COMMONWEALTH of VIRGINIA

DEPARTMENT OF LABOR AND INDUSTRY

C. Ray Davenport
COMMISSIONER

Main Street Centre
600 East Main Street, Suite 207
Richmond, Virginia 23219
PHONE (804) 371-2327
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AGENDA

SAFETY AND HEALTH CODES BOARD

PUBLIC HEARING

Main Street Centre
600 East Main Street
12th Floor Conference Room - North
Richmond, Virginia

Tuesday, September 13, 2016

10:00 a.m.

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1. Call to Order

2. Items for Discussion:

   a) 16VAC 25-50, Proposed Regulatory Action to Amend Boiler and Pressure Vessel Rules and Regulations

3. Opportunity for Public Comment on the Proposed Amendments

4. Adjournment

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VIRGINIA SAFETY AND HEALTH CODES BOARD

BRIEFING PACKAGE

September 13, 2016

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

I. Action Requested

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

II. Summary of the Proposed Regulation

The Boiler Safety Compliance Program seeks to amend the Boiler and Pressure Vessel Rules and Regulations by updating to the most recent editions of the following "Forms" and "Documents Incorporated by Reference" (DIBR), as listed below:

Forms (16VAC 25-50)

Form R-1, Report of Repair, National Board Inspection Code NB-66 ~~(rev. 2012)~~ (rev.13 6/28/15)

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

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

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

Documents Incorporated by Reference (16VAC 25-50)

1. ~~2007~~ 2015 Boiler and Pressure Vessel Code, ASME Code, American Society of Mechanical Engineers;

2. National Board Bylaws, national Board of boiler and Pressure Vessel Inspectors, ~~August 8, 1996~~ August 12, 2015;

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

4. ASME Code B 31.1, ASME Code for Pressure Piping, American National Standards Institute, ~~2007~~ 2014;

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

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

7. API 510, Pressure Vessel Inspection Code, Maintenance Inspection, Rating, Repair and Alteration, ~~Ninth Edition~~ Tenth Edition, ~~June 2006~~ May 2014, American Petroleum Institute.

III. Basis and Purpose of Intended Regulatory Action

A. Basis

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

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

B. Purpose

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

IV. Impact on Employers, Employees and the Department

A. Impact on Employers

For the most part, there would be little impact on employers as a result of the American Society Mechanical Engineers (ASME), National Board Inspection Code (NBIC), and National Fire Protection Association (NFPA) code updates. Companies that utilize the ASME or NBIC codes for construction or repair are already required to have and work to the current editions of the codes, therefore, there is no financial burden for them to purchase the most recent editions. The major change would be the requirement in the NBIC for signage and metering for CO_2 tank installations.

B. Impact on Employees

No negative impact is anticipated on employees as a result of the proposed regulatory changes. For employees working in, and citizens visiting, the restaurant, fast food, and convenience store industry utilizing CO_2 tanks for beverage dispensers, there will be additional safety added by the requirement for CO_2 metering/alarms.

C. Impact on the Department of Labor and Industry

Any impact on the Department would be minimal because the department already has copies of, and already follows, the most recent editions of the NBIC and ASME when performing reviews of manufacturers and repair shops that are required to use the most recent code edition.

V. Comments

The Boiler Safety Compliance Program of the Virginia Department of Labor and Industry received no comments during the August 8, 2016 through September 7, 2016, public comment period.

Contact Person:

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

RECOMMENDED ACTION

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

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

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

As Adopted by the

Safety and Health Codes Board

Date: _____

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

Form R-1, Report of Repair, National Board Inspection Code NB-66 ~~(rev. 2012)~~ (rev.13 6/28/15)

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

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

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

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

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API 510, Pressure Vessel Inspection Code, Maintenance Inspection, Rating, Repair and Alteration, ~~Ninth~~ Tenth Edition, June ~~2006~~ 2014, American Petroleum Institute.

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AGENDA

SAFETY AND HEALTH CODES BOARD

Main Street Centre
600 East Main Street
12th Floor Conference Room - North
Richmond, Virginia

Tuesday, September 13, 2016

10:00 a.m.

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

1. Call to Order
2. Approval of Agenda
3. Approval of Minutes for Public Hearing and for Board Meeting of March 3, 2016
4. Election of Officers
5. Opportunity for the Public to Address the Board on this 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.

6. **Old Business**

Recording and Reporting Occupational Injuries and Illnesses-Reporting Fatalities, Hospitalizations, Amputations, and Losses of an Eye As a Result of Work-related Incidents to OSHA, 16VAC25-85-1904.39

Presenter – Jay Withrow

7. **New Business**

a) Updating National Consensus Standards - Eye & Face Protection, Final Rule; Parts 1910, 1915, 1917, 1918, and 1926

Presenter – Jennifer Rose

b) Occupational Exposure to Respirable Crystalline Silica

Presenter – Ron Graham

c) Improve Tracking of Workplace Injuries and Illnesses, §§1904.35, 1904.36, and 1904.41; Final Rule; and Correction to §1904.35(b)(2)

Presenter – Jay Withrow

d) 16 VAC 25-60, Notice of Intended Regulatory Action (NOIRA) to Amend Administrative Regulation for the Virginia Occupational Safety and Health (VOSH) Program;

Presenter – Jay Withrow

e) <u>Report on Periodic Review of Regulations</u>

1. 16VAC25-11, Public Participation Guidelines
2. 16VAC25-50, Boiler and Pressure Vessel Rules and Regulations
3. 16VAC25-160, Construction Industry Standard for Sanitation
4. 16VAC25-180, Virginia Field Sanitation Standard, Agriculture

Presenter – Holly Raney

f) Public Participation Guidelines, 16VAC25-11; Fast-Track Amendment

Presenter – Regina Cobb

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

9. Items of Interest from Members of the Board

10. Meeting Adjournment

DRAFT
SAFETY AND HEALTH CODES BOARD
MEETING MINUTES
THURSDAY, March 3, 2016

BOARD MEMBERS PRESENT:
Mr. Jerome Brooks
Mr. Lou Cernak, Jr.
Mr. John Fulton
Mr. Chris Gordon
Ms. Anna Jolly
Mr. David Martinez
Mr. Travis Parsons
Mr. Kenneth Richardson, II
Ms. Milagro Rodriguez, Chair
Mr. Chuck Stiff, Vice Chair
Mr. Tommy Thurston

BOARD MEMBERS ABSENT:
Mr. Courtney Malveaux

STAFF PRESENT:
Mr. C. Ray Davenport, Commissioner of Dept. of Labor & Industry
Mr. Bill Burge, Assistant Commissioner
Mr. Jay Withrow, Director, Legal Support, BLS, VPP, ORA, OPP & OWP
Mr. Ron Graham, Director, VOSH Health Compliance
Ms. Jennifer Rose, Director, VOSH Safety Compliance
Mr. Ed Hilton, Director, Boiler Safety Compliance Management
Mr. John Crisanti, Manager, Office of Policy and Planning
Ms. Diane Duell, Director, Legal Services
Mr. Warren Rice, Director, Consultation Services
Ms. Deonna Hargrove, Consultation Program Manager
Ms. Regina Cobb, Senior Management Analyst
Ms. Cathy Brown, Program Support Technician, Senior

OTHERS PRESENT:
Ms. Lori J. Krenik, Court Reporter, Halasz Reporting & Videoconference
Joshua Laws, Esq., Assistant Attorney General, OAG
Ms. Beverly Crandell, Safety Program Coordinator, Tidewater Community College

ORDERING OF AGENDA

Chair Milly Rodriguez called the meeting to order at 10:00 a.m. A quorum was present.

Ms. Rodriguez requested a motion to approve the Agenda. Mr. Kenneth Richardson moved to accept the Agenda, and Mr. Tommy Thurston properly seconded the motion. The Agenda was approved, as submitted, and the motion was carried by unanimous voice vote.

APPROVAL OF MINUTES

Ms. Rodriguez asked the Board for a motion to approve the Minutes from the October 29, 2015, Board meeting. On proper motion by Ms. Anna Jolly and seconded by Mr. Chuck Stiff. The Minutes were approved by unanimous voice vote.

PUBLIC COMMENTS

Ms. Rodriguez opened the floor for comments from the public, however, there were no comments.

OLD BUSINESS

Proposed Amendments to the Administrative Regulation for the Virginia Occupational Safety and Health (VOSH) Program

Mr. Jay Withrow, Director of Legal Support, BLS, VPP, ORA, OPP & OWP for the Department, began by requesting the Board to consider for adoption, as a proposed regulation of the Board, the proposed language in the attached Amendment to the Administrative Regulation for the VOSH Program, 16VAC25-60, et seq. He then reminded the Board of the regulatory history of these proposed amendments. He stated that rather than reading the entire package, instead he would highlight some issues.

He started by briefly discussing item No. 1 of the briefing package which deals with §16VAC25-60-130. He stated that this amendment would allow VOSH to enforce the Virginia Department of Transportation Work Area Protection Manual, in lieu of the federal Manual on Uniform Traffic Control Devices (MUTCD), an OSHA regulation which has been issued for years. He informed the Board that, when the regulation was drafted, much language in it is references that employers "should" do this or you "may" do that. He stated that VDOT developed its own version of the manual – the Work Area Protection Manual - the use of which is required in their contracts with employers. The proposal from our regulation would allow our Department to enforce the Virginia Work Area Protection Manual in a situation where there is a contract either with VDOT or a locality that says you are required to comply with the Virginia manual.

He stated that item Number 2 of the briefing package clarifies whistleblower anti-retaliation safeguards for public sector employees other than the Commonwealth and its agencies, e.g., political subdivisions such as city and county governments.

He continued by stating that in item Number 3 one of the purposes of the Administrative Regulation Manual (ARM) is to address public sector coverage issues, government employees and employers. He added that there is a statute in the Virginia Code that states that our code sections and regulations only apply to public sector employers to the extent that the Board or Commissioner by regulation applies them, so the Department has to go through and look at any of the specific code sections that the Department wants to apply to the public sector. The Department has to list them in the ARM. He added that the second part of this item is to obtain administrative search warrants. He stated that the Department gets overwhelming cooperation from local governments, but if they refused the Department entry to a work site, the Department would have to get a search warrant, and this amendment allows the Commonwealth's Attorney to do that.

He stated that item Number 4 provides some clarification when seeking to resolve whistleblower anti-retaliation cases involving the Commonwealth and its agencies. He informed the Board that Number 5 clarifies the releasable documents under the Freedom of Information Act (FOIA). These provisions are identical to the provisions OSHA follows in its VPP program. With respect to Number 6, Mr. Withrow explained that this is a very minor change to now describe the Department's anti- discrimination cases as whistleblower cases, a change that OSHA made.

He explained that Item Number 7 concerns whistleblower as well, clarifying that the Commissioner may request penalties that would be paid to the employee for occupational whistleblower discrimination or anti-retaliation cases at the litigation state. He stated that Number 8 clarifies in 16VAC25-60-245 the Commissioner's authority to take and preserve testimony, examine witnesses and administer oaths constitutes an administrative subpoena power.

He informed the Board that items Numbers 9 and 10 have to do with some legal issues and the burden of proof in VOSH cases. He added that this amendment establishes in regulation that the burden of proof is by a preponderance of the evidence. Also, item Number 10 addresses the burden of proving an affirmative defense citation that lies with the defendant.

Mr. Withrow stated that there was no cost impact associated with the ten item previously discussed. He admitted that for item Number 1, the VDOT issue, there is some impact in that now employers would be subject to citation under the new regulation that they would not have been cited under the old regulation. He added that this does not involve a large number of instances because the Department does not cite work zone construction very often, but there is a potential for that. He also added that VDOT requires employers to sign a contract in which employers agree to accept financial responsibility. He stated that for items Numbers 2 - 6, 8 and 10, there was no additional cost impact on employers. He stated that a financial burden on the employer would be imposed with respect to item Number 7, which was the issue of where the Department could go in a whistleblower case which goes to the judge for litigation and additional penalties against the company is requested to be assessed. He admitted that whistleblower cases that actually go to court are very rare, averaging less than one per year.

Mr. Withrow informed the Board that employees would benefit from more protections from the VDOT regulations and from the whistleblower provision if additional penalties encourage employers to comply with the Department's regulation and the anti-discrimination law. He added that he did not believe there will be any adverse impact on employees from the proposed amendments. With respect to impact on the Department, he stated that, other than training the Department's employees on changes to the regulations, there would not be any additional physical or programmatic impacts involved.

When asked how many whistleblower cases the Department investigates, Mr. Withrow responded that the Department receives approximately 100 to 125 complaints a year, but the Department only investigates about 25 to 30 of those. He continued by stating that the Department receives many complaints that are not in our jurisdiction, and that are covered by a federal agency or the complaints are not safety and health-related, but are discrimination complaints based on race, sexual orientation or other types of discriminatory actions that the Department does not cover.

In conclusion, Mr. Withrow recommended that the Board consider for adoption, as a proposed regulation of the Board, the proposed amendments to the Administrative Regulation for the VOSH Program, 16VAC25-60, *et seq.*, in accordance with the authority of the Board under §40.1-22(5) and the

requirements of the Administrative Process Act, §2.2-4000, *et seq.,* of the Code of Virginia.

A motion to accept the Department's recommendation was properly made by Mr. Stiff and seconded by Ms. Jolly. The motion was approved unanimously by voice vote.

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

Mr. Withrow began by providing the regulatory background for this proposed regulation which was approved by the Governor on October 30, 2015 and published in the Virginia Register on November 30, 2015, with a 30-day public comment period which ended on December 31, 2015. No comments were received. He then requested the Board to consider for adoption as a proposed regulation of the Board the Proposed Regulation on Virginia Voluntary Protection Programs (VPP), 16VAC25-200.

He summarized the proposed regulation by stating that on March 19, 2015, the Virginia General Assembly approved the adoption of §40.1-49.13 of the Code of Virginia which codified the VOSH Voluntary Protection Program (VPP). Subsection B of §40.1-49.13 requires the Board to adopt a VPP regulation which addresses the following issues: scope, purpose, and applicability; definitions; categories of participation; ways to participate; application requirements; comprehensive safety and health management system requirements; certification and re-certification processes; on-site evaluations; annual submissions; other participation requirements; enforcement activity at VPP sites; and withdrawal or termination.

He then informed the Board that Virginia's VPP was instituted in 1996 and is patterned after federal OSHA's VPP which was originally created in 1992. He added that an employer's membership in VPP is recognized as the nation's and Virginia's highest award that can be bestowed by a government agency to an employer for excellence in occupational safety and health management systems. Traditional VPP has two levels: Star worksite and Merit worksite which he explained in detail.

He stated that the purpose of this proposed change is to adopt definitions, rules, regulations, and standards required by Virginia Code § 40.1-49.13.

With respect to impact of the proposed regulation on employers, Mr. Withrow stated that VPP is a voluntary program so there is no negative impact on Virginia employers that are not participants of the program. He added that program participants do incur costs associated with developing and implementing safety and health management systems that often exceed current VOSH laws, regulations, and standards. However, the costs are incurred on a voluntary basis. The Department tracks injury and illness rates for each VPP site on an annual basis.

He stated that VPP sites regularly report decreased bottom line expenditures, which are associated with both drastically reduced injury and illness rates, and improved productivity and employee morale. VPP is available to private and public sector employers of all sizes. Virginia was the first VPP in the country to recognize state correctional institutions as VPP members – Augusta and Lunenburg Correctional Facilities of the Virginia Department of Corrections (VADOC).

He mentioned that Virginia's VPP has recognized a total of 66 Star worksites since the program began in 1996. He added that VPP participation benefits employees by enhancing workplace safety and health practices; reducing workplace injuries and illnesses and the associated workers' compensation and medical costs; and improving employee morale. VPP participation encourages active employee

involvement in safety and health. He also stated that expanding Virginia's VPP will promote safer and healthier work places in Virginia by using a proactive, cooperative approach between employers, employees and Virginia government.

In conclusion, Mr. Withrow requested the Board to consider for adoption, as a proposed regulation of the Board, the Proposed Regulation on Virginia Voluntary Protection Programs (VPP), 16VAC25-200, in accordance with the authority of the Board under §40.1-22(5) and the requirements of the Administrative Process Act, §2.2-4000, *et seq*.

A motion to accept the Department's recommendation was properly made by Mr. Travis Parsons and seconded by Mr. Stiff. The motion was approved unanimously by voice vote.

NEW BUSINESS

Electrical Safety-Related Work Practices, §1910.331 (Subpart S –Electrical); Electric Power Generation, Transmission, and Distribution, 1910.269 (Subpart R – Special Industries); General, 1926.950 (Subpart V – Power Transmission and Distribution); and Working On or Near Exposed Energized Parts, 1926.960 (Subpart V – Power Transmission and Distribution); Corrections

Ms. Jennifer Rose, VOSH Safety Compliance Director for the Department of Labor and Industry, requested that the Board consider for adoption the Corrections to the Electrical Safety-Related Work Practices, §1910.331 (Subpart S –Electrical); Electric Power Generation, Transmission, and Distribution, 1910.269 (Subpart R – Special Industries); General, 1926.950 (Subpart V – Power Transmission and Distribution); and Working On or Near Exposed Energized Parts, 1926.960 (Subpart V – Power Transmission and Distribution), as published on October 5, 2015 in 80 FR 60033.

Ms. Rose summarized the corrections by stating that they will provide additional clarification regarding the applicability of the standard to certain operations, including some tree trimming work that is performed near, but that is not on or directly associated with, electric power generation, transmission, and distribution installations. She added that minor errors in two minimum approach distances tables in the general industry and construction standards for electric power generation, transmission and distribution work also were corrected. She then explained in detail each of the corrections that federal OSHA made, for example, expressly limiting the scope of §1910.269 as it relates to line-clearance tree trimming. She informed the Board that the standard applies to line-clearance tree trimming only to the extent it is performed for the purpose of clearing space around electric power generation, transmission, or distribution lines or equipment and on behalf of an organization that operates, or that controls the operating procedures for those lines or equipment.

Ms. Rose also detailed other corrections, such as: a note was added to the definition of "line-clearance tree trimming" in §1910.269(x), with corresponding revisions to Note 2 to the definition of "line-clearance tree trimmer" to explain the scope of §1910.269; replacing terms such as "line-clearance tree-trimming operations" and "line-clearance tree-trimming work" wherever they appear in 1910.269 and Subpart V of Part 1926 with "line-clearance tree trimming"; referencing the scope of §1910.269 in Note 3 of §1910.331(c)(1); and correcting minor errors in various Tables in Subpart V of Part 1926.

Ms. Rose described the history of §§1910.331 through 1910.335, the Electrical Safety-Related Work Practices Standard for General Industry, and of §1910.269, the Electric Power Generation, Transmission, and Distribution standard in 1994. She explained OSHA's conclusion that the language in the existing

standards did not convey its intent with respect to tree-trimming activities that meet the definition of "line-clearance tree trimming," but that are not directly associated with electric power generation, transmission, or distribution lines or equipment

She explained that in 2014 tree care industry representatives raised questions that led OSHA to believe that the industry was unclear about the application of §1910.269, with respect to certain tree-trimming work. As a result, OSHA examined the relevant regulatory language in the general industry standards on Electrical Safety-Related Work Practices in Subpart S and on Electric Power Generation, Transmission and Distribution work, §1910.269, and determined that the scope provisions in §1910.331 did not accurately explain the applicability of the Electrical Safety-Related Work Practices at §§1910.331 through 1910.335 to qualified persons performing work near, but not on or directly associated with, the installations listed in §1910.331(c)(1) through (c)(4), including electric power generation, transmission, and distribution installations. As a result, OSHA made the necessary corrections to provide improved clarity.

Ms. Rose added that, other than improved clarity, no significant impact is anticipated on employers, employees or the Department with the adoption of these corrections.

In conclusion, she requested that the Board adopt the corrections to Electrical Safety-Related Work Practices, §1910.331 (Subpart S –Electrical); Electric Power Generation, Transmission, and Distribution, 1910.269 (Subpart R – Special Industries); General, 1926.950 (Subpart V – Power Transmission and Distribution); and Working On or Near Exposed Energized Parts, 1926.960 (Subpart V – Power Transmission and Distribution), with an effective date of June 15, 2016.

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

Notice of Intended Regulatory Action for Amendments to 16VAC25-50, Boiler and Pressure Vessel Rules and Regulations

Mr. Ed Hilton, Director of the Boiler Safety Compliance Program for the Department of Labor and Industry, requested the Board to authorize the Department to initiate the regulatory process to amend 16VAC25-50, Boiler and Pressure Vessel Rules and Regulations, by filing a Notice of Intended Regulatory Action (NOIRA), pursuant to the Virginia Administrative Process Act, §2.2-4007.01.

Mr. Hilton described the amendments which included adopting the latest Editions of the following publications: Boiler and Pressure Vessel Code, ASME Code; ANSI/NB National Board Inspection Code (NBIC), National Board of Boiler and Pressure Vessel Inspectors; B31.1, ASME Code for Power Piping, American National Standards Institute; NFPA 85, Boiler and Combustion Systems Hazards, 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, American Society of Mechanical Engineers; and API 510, Pressure Vessel Inspection Code, Maintenance Inspection, Rating, Repair and Alteration, American Petroleum Institute.

He explained the basis for this intended regulatory action is to provide both increased protection of human life and property from the unsafe or dangerous construction, installation, inspection, operation, and repair of boilers and pressure vessels in the Commonwealth of Virginia by complying with the most recent editions of industry required guidance documents.

He informed the Board that the purpose of the NOIRA is to conform to the most current editions of NFPA, ASME and National Board safety and inspection codes. With respect to impact, Mr. Hilton stated that adopting the latest editions of the various codes will cause little impact on employers who are already required to comply with the Codes. He noted that a major change would be the requirement in the NBIC for signage and metering for CO_2 tank installations. No negative impact is anticipated for employees or the Department.

Mr. Hilton concluded by requesting the Board to authorize the Department to initiate the regulatory process to amend 16VAC25-50, Boiler and Pressure Vessel Rules and Regulations, by filing a Notice of Intended Regulatory Action (NOIRA), pursuant to the Virginia Administrative Process Act, §2.2-4007.01.

A motion to accept the Department's recommendation was properly made by Mr. David Martinez and seconded by Mr. John Fulton. The motion was approved unanimously by voice vote.

Report of Periodic Review of Certain Existing Regulations

Ms. Regina Cobb, Senior Management Analyst for the Department of Labor and Industry, requested the Board's permission to proceed with the periodic review process for the following four regulations:

1. 16VAC25-11, Public Participation Guidelines;
2. 16VAC25-50, Boiler and Pressure Vessel Rules and Regulations;
3. 16VAC25-160, Construction Industry Standard for Sanitation; and
4. 16VAC25-180, Virginia Field Sanitation Standard, Agriculture.

She explained that the Administrative Process Act, §2.2-4017 of the Code of Virginia and Executive Order 17 (2014), "Development and Review of State Agency Regulations," govern the periodic review of existing regulations. She continued by stating that the Executive Order requires that state agencies conduct a periodic review of regulations every four years.

Ms. Cobb stated that if the Board grants approval for the Department to proceed, the process of periodic review begins with publication of the Notice of Periodic Review in the Virginia Register, which starts a public comment period of at least 21 days, but no more than 90 days. The Department will review the regulations and any public comments, then prepare recommendations for the Board's consideration.

Ms. Cobb concluded by recommending that the Board approve the publication of a Notice of Periodic Review in the Virginia Register for the above-mentioned regulations.

A motion to accept the recommendation was properly made by Mr. Stiff, and seconded by Ms. Jolly. The Department's recommendation was approved unanimously by voice vote.

Items of Interest from the Department of Labor and Industry

Mr. Withrow informed the Board of the Bipartisan Budget Act of 2015, that Congress passed and President Obama signed, which contained a provision to increase OSHA penalties by roughly 78 percent by tying them to Consumer Price Index (CPI) changes. He noted that this provision actually caught OSHA and the state planners by surprise. He added that the last time OSHA penalties were increased was

1991. The penalties were increased at one time and then on an ongoing basis. Since the penalties will be tied to the CPI, penalties will increase each year as the CPI increases. He stated that Virginia has its penalty level maximums in statute. The OSHA change will take effect on July 1. He added that the Department will be going to the General Assembly this fall to make a statutory change. He noted that the Department does not know if it will be able to tie its penalty increase to the CPI.

Commissioner Davenport recognized the various staff members in attendance at the meeting. He informed the Board that the governor's budget did contain three positions on their compliance side of Occupational Safety and Health and two on the wage compliance side. The Commissioner stated that the Department is hopeful that there will be some additional funding for the Department's staffing needs.

He also reminded the Board of last year's OSHA reporting requirements legislation and the legislation that the Department re-submitted because a drafting error. He announced that the legislation has been corrected to mirror OSHA's requirements, passed both houses of the general assembly, and the Governor's signature is expected soon.

Commissioner Davenport also called the Board's attention to a proposal to have the Department's penalties and fines also apply to public sector employers. The proposal was originally submitted in 2007, but defeated. The Department resubmitted it this year. It directs the Commissioner of Labor and Industry and the Safety and Health Codes Board to adopt regulations on enforcing OSHA programs applicable to employees in the Commonwealth, its agencies, institutions, political subdivisions or any public body. The payment of such penalties is negotiated sums in lieu of such penalties and deposited in the Treasury of the Commonwealth. Currently, this legislation has passed the House and the Senate and is currently on the floor of the House. He added that he hopes it will pass and go forward to the Governor for signature within the next few days.

Items of Interest from the Department or from the Board

There were no items of interest from the Board.

Adjournment

There being no further business, a motion was made by Mr. Parsons and properly seconded by Mr. Stiff to adjourn the meeting. The motion was carried unanimously by voice vote. The meeting adjourned at 12:13 p.m.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF LABOR AND INDUSTRY

C. Ray Davenport
COMMISSIONER

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VIRGINIA SAFETY AND HEALTH CODES BOARD

BRIEFING PACKAGE

For September 13, 2016

**Recording and Reporting Occupational Injuries and Illnesses-
Reporting Fatalities, Hospitalizations, Amputations, and Losses of an Eye
As a Result of Work-related Incidents to OSHA, 16VAC25-85-1904.39**

I. Action Requested

The Virginia Occupational Safety and Health (VOSH) Program requests the Safety and Health Codes Board to consider for adoption correcting amendments to the Occupational Injury and Illness Recording and Reporting Requirements – and 16VAC25-85-1904.39, as authorized by Chapter 336 of the 2016 Virginia Acts of Assembly.

The proposed effective date is December 1, 2016.

II. Background and History

The regulation in question, Occupational Injury and Illness Recording and Reporting Requirements - Reporting Fatalities, Hospitalizations, Amputations, and Losses of an Eye As a Result of Work-related Incidents to OSHA, 16VAC25-85-1904.39 requires employers with more than ten employees in most industries to report all work-related fatalities and work-related incidents within certain specified timeframes.

The vast majority of regulatory changes which adopt other identical federal OSHA standards begin with adoption of the changes by the Board followed by the standard regulatory promulgation process, with the Virginia Administrative Process Act Article 2 exemption, to become law. However, in this particular case, the changes OSHA enacted by regulation, i.e., to change injury reporting timeframe requirements, are also statutorily enacted in the controlling statute for the regulation, §40.1-51.1 of the *Code of Virginia*.

In this case, as discussed during the Board's first amendment to this regulation in 2015, regulation is subordinate to statutory law, and prior action by the General Assembly was necessary to change conflicting language in the statute to remove the potential conflict with a regulatory change of the Board.

A. <u>2015 Action by the General Assembly and the Board</u>

Action by the General Assembly during the 2015 Session was first necessary to change the language in the existing statute to accommodate the federal OSHA regulatory change and remove the potential conflict. On March 17, 2015, a statutory change approved by the General Assembly was signed by Governor McAuliffe with an effective date of July 1, 2015. *[Refer to Attachment-1 to this package.]*

This 2015 action by the General Assembly cleared the way for the Board to act on the new federal amendments to Part 1904. This action, however, included a legislative drafting error which incorrectly required reporting of all in-patient hospitalizations, amputations, and losses of an eye within eight (8) hours.

The VOSH regulation subsequently adopted by the Board on July 15, 2015, was not identical to the federal OSHA requirements, as it was required to incorporate the errors in the statutory change earlier that year, i.e., to report in-patient hospitalizations, amputations, and losses of an eye within eight (8) hours from the time the event is reported to the employer rather than the 24-hour period allowed by the revised federal OSHA regulation.

B. <u>Resultant VOSH Enforcement Policy</u>

Due to the necessity to enact a statutory amendment in 2016 correcting the legislative drafting error discussed above prior to any correction of the regulation by the Board, the policy of VOSH regarding enforcement of the standard over the past year has been to not issue citations or penalties. In such instances where an in-patient hospitalization, amputation, or loss of an eye were reported within OSHA's requirement of 24 hours, but not within the 8 hours required by §40.1-51.1.D., a *de minimis* violation would be noted in the case file in accordance with §40.1-49.4.A.2. A *de minimis* violation is defined as one that has no direct or immediate relationship to safety and health.

C. **2016 Action by the General Assembly**

The Department was successful in amending §40.1-51.1.D during the 2016 Session of the Virginia General Assembly to bring the statute into conformity with the OSHA regulation. The statutory change to Va. Code §40.1-51.1.D was signed by Governor McAuliffe became effective on July 1, 2016. *[Refer to Attachment-2 to this package.]*

This action facilitates the Board's option to adopt regulatory amendments requested by VOSH to the Part 1904 changes adopted by the Board last year bringing the Board's Part 1904 requirements into complete conformity with the federal OSHA Part 1904 requirements.

III. Corrections to the Part 1904 Reportable Work Related Injury and Illness Allowable Reporting Times

These amendments, if approved by the Board, will complete the update of 16VAC25-1904.39 resulting in the VOSH standard being identical to the 2014 federal OSHA requirements for employers to report certain work-related injury and illnesses. The affected timeframes requested for amendment in order to become OSHA identical are listed below:

- Every in-patient hospitalization resulting from a work-related incident must be reported within ~~eight (8)~~ twenty- four (24) hours of the hospitalization;
- All amputations resulting from work-related incidents, resulting from a work-related incident must be reported within ~~eight (8)~~ twenty- four (24) hours hours of the incident;
- Each loss of an eye resulting from a work-related incident must be reported within ~~eight (8)~~ twenty- four (24) hours of the incident;

	Current VOSH Regulation	Current Federal OSHA Regulation
Hospitalizations	Employers are required to report each In-patient hospitalization **within 8 hours** of the hospitalization due to a work - related incident.	Employers are required to report each in-patient hospitalization **within 24 hours** of the hospitalization due to a work - related incident.
Amputations	Employers are required to report each amputation **within 8 hours** of the amputation, occurring as a result of a work-related incident.	Employers are required to report each amputation **within 24 hours** of the amputation, occurring as a result of a work-related incident.
Losses of an Eye	Employers are required to report each loss of an eye **within 8 hours** of the loss of an eye, occurring as a result of a work-related incident.	Employers are required to report each loss of an eye **within 24 hours** of the loss of an eye, occurring as a result of a work-related incident.

IV. Impacts on Affected Entities Resulting From Adoption of the Amendments

A. Impact on Employers

If adopted, employers will still not be issued a monetary penalty if they report the workplace incident within 24 hours. The only change will be that they will no longer be issued a *de minimus* violation as they will now be in compliance with the regulation if they report the incident with the specified 24 hour period.

B. Impact on Employees

No impact on employees is anticipated by this change.

C. Impact on the Department of Labor and Industry

Impact on the Department would be minimal. The adoption of these amendments by the Board will provide the slight benefit of VOSH to no longer be required to issue a penalty for a *de minimus* violation of the standard.

Federal regulations 29 CFR 1953.23(a) and (b) require that Virginia, within six months of the occurrence of a federal program change, adopt identical changes or promulgate equivalent changes which are at least as effective as the federal change. The Virginia Code reiterates this requirement in § 40.1-22(5). Adopting these revisions will allow Virginia to conform to the federal program change.

D. Benefits

The adoption of these changes will result in an indirect benefit to those employers, especially in the construction industry, who operate in several states or jurisdictions. Their regulatory burden is simplified as they will have only to deal with a regulation identical to the federal regualtion for reporting workplace injuries and illnesses they encounter elsewhere when they work in areas under VOSH's jurisdiction. There is also a minimal direct benefit to VOSH in that it would no longer be required to issue *de minimus* violations of the standard where the employer does notify the Department within the 24-hour period as per the current enforcement policy.

E. Costs

There are no additional costs to either employers or the Department associated with the adoption of these requested regulatory amendments.

F. **Technology Feasibility**

As the requested change has been in effect for approximately two years under those jurisdictions under OSHA's direct enforcement, and it requires no additional reporting demands on the employer, the change is deemed to be technologically feasible.

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2015 SESSION

CHAPTER 270

An Act to amend and reenact § 40.1-51.1 of the Code of Virginia, relating to workplace safety; employer reporting requirements.

[H 1681]
Approved March 17, 2015

Be it enacted by the General Assembly of Virginia:

1. That § 40.1-51.1 of the Code of Virginia is amended and reenacted as follows:

§ 40.1-51.1. Duties of employers.

A. 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, and to comply with all applicable occupational safety and health rules and regulations promulgated under this title.

B. Every employer shall provide to employees by such suitable means as shall be prescribed in rules and regulations of the Safety and Health Codes Board, information regarding their exposure to toxic materials or harmful physical agents and prompt information when they are exposed to concentration or levels of toxic materials or harmful physical agents in excess of those prescribed by the applicable safety and health standards and shall provide employees or their representatives with the opportunity to observe monitoring or measuring of exposures. Every employer shall also inform any employee who is being exposed of the corrective action being taken and shall provide former employees with access to information about their exposure to toxic materials or harmful physical agents.

C. Every employer cited for a violation of any safety and health provisions of this title or standards, rules and regulations promulgated thereunder shall post a copy of such citation at the site of the violations so noted as prescribed in the rules and regulations of the Safety and Health Codes Board.

D. Every employer shall report to the Virginia Department of Labor and Industry within eight hours any work-related incident resulting in *(i)* a fatality ~~or in~~, *(ii)* the ~~in patient~~ *inpatient* hospitalization of ~~three~~ *one* or more persons, *(iii) an amputation, or (iv) the loss of an eye,* as prescribed in the rules and regulations of the Safety and Health Codes Board.

E. Every employer, through posting of notices or other appropriate means, shall keep his employees informed of their rights and responsibilities under this title and of specific safety and health standards applicable to his business establishment.

F. An employer representative shall be given the opportunity to accompany the safety and health inspectors on safety or health inspections.

G. Nothing in this section shall be construed to limit the authority of the Commissioner pursuant to § 40.1-6 or the Board pursuant to § 40.1-22 to promulgate necessary rules and regulations to protect and promote the safety and health of employees.

2016 SESSION

CHAPTER 336

An Act to amend and reenact § 40.1-51.1 of the Code of Virginia, relating to reporting requirements for work-related hospitalization, amputation, or loss of an eye.

[H 691]
Approved March 11, 2016

Be it enacted by the General Assembly of Virginia:

1. That § 40.1-51.1 of the Code of Virginia is amended and reenacted as follows:

§ 40.1-51.1. Duties of employers.

A. It shall be the duty of every employer to furnish to each of his employees safe employment and a place of employment which that is free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees, and to comply with all applicable occupational safety and health rules and regulations promulgated under this title.

B. Every employer shall provide to employees, by such suitable means as shall be prescribed in rules and regulations of the Safety and Health Codes Board, information regarding their exposure to toxic materials or harmful physical agents and prompt information when they are exposed to concentration or levels of toxic materials or harmful physical agents in excess of those prescribed by the applicable safety and health standards and shall provide employees or their representatives with the opportunity to observe monitoring or measuring of exposures. Every employer shall also inform any employee who is being exposed of the corrective action being taken and shall provide former employees with access to information about their exposure to toxic materials or harmful physical agents.

C. Every employer cited for a violation of any safety and health provisions of this title or standards, rules, and regulations promulgated thereunder shall post a copy of such citation at the site of the violations so noted as prescribed in the rules and regulations of the Safety and Health Codes Board.

D. Every employer shall report to the Virginia Department of Labor and Industry within eight hours any work-related incident resulting in (i) a fatality, (ii) or within 24 hours any work-related incident resulting in (i) the inpatient hospitalization of one or more persons, (iii) (ii) an amputation, or (iv) (iii) the loss of an eye, as prescribed in the rules and regulations of the Safety and Health Codes Board.

E. Every employer, through posting of notices or other appropriate means, shall keep his employees informed of their rights and responsibilities under this title and of specific safety and health standards applicable to his business establishment.

F. An employer representative shall be given the opportunity to accompany the safety and health inspectors on safety or health inspections.

G. Nothing in this section shall be construed to limit the authority of the Commissioner pursuant to § 40.1-6 or the Board pursuant to § 40.1-22 to promulgate necessary rules and regulations to protect and promote the safety and health of employees.

Recommended Action

Staff of the Department of Labor and Industry recommends that the Safety and Health Codes Board adopt the amendments to Recording and Reporting Occupational Injuries and Illnesses - Reporting Fatalities, Hospitalizations, Amputations, and Losses of an Eye as a Result of Work-related Incidents to OSHA, 16VAC25-85-1904.39, as authorized by Virginia Code §§ 40.1-22(5), 40.1-51.1.D., and 2.2-4006.A.4(c), with an effective date of December 1, 2016.

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 above-cited subsection A.4(c) of the Administrative Process Act.

**Recording and Reporting Occupational Injuries and Illnesses -
Reporting Fatalities, Hospitalizations, Amputations, and Losses of an Eye
As a Result of Work-related Incidents to OSHA, 16VAC25-85-1904.39**

As Adopted by the

Safety and Health Codes Board

Date: _____

VIRGINIA OCCUPATIONAL SAFETY AND HEALTH PROGRAM

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

Effective Date: _____

**Recording and Reporting Occupational Injuries and Illnesses -
Reporting Fatalities, Hospitalizations, Amputations, and Losses of an Eye
As a Result of Work-related Incidents to OSHA, 16VAC25-85-1904.39**

When the regulations, as set forth in the amendment to Regulation for Reporting Fatalities, Hospitalizations, Amputations, and Losses of an Eye As a Result of Work-related Incidents to OSHA, 16VAC25-85-1904.39, are applied to the Commissioner of the Department of Labor and Industry and/or to Virginia employers, the following federal terms shall be considered to read as below:

Federal Terms	VOSH Equivalent
OSHA	VOSH
29 CFR	VOSH Standard
Assistant Secretary	Commissioner of Labor and Industry
Area Office	Regional Office
Agency	Department
January 1, 2015	September 13, 2016

Non-relevant Federal Register material has been deleted

■ 4. Revise § 1904.39 to read as follows:

§ 1904.39 Reporting fatalities, hospitalizations, amputations, and losses of an eye as a result of work-related incidents to OSHA.

(a) *Basic requirement.* (1) Within eight (8) hours after the death of any employee as a result of a work-related incident, you must report the fatality to the Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.

(2) Within twenty-four (24) hours after the in-patient hospitalization of one or more employees or an employee's amputation or an employee's loss of an eye, as a result of a work-related incident, you must report the in-patient hospitalization, amputation, or loss of an eye to OSHA.

(3) You must report the fatality, in-patient hospitalization, amputation, or loss of an eye using one of the following methods:

(i) By telephone or in person to the OSHA Area Office that is nearest to the site of the incident.

(ii) By telephone to the OSHA toll-free central telephone number, 1–800–321–OSHA (1–800–321–6742).

(iii) By electronic submission using the reporting application located on OSHA's public Web site at *www.osha.gov*.

(b) *Implementation*—(1) *If the Area Office is closed, may I report the fatality, in-patient hospitalization, amputation, or loss of an eye by leaving a message on OSHA's answering machine, faxing the Area Office, or sending an email?* No, if the Area Office is closed, you must report the fatality, in-patient hospitalization, amputation, or loss of an eye using either the 800 number or the reporting application located on OSHA's public Web site at *www.osha.gov*.

(2) *What information do I need to give to OSHA about the in-patient hospitalization, amputation, or loss of an eye?* You must give OSHA the following information for each fatality, in-patient hospitalization, amputation, or loss of an eye:

(i) The establishment name;

(ii) The location of the work-related incident;

(iii) The time of the work-related incident;

(iv) The type of reportable event (i.e., fatality, in-patient hospitalization, amputation, or loss of an eye);

(v) The number of employees who suffered a fatality, in-patient hospitalization, amputation, or loss of an eye;

(vi) The names of the employees who suffered a fatality, in-patient hospitalization, amputation, or loss of an eye;

(vii) Your contact person and his or her phone number; and

(viii) A brief description of the work-related incident.

(3) *Do I have to report the fatality, in-patient hospitalization, amputation, or loss of an eye if it resulted from a motor vehicle accident on a public street or highway?* If the motor vehicle accident occurred in a construction work zone, you must report the fatality, in-patient hospitalization, amputation, or loss of an eye. If the motor vehicle accident occurred on a public street or highway,

but not in a construction work zone, you do not have to report the fatality, in-patient hospitalization, amputation, or loss of an eye to OSHA. However, the fatality, in-patient hospitalization, amputation, or loss of an eye must be recorded on your OSHA injury and illness records, if you are required to keep such records.

(4) *Do I have to report the fatality, in-patient hospitalization, amputation, or loss of an eye if it occurred on a commercial or public transportation system?* No, you do not have to report the fatality, in-patient hospitalization, amputation, or loss of an eye to OSHA if it occurred on a commercial or public transportation system (e.g., airplane, train, subway, or bus). However, the fatality, in-patient hospitalization, amputation, or loss of an eye must be recorded on your OSHA injury and illness records, if you are required to keep such records.

(5) *Do I have to report a work-related fatality or in-patient hospitalization caused by a heart attack?* Yes, your local OSHA Area Office director will decide whether to investigate the event, depending on the circumstances of the heart attack.

(6) *What if the fatality, in-patient hospitalization, amputation, or loss of an eye does not occur during or right after the work-related incident?* You must only report a fatality to OSHA if the fatality occurs within thirty (30) days of the work-related incident. For an in-patient hospitalization, amputation, or loss of an eye, you must only report the event to OSHA if it occurs within twenty-four (24) hours of the work-related incident. However, the fatality, in-patient hospitalization, amputation, or loss of an eye must be recorded on your OSHA injury and illness records, if you are required to keep such records.

(7) *What if I don't learn about a reportable fatality, in-patient hospitalization, amputation, or loss of an eye right away?* If you do not learn about a reportable fatality, in-patient hospitalization, amputation, or loss of an eye at the time it takes place, you must make the report to OSHA within the following time period after the fatality, in-patient hospitalization, amputation, or loss of an eye is reported to you or to any of your agent(s): Eight (8) hours for a fatality, and twenty-four (24) hours for an in-patient hospitalization, an amputation, or a loss of an eye.

(8) *What if I don't learn right away that the reportable fatality, in-patient hospitalization, amputation, or loss of an eye was the result of a work-related incident?* If you do not learn right away that the reportable fatality, in-patient hospitalization, amputation, or loss of an eye was the result of a work-related incident, you must make the report to OSHA within the following time period after you or any of your agent(s) learn that the reportable fatality, in-patient hospitalization, amputation, or loss of an eye was the result of a work-related incident: Eight (8) hours for a fatality, and twenty-four (24) hours for an in-patient hospitalization, an amputation, or a loss of an eye.

(9) *How does OSHA define "in-patient hospitalization"?* OSHA defines in-patient hospitalization as a formal admission to the in-patient service of a hospital or clinic for care or treatment.

(10) *Do I have to report an in-patient hospitalization that involves only observation or diagnostic testing?* No, you do not have to report an in-patient hospitalization that involves only observation or diagnostic testing. You must only report to OSHA each in-patient hospitalization that involves care or treatment.

(11) *How does OSHA define "amputation"?* An amputation is the traumatic loss of a limb or other external body part. Amputations include a part, such as a limb or appendage, that has been severed, cut off, amputated (either completely or partially); fingertip amputations with or without bone loss; medical amputations resulting from irreparable damage; amputations of body parts that have since been reattached. Amputations do not include avulsions, enucleations, deglovings, scalpings, severed ears, or broken or chipped teeth.

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COMMONWEALTH of VIRGINIA

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VIRGINIA SAFETY AND HEALTH CODES BOARD

BRIEFING PACKAGE

For September 13, 2016

Updating OSHA Standards Based on National Consensus Standards; Eye and Face Protection; Final Rule; Parts 1910, 1915, 1917, 1918, and 1926

I. **Action Requested.**

The Virginia Occupational Safety and Health (VOSH) Program requests that the Safety and Health Codes Board consider for adoption federal OSHA's Updating OSHA Standards Based on the National Consensus Standards for Eye and Face Protection, as published in 81 FR 16085 on March 25, 2016. The following standards on eye and face protection are affected by this final rule:

- 16VAC25-90-1910.6, Incorporation by reference;
- 16VAC25-90-1910.133, Eye and face protection;
- 16VAC25-100-1915.5, Incorporation by reference;
- 16VAC25-100-1915.153, Eye and face protection;
- 16VAC25-120-1917.3, Incorporation by reference;
- 16VAC25-120-1917.91, Eye and face protection;
- 16VAC25-130-1918.3, Incorporation by reference;
- 16VAC25-130-1918.101, Eye and face protection
- 16VAC25-175-1926.6, Incorporation by reference; and
- 16VAC25-175-1926.102, Eye and face protection

This final rule updates eye and face protection requirements in OSHA's general industry, shipyard employment, marine terminals, longshoring, and construction standards. The changes involve the incorporation by reference of the latest ANSI/International Safety Equipment Association (ISEA) Z87.1-2010 standard on Occupational and Educational Eye and Face Protection Devices and the removal of the oldest ANSI (Z87.1-1989) version of the same standard. ANSI/ISEA Z87.1-2010 provides requirements for the selection, testing, use, and maintenance of protectors intended to minimize or prevent eye and face injuries, including impact, non-ionizing radiation and chemical exposures, in occupational and education environments. ANSI Z87.1-2003 and ANSI Z87.1-1989 (R-1998) are prior versions of this standard which are also incorporated by reference as alternative means of compliance with OSHA's eye and face protection requirements.

With respect to the consensus standards update, OSHA has amended §§1926.6 and 1926.102, which currently incorporate by reference ANSI Z87.1-1968 to include the same three consensus standards incorporated into the general industry and maritime standards, ANSI/ISEA Z87.1-2010, ANSI Z87.1-2003, and ANSI Z87.1-1989 (R-1998). Additionally, OSHA replaced all eye and face protection provisions in its construction standard to make it more consistent with the general and maritime industry standards, except those provisions that were unique to the construction industry standard.

The proposed effective date is December 1, 2016.

II. Basis, Purpose and Impact.

A. Basis.

OSHA requires employers to ensure that their employees use eye and face protection where necessary to protect them against flying objects, splashes or droplets of hazardous chemicals, and other workplace hazards that could injure their eyes and face. OSHA's standards state that the protection employers provide must meet specified consensus standards. For operations covered by OSHA's general industry, shipyard employment, longshoring, and marine terminals standards, the protection must comply with one of the following standards: ANSIZ 87.1-2003, ANSIZ87.1-1989 (r-1998), and ANSI Z87.1-1989. Alternatively, the employer may show that the devices used are at least as effective as one of these consensus standards: §§1910.133(b); 1915.153(b); 1917.91(a)(1); 1918.101(a)(1). The construction standard requires that eye and face protection meet the requirements of ANSI A87.1-1968 (§1926.102(a)(2)).

As part of its ongoing efforts to update it standards with the latest versions of national consensus standards, OSHA last updated its eye and face protection standards in 2009. That effort did not address the eye and face protection requirements in the construction standard which had been revised in 1993, and during the 2009 rulemaking OSHA received several comments suggesting that the construction requirements be updated as well. After the new ANSI/ISEA 87.1-2010 standard was published, OSHA decided to again update its eye and face protection requirements.

Before publishing the proposal, OSHA consulted the Advisory Committee on Construction Safety and Health (ACCSH) on May 8, 2014, as required by 29 CFR 1911.10. OSHA presented the Committee with two options and the Committee selected the option which required replacing all eye and face protection provisions in the construction standard with those of the general industry and maritime standards, except those that were unique to the construction industry.

B. Purpose

Through this final rule, OSHA has incorporated by reference three recent editions of the applicable national consensus standards in its existing eye and face protection standards. This final rule will ensure consistency among OSHA's standards, and eliminate any confusion, clarify employer obligations, and provide up-to-date protection for workers exposed to eye and face hazards.

C. Impact of Employers

Under the final rule employers may follow any of the three most recent versions of the Z87.1 standards. This update to these standards places no new obligations, costs, or time constraints on employers. Employers already in compliance with OSHA's eye and face requirements may continue to follow their current usual and customary practices in providing eye and face protection to their employees. Employers are allowed increased flexibility in choosing eye and face protection for their employees and are not required to update or replace that protection solely as a result of this final rule if the employer's current practice meets the new standards. As such, this rule has no compliance or economic burdens associated with it.

OSHA believes that the ANSI/ISEA and ANSI standards are reasonably available to interested parties. Employers also may rely on manufacturer representations that protection is compliant with the indicated standard and therefore are not obligated to incur this expense to comply with the standard.

OSHA also believes that these revisions will make compliance easier for employers who perform work that is covered both by the construction standard and another of OSHA's standards.

D. Impact on Employees

This final rule does not alter the substantive protection that employers must provide to employees. Employees will continue to receive the same eye and face protection that they are currently receiving.

E. Impact on the Department of Labor and Industry.

No impact is anticipated on the Department if the final rule is adopted; however, the Department will benefit from the consistency among the affected VOSH standards.

Federal regulations 29 CFR 1953.23(a) and (b) require that Virginia, within six months of the occurrence of a federal program change, to adopt identical changes or promulgate equivalent changes which are at least as effective as the federal change. The Virginia Code reiterates this requirement in § 40.1-22(5). Adopting these revisions will allow Virginia to conform to the federal program change.

F. Technological Feasibility

OSHA believes that eye and face protection meeting the 2010 ANSI/ISEA standard is already on the market, and the 2010 standard is not less protective than the previous versions of the standard.

The final rule is technologically feasible because:

1. protectors are already manufactured in accordance with the 2010 ANSI/ISEA standard or the other versions permitted under the revision; and

2. employers are already in compliance with the 1998 and 2003 versions of the ANSI standard, which are incorporated by reference into the general industry and maritime standards; therefore, compliance with the earlier versions of the ANSI standard constitutes compliance with the OSHA final rule.

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RECOMMENDED ACTION

Staff of the Department of Labor and Industry recommends that the Safety and Health Codes Board adopt the Final Rule Updating OSHA Standards Based on National Consensus Standards for Eye and Face Protection, Parts 1910, 1915, 1917, 1918, and 1926, as authorized by Virginia Code §§ 40.1-22(5) and 2.2-4006.A.4(c), with an effective date of December 1, 2016.

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 above-cited subsection A.4(c) of the Administrative Process Act.

Updating OSHA Standards Based on National Consensus Standards for Eye and Face Protection;
Parts 1910, 1915, 1917, 1918, and 1926;
Final Rule

As Adopted by the

Safety and Health Codes Board

Date: _____

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

VIRGINIA OCCUPATIONAL SAFETY AND HEALTH PROGRAM

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

Effective Date: _____

16VAC25-90-1910.6, Incorporation by reference;
16VAC25-90-1910.133, Eye and face protection;
16VAC25-100-1915.5, Incorporation by reference;
16VAC25-100-1915.153, Eye and face protection;
16VAC25-120-1917.3, Incorporation by reference;
16VAC25-120-1917.91, Eye and face protection;
16VAC25-130-1918.3, Incorporation by reference;
16VAC25-130-1918.101, Eye and face protection
16VAC25-175-1926.6, Incorporation by reference; and
16VAC25-175-1926.102, Eye and face protection

When the regulations, as set forth in the Final Rule Updating OSHA Standards Based on the National Consensus Standards for Eye and Face Protection, Parts 1910, 1915, 1917, 1918, and 1926, are applied to the Commissioner of the Department of Labor and Industry and/or to Virginia employers, the following federal terms shall be considered to read as below:

Federal Terms	VOSH Equivalent
29 CFR	VOSH Standard
Assistant Secretary	Commissioner of Labor and Industry
Agency	Department
April 25, 2016	December 1, 2016

PART 1910—[AMENDED]

Subpart A—[Amended]

■ 2. Amend § 1910.6 by revising paragraphs (e)(69) through (71) to read as follows:

§ 1910.6 Incorporation by reference.

* * * * *

(e) * * *

(69) ANSI/ISEA Z87.1–2010, Occupational and Educational Personal Eye and Face Protection Devices, Approved April 13, 2010; IBR approved for § 1910.133(b). Copies are available for purchase from:

(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

(70) ANSI Z87.1–2003, Occupational and Educational Eye and Face Personal Protection Devices Approved June 19, 2003; IBR approved for §§ 1910.133(b). Copies available for purchase from the:

(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

(71) ANSI Z87.1–1989 (R–1998), Practice for Occupational and Educational Eye and Face Protection, Reaffirmation approved January 4, 1999; IBR approved for § 1910.133(b). Copies are available for purchase from:

(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

* * * * *

Subpart I—[Amended]

■ 4. Amend § 1910.133 by revising paragraph (b)(1) to read as follows:

§ 1910.133 Eye and face protection.

* * * * *

(b) *Criteria for protective eye and face protection.* (1) Protective eye and face protection devices must comply with any of the following consensus standards:

(i) ANSI/ISEA Z87.1–2010, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1910.6;

(ii) ANSI Z87.1–2003, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1910.6; or

(iii) ANSI Z87.1–1989 (R–1998), Practice for Occupational and Educational Eye and Face Protection, incorporated by reference in § 1910.6;

* * * * *

PART 1915—[AMENDED]

■ 6. Amend § 1915.5 by revising paragraphs (d)(1)(vi) through (viii) to read as follows:

§ 1915.5 Incorporation by reference.

* * * * *

(d)(1) * * *

(vi) ANSI/ISEA Z87.1–2010, Occupational and Educational Personal Eye and Face Protection Devices, Approved April 13, 2010; IBR approved for § 1915.153(b). Copies are available for purchase from:

(A) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(B) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(C) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

(vii) ANSI Z87.1–2003, Occupational and Educational Personal Eye and Face Protection Devices, approved June 19, 2003; IBR approved for § 1910.153(b). Copies available for purchase from the:

(A) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(B) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(C) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

(viii) ANSI Z87.1–1989 (R–1998), Practice for Occupational and Educational Eye and Face Protection.

Reaffirmation approved January 4, 1999; IBR approved for § 1910.153(b). Copies are available for purchase from:

(A) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(B) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(C) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

* * * * *

Subpart I—[Amended]

■ 7. Amend § 1915.153 by revising paragraph (b)(1) to read as follows:

§ 1915.153 Eye and face protection.

* * * * *

(b) *Criteria for protective eye and face devices.* (1) Protective eye and face protection devices must comply with any of the following consensus standards:

(i) ANSI/ISEA Z87.1–2010, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1915.5;

(ii) ANSI Z87.1–2003, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1915.5; or

(iii) ANSI Z87.1–1989 (R–1998), Practice for Occupational and Educational Eye and Face Protection, incorporated by reference in § 1915.5;

* * * * *

PART 1917—[AMENDED]

■ 9. Amend § 1917.3 by revising paragraphs (b)(6) through (8) to read as follows:

§ 1917.3 Incorporation by reference.

* * * * *

(b) * * *

(6) ANSI/ISEA Z87.1–2010, Occupational and Educational Personal Eye and Face Protection Devices, Approved April 13, 2010; IBR approved for § 1917.91(a). Copies are available for purchase from:

(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

(7) ANSI Z87.1–2003, Occupational and Educational Personal Eye and Face Protection Devices, Approved April 13, 2010; IBR approved for § 1917.91(a). Copies available for purchase from the:

(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

(8) ANSI Z87.1–1989 (R–1998), Practice for Occupational and Educational Eye and Face Protection, Reaffirmation approved January 4, 1999; IBR approved for § 1917.91(a). Copies are available for purchase from:

(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

* * * * *

Subpart E—[Amended]

■ 10. Amend § 1917.91 by revising paragraph (a)(1)(i) to read as follows:

§ 1917.91 Eye and face protection.

(a)(1)(i) The employer shall ensure that each affected employee uses protective eye and face protection devices that comply with any of the following consensus standards:

(A) ANSI/ISEA Z87.1–2010, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1917.3;

(B) ANSI Z87.1–2003, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1917.3;

or

(C) ANSI Z87.1–1989 (R–1998), Practice for Occupational and Educational Eye and Face Protection, incorporated by reference in § 1917.3;

* * * * *

PART 1918—[AMENDED]

■ 12. Amend § 1918.3 by revising paragraphs (b)(6) through (8) to read as follows:

§ 1918.3 Incorporation by reference.

* * * * *

(b) * * *

(6) ANSI/ISEA Z87.1–2010, Occupational and Educational Personal Eye and Face Protection Devices, Approved April 13, 2010; IBR approved for § 1918.101(a). Copies are available for purchase from:

(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

(7) ANSI Z87.1–2003, Occupational and Educational Personal Eye and Face Protection Devices, Approved June 19, 2003; IBR approved for § 1918.101(a). Copies available for purchase from the:

(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

(8) ANSI Z87.1–1989 (R–1998), Practice for Occupational and Educational Eye and Face Protection. Reaffirmation approved January 4, 1999; IBR approved for § 1918.101(a). Copies are available for purchase from:

(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

* * * * *

Subpart J—[Amended]

■ 13. Amend § 1918.101 by revising paragraph (a)(1)(i) to read as follows:

§ 1918.101 Eye and face protection.

(a) * * *

(1)(i) Employers must ensure that each employee uses appropriate eye and/or face protection when the employee is exposed to an eye or face hazards, and that protective eye and face devices comply with any of the following consensus standards:

(A) ANSI/ISEA Z87.1–2010, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1918.3;

(B) ANSI Z87.1–2003, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1918.3; or

(C) ANSI Z87.1–1989 (R–1998), Practice for Occupational and Educational Eye and Face Protection, incorporated by reference in § 1918.3

* * * * *

PART 1926—[AMENDED]

Subpart A—General [Amended]

■ 15. Amend § 1926.6 as follows:

■ a. Revise paragraph (h)(31);

■ b. Redesignate paragraphs (h)(32) thru (34) as (h)(34) thru (36);

■ c. Add new paragraphs (h)(32) and (h)(33).

The revisions and additions read as follows:

§ 1926.6 Incorporation by reference.

* * * * *

(h) * * *

(31) ANSI/ISEA Z87.1–2010, Occupational and Educational Personal Eye and Face Protection Devices, Approved April 3, 2010; IBR approved for § 1926.102(b). Copies are available for purchase from:

(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

(32) ANSI Z87.1–2003, Occupational and Educational Personal Eye and Face Protection Devices, Approved June 19, 2003; IBR approved for § 1926.102(b). Copies available for purchase from the:

(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

(33) ANSI Z87.1–1989 (R–1998), Practice for Occupational and Educational Eye and Face Protection, Reaffirmation approved January 4, 1999; IBR approved for § 1926.102(b). Copies are available for purchase from:

(i) American National Standards Institute's e-Standards Store, 25 W 43rd Street, 4th Floor, New York, NY 10036; telephone: (212) 642–4980; Web site: *http://webstore.ansi.org/;*

(ii) IHS Standards Store, 15 Inverness Way East, Englewood, CO 80112; telephone: (877) 413–5184; Web site: *http://global.ihs.com;* or

(iii) TechStreet Store, 3916 Ranchero Dr., Ann Arbor, MI 48108; telephone: (877) 699–9277; Web site: *http://techstreet.com.*

* * * * *

Subpart E—[Amended]

■ 17. Amend § 1926.102 as follows:

■ a. Revise paragraphs (a)(1) thru (4).

■ b. Remove paragraphs (a)(5), (a)(7), (a)(8), and Tables E–1, E–2, and E–3.

■ c. Redesignate paragraph (a)(6) as (a)(5).

■ d. Revise paragraph (b).

■ e. Add paragraph (c).

The additions and revisions read as follows:

§ 1926.102 Eye and face protection.

(a) *General requirements.* (1) The employer shall ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

(2) The employer shall ensure that each affected employee uses eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors (*e.g.* clip-on or slide-on side shields) meeting the pertinent requirements of this section are acceptable.

(3) The employer shall ensure that each affected employee who wears prescription lenses while engaged in operations that involve eye hazards wears eye protection that incorporates the prescription in its design, or wears eye protection that can be worn over the prescription lenses without disturbing the proper position of the prescription lenses or the protective lenses.

(4) Eye and face PPE shall be distinctly marked to facilitate identification of the manufacturer.

* * * * *

(b) *Criteria for protective eye and face protection.* (1) Protective eye and face protection devices must comply with any of the following consensus standards:

(i) ANSI/ISEA Z87.1–2010, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1926.6;

(ii) ANSI Z87.1–2003, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1926.6; or

(iii) ANSI Z87.1–1989 (R–1998), Practice for Occupational and

Educational Eye and Face Protection, incorporated by reference in § 1926.6:

(2) Protective eye and face protection devices that the employer demonstrates are at least as effective as protective eye and face protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.

(c) *Protection against radiant energy*—(1) *Selection of shade numbers for welding filter.* Table E–1 shall be used as a guide for the selection of the proper shade numbers of filter lenses or plates used in welding. Shades more dense than those listed may be used to suit the individual's needs.

TABLE E–1—FILTER LENS SHADE NUMBERS FOR PROTECTION AGAINST RADIANT ENERGY

Welding operation	Shade number
Shielded metal-arc welding 1/16-, 3/32-, 1/8-, 5/32-inch diameter electrodes	10
Gas-shielded arc welding (nonferrous) 1/16-, 3/32-, 1/8-, 5/32-inch diameter electrodes	11
Gas-shielded arc welding (ferrous) 1/16-, 3/32-, 1/8-, 5/32-inch diameter electrodes	12
Shielded metal-arc welding 3/16-, 7/32-, 1/4-inch diameter electrodes	12
5/16-, 3/8-inch diameter electrodes	14
Atomic hydrogen welding	10–14
Carbon-arc welding	14
Soldering	2
Torch brazing	3 or 4
Light cutting, up to 1 inch	3 or 4
Medium cutting, 1 inch to 6 inches	4 or 5
Heavy cutting, over 6 inches	5 or 6
Gas welding (light), up to 1/8-inch	4 or 5
Gas welding (medium), 1/8-inch to 1/2-inch	5 or 6
Gas welding (heavy), over 1/2-inch	6 or 8

(2) *Laser protection.* (i) Employees whose occupation or assignment requires exposure to laser beams shall be furnished suitable laser safety goggles which will protect for the specific wavelength of the laser and be of optical density (O.D.) adequate for the energy involved. Table E–2 lists the maximum power or energy density for which adequate protection is afforded by glasses of optical densities from 5 through 8. Output levels falling between lines in this table shall require the higher optical density.

TABLE E–2—SELECTING LASER SAFETY GLASS

Intensity, CW maximum power density (watts/cm^2)	Attenuation	
	Optical density (O.D.)	Attenuation factor
10^{-2}	5	10^5
10^{-1}	6	10^6
1.0	7	10^7
10.0	8	10^8

(ii) All protective goggles shall bear a label identifying the following data:

(A) The laser wavelengths for which use is intended;

(B) The optical density of those wavelengths;

(C) The visible light transmission.

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COMMONWEALTH of VIRGINIA

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VIRGINIA SAFETY AND HEALTH CODES BOARD

BRIEFING PACKAGE

For September 13, 2016

Occupational Exposure to Respirable Crystalline Silica, Parts 1910, 1915, and 1926; Final Rule; and Other Related Standards

I. Action Requested

The Virginia Occupational Safety and Health (VOSH) Program requests the Safety and Health Codes Board to consider for adoption federal OSHA's Final Rule on the Occupational Exposure to Crystalline Silica, Parts 1910, 1915, and 1926 and Other Related Standards, as published on March 25, 2016 in 81 FR 16285.

The proposed effective date is December 1, 2016.

II. Summary of the Final Standard

A. General

Federal OSHA has amended its existing standards for occupational exposure to respirable crystalline silica. OSHA determined that employees exposed to respirable crystalline silica at the previous permissible exposure limits face a significant risk of material impairment to their health, such as developing silicosis and other non-malignant respiratory diseases, lung cancer, and kidney disease.

This final rule establishes a new permissible exposure limit (PEL) of 50 micrograms of respirable crystalline silica per cubic meter of air (50 $\mu g/m^3$) as an 8-hour time-weighted

average in all industries covered by the rule, with the exception of agricultural operations covered under Part 1928. (16287) It also includes other provisions to protect employees, such as requirements for exposure assessment, methods for controlling exposure, respiratory protection, medical surveillance, hazard communication, and recordkeeping.

Federal OSHA has issued two separate silica standards - one for general industry and maritime, and the other for construction - in order to tailor requirements to the circumstances found in these sectors. These rules are based on extensive review of peer-reviewed scientific evidence, current industry consensus standards, an extensive public outreach effort, and nearly a year of public comment, including several weeks of public hearings. They provide affordable and flexible strategies for employers to protect workers in their workplaces from the serious risks posed by silica exposure.

In paragraph (e) of §1910.1000, Air Contaminants, federal OSHA also amended Table Z-1 – Limits on Air Contaminants by revising the entries for "Silica, crystalline cristobalite, respirable dust; "Silica, crystalline quartz, respirable dust"; Silica, crystalline Tripoli (as quartz), respirable dust"; and "Silica, crystalline tridymite, respirable dust"; and by adding footnote 7, to reference Table Z-3 for the exposure limit for any operations or sectors where the exposure limit in §1910.1053 is stayed or is otherwise not in effect; and amending Table Z-3-Mineral Dusts - by revising the entries for "Silica: Crystalline Quartz (Respirable)", "Silica: Crystalline Cristobalite", and "Silica: Crystalline Tridymite"; and removing entries in columns 1,2, and 3 for "Silica: Crystalline Quartz (Total Dust)" and adding footnote f.

In §1926.55, Gases, Vapors, Fumes, Dusts, and Mists, federal OSHA amended Appendix A by revising entries for "Silica, crystalline cristobalite, respirable dust; "Silica, crystalline quartz, respirable dust"; Silica, crystalline tripoli (as quartz), respirable dust"; and "Silica, crystalline tridymite, respirable dust"; and by adding footnote 5, to reference Mineral Dusts table for the exposure limit for any operations or sectors where the exposure limit in §1926.1153 is stayed or is otherwise not in effect; and added footnote p which states that "This standard applies to any operations or sectors for which the respirable crystalline silica standard, 1926.1153, is stayed or otherwise is not in effect".

B. Uses for Silica

Crystalline silica is used in industry in a wide variety of applications. Sand and gravel are used in road building and concrete construction. Sand with greater than 98 percent silica is used in the manufacture of glass and ceramics. Silica sand is used to form molds for metal castings in foundries, and in abrasive blasting operations. Silica is also used as a filler in plastics, rubber, and paint, and as an abrasive in soaps and scouring cleansers. Silica sand is used to filter impurities from municipal water and sewage treatment plants, and in hydraulic fracturing for oil and gas recovery. Silica is also used to manufacture artificial stone products used as bathroom and kitchen countertops, and the silica content in those products can exceed 85 percent.

C. Silicosis

Silicosis is an irreversible, progressive disease induced by the inflammatory effects of respirable crystalline silica in the lung, leading to lung damage and scarring and, in some cases, progressing to complications resulting in disability and death. Exposure to respirable crystalline silica is the only known cause of silicosis. There are three types of silicosis:

- Acute silicosis following intense exposure to respirable dust of high crystalline silica content for a relatively short period, i.e., a few months or years;
- An accelerated form, resulting from about 5 to 15 years of heavy exposure to respirable dusts of high crystalline silica content; and,
- most commonly, a chronic form that typically follows less intense exposure of more than 20 years. Affected workers may have a dry chronic cough, sputum production, shortness of breath, and reduced pulmonary function. These symptoms result from airway restriction and/or obstruction caused by the development of fibrotic scarring in the alveolar sacs and lower region of the lung.

D. Health hazards caused by exposure to crystalline silicosis

OSHA concluded that employees exposed to respirable crystalline silica are at significant risk of developing silicosis and other non-malignant respiratory disease, lung cancer, kidney effects, and immune system effects. In addition to causing silicosis, exposure to crystalline silica has been associated with increased risks of other non-malignant respiratory diseases (NMRD), primarily chronic obstructive pulmonary disease (COPD), chronic bronchitis, and emphysema.

OSHA concluded that the PEL of 50 $\mu g/m^3$ reduces the significant risks of material impairments of health posed to workers by occupational exposure to respirable crystalline silica to the maximum extent that is technologically and economically feasible.

III. Key Provisions of the Respirable Crystalline Silicosis Final Rule

1910.1053(a) General Industry/Maritime: Standards cover all occupational exposures to respirable crystalline silica with the exception of agricultural operations covered under Part 1928. OSHA excludes exposures in general industry and maritime where the employer has objective data demonstrating that employee exposure to respirable crystalline silica will remain below 25 $\mu g/m^3$ as an 8-hour TWA under any foreseeable conditions. Also excluded are exposures resulting from processing of sorptive clays.

Construction: All occupational exposures to respirable crystalline silica are covered, unless employee exposure will remain below 25 $\mu g/m^3$ as an 8-hour TWA under any foreseeable conditions.

1926.1153(b): Construction – Competent Person:

- Construction employers must designate competent person to implement written exposure control plan
- "Competent person" is an individual capable of identifying existing and foreseeable respirable crystalline silica hazards, who has authorization to take prompt corrective measures
- Makes frequent and regular inspection of job sites, materials, and equipment

1926.1153(c) Specified Exposure Control Methods

- Employers who fully and properly implement the controls listed on Table 1 are not separately required to comply with PELs and are not subject to provisions for exposure assessment and methods of compliance.
- Employees are "engaged in the task" when operating the listed equipment, assisting with the task, or have some responsibility for the completion of the task
- Employees are not "engaged in the task" if they are only in the vicinity of a task

1910.1053(d) and 1926.1153(d)(2): Exposure Assessment

- Required if exposures are or may reasonably be expected to be at or above action level of $25\mu g/m^3$
- Exposures assessments can be done following:
- The performance option – exposure assessed using any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures
- The scheduled monitoring option – prescribes a schedule for performing initial and periodic personal monitoring

1910.1053(e) – Regulated Areas

- Required where exposures can reasonably be expected to exceed the PEL
- Must be demarcated in any manner that limits workers in the area
- Must post warning signs at entrances
- Respirator use required

1910.1053(f) and 1926.1153 (d)(3)(i)– Methods of Compliance

- Employers can use any engineering or work practice controls to limit exposures to the PEL
- Respirators permitted where PEL cannot be achieved with engineering and work practice controls

1910.1053(f)(2)(i) and 1926.1153(g)(1)– Written Exposure Control Plan

The plan must describe:

- Tasks involving exposure to respirable crystalline silica
- Engineering controls, work practices, and respiratory protections for each task
- Housekeeping measures used to limit exposure
- All of the above for construction plus the following specified exposure control methods:
    - Table 1 in the construction standard matches 18 tasks with effective dust control methods and, in some cases, respirator requirements

- Employers that fully and properly implement controls on Table 1 do not have to:
- Comply with the PEL
- Conduct exposure assessments for employees engaged in those tasks

1910.1053(g) Respiratory Protection

- Must comply with §1910.134
- Respirators required for exposures above the PEL:
  - While installing or implementing controls or work practices
  - For tasks where controls or work practices are not feasible
  - When feasible controls cannot reduce exposures to the PEL
  - While in a regulated area (General Industry/Maritime)

1926.1153(e) Construction Respiratory Protection - Requirements on Table 1

- Respirators required where exposures above the PEL are likely to persist despite full and proper implementation of the specified engineering and work practice controls
- Where respirators required, must be used by all employees engaged in the task for entire duration of the task
- Provisions specify how to determine when respirators are required for an employee engaged in more than one task

1910.1053(h) and 1926.1153(f) Housekeeping

- When it can contribute to exposure, employers must not allow:
  - Dry sweeping or brushing
  - Use of compressed air for cleaning surfaces or clothing, unless it is used with ventilation to capture the dust
- Those methods can be used if no other methods, like HEPA vacuums, wet sweeping, or use of ventilation with compressed air are feasible.

1910.1053(i) and 1926.1153(h) Medical Surveillance

- Employers must offer medical examinations to workers who will be exposed above the action level for 30 or more days a year
- Employers must offer examinations every three years to workers who continue to be exposed above the trigger
- Exam includes medical and work history, physical exam, chest X-ray, and pulmonary function test with a TB test on initial exam only
- Worker receives detailed report of medical findings

1910.1053(j) and 1926.1153(i) Communication of Hazards

- Employers are required to comply with hazard communication standard (HCS) §1910.1200
- Address: cancer, lung effects, immune system effects, and kidney effects as part of HCS
- Train workers on health hazards, tasks resulting in exposure, workplace protections, and medical surveillance

IV. Employer Responsibilities

A. General Industry and Maritime

The standard for general industry and maritime requires employers to:

- Measure the amount of silica that workers are exposed to if it may be at or above an action level of 25 µg/m3 (micrograms of silica per cubic meter of air), averaged over an 8-hour day;
- Protect workers from respirable crystalline silica exposures above the PEL of 50 µg/m3, averaged over an 8-hour day;
- Limit workers' access to areas where they could be exposed above the PEL;
- Use dust controls to protect workers from silica exposures above the PEL;
- Provide respirators to workers when dust controls cannot limit exposures to the PEL;
- Restrict housekeeping practices that expose workers to silica where feasible alternatives are available;
- Establish and implement a written exposure control plan that identifies tasks that involve exposure and methods used to protect worker;
- Offer medical exams – including chest X-rays and lung function tests 0 every three years for workers exposed at or above the action level for 30 or more days per year;
- Train workers on work operations that result in silica exposure and ways to limit exposure; and
- Keep records of workers' silica exposure and medical exams.

General industry and maritime employers must comply with all requirements of the standard by June 23, 2018, except for the following:

- **Medical surveillance** must be offered to employees who will be exposed at or above the action level for 30 or more days a year starting on June 23, 2020.
- **Hydraulic fracturing** operations in the oil and gas industry must implement engineering controls to limit exposures to the new PEL by June 23, 2021.

B. Construction Industry

Regardless of which exposure control method is used, all construction employers covered by the standard are required to:

- Establish and implement a written exposure control plan that identifies tasks that involve exposure and methods used to protect workers, including procedures to restrict access to work areas where high exposures may occur.
- Designate a competent person to implement the written exposure control plan.
- Restrict housekeeping practices that expose workers to silica where feasible alternatives are available.
- Offer medical exams – including chest X-rays and lung function tests – every three years for workers who are required by the standard to wear a respirator for 30 or more days per year.
- Train workers on work operations that result in silica exposure and ways to limit exposure.
- Keep records of workers' silica exposure and medical exams.

Employers who follow Table 1 correctly are not required to measure workers' exposure to silica and are not subject to the PEL. Table 1 matches common construction tasks with dust control methods so employers know exactly what they need to do to limit worker exposures to silica.

Construction employers must comply with all requirements of the standard by June 23, 2017, except requirements for laboratory evaluation of exposure samples, which begin on June 23, 2018.

C. Affected Industries (include NAICS & industries)

There are over 30 major industries and operations where exposures to crystalline silica can occur. They include such diverse workplaces as foundries, dental laboratories, concrete products and paint and coating manufacture, as well as construction activities including masonry cutting, drilling, grinding and tuckpointing, and use of heavy equipment during demolition activities involving silica-containing materials.

1. General Industry and Maritime

There are approximately 295,000 workers nationwide who are exposed to respirable crystalline silica in over 75,000 general industry and maritime workplaces. In Virginia, it is estimated that there are approximately, 8,000

workers who are exposed to respirable crystalline silica in over 2,000 general industry and maritime workplaces. Some of the affected industries include:

- Asphalt Roofing materials; Concrete products; Cut stone;
- Dental laboratories; Foundries; Jewelry; Porcelain enameling;
- Pottery; Railroads; Ready-Mix concrete;
- Shipyards; Structural Clay Products; and Support Activities for Oil and Gas operations

2. Construction Industry

OSHA estimates that there are approximately two million construction workers exposed to respirable crystalline silica in over 600,000 workplaces. OSHA also estimates that more than 840,000 of these workers are exposed to silica levels that exceed the new permissible limit.

Exposure in the construction industry can occur during common construction tasks, such as:

- Using masonry saws; grinders; drills; jackhammers and handheld powered chipping tools;
- Operating vehicle-mounted drilling rigs; milling; operating crushing machines; and
- Using heavy equipment for demolition or certain other tasks.

The construction standard does not apply where exposures will remain low under any foreseeable conditions; for example, when only performing tasks such as mixing mortar; pouring concrete footers, slab foundation and foundation walls; and removing concrete formwork.

V. Basis, Purpose and Impact of the Final Standard

A. Basis and History

In 1971, federal OSHA promulgated approximately 425 permissible exposure limits (PELs) for air contaminants, including crystalline silica. These standards had been adopted primarily from recommendations of the American Conference of Governmental Industrial Hygienists (ACGIH). The PELs for crystalline silica in the form of respirable quartz, expressed as time-weighted averages (TWAs) were approximately equivalent to 100 $\mu g/m^3$ for general industry and 250 $\mu g/m^3$ for construction and shipyards. The PELs were not supplemented by additional protective provisions – such as medical surveillance requirements – as are included in other OSHA standards.

Prior to the final rule, OSHA's PELs for silica were more than 40 years old, were based on research from the 1960's and earlier, did not adequately protect worker health and did not reflect more recent scientific evidence. Previous construction and shipyard PELs were based on an old method of measuring worker exposures to silica that is not used today. Those previous limits were inconsistent, allowing permissible levels for construction and shipyards to be more than twice as high as levels in general industry.

After a full review of scientific evidence, industry consensus standards, and extensive stakeholder input, OSHA published its Notice of Proposed Rulemaking (NPRM) for respirable crystalline silica in the *Federal Register* on September 12, 2013 (78 FR 56273). The rulemaking process allowed OSHA to solicit input in various forms for nearly a full year. OSHA held 14 days of public hearings in 2014, and heard testimony from over 200 stakeholders representing more than 70 organizations, such as public health groups, trade associations, and labor unions. OSHA also accepted over 2,000 comments, amounting to about 34,000 pages of material. In response to this extensive public engagement, OSHA made substantial changes to the standard for respirable crystalline silica.

B. Purpose

Exposure to crystalline silica has been shown to increase the risk of several serious diseases. Crystalline silica is the only known cause of silicosis, which is a progressive respiratory disease in which respirable crystalline silica particles cause an inflammatory reaction in the lungs, leading to lung damage and scarring, and, in some cases, to complications resulting in disability and death. OSHA's research demonstrated a significant relationship between exposure to crystalline silica and lung cancer mortality.

The final rule will reduce the numbers of fatalities and illnesses occurring among employees exposed to respirable crystalline silica in general industry, maritime, and construction sectors. This objective will be achieved by requiring employers to install engineering controls where appropriate and to provide employees with the equipment, respirators, training, exposure monitoring, medical surveillance, and other protective measures necessary for them to perform their jobs safely.

C. Impact on Employers

The final rule provides flexibility to help employers, especially small businesses, protect workers from silica exposure, with staggered compliance dates to ensure sufficient time to meet the requirements. Employers have from one to five years to get the right protections in place.

Additionally, the final rule includes flexible alternatives, especially useful for small employers. Employers can either use a control method provided in Table 1 of the Construction standard, or they can measure workers' exposure to silica and independently decide which dust controls work best to limit exposures to the PEL in their workplaces. For the most common tasks in construction, OSHA has spelled out in

Table 1 exactly how to best protect workers. If employers follow those specifications, they can be sure that they are providing their workers with the required level of protection. If they have better ideas about how to provide protection, they can do that, too – as long as they make sure that their methods effectively reduce their workers' exposure to silica dust.

OSHA determined that by employers improving or adding effective controls and work practices to reduce employee exposures to the PEL or below, these employers will reduce exposure variability, and this reduction will provide employers with greater confidence that they are in compliance with the revised PEL.

OSHA estimated that nationwide approximately 646,000 (Virginia estimate: approximately 17,000) small business or government entities would be affected by the silica standard. Within these small entities, approximately 1.4 million (Virginia estimate: approximately 38,000) workers are exposed to crystalline silica and would be protected by this final standard. OSHA also estimated that approximately 579,000 (Virginia estimate: approximately 16,000) very small entities would be affected by the silica standard. Within these very small entities, approximately 785,000 (Virginia estimate: approximately 21,000) workers nationwide are exposed to crystalline silica and would be protected by the standard.

OSHA made two changes to the scope of the rule that will minimize impacts for small business. OSHA eliminated from the scope of the rule exposures that result from the processing of sorptive clays. OSHA also rewrote the scope of the rule with respect to the coverage of employers whose employees are exposed to silica at levels below the action level. The final rule does not apply to employers in general industry and maritime where the employer has objective data demonstrating that employee exposure to respirable crystalline silica will remain below 25 $\mu g/m^3$ as an 8-hour time-weighted average under any foreseeable conditions, and does not apply in construction where employee exposure will remain below 25 $\mu g/m^3$ as an 8-hour time-weighted average under any foreseeable conditions.

OSHA expects that these changes may remove all compliance duties for some small businesses, possibly including carpenters, plumbers, and electricians, whose employees' only exposures to respirable crystalline silica is in small amounts for short-duration tasks that are performed infrequently.

D. Impact on Employees

The final rule will improve worker protection by:

- Reducing the permissible exposure limit for crystalline silica to 50 micrograms per cubic meter of air, averaged over an eight-hours shift;

- Requiring employers to use engineering controls, such as water or ventilation, and work practices to limit worker exposure; provide respiratory protection when

controls are not able to limit exposures to the permissible level; limit access to high exposure areas; train workers; and provide medical exams to highly exposed workers;

- Providing greater certainty and ease of compliance to construction employers , including many small employers, by including a table of specified controls they can follow to be in compliance, without having to monitor exposure;

- Staggering compliance dates to ensure employers have sufficient time to meet the requirements, e.g., extra time for the hydraulic fracturing (fracking) industry to install new engineering controls and for all general industry employers to offer medical surveillance to employees exposed between the PEL and 50 micrograms per cubic meter and the action level of 25 micrograms per cubic meter.

OSHA estimates that nationally there are approximately 2.3 million workers, including two million construction workers, who will be affected by the final silica rule. In Virginia it is estimated that 62,000 workers, including 54,000 Virginia construction workers who will be affected by the final rule.

OSHA estimates that nationally over 100,000 workers in general industry and maritime are exposed to silica levels that exceed the new permissible exposure (PEL); in Virginia, there are approximately 2,700 workers in general industry and maritime who are exposed to silica levels that exceed the new PEL.

E. Impact on the Department of Labor and Industry

It is anticipated that any impact on the Department resulting from adoption of these revised standards would be negligible. Any such costs would be related to training VOSH compliance staff on the standard.

Federal regulations 29 CFR 1953.23(a) and (b) require that Virginia, within six months of the occurrence of a federal program change, to adopt identical changes or promulgate equivalent changes which are at least as effective as the federal change. The Virginia Code reiterates this requirement in § 40.1-22(5). Adopting these revisions will allow Virginia to conform to the federal program change.

F. Benefits

OSHA intends the requirements for training on control measures, housekeeping, and other ancillary provisions of the rule to apply where those measures are used to limit exposures. The provision requiring exposure assessment in general industry is integral to determining the engineering controls and work practices needed to control employee exposure to the new PEL, to evaluate the effectiveness of the required engineering and work practice controls, and to determine whether additional controls must be instituted. In addition, monitoring is necessary to determine which respirator, if any, must be used by the employee, and it is also necessary for compliance purposes.

The requirement for regulated areas in general industry and maritime serves several important purposes, including alerting employees to the presence of respirable crystalline silica at levels above the PEL, restricting the number of people potentially exposed to respirable crystalline silica at levels above the PEL, and ensuring that those who must be exposed are properly protected. Similarly, the competent person requirement in the construction standard will protect bystanders by restricting access to work areas only when necessary, benefiting those bystanders through reduced exposures.

Written exposure control plans provide a systematic approach for ensuring proper function of engineering controls and effective work practices that can prevent overexposures from occurring. OSHA expects a written exposure control plan will be instrumental in ensuring that employers comprehensively and consistently protect their employees.

The medical surveillance provisions have the potential to protect workers through the early detection of silica-related illnesses and will enable employees to take actions in response to information about their health status gleaned from medical surveillance. Additionally, by requiring medical surveillance to general industry and maritime workers exposed at or above the action level, OSHA provides an incentive for employers to further reduce exposures, where possible, to avoid incurring the costs of medical surveillance.

OSHA estimates that the final rule will prevent 642 fatalities nationally each year, and in Virginia, 17 fatalities each year will be prevented. Once the final rule is fully effective, 918 silica-related illnesses will be prevented each year nationally; and in Virginia, approximately 25 silica-related illnesses will be prevented annually once the final rule is fully effective.

Average Annual Net Benefits over next 60 yrs	Nationally	Virginia
	$3.8B to $7.7B	$102M to 207M

G. Costs

For both construction and general industry/maritime, the estimated costs for the silica rule represent the additional costs necessary for employers to achieve full compliance with the new standard, assuming that all firms are compliant with the previous standard. The estimated costs do not include any costs necessary to achieve compliance with previous silica requirements, to the extent that some employers may not be fully complying with previously-applicable regulatory requirements. OSHA almost never assigns costs for reaching compliance with an already existing standard to a new standard addressing the same health issues. Nor are any costs associated with previously-achieved compliance with the new requirements included.

OSHA estimated that the standard will have a total cost of $1,029.8 billion per year. Of that total, OSHA estimated that the combined costs for employers in the general industry and maritime sectors to comply with the final silica rule will be approximately $370.8 million annually. These costs include $238.1 million annually for engineering controls and $10.5 million annually for respirators to meet the final PEL of 50 $\mu g/m^3$. The remaining $122.2 million annually are to meet the ancillary provisions of the final rule. These ancillary annual costs consist of $79.6 million for exposure monitoring; $29.7 million for medical surveillance; $6.0 million for familiarization and training; and $4.1 million for the written exposure control plan.

Annualized compliance costs in construction are expected to total $659.0 million, of which $423.4 million are for engineering controls, $22.4 million are for respirators, and $213.2 million are to meet the ancillary provisions of the rule. These ancillary annual costs consist of $416.5 million for exposure monitoring; $66.7 million for medical surveillance; $89.9 million for medical surveillance; $89.9 million for familiarization and training; and $40.1 million for the written exposure control plan.

OSHA estimates that nationally the rule will result in annual costs of approximately $1,524 for the average workplace covered by the rule. The annual cost to a firm with fewer than twenty employees averages about $560.

Provisions	Estimated Combined Annualized Nation-wide Costs for General Industry & Maritime	Estimated Combined Annualized Nation-wide Costs for Construction Industry	Estimated Combined Annualized **Virginia** Costs for General Industry & Maritime (~02.685%)*	Estimated Combined Annualized **Virginia** Costs for Construction (~02.685%)*
Engineering Controls (includes Abrasive Blasting) [to meet PEL of 50 $\mu g/m^3$]	$238.1M	$423.4M	$ 6.4M	$11.4M
Respirators [to meet PEL of 50 $\mu g/m^3$]	$ 10.5M	$ 22.4M	$ 282,000	$ 601,000
Ancillary provisions:				
Exposure Assessment	$ 79.6M	$ 16.5M	$ 2.1M	$ 443,000
Medical Surveillance (i)	$ 29.7M	$ 66.7M	$ 795,000	$ 1.8M
Familiarization and Training	$ 6.0M	$ 89.9M	$ 161,000	$ 2.4M
Regulated Area (e)(1)	$ 2.6M	N/A	$ 70,000	N/A
Written Exposure Control Plan (f)(2)	$ 4.1M	$ 40.1M	$ 110,000	$ 1.1M
Total Annualized Costs	$370.8M	$659.0M	$ 10M	$17.7M

H. Technological Feasibility

OSHA concluded that the PEL of 50 $\mu g/m^3$ is technologically feasible for most operations in all affected industries, although it will be a technological challenge for several affected sectors and will require the use of respirators for a limited number of job categories and tasks. Many employers are already implementing the necessary measures to protect their workers to meet the new standards since much of the technology is widely available and affordable.

Employers must use engineering controls and work practices as the primary methods to keep silica exposures at or below the PEL.

- Engineering controls include wetting down work operations or using local exhaust ventilation, such as vacuums, to keep silica-containing dust out of the air and out of workers' lungs. Another control method that may work well is enclosing an operation ("process isolation").

- Examples of work practices to control silica exposures include wetting down dust before sweeping it up or using the water flow rate recommended by the manufacturer for a tool with water controls. Such water-based dust suppression systems are commercially available from several vendors.

- Respirators are only allowed when engineering and work practice controls cannot maintain exposures at or below the PEL.

  Silica-exposed workers cannot wear respirators all of the time because respirators are not as protective as engineering controls, and they are not always as practical either because:

  - Respirators must be selected for each worker, individually fitted and periodically refitted, and regularly maintained, and unless filters and other parts are replaced as necessary; otherwise, workers will continue to be exposed to silica.
  - In many cases, workers using only respirators would also have to wear more extensive and expensive protection.
  - Even when respirators are selected, fitted, and maintained correctly, they must be worn consistently and correctly by workers to be effective.
  - Respirators can also be uncomfortable, especially in hot weather, and cannot be used by some workers.

  For construction, the standard includes Table 1, a flexible compliance option, which provides a list of common construction tasks, along with exposure control methods and work practices that work well for those tasks and can be used to comply with the requirements of the standard. Table 1 identifies 18 common construction tasks that generate high exposures to respirable crystalline silica and for each task. It also specifies engineering controls, work practices, and respiratory protection that effectively protect workers.

Employers who fully and properly implement the engineering controls, work practices, and respiratory protection specified for a task on Table 1 are not required to measure respirable crystalline silica exposures to verify that levels are at or below the PEL for workers engaged in the Table 1 task.

I. Economic Feasibility

Based on its analysis of economic impacts, OSHA concluded that the annualized costs as a percentage of annual revenues and as a percentage of annual profits are below the threshold level that could threaten the economic viability of any of the construction industries. OSHA, therefore, found that the final rule is economically feasible for each of the industries engaged in construction activities. OSHA added that, while there would be additional costs, not attributable to the final rule, for some employers in construction industries to come into compliance with the preceding silica standard, these costs would not affect OSHA's determination of the economic feasibility of the final rule.

J. Implementation/Compliance Schedule

Both standards contained in the final rule became effective nationally on June 23, 2016, and in Virginia, they become effective on December 1, 2016. Virginia plans to match federal OSHA's compliance schedule, whereby industries have one to five years to comply with most requirements, based on the following schedule:

For all operations in general industry and maritime, other than hydraulic fracturing operations in the oil and gas industry:

- Employers are required to comply with all obligations of the standard, with the exception of the action level trigger for medical surveillance, by June 23, 2018.
- Employers are required to offer medical examinations to employees exposed above the PEL for 30 or more days a year beginning on June 23, 2018.
- Employers are required to offer medical examinations to employees exposed at or above the action level for 30 or more days a year beginning on June 23, 2020.

For hydraulic fracturing operations in the oil and gas industry:

- Employers are required to comply with all obligations of the standard, except for engineering controls and the action level trigger for medical surveillance, by June 23, 2018.
- Employers are required to comply with requirements for engineering controls to limit exposures to the new PEL by June 23, 2021. From June 23, 2018 through June 23, 2021, employers can continue to have employees wear respirators if their exposures exceed the PEL.

- Employers are required to offer medical examinations to employees exposed above the PEL for 30 or more days beginning on June 23, 2018.

- Employers are required to offer medical examinations to employees exposed at or above the action level for 30 or more days a year beginning on June 23, 2020.

For all operations in Construction – June 23, 2017

- Employers are required to comply with all obligations of the standard by June 23, 2017, except for methods of sample analysis, in which compliance is required by June 23, 2018.

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RECOMMENDED ACTION

Staff of the Department of Labor and Industry recommends that the Safety and Health Codes Board adopt the Final Rule on the Occupational Exposure to Crystalline Silica, Parts 1910, 1915, and 1926 and Other Related Standards, as authorized by Virginia Code §§ 40.1-22(5) and 2.2-4006.A.4(c), with an effective date of December 1, 2016.

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 above-cited subsection A.4(c) of the Administrative Process Act.

Occupational Exposure to Respirable Crystalline Silica, Parts 1910, 1915, and 1926; Final Rule; and Other Related Standards

As Adopted by the

Safety and Health Codes Board

Date: _____

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

VIRGINIA OCCUPATIONAL SAFETY AND HEALTH PROGRAM

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

Effective Date: _____

16VAC25-90-1910.1053, Occupational Exposure to Respirable Crystalline Silica, 1910.1053;
16VAC25-120-1915.1053, Occupational Exposure to Respirable Crystalline Silica, 1915.1053;
16VAC25-175-1926.1153, Occupational Exposure to Respirable Crystalline Silica, 1926.1153;
16VAC25-90-1910.1000, Air Contaminants, 1910.1000
16VAC25-175-1926.55, Gases, Vapors, Fumes, Dusts, and Mists, 1926.55

When the regulations, as set forth in the Final Rule on the Occupational Exposure to Crystalline Silica, Parts 1910, 1915, and 1926 and Other Related Standards, are applied to the Commissioner of the Department of Labor and Industry and/or to Virginia employers, the following federal terms shall be considered to read as below:

Federal Terms	VOSH Equivalent
29 CFR	VOSH Standard
Assistant Secretary	Commissioner of Labor and Industry
Agency	Department
June 23, 2016 Except as provided for in paragraphs (l)(3) and (l)(4) of §1910.1053(l) and in §1926.1153(k) for construction.	December 1, 2016 Except as provided for in paragraphs (l)(3) and (l)(4) of §1910.1053(l) and in §1926.1153(k) for construction.

Amendments to Standards

For the reasons set forth in the preamble, 29 CFR parts 1910, 1915, and 1926, of the Code of Federal Regulations are amended as follows:

PART 1910—OCCUPATIONAL SAFETY AND HEALTH STANDARDS

Subpart Z—[Amended]

■ 2. In § 1910.1000, paragraph (e):
■ a. Amend Table Z–1—Limits on Air Contaminants by:
■ i. Revising the entries for "Silica, crystalline cristobalite, respirable dust"; "Silica, crystalline quartz, respirable dust"; Silica, crystalline tripoli (as quartz), respirable dust"; and "Silica, crystalline tridymite, respirable dust"; and
■ ii. Adding footnote 7.
■ b. Amend Table Z–3–Mineral Dusts by:
■ i. Revising the entries for "Silica: Crystalline Quartz (Respirable)", "Silica: Crystalline Cristobalite", and "Silica: Crystalline Tridymite";
■ ii. Removing entries in columns 1, 2, and 3 for "Silica: Crystalline Quartz (Total Dust)" and
■ iii. Adding footnote f.

The revisions and addition read as follows:

§ 1910.1000 Air contaminants.

* * * * *

The revisions and addition read as follows:

§ 1910.1000 Air contaminants.

* * * * *

TABLE Z–1—LIMITS FOR AIR CONTAMINANTS

Substance	CAS No. (c)	ppm(a) [1]	mg/m³(b) [1]	Skin designation
* * * *	*	*	*	*
Silica, crystalline, respirable dust				
Cristobalite; see 1910.1053 [7]	14464–46–1			
Quartz; see 1910.1053 [7]	14808–60–7			
Tripoli (as quartz); see 1910.1053 [7]	1317–95–9			
Tridymite; see 1910.1053 [7]	15468–32–3			
* * * *	*	*	*	*

* * * * * * *

[1] The PELs are 8-hour TWAs unless otherwise noted; a (C) designation denotes a ceiling limit. They are to be determined from breathing-zone air samples.

(a) Parts of vapor or gas per million parts of contaminated air by volume at 25 °C and 760 torr.

(b) Milligrams of substance per cubic meter of air. When entry is in this column only, the value is exact; when listed with a ppm entry, it is approximate.

(c) The CAS number is for information only. Enforcement is based on the substance name. For an entry covering more than one metal compound, measured as the metal, the CAS number for the metal is given—not CAS numbers for the individual compounds.

(d) The final benzene standard in 1910.1028 applies to all occupational exposures to benzene except in some circumstances the distribution and sale of fuels, sealed containers and pipelines, coke production, oil and gas drilling and production, natural gas processing, and the percentage exclusion for liquid mixtures; for the excepted subsegments, the benzene limits in Table Z–2 apply. See 1910.1028 for specific circumstances.

(e) This 8-hour TWA applies to respirable dust as measured by a vertical elutriator cotton dust sampler or equivalent instrument. The time-weighted average applies to the cotton waste processing operations of waste recycling (sorting, blending, cleaning and willowing) and garnetting. See also 1910.1043 for cotton dust limits applicable to other sectors.

(f) All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z–3.

* * * * * * *

[3] See Table Z–3.

* * * * * * *

[7] See Table Z–3 for the exposure limit for any operations or sectors where the exposure limit in § 1910.1053 is stayed or is otherwise not in effect.

* * * * * * *

TABLE Z–3—MINERAL DUSTS

Substance	mppcf [a]	mg/m³
Silica:		
Crystalline		

TABLE Z–3—MINERAL DUSTS—Continued

Substance	mppcf[a]	mg/m³
Quartz (Respirable)[f]	250[b] / %SiO_2+5	10 mg/m³[e] / % SiO_2+2
Cristobalite: Use ½ the value calculated from the count or mass formulae for quartz[f]		
Tridymite: Use ½ the value calculated from the formulae for quartz[f]		

[a] Millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques.

[b] The percentage of crystalline silica in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable.

[e] Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics:

Aerodynamic diameter (unit density sphere)	Percent passing selector
2	90
2.5	75
3.5	50
5.0	25
10	0

The measurements under this note refer to the use of an AEC (now NRC) instrument. The respirable fraction of coal dust is determined with an MRE; the figure corresponding to that of 2.4 mg/m³ in the table for coal dust is 4.5 mg/m³[K].

[f] This standard applies to any operations or sectors for which the respirable crystalline silica standard, 1910.1053, is stayed or is otherwise not in effect.

■ 4. Add § 1910.1053 to read as follows:

§ 1910.1053 Respirable Crystalline Silica.

(a) *Scope and application.* (1) This section applies to all occupational exposures to respirable crystalline silica, except:

(i) Construction work as defined in 29 CFR 1910.12(b) (occupational exposures to respirable crystalline silica in construction work are covered under 29 CFR 1926.1153);

(ii) Agricultural operations covered under 29 CFR part 1928; and

(iii) Exposures that result from the processing of sorptive clays.

(2) This section does not apply where the employer has objective data demonstrating that employee exposure to respirable crystalline silica will remain below 25 micrograms per cubic meter of air (25 μg/m³) as an 8-hour time-weighted average (TWA) under any foreseeable conditions.

(3) This section does not apply if the employer complies with 29 CFR 1926.1153 and:

(i) The task performed is indistinguishable from a construction task listed on Table 1 in paragraph (c) of 29 CFR 1926.1153; and

(ii) The task will not be performed regularly in the same environment and conditions.

(b) *Definitions.* For the purposes of this section the following definitions apply:

Action level means a concentration of airborne respirable crystalline silica of 25 μg/m³, calculated as an 8-hour TWA.

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Director means the Director of the National Institute for Occupational Safety and Health (NIOSH), U.S. Department of Health and Human Services, or designee.

Employee exposure means the exposure to airborne respirable crystalline silica that would occur if the employee were not using a respirator.

High-efficiency particulate air [HEPA] filter means a filter that is at least 99.97 percent efficient in removing mono-dispersed particles of 0.3 micrometers in diameter.

Objective data means information, such as air monitoring data from industry-wide surveys or calculations based on the composition of a substance, demonstrating employee exposure to respirable crystalline silica associated with a particular product or material or a specific process, task, or activity. The data must reflect workplace conditions closely resembling or with a higher exposure potential than the processes, types of material, control methods, work practices, and environmental conditions in the employer's current operations.

Physician or other licensed health care professional [PLHCP] means an individual whose legally permitted scope of practice (*i.e.*, license, registration, or certification) allows him or her to independently provide or be delegated the responsibility to provide some or all of the particular health care services required by paragraph (i) of this section.

Regulated area means an area, demarcated by the employer, where an employee's exposure to airborne concentrations of respirable crystalline silica exceeds, or can reasonably be expected to exceed, the PEL.

Respirable crystalline silica means quartz, cristobalite, and/or tridymite contained in airborne particles that are determined to be respirable by a sampling device designed to meet the characteristics for respirable-particle-size-selective samplers specified in the International Organization for Standardization (ISO) 7708:1995: Air Quality—Particle Size Fraction Definitions for Health-Related Sampling.

Specialist means an American Board Certified Specialist in Pulmonary Disease or an American Board Certified Specialist in Occupational Medicine.

This section means this respirable crystalline silica standard, 29 CFR 1910.1053.

(c) *Permissible exposure limit (PEL).* The employer shall ensure that no employee is exposed to an airborne concentration of respirable crystalline silica in excess of 50 μg/m³, calculated as an 8-hour TWA.

(d) *Exposure assessment*—(1) *General.* The employer shall assess the exposure of each employee who is or may reasonably be expected to be exposed to respirable crystalline silica at or above

the action level in accordance with either the performance option in paragraph (d)(2) or the scheduled monitoring option in paragraph (d)(3) of this section.

(2) *Performance option.* The employer shall assess the 8-hour TWA exposure for each employee on the basis of any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures to respirable crystalline silica.

(3) *Scheduled monitoring option.* (i) The employer shall perform initial monitoring to assess the 8-hour TWA exposure for each employee on the basis of one or more personal breathing zone air samples that reflect the exposures of employees on each shift, for each job classification, in each work area. Where several employees perform the same tasks on the same shift and in the same work area, the employer may sample a representative fraction of these employees in order to meet this requirement. In representative sampling, the employer shall sample the employee(s) who are expected to have the highest exposure to respirable crystalline silica.

(ii) If initial monitoring indicates that employee exposures are below the action level, the employer may discontinue monitoring for those employees whose exposures are represented by such monitoring.

(iii) Where the most recent exposure monitoring indicates that employee exposures are at or above the action level but at or below the PEL, the employer shall repeat such monitoring within six months of the most recent monitoring.

(iv) Where the most recent exposure monitoring indicates that employee exposures are above the PEL, the employer shall repeat such monitoring within three months of the most recent monitoring.

(v) Where the most recent (non-initial) exposure monitoring indicates that employee exposures are below the action level, the employer shall repeat such monitoring within six months of the most recent monitoring until two consecutive measurements, taken 7 or more days apart, are below the action level, at which time the employer may discontinue monitoring for those employees whose exposures are represented by such monitoring, except as otherwise provided in paragraph (d)(4) of this section.

(4) *Reassessment of exposures.* The employer shall reassess exposures whenever a change in the production, process, control equipment, personnel, or work practices may reasonably be expected to result in new or additional exposures at or above the action level, or when the employer has any reason to believe that new or additional exposures at or above the action level have occurred.

(5) *Methods of sample analysis.* The employer shall ensure that all samples taken to satisfy the monitoring requirements of paragraph (d) of this section are evaluated by a laboratory that analyzes air samples for respirable crystalline silica in accordance with the procedures in Appendix A to this section.

(6) *Employee notification of assessment results.* (i) Within 15 working days after completing an exposure assessment in accordance with paragraph (d) of this section, the employer shall individually notify each affected employee in writing of the results of that assessment or post the results in an appropriate location accessible to all affected employees.

(ii) Whenever an exposure assessment indicates that employee exposure is above the PEL, the employer shall describe in the written notification the corrective action being taken to reduce employee exposure to or below the PEL.

(7) *Observation of monitoring.* (i) Where air monitoring is performed to comply with the requirements of this section, the employer shall provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to respirable crystalline silica.

(ii) When observation of monitoring requires entry into an area where the use of protective clothing or equipment is required for any workplace hazard, the employer shall provide the observer with protective clothing and equipment at no cost and shall ensure that the observer uses such clothing and equipment.

(e) *Regulated areas*—(1) *Establishment.* The employer shall establish a regulated area wherever an employee's exposure to airborne concentrations of respirable crystalline silica is, or can reasonably be expected to be, in excess of the PEL.

(2) *Demarcation.* (i) The employer shall demarcate regulated areas from the rest of the workplace in a manner that minimizes the number of employees exposed to respirable crystalline silica within the regulated area.

(ii) The employer shall post signs at all entrances to regulated areas that bear the legend specified in paragraph (j)(2) of this section.

(3) *Access.* The employer shall limit access to regulated areas to:

(A) Persons authorized by the employer and required by work duties to be present in the regulated area;

(B) Any person entering such an area as a designated representative of employees for the purpose of exercising the right to observe monitoring procedures under paragraph (d) of this section; and

(C) Any person authorized by the Occupational Safety and Health Act or regulations issued under it to be in a regulated area.

(4) *Provision of respirators.* The employer shall provide each employee and the employee's designated representative entering a regulated area with an appropriate respirator in accordance with paragraph (g) of this section and shall require each employee and the employee's designated representative to use the respirator while in a regulated area.

(f) *Methods of compliance*—(1) *Engineering and work practice controls.* The employer shall use engineering and work practice controls to reduce and maintain employee exposure to respirable crystalline silica to or below the PEL, unless the employer can demonstrate that such controls are not feasible. Wherever such feasible engineering and work practice controls are not sufficient to reduce employee exposure to or below the PEL, the employer shall nonetheless use them to reduce employee exposure to the lowest feasible level and shall supplement them with the use of respiratory protection that complies with the requirements of paragraph (g) of this section.

(2) *Written exposure control plan.* (i) The employer shall establish and implement a written exposure control plan that contains at least the following elements:

(A) A description of the tasks in the workplace that involve exposure to respirable crystalline silica;

(B) A description of the engineering controls, work practices, and respiratory protection used to limit employee exposure to respirable crystalline silica for each task; and

(C) A description of the housekeeping measures used to limit employee exposure to respirable crystalline silica.

(ii) The employer shall review and evaluate the effectiveness of the written exposure control plan at least annually and update it as necessary.

(iii) The employer shall make the written exposure control plan readily available for examination and copying, upon request, to each employee covered by this section, their designated representatives, the Assistant Secretary and the Director.

(3) *Abrasive blasting.* In addition to the requirements of paragraph (f)(1) of this section, the employer shall comply

with other OSHA standards, when applicable, such as 29 CFR 1910.94 (Ventilation), 29 CFR 1915.34 (Mechanical paint removers), and 29 CFR 1915 Subpart I (Personal Protective Equipment), where abrasive blasting is conducted using crystalline silica-containing blasting agents, or where abrasive blasting is conducted on substrates that contain crystalline silica.

(g) *Respiratory protection*—(1) *General.* Where respiratory protection is required by this section, the employer must provide each employee an appropriate respirator that complies with the requirements of this paragraph and 29 CFR 1910.134. Respiratory protection is required:

(i) Where exposures exceed the PEL during periods necessary to install or implement feasible engineering and work practice controls;

(ii) Where exposures exceed the PEL during tasks, such as certain maintenance and repair tasks, for which engineering and work practice controls are not feasible;

(iii) During tasks for which an employer has implemented all feasible engineering and work practice controls and such controls are not sufficient to reduce exposures to or below the PEL; and

(iv) During periods when the employee is in a regulated area.

(2) *Respiratory protection program.* Where respirator use is required by this section, the employer shall institute a respiratory protection program in accordance with 29 CFR 1910.134.

(h) *Housekeeping.* (1) The employer shall not allow dry sweeping or dry brushing where such activity could contribute to employee exposure to respirable crystalline silica unless wet sweeping, HEPA-filtered vacuuming or other methods that minimize the likelihood of exposure are not feasible.

(2) The employer shall not allow compressed air to be used to clean clothing or surfaces where such activity could contribute to employee exposure to respirable crystalline silica unless:

(i) The compressed air is used in conjunction with a ventilation system that effectively captures the dust cloud created by the compressed air; or

(ii) No alternative method is feasible.

(i) *Medical surveillance*—(1) *General.* (i) The employer shall make medical surveillance available at no cost to the employee, and at a reasonable time and place, for each employee who will be occupationally exposed to respirable crystalline silica at or above the action level for 30 or more days per year.

(ii) The employer shall ensure that all medical examinations and procedures required by this section are performed by a PLHCP as defined in paragraph (b) of this section.

(2) *Initial examination.* The employer shall make available an initial (baseline) medical examination within 30 days after initial assignment, unless the employee has received a medical examination that meets the requirements of this section within the last three years. The examination shall consist of:

(i) A medical and work history, with emphasis on: Past, present, and anticipated exposure to respirable crystalline silica, dust, and other agents affecting the respiratory system; any history of respiratory system dysfunction, including signs and symptoms of respiratory disease (*e.g.*, shortness of breath, cough, wheezing); history of tuberculosis; and smoking status and history;

(ii) A physical examination with special emphasis on the respiratory system;

(iii) A chest X-ray (a single posteroanterior radiographic projection or radiograph of the chest at full inspiration recorded on either film (no less than 14 x 17 inches and no more than 16 x 17 inches) or digital radiography systems), interpreted and classified according to the International Labour Office (ILO) International Classification of Radiographs of Pneumoconioses by a NIOSH-certified B Reader;

(iv) A pulmonary function test to include forced vital capacity (FVC) and forced expiratory volume in one second (FEV_1) and FEV_1/FVC ratio, administered by a spirometry technician with a current certificate from a NIOSH-approved spirometry course;

(v) Testing for latent tuberculosis infection; and

(vi) Any other tests deemed appropriate by the PLHCP.

(3) *Periodic examinations.* The employer shall make available medical examinations that include the procedures described in paragraph (i)(2) of this section (except paragraph (i)(2)(v)) at least every three years, or more frequently if recommended by the PLHCP.

(4) *Information provided to the PLHCP.* The employer shall ensure that the examining PLHCP has a copy of this standard, and shall provide the PLHCP with the following information:

(i) A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to respirable crystalline silica;

(ii) The employee's former, current, and anticipated levels of occupational exposure to respirable crystalline silica;

(iii) A description of any personal protective equipment used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and

(iv) Information from records of employment-related medical examinations previously provided to the employee and currently within the control of the employer.

(5) *PLHCP's written medical report for the employee.* The employer shall ensure that the PLHCP explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of each medical examination performed. The written report shall contain:

(i) A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to respirable crystalline silica and any medical conditions that require further evaluation or treatment;

(ii) Any recommended limitations on the employee's use of respirators;

(iii) Any recommended limitations on the employee's exposure to respirable crystalline silica; and

(iv) A statement that the employee should be examined by a specialist (pursuant to paragraph (i)(7) of this section) if the chest X-ray provided in accordance with this section is classified as 1/0 or higher by the B Reader, or if referral to a specialist is otherwise deemed appropriate by the PLHCP.

(6) *PLHCP's written medical opinion for the employer.* (i) The employer shall obtain a written medical opinion from the PLHCP within 30 days of the medical examination. The written opinion shall contain only the following:

(A) The date of the examination;

(B) A statement that the examination has met the requirements of this section; and

(C) Any recommended limitations on the employee's use of respirators.

(ii) If the employee provides written authorization, the written opinion shall also contain either or both of the following:

(A) Any recommended limitations on the employee's exposure to respirable crystalline silica;

(B) A statement that the employee should be examined by a specialist (pursuant to paragraph (i)(7) of this section) if the chest X-ray provided in accordance with this section is classified as 1/0 or higher by the B Reader, or if referral to a specialist is

otherwise deemed appropriate by the PLHCP.

(iii) The employer shall ensure that each employee receives a copy of the written medical opinion described in paragraph (i)(6)(i) and (ii) of this section within 30 days of each medical examination performed.

(7) *Additional examinations.* (i) If the PLHCP's written medical opinion indicates that an employee should be examined by a specialist, the employer shall make available a medical examination by a specialist within 30 days after receiving the PLHCP's written opinion.

(ii) The employer shall ensure that the examining specialist is provided with all of the information that the employer is obligated to provide to the PLHCP in accordance with paragraph (i)(4) of this section.

(iii) The employer shall ensure that the specialist explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of the examination. The written report shall meet the requirements of paragraph (i)(5) (except paragraph (i)(5)(iv)) of this section.

(iv) The employer shall obtain a written opinion from the specialist within 30 days of the medical examination. The written opinion shall meet the requirements of paragraph (i)(6) (except paragraph (i)(6)(i)(B) and (i)(6)(ii)(B)) of this section.

(j) *Communication of respirable crystalline silica hazards to employees*—(1) *Hazard communication.* The employer shall include respirable crystalline silica in the program established to comply with the hazard communication standard (HCS) (29 CFR 1910.1200). The employer shall ensure that each employee has access to labels on containers of crystalline silica and safety data sheets, and is trained in accordance with the provisions of HCS and paragraph (j)(3) of this section. The employer shall ensure that at least the following hazards are addressed: Cancer, lung effects, immune system effects, and kidney effects.

(2) Signs. The employer shall post signs at all entrances to regulated areas that bear the following legend:

DANGER
RESPIRABLE CRYSTALLINE SILICA
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
WEAR RESPIRATORY PROTECTION IN THIS AREA
AUTHORIZED PERSONNEL ONLY

(3) *Employee information and training.* (i) The employer shall ensure that each employee covered by this section can demonstrate knowledge and understanding of at least the following:

(A) The health hazards associated with exposure to respirable crystalline silica;

(B) Specific tasks in the workplace that could result in exposure to respirable crystalline silica;

(C) Specific measures the employer has implemented to protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, and respirators to be used;

(D) The contents of this section; and

(E) The purpose and a description of the medical surveillance program required by paragraph (i) of this section.

(ii) The employer shall make a copy of this section readily available without cost to each employee covered by this section.

(k) *Recordkeeping*—(1) *Air monitoring data.* (i) The employer shall make and maintain an accurate record of all exposure measurements taken to assess employee exposure to respirable crystalline silica, as prescribed in paragraph (d) of this section.

(ii) This record shall include at least the following information:

(A) The date of measurement for each sample taken;

(B) The task monitored;

(C) Sampling and analytical methods used;

(D) Number, duration, and results of samples taken;

(E) Identity of the laboratory that performed the analysis;

(F) Type of personal protective equipment, such as respirators, worn by the employees monitored; and

(G) Name, social security number, and job classification of all employees represented by the monitoring, indicating which employees were actually monitored.

(iii) The employer shall ensure that exposure records are maintained and made available in accordance with 29 CFR 1910.1020.

(2) *Objective data.* (i) The employer shall make and maintain an accurate record of all objective data relied upon to comply with the requirements of this section.

(ii) This record shall include at least the following information:

(A) The crystalline silica-containing material in question;

(B) The source of the objective data;

(C) The testing protocol and results of testing;

(D) A description of the process, task, or activity on which the objective data were based; and

(E) Other data relevant to the process, task, activity, material, or exposures on which the objective data were based.

(iii) The employer shall ensure that objective data are maintained and made available in accordance with 29 CFR 1910.1020.

(3) *Medical surveillance.* (i) The employer shall make and maintain an accurate record for each employee covered by medical surveillance under paragraph (i) of this section.

(ii) The record shall include the following information about the employee:

(A) Name and social security number;

(B) A copy of the PLHCPs' and specialists' written medical opinions; and

(C) A copy of the information provided to the PLHCPs and specialists.

(iii) The employer shall ensure that medical records are maintained and made available in accordance with 29 CFR 1910.1020.

(l) *Dates.* (1) This section is effective June 23, 2016.

(2) Except as provided for in paragraphs (l)(3) and (4) of this section, all obligations of this section commence June 23, 2018.

(3) For hydraulic fracturing operations in the oil and gas industry:

(i) All obligations of this section, except obligations for medical surveillance in paragraph (i)(1)(i) and engineering controls in paragraph (f)(1) of this section, commence June 23, 2018;

(ii) Obligations for engineering controls in paragraph (f)(1) of this section commence June 23, 2021; and

(iii) Obligations for medical surveillance in paragraph (i)(1)(i) commence in accordance with paragraph (l)(4) of this section.

(4) The medical surveillance obligations in paragraph (i)(1)(i) commence on June 23, 2018, for employees who will be occupationally exposed to respirable crystalline silica above the PEL for 30 or more days per year. Those obligations commence June 23, 2020, for employees who will be occupationally exposed to respirable crystalline silica at or above the action level for 30 or more days per year.

Appendix A to § 1910.1053—Methods of Sample Analysis

This appendix specifies the procedures for analyzing air samples for respirable crystalline silica, as well as the quality control procedures that employers must ensure that laboratories use when performing an analysis required under 29 CFR 1910.1053 (d)(5). Employers must ensure that such a laboratory:

1. Evaluates all samples using the procedures specified in one of the following analytical methods: OSHA ID–142; NMAM 7500; NMAM 7602; NMAM 7603; MSHA P–2; or MSHA P–7;

2. Is accredited to ANS/ISO/IEC Standard 17025:2005 with respect to crystalline silica analyses by a body that is compliant with ISO/IEC Standard 17011:2004 for implementation of quality assessment programs;

3. Uses the most current National Institute of Standards and Technology (NIST) or NIST traceable standards for instrument calibration or instrument calibration verification;

4. Implements an internal quality control (QC) program that evaluates analytical uncertainty and provides employers with estimates of sampling and analytical error;

5. Characterizes the sample material by identifying polymorphs of respirable crystalline silica present, identifies the presence of any interfering compounds that might affect the analysis, and makes any corrections necessary in order to obtain accurate sample analysis; and

6. Analyzes quantitatively for crystalline silica only after confirming that the sample matrix is free of uncorrectable analytical interferences, corrects for analytical interferences, and uses a method that meets the following performance specifications:

6.1 Each day that samples are analyzed, performs instrument calibration checks with standards that bracket the sample concentrations;

6.2 Uses five or more calibration standard levels to prepare calibration curves and ensures that standards are distributed through the calibration range in a manner that accurately reflects the underlying calibration curve; and

6.3 Optimizes methods and instruments to obtain a quantitative limit of detection that represents a value no higher than 25 percent of the PEL based on sample air volume.

Appendix B to § 1910.1053—Medical Surveillance Guidelines

Introduction

The purpose of this Appendix is to provide medical information and recommendations to aid physicians and other licensed health care professionals (PLHCPs) regarding compliance with the medical surveillance provisions of the respirable crystalline silica standard (29 CFR 1910.1053). Appendix B is for informational and guidance purposes only and none of the statements in Appendix B should be construed as imposing a mandatory requirement on employers that is not otherwise imposed by the standard.

Medical screening and surveillance allow for early identification of exposure-related health effects in individual employee and groups of employees, so that actions can be taken to both avoid further exposure and prevent or address adverse health outcomes. Silica-related diseases can be fatal, encompass a variety of target organs, and may have public health consequences when considering the increased risk of a latent tuberculosis (TB) infection becoming active. Thus, medical surveillance of silica-exposed employees requires that PLHCPs have a thorough knowledge of silica-related health effects.

This Appendix is divided into seven sections. Section 1 reviews silica-related diseases, medical responses, and public health responses. Section 2 outlines the components of the medical surveillance program for employees exposed to silica. Section 3 describes the roles and responsibilities of the PLHCP implementing the program and of other medical specialists and public health professionals. Section 4 provides a discussion of considerations, including confidentiality. Section 5 provides a list of additional resources and Section 6 lists references. Section 7 provides sample forms for the written medical report for the employee, the written medical opinion for the employer and the written authorization.

1. Recognition of Silica-Related Diseases

1.1. Overview. The term "silica" refers specifically to the compound silicon dioxide (SiO_2). Silica is a major component of sand, rock, and mineral ores. Exposure to fine (respirable size) particles of crystalline forms of silica is associated with adverse health effects, such as silicosis, lung cancer, chronic obstructive pulmonary disease (COPD), and activation of latent TB infections. Exposure to respirable crystalline silica can occur in industry settings such as foundries, abrasive blasting operations, paint manufacturing, glass and concrete product manufacturing, brick making, china and pottery manufacturing, manufacturing of plumbing fixtures, and many construction activities including highway repair, masonry, concrete work, rock drilling, and tuck-pointing. New uses of silica continue to emerge. These include countertop manufacturing, finishing, and installation (Kramer *et al.* 2012; OSHA 2015) and hydraulic fracturing in the oil and gas industry (OSHA 2012).

Silicosis is an irreversible, often disabling, and sometimes fatal fibrotic lung disease. Progression of silicosis can occur despite removal from further exposure. Diagnosis of silicosis requires a history of exposure to silica and radiologic findings characteristic of silica exposure. Three different presentations of silicosis (chronic, accelerated, and acute) have been defined. Accelerated and acute silicosis are much less common than chronic silicosis. However, it is critical to recognize all cases of accelerated and acute silicosis because these are life-threatening illnesses and because they are caused by substantial overexposures to respirable crystalline silica. Although any case of silicosis indicates a breakdown in prevention, a case of acute or accelerated silicosis implies current high exposure and a very marked breakdown in prevention.

In addition to silicosis, employees exposed to respirable crystalline silica, especially those with accelerated or acute silicosis, are at increased risks of contracting active TB and other infections (ATS 1997; Rees and Murray 2007). Exposure to respirable crystalline silica also increases an employee's risk of developing lung cancer, and the higher the cumulative exposure, the higher the risk (Steenland *et al.* 2001; Steenland and Ward 2014). Symptoms for these diseases and other respirable crystalline silica-related diseases are discussed below.

1.2. Chronic Silicosis. Chronic silicosis is the most common presentation of silicosis and usually occurs after at least 10 years of exposure to respirable crystalline silica. The clinical presentation of chronic silicosis is:

1.2.1. Symptoms—shortness of breath and cough, although employees may not notice any symptoms early in the disease. Constitutional symptoms, such as fever, loss of appetite and fatigue, may indicate other diseases associated with silica exposure, such as TB infection or lung cancer. Employees with these symptoms should immediately receive further evaluation and treatment.

1.2.2. Physical Examination—may be normal or disclose dry rales or rhonchi on lung auscultation.

1.2.3. Spirometry—may be normal or may show only a mild restrictive or obstructive pattern.

1.2.4. Chest X-ray—classic findings are small, rounded opacities in the upper lung fields bilaterally. However, small irregular opacities and opacities in other lung areas can also occur. Rarely, "eggshell calcifications" in the hilar and mediastinal lymph nodes are seen.

1.2.5. Clinical Course—chronic silicosis in most cases is a slowly progressive disease. Under the respirable crystalline silica standard, the PLHCP is to recommend that employees with a 1/0 category X-ray be referred to an American Board Certified Specialist in Pulmonary Disease or Occupational Medicine. The PLHCP and/or Specialist should counsel employees regarding work practices and personal habits that could affect employees' respiratory health.

1.3. Accelerated Silicosis. Accelerated silicosis generally occurs within 5–10 years of exposure and results from high levels of exposure to respirable crystalline silica. The clinical presentation of accelerated silicosis is:

1.3.1. Symptoms—shortness of breath, cough, and sometimes sputum production. Employees with exposure to respirable crystalline silica, and especially those with accelerated silicosis, are at high risk for activation of TB infections, atypical mycobacterial infections, and fungal superinfections. Constitutional symptoms, such as fever, weight loss, hemoptysis (coughing up blood), and fatigue may herald one of these infections or the onset of lung cancer.

1.3.2. Physical Examination—rales, rhonchi, or other abnormal lung findings in relation to illnesses present. Clubbing of the digits, signs of heart failure, and cor pulmonale may be present in severe lung disease.

1.3.3. Spirometry—restrictive or mixed restrictive/obstructive pattern.

1.3.4. Chest X-ray—small rounded and/or irregular opacities bilaterally. Large opacities and lung abscesses may indicate infections, lung cancer, or progression to complicated silicosis, also termed progressive massive fibrosis.

1.3.5. Clinical Course—accelerated silicosis has a rapid, severe course. Under the respirable crystalline silica standard, the PLHCP can recommend referral to a Board Certified Specialist in either Pulmonary Disease or Occupational Medicine, as deemed appropriate, and referral to a Specialist is recommended whenever the diagnosis of accelerated silicosis is being considered.

1.4. Acute Silicosis. Acute silicosis is a rare disease caused by inhalation of extremely high levels of respirable crystalline silica particles. The pathology is similar to alveolar proteinosis with lipoproteinaceous material accumulating in the alveoli. Acute silicosis develops rapidly, often, within a few months to less than 2 years of exposure, and is almost always fatal. The clinical presentation of acute silicosis is as follows:

1.4.1. Symptoms—sudden, progressive, and severe shortness of breath. Constitutional symptoms are frequently present and include fever, weight loss, fatigue, productive cough, hemoptysis (coughing up blood), and pleuritic chest pain.

1.4.2. Physical Examination—dyspnea at rest, cyanosis, decreased breath sounds, inspiratory rales, clubbing of the digits, and fever.

1.4.3. Spirometry—restrictive or mixed restrictive/obstructive pattern.

1.4.4. Chest X-ray—diffuse haziness of the lungs bilaterally early in the disease. As the disease progresses, the "ground glass" appearance of interstitial fibrosis will appear.

1.4.5. Clinical Course—employees with acute silicosis are at especially high risk of TB activation, nontuberculous mycobacterial infections, and fungal superinfections. Acute silicosis is immediately life-threatening. The employee should be urgently referred to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine for evaluation and treatment. Although any case of silicosis indicates a breakdown in prevention, a case of acute or accelerated silicosis implies a profoundly high level of silica exposure and may mean that other employees are currently exposed to dangerous levels of silica.

1.5. COPD. COPD, including chronic bronchitis and emphysema, has been documented in silica-exposed employees, including those who do not develop silicosis. Periodic spirometry tests are performed to evaluate each employee for progressive changes consistent with the development of COPD. In addition to evaluating spirometry results of individual employees over time, PLHCPs may want to be aware of general trends in spirometry results for groups of employees from the same workplace to identify possible problems that might exist at that workplace. (*See* Section 2 of this Appendix on Medical Surveillance for further discussion.) Heart disease may develop secondary to lung diseases such as COPD. A recent study by Liu *et al.* 2014 noted a significant exposure-response trend between cumulative silica exposure and heart disease deaths, primarily due to pulmonary heart disease, such as cor pulmonale.

1.6. Renal and Immune System. Silica exposure has been associated with several types of kidney disease, including glomerulonephritis, nephrotic syndrome, and end stage renal disease requiring dialysis. Silica exposure has also been associated with other autoimmune conditions, including progressive systemic sclerosis, systemic lupus erythematosus, and rheumatoid arthritis. Studies note an association between employees with silicosis and serologic markers for autoimmune diseases, including antinuclear antibodies, rheumatoid factor, and immune complexes (Jalloul and Banks 2007; Shtraichman *et al.* 2015).

1.7. TB and Other Infections. Silica-exposed employees with latent TB are 3 to 30 times more likely to develop active pulmonary TB infection (ATS 1997; Rees and Murray 2007). Although respirable crystalline silica exposure does not cause TB infection, individuals with latent TB infection are at increased risk for activation of disease if they have higher levels of respirable crystalline silica exposure, greater profusion of radiographic abnormalities, or a diagnosis of silicosis. Demographic characteristics, such as immigration from some countries, are associated with increased rates of latent TB infection. PLHCPs can review the latest Centers for Disease Control and Prevention (CDC) information on TB incidence rates and high risk populations online (*See* Section 5 of this Appendix). Additionally, silica-exposed employees are at increased risk for contracting nontuberculous mycobacterial infections, including *Mycobacterium avium-intracellulare* and *Mycobacterium kansaii.*

1.8. Lung Cancer. The National Toxicology Program has listed respirable crystalline silica as a known human carcinogen since 2000 (NTP 2014). The International Agency for Research on Cancer (2012) has also classified silica as Group 1 (carcinogenic to humans). Several studies have indicated that the risk of lung cancer from exposure to respirable crystalline silica and smoking is greater than additive (Brown 2009; Liu *et al.* 2013). Employees should be counseled on smoking cessation.

2. Medical Surveillance

PLHCPs who manage silica medical surveillance programs should have a thorough understanding of the many silica-related diseases and health effects outlined in Section 1 of this Appendix. At each clinical encounter, the PLHCP should consider silica-related health outcomes, with particular vigilance for acute and accelerated silicosis. In this Section, the required components of medical surveillance under the respirable crystalline silica standard are reviewed, along with additional guidance and recommendations for PLHCPs performing medical surveillance examinations for silica-exposed employees.

2.1. History

2.1.1. The respirable crystalline silica standard requires the following: A medical and work history, with emphasis on: Past, present, and anticipated exposure to respirable crystalline silica, dust, and other agents affecting the respiratory system; any history of respiratory system dysfunction, including signs and symptoms of respiratory disease (*e.g.*, shortness of breath, cough, wheezing); history of TB; and smoking status and history.

2.1.2. Further, the employer must provide the PLHCP with the following information:

2.1.2.1. A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to respirable crystalline silica;

2.1.2.2. The employee's former, current, and anticipated levels of occupational exposure to respirable crystalline silica;

2.1.2.3. A description of any personal protective equipment used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and

2.1.2.4. Information from records of employment-related medical examinations previously provided to the employee and currently within the control of the employer.

2.1.3. Additional guidance and recommendations: A history is particularly important both in the initial evaluation and in periodic examinations. Information on past and current medical conditions (particularly a history of kidney disease, cardiac disease, connective tissue disease, and other immune diseases), medications, hospitalizations and surgeries may uncover health risks, such as immune suppression, that could put an employee at increased health risk from exposure to silica. This information is important when counseling the employee on risks and safe work practices related to silica exposure.

2.2. Physical Examination

2.2.1. The respirable crystalline silica standard requires the following: A physical examination, with special emphasis on the respiratory system. The physical examination must be performed at the initial examination and every three years thereafter.

2.2.2. Additional guidance and recommendations: Elements of the physical examination that can assist the PHLCP include: An examination of the cardiac system, an extremity examination (for clubbing, cyanosis, edema, or joint abnormalities), and an examination of other pertinent organ systems identified during the history.

2.3. TB Testing

2.3.1. The respirable crystalline silica standard requires the following: Baseline testing for TB on initial examination.

2.3.2. Additional guidance and recommendations:

2.3.2.1. Current CDC guidelines (*See* Section 5 of this Appendix) should be followed for the application and interpretation of Tuberculin skin tests (TST). The interpretation and documentation of TST reactions should be performed within 48 to 72 hours of administration by trained PLHCPs.

2.3.2.2. PLHCPs may use alternative TB tests, such as interferon-γ release assays (IGRAs), if sensitivity and specificity are comparable to TST (Mazurek *et al.* 2010; Slater *et al.* 2013). PLHCPs can consult the current CDC guidelines for acceptable tests for latent TB infection.

2.3.2.3. The silica standard allows the PLHCP to order additional tests or test at a greater frequency than required by the standard, if deemed appropriate. Therefore, PLHCPs might perform periodic (*e.g.*, annual) TB testing as appropriate, based on employees' risk factors. For example, according to the American Thoracic Society (ATS), the diagnosis of silicosis or exposure to silica for 25 years or more are indications for annual TB testing (ATS 1997). PLHCPs

should consult the current CDC guidance on risk factors for TB (*See* Section 5 of this Appendix).

2.3.2.4. Employees with positive TB tests and those with indeterminate test results should be referred to the appropriate agency or specialist, depending on the test results and clinical picture. Agencies, such as local public health departments, or specialists, such as a pulmonary or infectious disease specialist, may be the appropriate referral. Active TB is a nationally notifiable disease. PLHCPs should be aware of the reporting requirements for their region. All States have TB Control Offices that can be contacted for further information. (*See* Section 5 of this Appendix for links to CDC's TB resources and State TB Control Offices.)

2.3.2.5. The following public health principles are key to TB control in the U.S. (ATS–CDC–IDSA 2005):

(*1*) Prompt detection and reporting of persons who have contracted active TB;

(*2*) Prevention of TB spread to close contacts of active TB cases;

(*3*) Prevention of active TB in people with latent TB through targeted testing and treatment; and

(*4*) Identification of settings at high risk for TB transmission so that appropriate infection-control measures can be implemented.

2.4. Pulmonary Function Testing

2.4.1. The respirable crystalline silica standard requires the following: Pulmonary function testing must be performed on the initial examination and every three years thereafter. The required pulmonary function test is spirometry and must include forced vital capacity (FVC), forced expiratory volume in one second (FEV_1), and FEV_1/FVC ratio. Testing must be administered by a spirometry technician with a current certificate from a National Institute for Occupational Health and Safety (NIOSH)-approved spirometry course.

2.4.2. Additional guidance and recommendations: Spirometry provides information about individual respiratory status and can be used to track an employee's respiratory status over time or as a surveillance tool to follow individual and group respiratory function. For quality results, the ATS and the American College of Occupational and Environmental Medicine (ACOEM) recommend use of the third National Health and Nutrition Examination Survey (NHANES III) values, and ATS publishes recommendations for spirometry equipment (Miller *et al.* 2005; Townsend 2011; Redlich *et al.* 2014). OSHA's publication, *Spirometry Testing in Occupational Health Programs: Best Practices for Healthcare Professionals,* provides helpful guidance (See Section 5 of this Appendix). Abnormal spirometry results may warrant further clinical evaluation and possible recommendations for limitations on the employee's exposure to respirable crystalline silica.

2.5. Chest X-ray

2.5.1. The respirable crystalline silica standard requires the following: A single posteroanterior (PA) radiographic projection or radiograph of the chest at full inspiration recorded on either film (no less than 14 x 17 inches and no more than 16 x 17 inches) or digital radiography systems. A chest X-ray must be performed on the initial examination and every three years thereafter. The chest X-ray must be interpreted and classified according to the International Labour Office (ILO) International Classification of Radiographs of Pneumoconioses by a NIOSH-certified B Reader.

Chest radiography is necessary to diagnose silicosis, monitor the progression of silicosis, and identify associated conditions such as TB. If the B reading indicates small opacities in a profusion of 1/0 or higher, the employee is to receive a recommendation for referral to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine.

2.5.2. Additional guidance and recommendations: Medical imaging has largely transitioned from conventional film-based radiography to digital radiography systems. The ILO Guidelines for the Classification of Pneumoconioses has historically provided film-based chest radiography as a referent standard for comparison to individual exams. However, in 2011, the ILO revised the guidelines to include a digital set of referent standards that were derived from the prior film-based standards. To assist in assuring that digitally-acquired radiographs are at least as safe and effective as film radiographs, NIOSH has prepared guidelines, based upon accepted contemporary professional recommendations (*See* Section 5 of this Appendix). Current research from Laney *et al.* 2011 and Halldin *et al.* 2014 validate the use of the ILO digital referent images. Both studies conclude that the results of pneumoconiosis classification using digital references are comparable to film-based ILO classifications. Current ILO guidance on radiography for pneumoconioses and B-reading should be reviewed by the PLHCP periodically, as needed, on the ILO or NIOSH Web sites (*See* Section 5 of this Appendix).

2.6. Other Testing. Under the respirable crystalline silica standards, the PLHCP has the option of ordering additional testing he or she deems appropriate. Additional tests can be ordered on a case-by-case basis depending on individual signs or symptoms and clinical judgment. For example, if an employee reports a history of abnormal kidney function tests, the PLHCP may want to order a baseline renal function tests (*e.g.*, serum creatinine and urinalysis). As indicated above, the PLHCP may order annual TB testing for silica-exposed employees who are at high risk of developing active TB infections. Additional tests that PLHCPs may order based on findings of medical examinations include, but is not limited to, chest computerized tomography (CT) scan for lung cancer or COPD, testing for immunologic diseases, and cardiac testing for pulmonary-related heart disease, such as cor pulmonale.

3. Roles and Responsibilities

3.1. PLHCP. The PLHCP designation refers to "an individual whose legally permitted scope of practice (*i.e.*, license, registration, or certification) allows him or her to independently provide or be delegated the responsibility to provide some or all of the particular health care services required" by the respirable crystalline silica standard. The legally permitted scope of practice for the PLHCP is determined by each State. PLHCPs who perform clinical services for a silica medical surveillance program should have a thorough knowledge of respirable crystalline silica-related diseases and symptoms. Suspected cases of silicosis, advanced COPD, or other respiratory conditions causing impairment should be promptly referred to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine.

Once the medical surveillance examination is completed, the employer must ensure that the PLHCP explains to the employee the results of the medical examination and provides the employee with a written medical report within 30 days of the examination. The written medical report must contain a statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to respirable crystalline silica and any medical conditions that require further evaluation or treatment. In addition, the PLHCP's written medical report must include any recommended limitations on the employee's use of respirators, any recommended limitations on the employee's exposure to respirable crystalline silica, and a statement that the employee should be examined by a Board Certified Specialist in Pulmonary Disease or Occupational medicine if the chest X-ray is classified as 1/0 or higher by the B Reader, or if referral to a Specialist is otherwise deemed appropriate by the PLHCP.

The PLHCP should discuss all findings and test results and any recommendations regarding the employee's health, worksite safety and health practices, and medical referrals for further evaluation, if indicated. In addition, it is suggested that the PLHCP offer to provide the employee with a complete copy of their examination and test results, as some employees may want this information for their own records or to provide to their personal physician or a future PLHCP. Employees are entitled to access their medical records.

Under the respirable crystalline silica standard, the employer must ensure that the PLHCP provides the employer with a written medical opinion within 30 days of the employee examination, and that the employee also gets a copy of the written medical opinion for the employer within 30 days. The PLHCP may choose to directly provide the employee a copy of the written medical opinion. This can be particularly helpful to employees, such as construction employees, who may change employers frequently. The written medical opinion can be used by the employee as proof of up-to-date medical surveillance. The following lists the elements of the written medical report for the employee and written medical opinion for the employer. (Sample forms for the written medical report for the employee, the written medical opinion for the employer, and the written authorization are provided in Section 7 of this Appendix.)

3.1.1. The written medical report for the employee must include the following information:

3.1.1.1. A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to respirable crystalline silica and any medical conditions that require further evaluation or treatment;

3.1.1.2. Any recommended limitations upon the employee's use of a respirator;

3.1.1.3. Any recommended limitations on the employee's exposure to respirable crystalline silica; and

3.1.1.4. A statement that the employee should be examined by a Board Certified Specialist in Pulmonary Disease or Occupational Medicine, where the standard requires or where the PLHCP has determined such a referral is necessary. The standard requires referral to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine for a chest X-ray B reading indicating small opacities in a profusion of 1/0 or higher, or if the PHLCP determines that referral to a Specialist is necessary for other silica-related findings.

3.1.2. The PLHCP's written medical opinion for the employer must include only the following information:

3.1.2.1. The date of the examination;

3.1.2.2. A statement that the examination has met the requirements of this section; and

3.1.2.3. Any recommended limitations on the employee's use of respirators.

3.1.2.4. If the employee provides the PLHCP with written authorization, the written opinion for the employer shall also contain either or both of the following:

(1) Any recommended limitations on the employee's exposure to respirable crystalline silica; and

(2) A statement that the employee should be examined by a Board Certified Specialist in Pulmonary Disease or Occupational Medicine if the chest X-ray provided in accordance with this section is classified as 1/0 or higher by the B Reader, or if referral to a Specialist is otherwise deemed appropriate.

3.1.2.5. In addition to the above referral for abnormal chest X-ray, the PLHCP may refer an employee to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine for other findings of concern during the medical surveillance examination if these findings are potentially related to silica exposure.

3.1.2.6. Although the respirable crystalline silica standard requires the employer to ensure that the PLHCP explains the results of the medical examination to the employee, the standard does not mandate how this should be done. The written medical opinion for the employer could contain a statement that the PLHCP has explained the results of the medical examination to the employee.

3.2. Medical Specialists. The silica standard requires that all employees with chest X-ray B readings of 1/0 or higher be referred to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine. If the employee has given written authorization for the employer to be informed, then the employer shall make available a medical examination by a Specialist within 30 days after receiving the PLHCP's written medical opinion.

3.2.1. The employer must provide the following information to the Board Certified Specialist in Pulmonary Disease or Occupational Medicine:

3.2.1.1. A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to respirable crystalline silica;

3.2.1.2. The employee's former, current, and anticipated levels of occupational exposure to respirable crystalline silica;

3.2.1.3. A description of any personal protective equipment used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and

3.2.1.4. Information from records of employment-related medical examinations previously provided to the employee and currently within the control of the employer.

3.2.2. The PLHCP should make certain that, with written authorization from the employee, the Board Certified Specialist in Pulmonary Disease or Occupational Medicine has any other pertinent medical and occupational information necessary for the specialist's evaluation of the employee's condition.

3.2.3. Once the Board Certified Specialist in Pulmonary Disease or Occupational Medicine has evaluated the employee, the employer must ensure that the Specialist explains to the employee the results of the medical examination and provides the employee with a written medical report within 30 days of the examination. The employer must also ensure that the Specialist provides the employer with a written medical opinion within 30 days of the employee examination. (Sample forms for the written medical report for the employee, the written medical opinion for the employer and the written authorization are provided in Section 7 of this Appendix.)

3.2.4. The Specialist's written medical report for the employee must include the following information:

3.2.4.1. A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to respirable crystalline silica and any medical conditions that require further evaluation or treatment;

3.2.4.2. Any recommended limitations upon the employee's use of a respirator; and

3.2.4.3. Any recommended limitations on the employee's exposure to respirable crystalline silica.

3.2.5. The Specialist's written medical opinion for the employer must include the following information:

3.2.5.1. The date of the examination; and

3.2.5.2. Any recommended limitations on the employee's use of respirators.

3.2.5.3. If the employee provides the Board Certified Specialist in Pulmonary Disease or Occupational Medicine with written authorization, the written medical opinion for the employer shall also contain any recommended limitations on the employee's exposure to respirable crystalline silica.

3.2.5.4. Although the respirable crystalline silica standard requires the employer to ensure that the Board Certified Specialist in Pulmonary Disease or Occupational Medicine explains the results of the medical examination to the employee, the standard does not mandate how this should be done. The written medical opinion for the employer could contain a statement that the Specialist has explained the results of the medical examination to the employee.

3.2.6. After evaluating the employee, the Board Certified Specialist in Pulmonary Disease or Occupational Medicine should provide feedback to the PLHCP as appropriate, depending on the reason for the referral. OSHA believes that because the PLHCP has the primary relationship with the employer and employee, the Specialist may want to communicate his or her findings to the PLHCP and have the PLHCP simply update the original medical report for the employee and medical opinion for the employer. This is permitted under the standard, so long as all requirements and time deadlines are met.

3.3. Public Health Professionals. PLHCPs might refer employees or consult with public health professionals as a result of silica medical surveillance. For instance, if individual cases of active TB are identified, public health professionals from state or local health departments may assist in diagnosis and treatment of individual cases and may evaluate other potentially affected persons, including coworkers. Because silica-exposed employees are at increased risk of progression from latent to active TB, treatment of latent infection is recommended. The diagnosis of active TB, acute or accelerated silicosis, or other silica-related diseases and infections should serve as sentinel events suggesting high levels of exposure to silica and may require consultation with the appropriate public health agencies to investigate potentially similarly exposed coworkers to assess for disease clusters. These agencies include local or state health departments or OSHA. In addition, NIOSH can provide assistance upon request through their Health Hazard Evaluation program. (*See* Section 5 of this Appendix)

4. Confidentiality and Other Considerations

The information that is provided from the PLHCP to the employee and employer under the medical surveillance section of OSHA's respirable crystalline silica standard differs from that of medical surveillance requirements in previous OSHA standards. The standard requires two separate written communications, a written medical report for the employee and a written medical opinion for the employer. The confidentiality requirements for the written medical opinion are more stringent than in past standards. For example, the information the PLHCP can (and must) include in his or her written medical opinion for the employer is limited to: The date of the examination, a statement that the examination has met the requirements of this section, and any recommended limitations on the employee's use of respirators. If the employee provides written authorization for the disclosure of

any limitations on the employee's exposure to respirable crystalline silica, then the PLHCP can (and must) include that information in the written medical opinion for the employer as well. Likewise, with the employee's written authorization, the PLHCP can (and must) disclose the PLHCP's referral recommendation (if any) as part of the written medical opinion for the employer. However, the opinion to the employer must not include information regarding recommended limitations on the employee's exposure to respirable crystalline silica or any referral recommendations without the employee's written authorization.

The standard also places limitations on the information that the Board Certified Specialist in Pulmonary Disease or Occupational Medicine can provide to the employer without the employee's written authorization. The Specialist's written medical opinion for the employer, like the PLHCP's opinion, is limited to (and must contain): The date of the examination and any recommended limitations on the employee's use of respirators. If the employee provides written authorization, the written medical opinion can (and must) also contain any limitations on the employee's exposure to respirable crystalline silica.

The PLHCP should discuss the implication of signing or not signing the authorization with the employee (in a manner and language that he or she understands) so that the employee can make an informed decision regarding the written authorization and its consequences. The discussion should include the risk of ongoing silica exposure, personal risk factors, risk of disease progression, and possible health and economic consequences. For instance, written authorization is required for a PLHCP to advise an employer that an employee should be referred to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine for evaluation of an abnormal chest X-ray (B-reading 1/0 or greater). If an employee does not sign an authorization, then the employer will not know and cannot facilitate the referral to a Specialist and is not required to pay for the Specialist's examination. In the rare case where an employee is diagnosed with acute or accelerated silicosis, co-workers are likely to be at significant risk of developing those diseases as a result of inadequate controls in the workplace. In this case, the PLHCP and/or Specialist should explain this concern to the affected employee and make a determined effort to obtain written authorization from the employee so that the PLHCP and/or Specialist can contact the employer.

Finally, without written authorization from the employee, the PLHCP and/or Board Certified Specialist in Pulmonary Disease or Occupational Medicine cannot provide feedback to an employer regarding control of workplace silica exposure, at least in relation to an individual employee. However, the regulation does not prohibit a PLHCP and/or Specialist from providing an employer with general recommendations regarding exposure controls and prevention programs in relation to silica exposure and silica-related illnesses, based on the information that the PLHCP receives from the employer such as employees' duties and exposure levels. Recommendations may include increased frequency of medical surveillance examinations, additional medical surveillance components, engineering and work practice controls, exposure monitoring and personal protective equipment. For instance, more frequent medical surveillance examinations may be a recommendation to employers for employees who do abrasive blasting with silica because of the high exposures associated with that operation.

ACOEM's Code of Ethics and discussion is a good resource to guide PLHCPs regarding the issues discussed in this section (*See* Section 5 of this Appendix).

5. Resources

5.1. American College of Occupational and Environmental Medicine (ACOEM):

ACOEM Code of Ethics. Accessed at: *http://www.acoem.org/codeofconduct.aspx*

Raymond, L.W. and Wintermeyer, S. (2006) ACOEM evidenced-based statement on medical surveillance of silica-exposed workers: Medical surveillance of workers exposed to crystalline silica. *J Occup Environ Med*, 48, 95–101.

5.2. Center for Disease Control and Prevention (CDC)

Tuberculosis Web page: *http://www.cdc.gov/tb/default.htm*

State TB Control Offices Web page: *http://www.cdc.gov/tb/links/tboffices.htm*

Tuberculosis Laws and Policies Web page: *http://www.cdc.gov/tb/programs/laws/default.htm*

CDC. (2013). Latent Tuberculosis Infection: A Guide for Primary Health Care Providers. Accessed at: *http://www.cdc.gov/tb/publications/ltbi/pdf/targetedltbi.pdf*

5.3. International Labour Organization

International Labour Office (ILO). (2011) Guidelines for the use of the ILO International Classification of Radiographs of Pneumoconioses, Revised edition 2011. Occupational Safety and Health Series No. 22: *http://www.ilo.org/safework/info/publications/WCMS_168260/lang-en/index.htm*

5.4. National Institute of Occupational Safety and Health (NIOSH)

NIOSH B Reader Program Web page. (Information on interpretation of X-rays for silicosis and a list of certified B-readers). Accessed at: *http://www.cdc.gov/niosh/topics/chestradiography/breader-info.html*

NIOSH Guideline (2011). Application of Digital Radiography for the Detection and Classification of Pneumoconiosis. NIOSH publication number 2011–198. Accessed at: *http://www.cdc.gov/niosh/docs/2011-198/.*

NIOSH Hazard Review (2002), Health Effects of Occupational Exposure to Respirable Crystalline Silica. NIOSH publication number 2002–129: Accessed at *http://www.cdc.gov/niosh/docs/2002-129/*

NIOSH Health Hazard Evaluations Programs. (Information on the NIOSH Health Hazard Evaluation (HHE) program, how to request an HHE and how to look up an HHE report). Accessed at: *http://www.cdc.gov/niosh/hhe/*

5.5. National Industrial Sand Association:

Occupational Health Program for Exposure to Crystalline Silica in the Industrial Sand Industry. National Industrial Sand Association, 2nd ed. 2010. Can be ordered at: *http://www.sand.org/silica-occupational-health-program*

5.6. Occupational Safety and Health Administration (OSHA)

Contacting OSHA: *http://www.osha.gov/html/Feed_Back.html*

OSHA's Clinicians Web page. (OSHA resources, regulations and links to help clinicians navigate OSHA's Web site and aid clinicians in caring for workers.) Accessed at: *http://www.osha.gov/dts/oom/clinicians/index.html*

OSHA's Safety and Health Topics Web page on Silica. Accessed at: *http://www.osha.gov/dsg/topics/silicacrystalline/index.html*

OSHA (2013). Spirometry Testing in Occupational Health Programs: Best Practices for Healthcare Professionals. (OSHA 3637–03 2013). Accessed at: *http://www.osha.gov/Publications/OSHA3637.pdf*

OSHA/NIOSH (2011). Spirometry: OSHA/NIOSH Spirometry InfoSheet (OSHA 3415–1–11). (Provides guidance to employers). Accessed at *http://www.osha.gov/Publications/osha3415.pdf*

OSHA/NIOSH (2011) Spirometry: OSHA/NIOSH Spirometry Worker Info. (OSHA 3418–3–11). Accessed at *http://www.osha.gov/Publications/osha3418.pdf*

5.7. Other

Steenland, K. and Ward E. (2014). Silica: A lung carcinogen. *CA Cancer J Clin*, 64, 63–69. (This article reviews not only silica and lung cancer but also all the known silica-related health effects. Further, the authors provide guidance to clinicians on medical surveillance of silica-exposed workers and worker counselling on safety practices to minimize silica exposure.)

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Occupational Safety and Health Administration/National Institute for Occupational Safety and Health (OSHA/NIOSH) (2015). Hazard alert. Worker exposure to silica during countertop manufacturing, finishing, and installation. (OSHA–HA–3768–2015).

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7. Sample Forms

Three sample forms are provided. The first is a sample written medical report for the employee. The second is a sample written medical opinion for the employer. And the third is a sample written authorization form that employees sign to clarify what information the employee is authorizing to be released to the employer.

BILLING CODE 4510–26–P

WRITTEN MEDICAL REPORT FOR EMPLOYEE

EMPLOYEE NAME: _____ **DATE OF EXAMINATION:** _____

TYPE OF EXAMINATION:

[ ] Initial examination [ ] Periodic examination [ ] Specialist examination

[ ] Other: _____

RESULTS OF MEDICAL EXAMINATION:

Physical Examination –	[ ] Normal	[ ] Abnormal (see below)	[ ] Not performed
Chest X-Ray –	[ ] Normal	[ ] Abnormal (see below)	[ ] Not performed
Breathing Test (Spirometry) –	[ ] Normal	[ ] Abnormal (see below)	[ ] Not performed
Test for Tuberculosis –	[ ] Normal	[ ] Abnormal (see below)	[ ] Not performed
Other:_____	[ ] Normal	[ ] Abnormal (see below)	[ ] Not performed

Results reported as abnormal: _____

_____

[ ] Your health may be at increased risk from exposure to respirable crystalline silica due to the following:

_____

RECOMMENDATIONS:

[ ] No limitations on respirator use

[ ] Recommended limitations on use of respirator: _____

[ ] Recommended limitations on exposure to respirable crystalline silica: _____

_____

Dates for recommended limitations, if applicable: _____ (MM/DD/YYYY) to _____ (MM/DD/YYYY)

[ ] I recommend that you be examined by a Board Certified Specialist in Pulmonary Disease or Occupational Medicine

[ ] Other recommendations*:

_____

_____

Your next periodic examination for silica exposure should be in: [ ] 3 years [ ] Other: _____ (MM/DD/YYYY)

Examining Provider: _____ (signature) Date: _____

Provider Name: _____

Office Address: _____ Office Phone: _____

*These findings may not be related to respirable crystalline silica exposure or may not be work-related, and therefore may not be covered by the employer. These findings may necessitate follow-up and treatment by your personal physician.

Respirable Crystalline Silica standard (§ 1910.1053 or 1926.1153)

WRITTEN MEDICAL OPINION FOR EMPLOYER

EMPLOYER: _____

EMPLOYEE NAME: _____ **DATE OF EXAMINATION:** _____

TYPE OF EXAMINATION:
[ ] Initial examination [ ] Periodic examination [ ] Specialist examination
[ ] Other: _____

USE OF RESPIRATOR:
[ ] No limitations on respirator use
[ ] Recommended limitations on use of respirator: _____

Dates for recommended limitations, if applicable: _____ (MM/DD/YYYY) to _____ (MM/DD/YYYY)

The employee has provided written authorization for disclosure of the following to the employer (if applicable):

[ ] This employee should be examined by an American Board Certified Specialist in Pulmonary Disease or Occupational Medicine
[ ] Recommended limitations on exposure to respirable crystalline silica: _____

Dates for exposure limitations noted above: _____ (MM/DD/YYYY) to _____ (MM/DD/YYYY)

NEXT PERIODIC EVALUATION: [ ] 3 years [ ] Other: _____ (MM/DD/YYYY)

Examining Provider: _____ (signature) Date: _____

Provider Name: _____ Provider's specialty: _____

Office Address: _____ Office Phone: _____

[ ] I attest that the results have been explained to the employee.

The following is required to be checked by the Physician or other Licensed Health Care Professional (PLHCP):
[ ] I attest that this medical examination has met the requirements of the medical surveillance section of the OSHA Respirable Crystalline Silica standard (§ 1910.1053(h) or 1926.1153(h)).

AUTHORIZATION FOR CRYSTALLINE SILICA OPINION TO EMPLOYER

This medical examination for exposure to crystalline silica could reveal a medical condition that results in recommendations for (1) limitations on respirator use, (2) limitations on exposure to crystalline silica, or (3) examination by a specialist in pulmonary disease or occupational medicine. Recommended limitations on respirator use will be included in the written opinion to the employer. If you want your employer to know about limitations on crystalline silica exposure or recommendations for a specialist examination, you will need to give authorization for the written opinion to the employer to include one or both of those recommendations.

I hereby authorize the opinion to the employer to contain the following information, if relevant (please check all that apply):

☐ Recommendations for limitations on crystalline silica exposure

☐ Recommendation for a specialist examination

OR

☐ I do not authorize the opinion to the employer to contain anything other than recommended limitations on respirator use.

Please read and initial:

___ I understand that if I do not authorize my employer to receive the recommendation for specialist examination, the employer will not be responsible for arranging and covering costs of a specialist examination.

_____
Name (printed)

_____ _____
Signature Date

BILLING CODE 4510-26-C

PART 1915—OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR SHIPYARD EMPLOYMENT

■ 6. In § 1915.1000, amend Table Z by:

■ a. Revising the entries for "Silica, crystalline cristobalite, respirable dust", "Silica, crystalline quartz, respirable

dust", "Silica, crystalline tripoli (as quartz), respirable dust", and "Silica, crystalline tridymite, respirable dust";

■ b. Under the "MINERAL DUSTS" heading of the table, revising the entry for "Silica: Cystalline Quartz";

■ c. Adding footnote 5; and

■ d. Add footnote p.

The revisions and additions should read as follows:

§ 1915.1000 Air contaminants.

* * * * *

TABLE Z—SHIPYARDS

Substance	CAS No.[d]	ppm[a] *	mg/m[3] [b] *	Skin designation
* * * * * * *				
Silica, crystalline, respirable dust				
Cristobalite; see 1915.1053	14464–46–1			
Quartz; see 1915.1053[5]	14808–60–7			
Tripoli (as quartz); see 1915.1053[5]	1317–95–9			
Trydimite; see 1915.1053	15468–32–3			
* * * * * * *				

MINERAL DUSTS

Substance	mppcf [(i)]
SILICA:	
Crystalline	250 [(k)]
Quartz. Threshold Limit calculated from the formula [(p)]	% SiO_2+5
* * * * * * *	

[5] See Mineral Dusts table for the exposure limit for any operations or sectors where the exposure limit in § 1915.1053 is stayed or is otherwise not in effect.

* The PELs are 8-hour TWAs unless otherwise noted; a (C) designation denotes a ceiling limit. They are to be determined from breathing-zone air samples.

[a] Parts of vapor or gas per million parts of contaminated air by volume at 25 °C and 760 torr.

[b] Milligrams of substance per cubic meter of air. When entry is in this column only, the value is exact; when listed with a ppm entry, it is approximate.

* * * * * * *

[p] This standard applies to any operations or sectors for which the respirable crystalline silica standard, 1915.1053, is stayed or otherwise is not in effect.

■ 7. Add § 1915.1053 to read as follows:

§ 1915.1053 Respirable crystalline silica.

The requirements applicable to shipyard employment under this section are identical to those set forth at § 1910.1053 of this chapter.

PART 1926—SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION

Subpart D—Occupational Health and Environmental Controls

■ 9. In § 1926.55, amend appendix A:

■ a. By revising the entries for "Silica, crystalline cristobalite, respirable dust", "Silica, crystalline quartz, respirable dust", "Silica, crystalline tripoli (as quartz), respirable dust", and "Silica, crystalline tridymite, respirable dust";

■ b. Under the "MINERAL DUSTS" heading of the table, by revising the entry for "Silica: Cystalline Quartz" in column 1;

■ c. Adding footnote 5; and

■ d. Adding footnote p .

The revisions and additions read as follows:

§ 1926.55 Gases, vapors, fumes, dusts, and mists.

* * * * *

Appendix A to § 1926.55—1970 American Conference of Governmental Industrial Hygienists' Threshold Limit Values of Airborne Contaminants

THRESHOLD LIMIT VALUES OF AIRBORNE CONTAMINANTS FOR CONSTRUCTION

Substance	CAS No.[d]	ppm[a] *	mg/m[3] [b] *	Skin designation
* * * * * * *				
Silica, crystalline, respirable dust				

THRESHOLD LIMIT VALUES OF AIRBORNE CONTAMINANTS FOR CONSTRUCTION—Continued

Substance	CAS No.[d]	ppm[a]*	mg/m[3] [b]*	Skin designation
Cristobalite; see 1926.1153	14464–46–1			
Quartz; see 1926.1153[5]	14808–60–7			
Tripoli (as quartz); see 1926.1153[5]	1317–95–9			
Trydimite; see 1926.1153	15468–32–3			
* * * * * * *				
MINERAL DUSTS				
SILICA:				
Crystalline				250 (k)
Quartz. Threshold Limit calculated from the formula (p)				% SiO^2+5
* * * * * * *				

Footnotes.

* * * * * * *

[5] See Mineral Dusts table for the exposure limit for any operations or sectors where the exposure limit in § 1926.1153 is stayed or is otherwise not in effect.

* * * * * * *

[a] Parts of vapor or gas per million parts of contaminated air by volume at 25 °C and 760 torr.

[b] Milligrams of substance per cubic meter of air. When entry is in this column only, the value is exact; when listed with a ppm entry, it is approximate.

* * * * * * *

[d] The CAS number is for information only. Enforcement is based on the substance name. For an entry covering more than one metal compound, measured as the metal, the CAS number for the metal is given—not CAS numbers for the individual compounds.

* * * * * * *

[p] This standard applies to any operations or sectors for which the respirable crystalline silica standard, 1926.1153, is stayed or otherwise is not in effect.

Subpart Z—Toxic and Hazardous Substances

■ 10. The authority for subpart Z of part 1926 is revised to read as follows:

Authority: Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704); Sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); and Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), 5–2007 (72 FR 31160), 4–2010 (75 FR 55355), or 1–2012 (77 FR 3912), as applicable; and 29 CFR part 1911.

Section 1926.1102 not issued under 29 U.S.C. 655 or 29 CFR part 1911; also issued under 5 U.S.C. 553.

■ 11. Add § 1926.1153 to read as follows:

§ 1926.1153 Respirable crystalline silica.

(a) *Scope and application.* This section applies to all occupational exposures to respirable crystalline silica in construction work, except where employee exposure will remain below 25 micrograms per cubic meter of air (25 $\mu g/m^3$) as an 8-hour time-weighted average (TWA) under any foreseeable conditions.

(b) *Definitions.* For the purposes of this section the following definitions apply:

Action level means a concentration of airborne respirable crystalline silica of 25 $\mu g/m^3$, calculated as an 8-hour TWA.

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Director means the Director of the National Institute for Occupational Safety and Health (NIOSH), U.S. Department of Health and Human Services, or designee.

Competent person means an individual who is capable of identifying existing and foreseeable respirable crystalline silica hazards in the workplace and who has authorization to take prompt corrective measures to eliminate or minimize them. The competent person must have the knowledge and ability necessary to fulfill the responsibilities set forth in paragraph (g) of this section.

Employee exposure means the exposure to airborne respirable crystalline silica that would occur if the employee were not using a respirator.

High-efficiency particulate air [HEPA] filter means a filter that is at least 99.97 percent efficient in removing monodispersed particles of 0.3 micrometers in diameter.

Objective data means information, such as air monitoring data from industry-wide surveys or calculations based on the composition of a substance, demonstrating employee exposure to respirable crystalline silica associated with a particular product or material or a specific process, task, or activity. The data must reflect workplace conditions closely resembling or with a higher exposure potential than the processes, types of material, control methods, work practices, and environmental conditions in the employer's current operations.

Physician or other licensed health care professional [PLHCP] means an individual whose legally permitted scope of practice (*i.e.*, license, registration, or certification) allows him or her to independently provide or be delegated the responsibility to provide some or all of the particular health care services required by paragraph (h) of this section.

Respirable crystalline silica means quartz, cristobalite, and/or tridymite contained in airborne particles that are determined to be respirable by a sampling device designed to meet the characteristics for respirable-particle-size-selective samplers specified in the International Organization for Standardization (ISO) 7708:1995: Air Quality—Particle Size Fraction Definitions for Health-Related Sampling.

Specialist means an American Board Certified Specialist in Pulmonary Disease or an American Board Certified Specialist in Occupational Medicine.

This section means this respirable crystalline silica standard, 29 CFR 1926.1153.

(c) *Specified exposure control methods.* (1) For each employee engaged in a task identified on Table 1, the

employer shall fully and properly implement the engineering controls, work practices, and respiratory protection specified for the task on Table 1, unless the employer assesses and limits the exposure of the employee to respirable crystalline silica in accordance with paragraph (d) of this section.

TABLE 1—SPECIFIED EXPOSURE CONTROL METHODS WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICA

Equipment/task	Engineering and work practice control methods	Required respiratory protection and minimum assigned protection factor (APF)	
		≤4 hours/shift	>4 hours/shift
(i) Stationary masonry saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None.
(ii) Handheld power saws (any blade diameter).	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions:		
	—When used outdoors	None	APF 10.
	—When used indoors or in an enclosed area	APF 10	APF 10.
(iii) Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less).	For tasks performed outdoors only: Use saw equipped with commercially available dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency.	None.	None.
(iv) Walk-behind saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions:		
	—When used outdoors	None	None.
	—When used indoors or in an enclosed area	APF 10	APF 10.
(v) Drivable saws	For tasks performed outdoors only: Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None.
(vi) Rig-mounted core saws or drills.	Use tool equipped with integrated water delivery system that supplies water to cutting surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None.
(vii) Handheld and stand-mounted drills (including impact and rotary hammer drills).	Use drill equipped with commercially available shroud or cowling with dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. Use a HEPA-filtered vacuum when cleaning holes.	None	None.
(viii) Dowel drilling rigs for concrete	For tasks performed outdoors only: Use shroud around drill bit with a dust collection system. Dust collector must have a filter with 99% or greater efficiency and a filter-cleaning mechanism. Use a HEPA-filtered vacuum when cleaning holes.	APF 10	APF 10.
(ix) Vehicle-mounted drilling rigs for rock and concrete.	Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector. OR Operate from within an enclosed cab and use water for dust suppression on drill bit.	None None	None. None.
(x) Jackhammers and handheld powered chipping tools.	Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact:		
	—When used outdoors	None	APF 10.
	—When used indoors or in an enclosed area	APF 10	APF 10.
	OR Use tool equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.		

TABLE 1—SPECIFIED EXPOSURE CONTROL METHODS WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICA—Continued

Equipment/task	Engineering and work practice control methods	Required respiratory protection and minimum assigned protection factor (APF)	
		≤4 hours/shift	>4 hours/shift
	Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism:		
	—When used outdoors	None	APF 10.
	—When used indoors or in an enclosed area	APF 10	APF 10.
(xi) Handheld grinders for mortar removal (*i.e.*, tuckpointing).	Use grinder equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.	APF 10	APF 25.
(xii) Handheld grinders for uses other than mortar removal.	For tasks performed outdoors only: Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. OR Use grinder equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism:	None	None.
	—When used outdoors	None	None.
	—When used indoors or in an enclosed area	None	APF 10.
(xiii) Walk-behind milling machines and floor grinders.	Use machine equipped with integrated water delivery system that continuously feeds water to the cutting surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. OR Use machine equipped with dust collection system recommended by the manufacturer. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes.	None	None.
(xiv) Small drivable milling machines (less than half-lane).	Use a machine equipped with supplemental water sprays designed to suppress dust. Water must be combined with a surfactant. Operate and maintain machine to minimize dust emissions.	None	None.
(xv) Large drivable milling machines (half-lane and larger).	For cuts of any depth on asphalt only: Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust. Operate and maintain machine to minimize dust emissions. For cuts of four inches in depth or less on any substrate: Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust. Operate and maintain machine to minimize dust emissions. OR Use a machine equipped with supplemental water spray designed to suppress dust. Water must be combined with a surfactant. Operate and maintain machine to minimize dust emissions.	None None None	None. None. None.
(xvi) Crushing machines	Use equipment designed to deliver water spray or mist for dust suppression at crusher and other points where dust is generated (*e.g.*, hoppers, conveyers, sieves/sizing or vibrating components, and discharge points). Operate and maintain machine in accordance with manufacturer's instructions to minimize dust emissions. Use a ventilated booth that provides fresh, climate-controlled air to the operator, or a remote control station.	None	None.

TABLE 1—SPECIFIED EXPOSURE CONTROL METHODS WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICA—Continued

Equipment/task	Engineering and work practice control methods	Required respiratory protection and minimum assigned protection factor (APF)	
		≤4 hours/shift	>4 hours/shift
(xvii) Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials (*e.g.*, hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials.	Operate equipment from within an enclosed cab	None	None.
	When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.	None	None.
(xviii) Heavy equipment and utility vehicles for tasks such as grading and excavating but not including: Demolishing, abrading, or fracturing silica-containing materials.	Apply water and/or dust suppressants as necessary to minimize dust emissions. OR	None	None.
	When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.	None	None.

(2) When implementing the control measures specified in Table 1, each employer shall:

(i) For tasks performed indoors or in enclosed areas, provide a means of exhaust as needed to minimize the accumulation of visible airborne dust;

(ii) For tasks performed using wet methods, apply water at flow rates sufficient to minimize release of visible dust;

(iii) For measures implemented that include an enclosed cab or booth, ensure that the enclosed cab or booth:

(A) Is maintained as free as practicable from settled dust;

(B) Has door seals and closing mechanisms that work properly;

(C) Has gaskets and seals that are in good condition and working properly;

(D) Is under positive pressure maintained through continuous delivery of fresh air;

(E) Has intake air that is filtered through a filter that is 95% efficient in the 0.3–10.0 μm range (*e.g.*, MERV–16 or better); and

(F) Has heating and cooling capabilities.

(3) Where an employee performs more than one task on Table 1 during the course of a shift, and the total duration of all tasks combined is more than four hours, the required respiratory protection for each task is the respiratory protection specified for more than four hours per shift. If the total duration of all tasks on Table 1 combined is less than four hours, the required respiratory protection for each task is the respiratory protection specified for less than four hours per shift.

(d) *Alternative exposure control methods.* For tasks not listed in Table 1, or where the employer does not fully and properly implement the engineering controls, work practices, and respiratory protection described in Table 1:

(1) *Permissible exposure limit (PEL).* The employer shall ensure that no employee is exposed to an airborne concentration of respirable crystalline silica in excess of 50 $\mu g/m^3$, calculated as an 8-hour TWA.

(2) *Exposure assessment*—(i) *General.* The employer shall assess the exposure of each employee who is or may reasonably be expected to be exposed to respirable crystalline silica at or above the action level in accordance with either the performance option in paragraph (d)(2)(ii) or the scheduled monitoring option in paragraph (d)(2)(iii) of this section.

(ii) *Performance option.* The employer shall assess the 8-hour TWA exposure for each employee on the basis of any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures to respirable crystalline silica.

(iii) *Scheduled monitoring option.* (A) The employer shall perform initial monitoring to assess the 8-hour TWA exposure for each employee on the basis of one or more personal breathing zone air samples that reflect the exposures of employees on each shift, for each job classification, in each work area. Where several employees perform the same tasks on the same shift and in the same work area, the employer may sample a representative fraction of these employees in order to meet this requirement. In representative sampling, the employer shall sample the employee(s) who are expected to have the highest exposure to respirable crystalline silica.

(B) If initial monitoring indicates that employee exposures are below the action level, the employer may discontinue monitoring for those employees whose exposures are represented by such monitoring.

(C) Where the most recent exposure monitoring indicates that employee exposures are at or above the action level but at or below the PEL, the employer shall repeat such monitoring within six months of the most recent monitoring.

(D) Where the most recent exposure monitoring indicates that employee exposures are above the PEL, the employer shall repeat such monitoring within three months of the most recent monitoring.

(E) Where the most recent (non-initial) exposure monitoring indicates that employee exposures are below the action level, the employer shall repeat such monitoring within six months of the most recent monitoring until two consecutive measurements, taken seven or more days apart, are below the action level, at which time the employer may discontinue monitoring for those employees whose exposures are represented by such monitoring, except as otherwise provided in paragraph (d)(2)(iv) of this section.

(iv) *Reassessment of exposures.* The employer shall reassess exposures whenever a change in the production, process, control equipment, personnel, or work practices may reasonably be expected to result in new or additional exposures at or above the action level, or when the employer has any reason to believe that new or additional exposures at or above the action level have occurred.

(v) *Methods of sample analysis.* The employer shall ensure that all samples taken to satisfy the monitoring requirements of paragraph (d)(2) of this section are evaluated by a laboratory that analyzes air samples for respirable crystalline silica in accordance with the procedures in Appendix A to this section.

(vi) Employee notification of assessment results. (A) Within five working days after completing an exposure assessment in accordance with paragraph (d)(2) of this section, the employer shall individually notify each affected employee in writing of the results of that assessment or post the results in an appropriate location accessible to all affected employees.

(B) Whenever an exposure assessment indicates that employee exposure is above the PEL, the employer shall describe in the written notification the corrective action being taken to reduce employee exposure to or below the PEL.

(vii) *Observation of monitoring.* (A) Where air monitoring is performed to comply with the requirements of this section, the employer shall provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to respirable crystalline silica.

(B) When observation of monitoring requires entry into an area where the use of protective clothing or equipment is required for any workplace hazard, the employer shall provide the observer with protective clothing and equipment at no cost and shall ensure that the observer uses such clothing and equipment.

(3) *Methods of compliance*—(i) *Engineering and work practice controls.* The employer shall use engineering and work practice controls to reduce and maintain employee exposure to respirable crystalline silica to or below the PEL, unless the employer can demonstrate that such controls are not feasible. Wherever such feasible engineering and work practice controls are not sufficient to reduce employee exposure to or below the PEL, the employer shall nonetheless use them to reduce employee exposure to the lowest feasible level and shall supplement them with the use of respiratory protection that complies with the requirements of paragraph (e) of this section.

(ii) *Abrasive blasting.* In addition to the requirements of paragraph (d)(3)(i) of this section, the employer shall comply with other OSHA standards, when applicable, such as 29 CFR 1926.57 (Ventilation), where abrasive blasting is conducted using crystalline silica-containing blasting agents, or where abrasive blasting is conducted on substrates that contain crystalline silica.

(e) *Respiratory protection*—(1) *General.* Where respiratory protection is required by this section, the employer must provide each employee an appropriate respirator that complies with the requirements of this paragraph and 29 CFR 1910.134. Respiratory protection is required:

(i) Where specified by Table 1 of paragraph (c) of this section; or

(ii) For tasks not listed in Table 1, or where the employer does not fully and properly implement the engineering controls, work practices, and respiratory protection described in Table 1:

(A) Where exposures exceed the PEL during periods necessary to install or implement feasible engineering and work practice controls;

(B) Where exposures exceed the PEL during tasks, such as certain maintenance and repair tasks, for which engineering and work practice controls are not feasible; and

(C) During tasks for which an employer has implemented all feasible engineering and work practice controls and such controls are not sufficient to reduce exposures to or below the PEL.

(2) *Respiratory protection program.* Where respirator use is required by this section, the employer shall institute a respiratory protection program in accordance with 29 CFR 1910.134.

(3) *Specified exposure control methods.* For the tasks listed in Table 1 in paragraph (c) of this section, if the employer fully and properly implements the engineering controls, work practices, and respiratory protection described in Table 1, the employer shall be considered to be in compliance with paragraph (e)(1) of this section and the requirements for selection of respirators in 29 CFR 1910.134(d)(1)(iii) and (d)(3) with regard to exposure to respirable crystalline silica.

(f) *Housekeeping.* (1) The employer shall not allow dry sweeping or dry brushing where such activity could contribute to employee exposure to respirable crystalline silica unless wet sweeping, HEPA-filtered vacuuming or other methods that minimize the likelihood of exposure are not feasible.

(2) The employer shall not allow compressed air to be used to clean clothing or surfaces where such activity could contribute to employee exposure to respirable crystalline silica unless:

(i) The compressed air is used in conjunction with a ventilation system that effectively captures the dust cloud created by the compressed air; or

(ii) No alternative method is feasible.

(g) *Written exposure control plan.* (1) The employer shall establish and implement a written exposure control plan that contains at least the following elements:

(i) A description of the tasks in the workplace that involve exposure to respirable crystalline silica;

(ii) A description of the engineering controls, work practices, and respiratory protection used to limit employee exposure to respirable crystalline silica for each task;

(iii) A description of the housekeeping measures used to limit employee exposure to respirable crystalline silica; and

(iv) A description of the procedures used to restrict access to work areas, when necessary, to minimize the number of employees exposed to respirable crystalline silica and their level of exposure, including exposures generated by other employers or sole proprietors.

(2) The employer shall review and evaluate the effectiveness of the written exposure control plan at least annually and update it as necessary.

(3) The employer shall make the written exposure control plan readily available for examination and copying, upon request, to each employee covered by this section, their designated representatives, the Assistant Secretary and the Director.

(4) The employer shall designate a competent person to make frequent and regular inspections of job sites, materials, and equipment to implement the written exposure control plan.

(h) *Medical surveillance*—(1) *General.* (i) The employer shall make medical surveillance available at no cost to the employee, and at a reasonable time and place, for each employee who will be required under this section to use a respirator for 30 or more days per year.

(ii) The employer shall ensure that all medical examinations and procedures required by this section are performed by a PLHCP as defined in paragraph (b) of this section.

(2) *Initial examination.* The employer shall make available an initial (baseline) medical examination within 30 days after initial assignment, unless the employee has received a medical examination that meets the requirements of this section within the last three years. The examination shall consist of:

(i) A medical and work history, with emphasis on: Past, present, and anticipated exposure to respirable crystalline silica, dust, and other agents affecting the respiratory system; any history of respiratory system dysfunction, including signs and

symptoms of respiratory disease (*e.g.*, shortness of breath, cough, wheezing); history of tuberculosis; and smoking status and history;

(ii) A physical examination with special emphasis on the respiratory system;

(iii) A chest X-ray (a single posteroanterior radiographic projection or radiograph of the chest at full inspiration recorded on either film (no less than 14 x 17 inches and no more than 16 x 17 inches) or digital radiography systems), interpreted and classified according to the International Labour Office (ILO) International Classification of Radiographs of Pneumoconioses by a NIOSH-certified B Reader;

(iv) A pulmonary function test to include forced vital capacity (FVC) and forced expiratory volume in one second (FEV_1) and FEV_1/FVC ratio, administered by a spirometry technician with a current certificate from a NIOSH-approved spirometry course;

(v) Testing for latent tuberculosis infection; and

(vi) Any other tests deemed appropriate by the PLHCP.

(3) *Periodic examinations.* The employer shall make available medical examinations that include the procedures described in paragraph (h)(2) of this section (except paragraph (h)(2)(v)) at least every three years, or more frequently if recommended by the PLHCP.

(4) *Information provided to the PLHCP.* The employer shall ensure that the examining PLHCP has a copy of this standard, and shall provide the PLHCP with the following information:

(i) A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to respirable crystalline silica;

(ii) The employee's former, current, and anticipated levels of occupational exposure to respirable crystalline silica;

(iii) A description of any personal protective equipment used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and

(iv) Information from records of employment-related medical examinations previously provided to the employee and currently within the control of the employer.

(5) *PLHCP's written medical report for the employee.* The employer shall ensure that the PLHCP explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of each medical examination performed. The written report shall contain:

(i) A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to respirable crystalline silica and any medical conditions that require further evaluation or treatment;

(ii) Any recommended limitations on the employee's use of respirators;

(iii) Any recommended limitations on the employee's exposure to respirable crystalline silica; and

(iv) A statement that the employee should be examined by a specialist (pursuant to paragraph (h)(7) of this section) if the chest X-ray provided in accordance with this section is classified as 1/0 or higher by the B Reader, or if referral to a specialist is otherwise deemed appropriate by the PLHCP.

(6) *PLHCP's written medical opinion for the employer.* (i) The employer shall obtain a written medical opinion from the PLHCP within 30 days of the medical examination. The written opinion shall contain only the following:

(A) The date of the examination;

(B) A statement that the examination has met the requirements of this section; and

(C) Any recommended limitations on the employee's use of respirators.

(ii) If the employee provides written authorization, the written opinion shall also contain either or both of the following:

(A) Any recommended limitations on the employee's exposure to respirable crystalline silica;

(B) A statement that the employee should be examined by a specialist (pursuant to paragraph (h)(7) of this section) if the chest X-ray provided in accordance with this section is classified as 1/0 or higher by the B Reader, or if referral to a specialist is otherwise deemed appropriate by the PLHCP.

(iii) The employer shall ensure that each employee receives a copy of the written medical opinion described in paragraph (h)(6)(i) and (ii) of this section within 30 days of each medical examination performed.

(7) *Additional examinations.* (i) If the PLHCP's written medical opinion indicates that an employee should be examined by a specialist, the employer shall make available a medical examination by a specialist within 30 days after receiving the PLHCP's written opinion.

(ii) The employer shall ensure that the examining specialist is provided with all of the information that the employer is obligated to provide to the PLHCP in accordance with paragraph (h)(4) of this section.

(iii) The employer shall ensure that the specialist explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of the examination. The written report shall meet the requirements of paragraph (h)(5) (except paragraph (h)(5)(iv)) of this section.

(iv) The employer shall obtain a written opinion from the specialist within 30 days of the medical examination. The written opinion shall meet the requirements of paragraph (h)(6) (except paragraph (h)(6)(i)(B) and (ii)(B)) of this section.

(i) *Communication of respirable crystalline silica hazards to employees*—(1) *Hazard communication.* The employer shall include respirable crystalline silica in the program established to comply with the hazard communication standard (HCS) (29 CFR 1910.1200). The employer shall ensure that each employee has access to labels on containers of crystalline silica and safety data sheets, and is trained in accordance with the provisions of HCS and paragraph (i)(2) of this section. The employer shall ensure that at least the following hazards are addressed: Cancer, lung effects, immune system effects, and kidney effects.

(2) *Employee information and training.* (i) The employer shall ensure that each employee covered by this section can demonstrate knowledge and understanding of at least the following:

(A) The health hazards associated with exposure to respirable crystalline silica;

(B) Specific tasks in the workplace that could result in exposure to respirable crystalline silica;

(C) Specific measures the employer has implemented to protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, and respirators to be used;

(D) The contents of this section;

(E) The identity of the competent person designated by the employer in accordance with paragraph (g)(4) of this section; and

(F) The purpose and a description of the medical surveillance program required by paragraph (h) of this section.

(ii) The employer shall make a copy of this section readily available without cost to each employee covered by this section.

(j) *Recordkeeping*—(1) *Air monitoring data.* (i) The employer shall make and

maintain an accurate record of all exposure measurements taken to assess employee exposure to respirable crystalline silica, as prescribed in paragraph (d)(2) of this section.

(ii) This record shall include at least the following information:

(A) The date of measurement for each sample taken;

(B) The task monitored;

(C) Sampling and analytical methods used;

(D) Number, duration, and results of samples taken;

(E) Identity of the laboratory that performed the analysis;

(F) Type of personal protective equipment, such as respirators, worn by the employees monitored; and

(G) Name, social security number, and job classification of all employees represented by the monitoring, indicating which employees were actually monitored.

(iii) The employer shall ensure that exposure records are maintained and made available in accordance with 29 CFR 1910.1020.

(2) *Objective data.* (i) The employer shall make and maintain an accurate record of all objective data relied upon to comply with the requirements of this section.

(ii) This record shall include at least the following information:

(A) The crystalline silica-containing material in question;

(B) The source of the objective data;

(C) The testing protocol and results of testing;

(D) A description of the process, task, or activity on which the objective data were based; and

(E) Other data relevant to the process, task, activity, material, or exposures on which the objective data were based.

(iii) The employer shall ensure that objective data are maintained and made available in accordance with 29 CFR 1910.1020.

(3) *Medical surveillance.* (i) The employer shall make and maintain an accurate record for each employee covered by medical surveillance under paragraph (h) of this section.

(ii) The record shall include the following information about the employee:

(A) Name and social security number;

(B) A copy of the PLHCPs' and specialists' written medical opinions; and

(C) A copy of the information provided to the PLHCPs and specialists.

(iii) The employer shall ensure that medical records are maintained and made available in accordance with 29 CFR 1910.1020.

(k) *Dates.* (1) This section shall become effective June 23, 2016.

(2) All obligations of this section, except requirements for methods of sample analysis in paragraph (d)(2)(v), shall commence June 23, 2017.

(3) Requirements for methods of sample analysis in paragraph (d)(2)(v) of this section commence June 23, 2018.

Appendix A to § 1926.1153—Methods of Sample Analysis

This This appendix specifies the procedures for analyzing air samples for respirable crystalline silica, as well as the quality control procedures that employers must ensure that laboratories use when performing an analysis required under 29 CFR 1926.1153 (d)(2)(v). Employers must ensure that such a laboratory:

1. Evaluates all samples using the procedures specified in one of the following analytical methods: OSHA ID–142; NMAM 7500; NMAM 7602; NMAM 7603; MSHA P–2; or MSHA P–7;

2. Is accredited to ANS/ISO/IEC Standard 17025:2005 with respect to crystalline silica analyses by a body that is compliant with ISO/IEC Standard 17011:2004 for implementation of quality assessment programs;

3. Uses the most current National Institute of Standards and Technology (NIST) or NIST traceable standards for instrument calibration or instrument calibration verification;

4. Implements an internal quality control (QC) program that evaluates analytical uncertainty and provides employers with estimates of sampling and analytical error;

5. Characterizes the sample material by identifying polymorphs of respirable crystalline silica present, identifies the presence of any interfering compounds that might affect the analysis, and makes any corrections necessary in order to obtain accurate sample analysis; and

6. Analyzes quantitatively for crystalline silica only after confirming that the sample matrix is free of uncorrectable analytical interferences, corrects for analytical interferences, and uses a method that meets the following performance specifications:

6.1 Each day that samples are analyzed, performs instrument calibration checks with standards that bracket the sample concentrations;

6.2 Uses five or more calibration standard levels to prepare calibration curves and ensures that standards are distributed through the calibration range in a manner that accurately reflects the underlying calibration curve; and

6.3 Optimizes methods and instruments to obtain a quantitative limit of detection that represents a value no higher than 25 percent of the PEL based on sample air volume.

Appendix B to § 1926.1153—Medical Surveillance Guidelines

Introduction

The purpose of this Appendix is to provide medical information and recommendations to aid physicians and other licensed health care professionals (PLHCPs) regarding compliance with the medical surveillance provisions of the respirable crystalline silica standard (29 CFR 1926.1153). Appendix B is for informational and guidance purposes only and none of the statements in Appendix B should be construed as imposing a mandatory requirement on employers that is not otherwise imposed by the standard.

Medical screening and surveillance allow for early identification of exposure-related health effects in individual employee and groups of employees, so that actions can be taken to both avoid further exposure and prevent or address adverse health outcomes. Silica-related diseases can be fatal, encompass a variety of target organs, and may have public health consequences when considering the increased risk of a latent tuberculosis (TB) infection becoming active. Thus, medical surveillance of silica-exposed employees requires that PLHCPs have a thorough knowledge of silica-related health effects.

This Appendix is divided into seven sections. Section 1 reviews silica-related diseases, medical responses, and public health responses. Section 2 outlines the components of the medical surveillance program for employees exposed to silica. Section 3 describes the roles and responsibilities of the PLHCP implementing the program and of other medical specialists and public health professionals. Section 4 provides a discussion of considerations, including confidentiality. Section 5 provides a list of additional resources and Section 6 lists references. Section 7 provides sample forms for the written medical report for the employee, the written medical opinion for the employer and the written authorization.

1. Recognition of Silica-Related Diseases

1.1. Overview. The term "silica" refers specifically to the compound silicon dioxide (SiO_2). Silica is a major component of sand, rock, and mineral ores. Exposure to fine (respirable size) particles of crystalline forms of silica is associated with adverse health effects, such as silicosis, lung cancer, chronic obstructive pulmonary disease (COPD), and activation of latent TB infections. Exposure to respirable crystalline silica can occur in industry settings such as foundries, abrasive blasting operations, paint manufacturing, glass and concrete product manufacturing, brick making, china and pottery manufacturing, manufacturing of plumbing fixtures, and many construction activities including highway repair, masonry, concrete work, rock drilling, and tuck-pointing. New uses of silica continue to emerge. These include countertop manufacturing, finishing, and installation (Kramer *et al.* 2012; OSHA 2015) and hydraulic fracturing in the oil and gas industry (OSHA 2012).

Silicosis is an irreversible, often disabling, and sometimes fatal fibrotic lung disease. Progression of silicosis can occur despite removal from further exposure. Diagnosis of silicosis requires a history of exposure to silica and radiologic findings characteristic of silica exposure. Three different presentations of silicosis (chronic, accelerated, and acute) have been defined. Accelerated and acute silicosis are much less common than chronic silicosis. However, it is critical to recognize all cases of accelerated and acute silicosis because these are life-threatening illnesses

and because they are caused by substantial overexposures to respirable crystalline silica. Although any case of silicosis indicates a breakdown in prevention, a case of acute or accelerated silicosis implies current high exposure and a very marked breakdown in prevention.

In addition to silicosis, employees exposed to respirable crystalline silica, especially those with accelerated or acute silicosis, are at increased risks of contracting active TB and other infections (ATS 1997; Rees and Murray 2007). Exposure to respirable crystalline silica also increases an employee's risk of developing lung cancer, and the higher the cumulative exposure, the higher the risk (Steenland *et al.* 2001; Steenland and Ward 2014). Symptoms for these diseases and other respirable crystalline silica-related diseases are discussed below.

1.2. Chronic Silicosis. Chronic silicosis is the most common presentation of silicosis and usually occurs after at least 10 years of exposure to respirable crystalline silica. The clinical presentation of chronic silicosis is:

1.2.1. Symptoms—shortness of breath and cough, although employees may not notice any symptoms early in the disease. Constitutional symptoms, such as fever, loss of appetite and fatigue, may indicate other diseases associated with silica exposure, such as TB infection or lung cancer. Employees with these symptoms should immediately receive further evaluation and treatment.

1.2.2. Physical Examination—may be normal or disclose dry rales or rhonchi on lung auscultation.

1.2.3. Spirometry—may be normal or may show only a mild restrictive or obstructive pattern.

1.2.4. Chest X-ray—classic findings are small, rounded opacities in the upper lung fields bilaterally. However, small irregular opacities and opacities in other lung areas can also occur. Rarely, "eggshell calcifications" in the hilar and mediastinal lymph nodes are seen.

1.2.5. Clinical Course—chronic silicosis in most cases is a slowly progressive disease. Under the respirable crystalline silica standard, the PLHCP is to recommend that employees with a 1/0 category X-ray be referred to an American Board Certified Specialist in Pulmonary Disease or Occupational Medicine. The PLHCP and/or Specialist should counsel employees regarding work practices and personal habits that could affect employees' respiratory health.

1.3. Accelerated Silicosis. Accelerated silicosis generally occurs within 5–10 years of exposure and results from high levels of exposure to respirable crystalline silica. The clinical presentation of accelerated silicosis is:

1.3.1. Symptoms—shortness of breath, cough, and sometimes sputum production. Employees with exposure to respirable crystalline silica, and especially those with accelerated silicosis, are at high risk for activation of TB infections, atypical mycobacterial infections, and fungal superinfections. Constitutional symptoms, such as fever, weight loss, hemoptysis (coughing up blood), and fatigue may herald one of these infections or the onset of lung cancer.

1.3.2. Physical Examination—rales, rhonchi, or other abnormal lung findings in relation to illnesses present. Clubbing of the digits, signs of heart failure, and cor pulmonale may be present in severe lung disease.

1.3.3. Spirometry—restrictive or mixed restrictive/obstructive pattern.

1.3.4. Chest X-ray—small rounded and/or irregular opacities bilaterally. Large opacities and lung abscesses may indicate infections, lung cancer, or progression to complicated silicosis, also termed progressive massive fibrosis.

1.3.5. Clinical Course—accelerated silicosis has a rapid, severe course. Under the respirable crystalline silica standard, the PLHCP can recommend referral to a Board Certified Specialist in either Pulmonary Disease or Occupational Medicine, as deemed appropriate, and referral to a Specialist is recommended whenever the diagnosis of accelerated silicosis is being considered.

1.4. Acute Silicosis. Acute silicosis is a rare disease caused by inhalation of extremely high levels of respirable crystalline silica particles. The pathology is similar to alveolar proteinosis with lipoproteinaceous material accumulating in the alveoli. Acute silicosis develops rapidly, often, within a few months to less than 2 years of exposure, and is almost always fatal. The clinical presentation of acute silicosis is as follows:

1.4.1. Symptoms—sudden, progressive, and severe shortness of breath. Constitutional symptoms are frequently present and include fever, weight loss, fatigue, productive cough, hemoptysis (coughing up blood), and pleuritic chest pain.

1.4.2. Physical Examination—dyspnea at rest, cyanosis, decreased breath sounds, inspiratory rales, clubbing of the digits, and fever.

1.4.3. Spirometry—restrictive or mixed restrictive/obstructive pattern.

1.4.4. Chest X-ray—diffuse haziness of the lungs bilaterally early in the disease. As the disease progresses, the "ground glass" appearance of interstitial fibrosis will appear.

1.4.5. Clinical Course—employees with acute silicosis are at especially high risk of TB activation, nontuberculous mycobacterial infections, and fungal superinfections. Acute silicosis is immediately life-threatening. The employee should be urgently referred to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine for evaluation and treatment. Although any case of silicosis indicates a breakdown in prevention, a case of acute or accelerated silicosis implies a profoundly high level of silica exposure and may mean that other employees are currently exposed to dangerous levels of silica.

1.5. COPD. COPD, including chronic bronchitis and emphysema, has been documented in silica-exposed employees, including those who do not develop silicosis. Periodic spirometry tests are performed to evaluate each employee for progressive changes consistent with the development of COPD. In addition to evaluating spirometry results of individual employees over time, PLHCPs may want to be aware of general trends in spirometry results for groups of employees from the same workplace to identify possible problems that might exist at that workplace. (*See* Section 2 of this Appendix on Medical Surveillance for further discussion.) Heart disease may develop secondary to lung diseases such as COPD. A recent study by Liu *et al.* 2014 noted a significant exposure-response trend between cumulative silica exposure and heart disease deaths, primarily due to pulmonary heart disease, such as cor pulmonale.

1.6. Renal and Immune System. Silica exposure has been associated with several types of kidney disease, including glomerulonephritis, nephrotic syndrome, and end stage renal disease requiring dialysis. Silica exposure has also been associated with other autoimmune conditions, including progressive systemic sclerosis, systemic lupus erythematosus, and rheumatoid arthritis. Studies note an association between employees with silicosis and serologic markers for autoimmune diseases, including antinuclear antibodies, rheumatoid factor, and immune complexes (Jalloul and Banks 2007; Shtraichman *et al.* 2015).

1.7. TB and Other Infections. Silica-exposed employees with latent TB are 3 to 30 times more likely to develop active pulmonary TB infection (ATS 1997; Rees and Murray 2007). Although respirable crystalline silica exposure does not cause TB infection, individuals with latent TB infection are at increased risk for activation of disease if they have higher levels of respirable crystalline silica exposure, greater profusion of radiographic abnormalities, or a diagnosis of silicosis. Demographic characteristics, such as immigration from some countries, are associated with increased rates of latent TB infection. PLHCPs can review the latest Centers for Disease Control and Prevention (CDC) information on TB incidence rates and high risk populations online (*See* Section 5 of this Appendix). Additionally, silica-exposed employees are at increased risk for contracting nontuberculous mycobacterial infections, including *Mycobacterium avium-intracellulare* and *Mycobacterium kansaii*.

1.8. Lung Cancer. The National Toxicology Program has listed respirable crystalline silica as a known human carcinogen since 2000 (NTP 2014). The International Agency for Research on Cancer (2012) has also classified silica as Group 1 (carcinogenic to humans). Several studies have indicated that the risk of lung cancer from exposure to respirable crystalline silica and smoking is greater than additive (Brown 2009; Liu *et al.* 2013). Employees should be counseled on smoking cessation.

2. Medical Surveillance

PLHCPs who manage silica medical surveillance programs should have a thorough understanding of the many silica-related diseases and health effects outlined in Section 1 of this Appendix. At each clinical encounter, the PLHCP should consider silica-related health outcomes, with particular vigilance for acute and accelerated silicosis. In this Section, the required components of

medical surveillance under the respirable crystalline silica standard are reviewed, along with additional guidance and recommendations for PLHCPs performing medical surveillance examinations for silica-exposed employees.

2.1. History.

2.1.1. The respirable crystalline silica standard requires the following: A medical and work history, with emphasis on: Past, present, and anticipated exposure to respirable crystalline silica, dust, and other agents affecting the respiratory system; any history of respiratory system dysfunction, including signs and symptoms of respiratory disease (*e.g.*, shortness of breath, cough, wheezing); history of TB; and smoking status and history.

2.1.2. Further, the employer must provide the PLHCP with the following information:

2.1.2.1. A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to respirable crystalline silica;

2.1.2.2. The employee's former, current, and anticipated levels of occupational exposure to respirable crystalline silica;

2.1.2.3. A description of any personal protective equipment used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and

2.1.2.4. Information from records of employment-related medical examinations previously provided to the employee and currently within the control of the employer.

2.1.3. Additional guidance and recommendations: A history is particularly important both in the initial evaluation and in periodic examinations. Information on past and current medical conditions (particularly a history of kidney disease, cardiac disease, connective tissue disease, and other immune diseases), medications, hospitalizations and surgeries may uncover health risks, such as immune suppression, that could put an employee at increased health risk from exposure to silica. This information is important when counseling the employee on risks and safe work practices related to silica exposure.

2.2. Physical Examination.

2.2.1. The respirable crystalline silica standard requires the following: A physical examination, with special emphasis on the respiratory system. The physical examination must be performed at the initial examination and every three years thereafter.

2.2.2. Additional guidance and recommendations: Elements of the physical examination that can assist the PHLCP include: An examination of the cardiac system, an extremity examination (for clubbing, cyanosis, edema, or joint abnormalities), and an examination of other pertinent organ systems identified during the history.

2.3. TB Testing.

2.3.1. The respirable crystalline silica standard requires the following: Baseline testing for TB on initial examination.

2.3.2. Additional guidance and recommendations:

2.3.2.1. Current CDC guidelines (*See* Section 5 of this Appendix) should be followed for the application and interpretation of Tuberculin skin tests (TST). The interpretation and documentation of TST reactions should be performed within 48 to 72 hours of administration by trained PLHCPs.

2.3.2.2. PLHCPs may use alternative TB tests, such as interferon-γ release assays (IGRAs), if sensitivity and specificity are comparable to TST (Mazurek *et al.* 2010; Slater *et al.* 2013). PLHCPs can consult the current CDC guidelines for acceptable tests for latent TB infection.

2.3.2.3. The silica standard allows the PLHCP to order additional tests or test at a greater frequency than required by the standard, if deemed appropriate. Therefore, PLHCPs might perform periodic (*e.g.*, annual) TB testing as appropriate, based on employees' risk factors. For example, according to the American Thoracic Society (ATS), the diagnosis of silicosis or exposure to silica for 25 years or more are indications for annual TB testing (ATS 1997). PLHCPs should consult the current CDC guidance on risk factors for TB (*See* Section 5 of this Appendix).

2.3.2.4. Employees with positive TB tests and those with indeterminate test results should be referred to the appropriate agency or specialist, depending on the test results and clinical picture. Agencies, such as local public health departments, or specialists, such as a pulmonary or infectious disease specialist, may be the appropriate referral. Active TB is a nationally notifiable disease. PLHCPs should be aware of the reporting requirements for their region. All States have TB Control Offices that can be contacted for further information. (*See* Section 5 of this Appendix for links to CDC's TB resources and State TB Control Offices.)

2.3.2.5. The following public health principles are key to TB control in the U.S. (ATS–CDC–IDSA 2005):

(1) Prompt detection and reporting of persons who have contracted active TB;

(2) Prevention of TB spread to close contacts of active TB cases;

(3) Prevention of active TB in people with latent TB through targeted testing and treatment; and

(4) Identification of settings at high risk for TB transmission so that appropriate infection-control measures can be implemented.

2.4. Pulmonary Function Testing.

2.4.1. The respirable crystalline silica standard requires the following: Pulmonary function testing must be performed on the initial examination and every three years thereafter. The required pulmonary function test is spirometry and must include forced vital capacity (FVC), forced expiratory volume in one second (FEV_1), and FEV_1/FVC ratio. Testing must be administered by a spirometry technician with a current certificate from a National Institute for Occupational Health and Safety (NIOSH)-approved spirometry course.

2.4.2. Additional guidance and recommendations: Spirometry provides information about individual respiratory status and can be used to track an employee's respiratory status over time or as a surveillance tool to follow individual and group respiratory function. For quality results, the ATS and the American College of Occupational and Environmental Medicine (ACOEM) recommend use of the third National Health and Nutrition Examination Survey (NHANES III) values, and ATS publishes recommendations for spirometry equipment (Miller *et al.* 2005; Townsend 2011; Redlich *et al.* 2014). OSHA's publication, *Spirometry Testing in Occupational Health Programs: Best Practices for Healthcare Professionals*, provides helpful guidance (*See* Section 5 of this Appendix). Abnormal spirometry results may warrant further clinical evaluation and possible recommendations for limitations on the employee's exposure to respirable crystalline silica.

2.5. Chest X-ray.

2.5.1. The respirable crystalline silica standard requires the following: A single posteroanterior (PA) radiographic projection or radiograph of the chest at full inspiration recorded on either film (no less than 14 x 17 inches and no more than 16 x 17 inches) or digital radiography systems. A chest X-ray must be performed on the initial examination and every three years thereafter. The chest X-ray must be interpreted and classified according to the International Labour Office (ILO) International Classification of Radiographs of Pneumoconioses by a NIOSH-certified B Reader.

Chest radiography is necessary to diagnose silicosis, monitor the progression of silicosis, and identify associated conditions such as TB. If the B reading indicates small opacities in a profusion of 1/0 or higher, the employee is to receive a recommendation for referral to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine.

2.5.2. Additional guidance and recommendations: Medical imaging has largely transitioned from conventional film-based radiography to digital radiography systems. The ILO Guidelines for the Classification of Pneumoconioses has historically provided film-based chest radiography as a referent standard for comparison to individual exams. However, in 2011, the ILO revised the guidelines to include a digital set of referent standards that were derived from the prior film-based standards. To assist in assuring that digitally-acquired radiographs are at least as safe and effective as film radiographs, NIOSH has prepared guidelines, based upon accepted contemporary professional recommendations (*See* Section 5 of this Appendix). Current research from Laney *et al.* 2011 and Halldin *et al.* 2014 validate the use of the ILO digital referent images. Both studies conclude that the results of pneumoconiosis classification using digital references are comparable to film-based ILO classifications. Current ILO guidance on radiography for pneumoconioses and B-reading should be reviewed by the PLHCP periodically, as needed, on the ILO or NIOSH Web sites (*See* Section 5 of this Appendix).

2.6. Other Testing. Under the respirable crystalline silica standards, the PLHCP has the option of ordering additional testing he or she deems appropriate. Additional tests can be ordered on a case-by-case basis depending on individual signs or symptoms and clinical judgment. For example, if an

employee reports a history of abnormal kidney function tests, the PLHCP may want to order a baseline renal function tests (*e.g.*, serum creatinine and urinalysis). As indicated above, the PLHCP may order annual TB testing for silica-exposed employees who are at high risk of developing active TB infections. Additional tests that PLHCPs may order based on findings of medical examinations include, but is not limited to, chest computerized tomography (CT) scan for lung cancer or COPD, testing for immunologic diseases, and cardiac testing for pulmonary-related heart disease, such as cor pulmonale.

3. Roles and Responsibilities

3.1. PLHCP. The PLHCP designation refers to "an individual whose legally permitted scope of practice (*i.e.*, license, registration, or certification) allows him or her to independently provide or be delegated the responsibility to provide some or all of the particular health care services required" by the respirable crystalline silica standard. The legally permitted scope of practice for the PLHCP is determined by each State. PLHCPs who perform clinical services for a silica medical surveillance program should have a thorough knowledge of respirable crystalline silica-related diseases and symptoms. Suspected cases of silicosis, advanced COPD, or other respiratory conditions causing impairment should be promptly referred to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine.

Once the medical surveillance examination is completed, the employer must ensure that the PLHCP explains to the employee the results of the medical examination and provides the employee with a written medical report within 30 days of the examination. The written medical report must contain a statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to respirable crystalline silica and any medical conditions that require further evaluation or treatment. In addition, the PLHCP's written medical report must include any recommended limitations on the employee's use of respirators, any recommended limitations on the employee's exposure to respirable crystalline silica, and a statement that the employee should be examined by a Board Certified Specialist in Pulmonary Disease or Occupational medicine if the chest X-ray is classified as 1/0 or higher by the B Reader, or if referral to a Specialist is otherwise deemed appropriate by the PLHCP.

The PLHCP should discuss all findings and test results and any recommendations regarding the employee's health, worksite safety and health practices, and medical referrals for further evaluation, if indicated. In addition, it is suggested that the PLHCP offer to provide the employee with a complete copy of their examination and test results, as some employees may want this information for their own records or to provide to their personal physician or a future PLHCP. Employees are entitled to access their medical records.

Under the respirable crystalline silica standard, the employer must ensure that the PLHCP provides the employer with a written medical opinion within 30 days of the employee examination, and that the employee also gets a copy of the written medical opinion for the employer within 30 days. The PLHCP may choose to directly provide the employee a copy of the written medical opinion. This can be particularly helpful to employees, such as construction employees, who may change employers frequently. The written medical opinion can be used by the employee as proof of up-to-date medical surveillance. The following lists the elements of the written medical report for the employee and written medical opinion for the employer. (Sample forms for the written medical report for the employee, the written medical opinion for the employer, and the written authorization are provided in Section 7 of this Appendix.)

3.1.1. The written medical report for the employee must include the following information:

3.1.1.1. A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to respirable crystalline silica and any medical conditions that require further evaluation or treatment;

3.1.1.2. Any recommended limitations upon the employee's use of a respirator;

3.1.1.3. Any recommended limitations on the employee's exposure to respirable crystalline silica; and

3.1.1.4. A statement that the employee should be examined by a Board Certified Specialist in Pulmonary Disease or Occupational Medicine, where the standard requires or where the PLHCP has determined such a referral is necessary. The standard requires referral to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine for a chest X-ray B reading indicating small opacities in a profusion of 1/0 or higher, or if the PHLCP determines that referral to a Specialist is necessary for other silica-related findings.

3.1.2. The PLHCP's written medical opinion for the employer must include only the following information:

3.1.2.1. The date of the examination;

3.1.2.2. A statement that the examination has met the requirements of this section; and

3.1.2.3. Any recommended limitations on the employee's use of respirators.

3.1.2.4. If the employee provides the PLHCP with written authorization, the written opinion for the employer shall also contain either or both of the following:

(1) Any recommended limitations on the employee's exposure to respirable crystalline silica; and

(2) A statement that the employee should be examined by a Board Certified Specialist in Pulmonary Disease or Occupational Medicine if the chest X-ray provided in accordance with this section is classified as 1/0 or higher by the B Reader, or if referral to a Specialist is otherwise deemed appropriate.

3.1.2.5. In addition to the above referral for abnormal chest X-ray, the PLHCP may refer an employee to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine for other findings of concern during the medical surveillance examination if these findings are potentially related to silica exposure.

3.1.2.6. Although the respirable crystalline silica standard requires the employer to ensure that the PLHCP explains the results of the medical examination to the employee, the standard does not mandate how this should be done. The written medical opinion for the employer could contain a statement that the PLHCP has explained the results of the medical examination to the employee.

3.2. Medical Specialists. The silica standard requires that all employees with chest X-ray B readings of 1/0 or higher be referred to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine. If the employee has given written authorization for the employer to be informed, then the employer shall make available a medical examination by a Specialist within 30 days after receiving the PLHCP's written medical opinion.

3.2.1. The employer must provide the following information to the Board Certified Specialist in Pulmonary Disease or Occupational Medicine:

3.2.1.1. A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to respirable crystalline silica;

3.2.1.2. The employee's former, current, and anticipated levels of occupational exposure to respirable crystalline silica;

3.2.1.3. A description of any personal protective equipment used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and

3.2.1.4. Information from records of employment-related medical examinations previously provided to the employee and currently within the control of the employer.

3.2.2. The PLHCP should make certain that, with written authorization from the employee, the Board Certified Specialist in Pulmonary Disease or Occupational Medicine has any other pertinent medical and occupational information necessary for the specialist's evaluation of the employee's condition.

3.2.3. Once the Board Certified Specialist in Pulmonary Disease or Occupational Medicine has evaluated the employee, the employer must ensure that the Specialist explains to the employee the results of the medical examination and provides the employee with a written medical report within 30 days of the examination. The employer must also ensure that the Specialist provides the employer with a written medical opinion within 30 days of the employee examination. (Sample forms for the written medical report for the employee, the written medical opinion for the employer and the written authorization are provided in Section 7 of this Appendix.)

3.2.4. The Specialist's written medical report for the employee must include the following information:

3.2.4.1. A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to

respirable crystalline silica and any medical conditions that require further evaluation or treatment;

3.2.4.2. Any recommended limitations upon the employee's use of a respirator; and

3.2.4.3. Any recommended limitations on the employee's exposure to respirable crystalline silica.

3.2.5. The Specialist's written medical opinion for the employer must include the following information:

3.2.5.1. The date of the examination; and

3.2.5.2. Any recommended limitations on the employee's use of respirators.

3.2.5.3. If the employee provides the Board Certified Specialist in Pulmonary Disease or Occupational Medicine with written authorization, the written medical opinion for the employer shall also contain any recommended limitations on the employee's exposure to respirable crystalline silica.

3.2.5.4. Although the respirable crystalline silica standard requires the employer to ensure that the Board Certified Specialist in Pulmonary Disease or Occupational Medicine explains the results of the medical examination to the employee, the standard does not mandate how this should be done. The written medical opinion for the employer could contain a statement that the Specialist has explained the results of the medical examination to the employee.

3.2.6. After evaluating the employee, the Board Certified Specialist in Pulmonary Disease or Occupational Medicine should provide feedback to the PLHCP as appropriate, depending on the reason for the referral. OSHA believes that because the PLHCP has the primary relationship with the employer and employee, the Specialist may want to communicate his or her findings to the PLHCP and have the PLHCP simply update the original medical report for the employee and medical opinion for the employer. This is permitted under the standard, so long as all requirements and time deadlines are met.

3.3. Public Health Professionals. PLHCPs might refer employees or consult with public health professionals as a result of silica medical surveillance. For instance, if individual cases of active TB are identified, public health professionals from state or local health departments may assist in diagnosis and treatment of individual cases and may evaluate other potentially affected persons, including coworkers. Because silica-exposed employees are at increased risk of progression from latent to active TB, treatment of latent infection is recommended. The diagnosis of active TB, acute or accelerated silicosis, or other silica-related diseases and infections should serve as sentinel events suggesting high levels of exposure to silica and may require consultation with the appropriate public health agencies to investigate potentially similarly exposed coworkers to assess for disease clusters. These agencies include local or state health departments or OSHA. In addition, NIOSH can provide assistance upon request through their Health Hazard Evaluation program. (*See* Section 5 of this Appendix)

4. Confidentiality and Other Considerations

The information that is provided from the PLHCP to the employee and employer under the medical surveillance section of OSHA's respirable crystalline silica standard differs from that of medical surveillance requirements in previous OSHA standards. The standard requires two separate written communications, a written medical report for the employee and a written medical opinion for the employer. The confidentiality requirements for the written medical opinion are more stringent than in past standards. For example, the information the PLHCP can (and must) include in his or her written medical opinion for the employer is limited to: The date of the examination, a statement that the examination has met the requirements of this section, and any recommended limitations on the employee's use of respirators. If the employee provides written authorization for the disclosure of any limitations on the employee's exposure to respirable crystalline silica, then the PLHCP can (and must) include that information in the written medical opinion for the employer as well. Likewise, with the employee's written authorization, the PLHCP can (and must) disclose the PLHCP's referral recommendation (if any) as part of the written medical opinion for the employer. However, the opinion to the employer must not include information regarding recommended limitations on the employee's exposure to respirable crystalline silica or any referral recommendations without the employee's written authorization.

The standard also places limitations on the information that the Board Certified Specialist in Pulmonary Disease or Occupational Medicine can provide to the employer without the employee's written authorization. The Specialist's written medical opinion for the employer, like the PLHCP's opinion, is limited to (and must contain): The date of the examination and any recommended limitations on the employee's use of respirators. If the employee provides written authorization, the written medical opinion can (and must) also contain any limitations on the employee's exposure to respirable crystalline silica.

The PLHCP should discuss the implication of signing or not signing the authorization with the employee (in a manner and language that he or she understands) so that the employee can make an informed decision regarding the written authorization and its consequences. The discussion should include the risk of ongoing silica exposure, personal risk factors, risk of disease progression, and possible health and economic consequences. For instance, written authorization is required for a PLHCP to advise an employer that an employee should be referred to a Board Certified Specialist in Pulmonary Disease or Occupational Medicine for evaluation of an abnormal chest X-ray (B-reading 1/0 or greater). If an employee does not sign an authorization, then the employer will not know and cannot facilitate the referral to a Specialist and is not required to pay for the Specialist's examination. In the rare case where an employee is diagnosed with acute or accelerated silicosis, co-workers are likely to be at significant risk of developing those diseases as a result of inadequate controls in the workplace. In this case, the PLHCP and/or Specialist should explain this concern to the affected employee and make a determined effort to obtain written authorization from the employee so that the PLHCP and/or Specialist can contact the employer.

Finally, without written authorization from the employee, the PLHCP and/or Board Certified Specialist in Pulmonary Disease or Occupational Medicine cannot provide feedback to an employer regarding control of workplace silica exposure, at least in relation to an individual employee. However, the regulation does not prohibit a PLHCP and/or Specialist from providing an employer with general recommendations regarding exposure controls and prevention programs in relation to silica exposure and silica-related illnesses, based on the information that the PLHCP receives from the employer such as employees' duties and exposure levels. Recommendations may include increased frequency of medical surveillance examinations, additional medical surveillance components, engineering and work practice controls, exposure monitoring and personal protective equipment. For instance, more frequent medical surveillance examinations may be a recommendation to employers for employees who do abrasive blasting with silica because of the high exposures associated with that operation.

ACOEM's Code of Ethics and discussion is a good resource to guide PLHCPs regarding the issues discussed in this section (*See* Section 5 of this Appendix).

5. Resources

5.1. American College of Occupational and Environmental Medicine (ACOEM):

ACOEM Code of Ethics. Accessed at: *http://www.acoem.org/codeofconduct.aspx*

Raymond, L.W. and Wintermeyer, S. (2006) ACOEM evidenced-based statement on medical surveillance of silica-exposed workers: Medical surveillance of workers exposed to crystalline silica. *J Occup Environ Med*, 48, 95–101.

5.2. Center for Disease Control and Prevention (CDC)

Tuberculosis Web page: *http://www.cdc.gov/tb/default.htm*

State TB Control Offices Web page: *http://www.cdc.gov/tb/links/tboffices.htm*

Tuberculosis Laws and Policies Web page: *http://www.cdc.gov/tb/programs/laws/default.htm*

CDC. (2013). Latent Tuberculosis Infection: A Guide for Primary Health Care Providers. Accessed at: *http://www.cdc.gov/tb/publications/ltbi/pdf/targetedltbi.pdf*

5.3. International Labour Organization

International Labour Office (ILO). (2011) Guidelines for the use of the ILO International Classification of Radiographs of Pneumoconioses, Revised edition 2011. Occupational Safety and Health Series No. 22: *http://www.ilo.org/safework/info/publications/WCMS_168260/lang-en/index.htm*

5.4. National Institute of Occupational Safety and Health (NIOSH)

NIOSH B Reader Program Web page. (Information on interpretation of X-rays for silicosis and a list of certified B-readers). Accessed at: *http://www.cdc.gov/niosh/topics/chestradiography/breader-info.html*

NIOSH Guideline (2011). Application of Digital Radiography for the Detection and Classification of Pneumoconiosis. NIOSH publication number 2011–198. Accessed at: *http://www.cdc.gov/niosh/docs/2011-198/*

NIOSH Hazard Review (2002), Health Effects of Occupational Exposure to Respirable Crystalline Silica. NIOSH publication number 2002–129: Accessed at *http://www.cdc.gov/niosh/docs/2002-129/*

NIOSH Health Hazard Evaluations Programs. (Information on the NIOSH Health Hazard Evaluation (HHE) program, how to request an HHE and how to look up an HHE report). Accessed at: *http://www.cdc.gov/niosh/hhe/*

5.5. National Industrial Sand Association:

Occupational Health Program for Exposure to Crystalline Silica in the Industrial Sand Industry. National Industrial Sand Association, 2nd ed. 2010. Can be ordered at: *http://www.sand.org/silica-occupational-health-program*

5.6. Occupational Safety and Health Administration (OSHA)

Contacting OSHA: *http://www.osha.gov/html/Feed_Back.html*

OSHA's Clinicians Web page. (OSHA resources, regulations and links to help clinicians navigate OSHA's Web site and aid clinicians in caring for workers.) Accessed at: *http://www.osha.gov/dts/oom/clinicians/index.html*

OSHA's Safety and Health Topics Web page on Silica. Accessed at: *http://www.osha.gov/dsg/topics/silicacrystalline/index.html*

OSHA (2013). Spirometry Testing in Occupational Health Programs: Best Practices for Healthcare Professionals. (OSHA 3637–03 2013). Accessed at: *http://www.osha.gov/Publications/OSHA3637.pdf*

OSHA/NIOSH (2011). Spirometry: OSHA/NIOSH Spirometry InfoSheet (OSHA 3415–1–11). (Provides guidance to employers). Accessed at *http://www.osha.gov/Publications/osha3415.pdf*

OSHA/NIOSH (2011) Spirometry: OSHA/NIOSH Spirometry Worker Info. (OSHA 3418–3–11). Accessed at *http://www.osha.gov/Publications/osha3418.pdf*

5.7. Other

Steenland, K. and Ward E. (2014). Silica: A lung carcinogen. *CA Cancer J Clin*, 64, 63–69. (This article reviews not only silica and lung cancer but also all the known silica-related health effects. Further, the authors provide guidance to clinicians on medical surveillance of silica-exposed workers and worker counselling on safety practices to minimize silica exposure.)

6. References

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American Thoracic Society (ATS), Centers for Disease Control (CDC), Infectious Diseases Society of America (IDSA) (2005). Controlling Tuberculosis in the United States. *Morbidity and Mortality Weekly Report (MMWR)*, 54(RR12), 1–81. Accessed at: *http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5412a1.htm*

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International Agency for Research on Cancer. (2012). Monographs on the evaluation of carcinogenic risks to humans: Arsenic, Metals, Fibers, and Dusts Silica Dust, Crystalline, in the Form of Quartz or Cristobalite. A Review of Human Carcinogens. Volume 100 C. Geneva, Switzerland: World Health Organization.

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Occupational Safety and Health Administration/National Institute for Occupational Safety and Health (OSHA/NIOSH) (2015). Hazard alert. Worker exposure to silica during countertop manufacturing, finishing, and installation. (OSHA–HA–3768–2015).

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7. Sample Forms

Three sample forms are provided. The first is a sample written medical report for the employee. The second is a sample written medical opinion for the employer. And the third is a sample written authorization form that employees sign to clarify what information the employee is authorizing to be released to the employer.

BILLING CODE 4510–26–P

WRITTEN MEDICAL REPORT FOR EMPLOYEE

EMPLOYEE NAME: _____ **DATE OF EXAMINATION:** _____

TYPE OF EXAMINATION:

[ ] Initial examination [ ] Periodic examination [ ] Specialist examination

[ ] Other: _____

RESULTS OF MEDICAL EXAMINATION:

Physical Examination –	[ ] Normal	[ ] Abnormal (see below)	[ ] Not performed
Chest X-Ray –	[ ] Normal	[ ] Abnormal (see below)	[ ] Not performed
Breathing Test (Spirometry) –	[ ] Normal	[ ] Abnormal (see below)	[ ] Not performed
Test for Tuberculosis –	[ ] Normal	[ ] Abnormal (see below)	[ ] Not performed
Other:_____	[ ] Normal	[ ] Abnormal (see below)	[ ] Not performed

Results reported as abnormal: _____

_____

[ ] Your health may be at increased risk from exposure to respirable crystalline silica due to the following:

_____

RECOMMENDATIONS:

[ ] No limitations on respirator use

[ ] Recommended limitations on use of respirator: _____

[ ] Recommended limitations on exposure to respirable crystalline silica: _____

_____

Dates for recommended limitations, if applicable: _____ (MM/DD/YYYY) to _____ (MM/DD/YYYY)

[ ] I recommend that you be examined by a Board Certified Specialist in Pulmonary Disease or Occupational Medicine

[ ] Other recommendations*:

_____

_____

Your next periodic examination for silica exposure should be in: [ ] 3 years [ ] Other: _____ (MM/DD/YYYY)

Examining Provider: _____ (signature) Date: _____

Provider Name: _____

Office Address: _____ Office Phone: _____

*These findings may not be related to respirable crystalline silica exposure or may not be work-related, and therefore may not be covered by the employer. These findings may necessitate follow-up and treatment by your personal physician.

Respirable Crystalline Silica standard (§ 1910.1053 or 1926.1153)

WRITTEN MEDICAL OPINION FOR EMPLOYER

EMPLOYER: _____

EMPLOYEE NAME: _____ **DATE OF EXAMINATION:** _____

TYPE OF EXAMINATION:
[ ] Initial examination [ ] Periodic examination [ ] Specialist examination
[ ] Other: _____

USE OF RESPIRATOR:
[ ] No limitations on respirator use
[ ] Recommended limitations on use of respirator: _____

Dates for recommended limitations, if applicable: _____ (MM/DD/YYYY) to _____ (MM/DD/YYYY)

The employee has provided written authorization for disclosure of the following to the employer (if applicable):

[ ] This employee should be examined by an American Board Certified Specialist in Pulmonary Disease or Occupational Medicine
[ ] Recommended limitations on exposure to respirable crystalline silica: _____

Dates for exposure limitations noted above: _____ (MM/DD/YYYY) to _____ (MM/DD/YYYY)

NEXT PERIODIC EVALUATION: [ ] 3 years [ ] Other: _____ (MM/DD/YYYY)

Examining Provider: _____ (signature) Date: _____

Provider Name: _____ Provider's specialty: _____

Office Address: _____ Office Phone: _____

[ ] I attest that the results have been explained to the employee.

The following is required to be checked by the Physician or other Licensed Health Care Professional (PLHCP):
[ ] I attest that this medical examination has met the requirements of the medical surveillance section of the OSHA Respirable Crystalline Silica standard (§ 1910.1053(h) or 1926.1153(h)).

AUTHORIZATION FOR CRYSTALLINE SILICA OPINION TO EMPLOYER

This medical examination for exposure to crystalline silica could reveal a medical condition that results in recommendations for (1) limitations on respirator use, (2) limitations on exposure to crystalline silica, or (3) examination by a specialist in pulmonary disease or occupational medicine. Recommended limitations on respirator use will be included in the written opinion to the employer. If you want your employer to know about limitations on crystalline silica exposure or recommendations for a specialist examination, you will need to give authorization for the written opinion to the employer to include one or both of those recommendations.

I hereby authorize the opinion to the employer to contain the following information, if relevant (please check all that apply):

☐ Recommendations for limitations on crystalline silica exposure

☐ Recommendation for a specialist examination

OR

☐ I do not authorize the opinion to the employer to contain anything other than recommended limitations on respirator use.

Please read and initial:

___ I understand that if I do not authorize my employer to receive the recommendation for specialist examination, the employer will not be responsible for arranging and covering costs of a specialist examination.

_____
Name (printed)

_____ _____
Signature Date

[FR Doc. 2016–04800 Filed 3–24–16; 8:45 am]
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COMMONWEALTH of VIRGINIA

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VIRGINIA SAFETY AND HEALTH CODES BOARD

BRIEFING PACKAGE

For September 13, 2016

Improve Tracking of Workplace Injuries and Illnesses, §§1904.35, 1904.36, and 1904.41; Final Rule; and Correction to §1904.35(b)(2)

I. Action Requested

The Virginia Occupational Safety and Health (VOSH) Program requests the Safety and Health Codes Board to consider for adoption federal OSHA's final rule to Improve Tracking of Workplace Injuries and Illnesses, as published on May 12, 2016 in 81 FR 29623; and its Correction, as published on May 20, 2016, in 81 FR 31854.

The proposed effective date is January 1, 2017, except for §§ 1904.35 and 1904.36, which become effective on December 1, 2016.

II. Summary of the Final Rule

In general, OSHA regulations at Part 1904 currently require employers with 11 or more employees in most industries to keep records of work-related injuries and illnesses at their establishments to help these employers and their employees identify hazards, fix problems and prevent additional injuries and illnesses. Employers covered by these rules must prepare the following forms for each case: OSHA Forms 300 – *Log of Work-Related Injuries and Illnesses*, 300A – *Summary of Work-Related Injuries and Illnesses*, and 301 – *Injury and Illness Incident Report*.

OSHA currently obtains the injury and illness data entered on the three recordkeeping forms only through onsite inspections, which collect only the data from the individual establishments being inspected, or by inclusion of an establishment in a survey pursuant to the previous Part 1904.41, *Annual OSHA injury and illness survey of ten or more employers.*

A. Update to Existing Recording and Reporting Requirements in Part 1904

This final rule makes several changes to the existing recording and reporting requirements under Part 1904. The final rule requires certain employers to electronically submit the injury and illness information they are already required to keep under existing OSHA regulations:

1. Establishments with 250 or more employees that are currently required to keep OSHA injury and illness records must electronically submit information from OSHA Forms 300 – *Log of Work-Related Injuries and Illnesses*, 300A – *Summary of Work-Related Injuries and Illnesses*, and 301 – *Injury and Illness Incident Report*.

2. Establishments with 20 to 249 employees that are classified in certain industries with historically high rates of occupational injuries and illnesses must electronically submit annually information from OSHA Form 300A only.

3. Establishments with fewer than 20 employees at all times during the year do not have to routinely submit information electronically to OSHA. OSHA requires all employers who receive notification from OSHA to electronically submit the requested information from their injury and illness records to OSHA or OSHA's designee.

4. OSHA intends to post the data from these submissions on its secure, publicly accessible website at www.osha.gov. It will also remove any Personally Identifiable Information (PII) on the website before the data are released to the public.

5. Implementation Schedule - VOSH would comply with OSHA's phase-in of the implementation schedule of the new reporting requirements over two years and would use the same implementation dates. Virginia will match federal OSHA's compliance schedule. The key implementation dates are:

   - July 1, 2017 – Employers with 250 employees or more that are required to routinely submit information under the final rule will be responsible for submitting information from their 2016 OSHA 300A Forms. Employers with 20-249 employees in designated, high-risk industries will be responsible for electronically submitting information from their 2016 OSHA 300A Forms.

- July 1, 2018 – Employers with 250 employees or more that are required to routinely submit information under the final rule will be responsible for submitting information from their 2017 OSHA 300, 301, and 300A Forms.

- March 2, 2019 – Employers with 250 employees or more that are required to routinely submit information under the final rule will be responsible for submitting information form OSHA 300, 301, and 300A Forms. Employers with 20-249 employees in designated industries will be responsible for electronically submitting information from their OSHA 300A Forms.

6. Employees Involvement - §1904.35

This final rule also amends OSHA's recordkeeping regulation to update requirements on how employers inform employees to report work-related injuries and illnesses to their employer. Discrimination or retaliation against an employee who reports a fatality, injury, or illness is a violation of section 11(c) of the OSH Act. The VOSH equivalent is §40.1-51.2:1 and §40.1-51.2:2 of the *Code of Virginia*.

Under section 11(c), OSHA may not act against an employer unless an employee files a complaint. Under §1904.35 (v)(1)(iv) of the final rule, VOSH will be able to cite an employer for taking adverse action against an employee for reporting an injury or illness, even if the employee did not file a complaint, *(See Attachments 1 & 2)*. Additionally, citations can result in orders requiring employers to abate violations, which may be a more efficient tool to correct employer policies and practices than the 11(c), which is often employee-specific.

The final rule contains three new provisions in §1904.35 that will promote complete and accurate reporting of work-related injuries and illnesses while also expanding OSHA's anti-retaliation protections:

- Paragraphs (a)(2) and (b)(1)(iii) of §1904.35 require employers to inform employees of their right to report work-related injuries and illnesses free from retaliation. The final rule strengthens paragraph (a) of §1904.35 by expanding the previous requirement for employers to inform employees how to report work-related injuries and illnesses so that the rule now includes a mandate to inform employees that they have a right to report work-related injuries and illnesses free from retaliation by their employer. This obligation may be met by posting the OSHA *Job Safety and Health – It's The Law* worker rights poster from April 2015, or later.

  OSHA also made a technical edit to paragraph (a)(3) of §1904.35 to clarify that the rights of employees and their representatives to access injury and illness records are governed by §1904.35(b)(2).

- Paragraph (b)(1)(i) of §1904.35 clarifies that the existing implicit requirement that an employer's procedure for reporting work-related injuries and illnesses must be reasonable and not deter or discourage employees from reporting; and

- Paragraph (b)(1)(iv) of §1904.35 incorporates explicitly into Part 1904 the existing prohibition on retaliation against employees for reporting work-related injuries or illnesses consistent with the existing prohibition contained in section 11(c) of the OSH Act. Three specific types of adverse employer actions that OSHA examined included: disciplinary policies, automatic post-accident drug testing, and employee incentive programs.

7. Other Significant Final Rule Changes

   a. Employees' Rights - §1904.36 – Prohibition Against Discrimination

      To ensure that the injury data on OSHA logs are accurate and complete, the final rule also promotes an employee's right to report injuries and illnesses without fear of retaliation, and clarifies that an employer must have a reasonable procedure for reporting work-related injuries that does not discourage employees from reporting. This aspect of the final rule targets employer programs and policies that, while nominally promoting safety, have the effect of discouraging workers from reporting injuries and, in turn, leading to incomplete or inaccurate records of workplace hazards.

   b. Addition of Appendix A to Subpart E of Part 1904

      OSHA added Appendix A to Subpart E of Part 1904, Designated Industries for §1904.41(a)(2) Annual Electronic Submission of OSHA Form 300A Summary of Work-Related Injuries and Illnesses by Establishments With 20 or More Employees but Fewer than 250 Employees in Designated Industries.

8. Correction to Final Rule

   On May 20, 2016, federal OSHA published in the *Federal Register* a correction to the Final Rule revising its Recording and Reporting Occupational Injuries and Illnesses Regulation. Paragraph (b)(2) of §1904.35, Employee Involvement, was inadvertently designated as "[Reserved]". The correction reinserts the paragraph which deals with implementing the basic requirement of an employee and his representatives' involvement in the recordkeeping system.

III. Basis, Purpose and Impact of the Amendment

A. Basis and History

OSHA's regulations on recording and reporting occupational injuries and illnesses were first issued in 1971. This regulation requires the recording of work-related injuries and illnesses that involve death, loss of consciousness, days away from work, restriction of work, transfer to another job, medical treatment other than first aid, or diagnosis of a significant injury or illness by a physician or other licensed healthcare professional.

From 1997 to 2012, OSHA used the authority in the previous §1904.41, Annual OSHA injury and illness survey of ten or more employers, to collect establishment-specific injury and illness data through the OSHA Data Initiative (ODI). OSHA then used this information to identify and target the most hazardous worksites in their Site Specific Targeting (SST) planned inspection program.

In 2013, OSHA issued a proposed rule to improve tracking of workplace injuries and illnesses through the electronic collection of establishment-specific injury and illness data to which OSHA currently does not have direct access. After considering public comments, OSHA issued a final rule that requires certain employers to electronically submit injury and illness data. In 2014, OSHA again amended the Part 1904 regulations to require employers to report work-related fatalities, in-patient hospitalizations and losses of an eye to OSHA and to allow electronic reporting.

B. Purpose

To assure completeness and accuracy of injury and illness data collected by employers and reported to OSHA, OSHA has issued a final rule to modernize injury and illness data collection to better inform workers, employers, the public, and OSHA about workplace hazards. Analysis of this data will enable OSHA to use its enforcement and compliance assistance resources more efficiently.

C. Impact on Employers

The final rule impacts employers as follows:

- The new provisions only require employers to submit to OSHA electronically the information employers have already collected and recorded. One or more methods of data transmission, other than manual data entry, will be provided, but use is not required.

- It does not require employers to adopt an electronic system to record occupational injuries and illnesses and to maintain OSHA Forms 300, 301 and 300A.

- The electronic submission requirements do not add to or change any employer's obligation to complete, retain, and certify injury and illness records.

- It does not add to or change the recording criteria or definitions for these records.

- It adds a prohibition on retaliation to Part 1904 that provides clear notice to employers of what actions are prohibited, such as employers' use of incentive programs, which will help to prevent retaliatory acts from occurring in the first place.

- Three specific types of adverse employer actions that OSHA examined included: disciplinary policies, automatic post-accident drug testing, and employee incentive programs.

    - With regard to automatic post-accident drug testing, OSHA states that drug testing policies should limit post-incident testing to situations in which employee drug use is likely to have contributed to the incident, and for which the drug test can accurately identify impairment caused by drug use. For example, it would likely not be reasonable to drug-test an employee who reports a bee sting, a repetitive strain injury, or an injury caused by a lack of machine guarding or a machine or tool malfunction.

    - With regard to employee incentive programs, if an incentive program makes a reward contingent upon, for example, whether employees correctly follow legitimate safety rules rather than whether they reported any injuries or illnesses, the program would not violate this provision. OSHA encourages incentive programs that promote worker participation in safety-related activities, such as identifying hazards or participating in investigations of injuries, incidents, or "near misses."

OSHA's recordkeeping regulation currently covers more than 600,000 employers with approximately 1,300,000 establishments nationally; and in Virginia that translates to more than 16,000 employers with approximately 35,000 establishments.

D. <u>Impact on Employees</u>

- The final rule includes provisions that encourage workers to report work-related injuries or illnesses to their employers and prohibit employers from retaliating against workers for making those reports.

- It expands the previous requirement for employers to inform employees how to report work-related injuries and illnesses so that the rule now includes a mandate to inform employees that they have a right to report work-related injuries and illnesses free from retaliation by their employer as described in paragraph (b)(1)(iii) of the final rule.

- Regarding the prohibition of discrimination against employees for reporting a work-related injury of illness, the final rule does not abolish or interfere with the rights or restrictions contained in section 11(c) of the OSH Act. An employee who wishes to file a complaint under section 11(c) may do so within the statutory 30-day period regardless of whether OSHA has issued, or will issue, a citation to the employer for violating the final rule.

- Retaliating against a worker for reporting a workplace injury or illness would be a violation of OSHA's recordkeeping requirements, eliminating some potential complications for workers and for OSHA in responding to retaliation. The new rule should discourage programs many employers have that actively reward workers for not reporting job-related injuries and illnesses.

- Using data newly accessible under this final rule, potential employees could examine the injury and illness records of establishments where they are interested in working to help make a more informed decision about a future place of employment.

E. Impact on the Department of Labor and Industry

VOSH believes that having workplace injury and illness information reported online will help the agency improve safety and health without additional inspections. This data will help VOSH better "target" its limited enforcement resources. The information VOSH gets about workplace injuries and illnesses under the new rule will help point VOSH toward where workers are most at risk.

The new rule also differs from §40.1-51.2:1 and §40.1-51.2:2, dealing with whistleblower protection, because it is specifically designed to promote the accuracy and integrity of the injury and illness records employers are required to keep under Part 1904. Under §40.1-51.2:1, VOSH may not act against an employer unless an employee files a complaint. Under §1904.35(b)(1)(iv) of the final rule, VOSH will be permitted to cite an employer for taking an adverse action against an employee for reporting an injury or illness, even if the employee did not file a §40.1-51.2:1 complaint with VOSH. These citations can result in orders requiring employers to abate violations which may be a more efficient tool to correct employer policies and practices than the remedies authorized under §40.1-51.2:2, which are often employee-specific.

The rule will also provide VOSH with data to assist the agency in improving allocation of compliance assistance – help VOSH provides to employers who want to improve their safety standards – and enforcement resources, expanding the agency's ability to identify, target and remove safety and health hazards, thereby preventing workplace injuries, illnesses and deaths. It will also enable VOSH to conduct more rigorous evaluations of the impact of government injury prevention activities.

Federal regulations 29 CFR 1953.23(a) and (b) require that Virginia, within six months of the occurrence of a federal program change, to adopt identical changes or promulgate equivalent changes which are at least as effective as the federal change. The Virginia Code reiterates this requirement in § 40.1-22(5). Adopting these revisions will allow Virginia to conform to the federal program change.

F. **Benefits**

- With the information obtained through this final rule, employers, employees, employee representatives, the government, and researchers may be better able to identify, target, and remove workplace safety and health hazards and thereby prevent worker injuries and illnesses.

- The data submission requirements of the final rule will improve the quality of the information and lead employers to increase workplace safety and health.

- Online access to these data will allow the public, including employees and potential employees, researchers, employers, unions, and workplace safety and health consultants, to use and benefit from the data.

- To increase its impact, the final rule will increase OSHA's impact on thousands of establishments where workers are being injured or made ill through the application of advances made in the field of behavioral economics in understanding and influencing decision-making in order to prevent worker injuries and illnesses.

- The final rule recognizes that public disclosure of data can be a powerful tool in changing behavior, i.e., to encourage employers to abate hazards and, thereby, prevent injuries and illnesses so that the employer's establishment can be seen by members of the public, including investors and job seekers. OSHA believes that disclosure of and public access to these data will "nudge" some employers to abate hazards and thereby prevent workplace injuries and illnesses, without OSHA having to conduct onsite inspections.

- The database resulting from this final rule will provide for the use of establishment-specific data without having to work under the restrictions imposed by BLS for the use of confidential data.

- It would also provide data on injury and illness classifications that are not currently available from any source, including the BLS SOII. Specifically, under this collection, there would be case-specific data for injuries and illnesses that do not involve days away from work. The BLS case and demographic data is limited to cases involving days away from work and a small subset of cases involving restricted work activity.

G. **Cost Estimates**

	National	VA
Total annualized costs of the final rule:	$ 15.0 M	$402,800
Total annualized Private Sector costs:	$ 13.7 M	$ 369,000
Annualized costs for electronic submissions for private sector establishments with 250 or more employees	$ 7.2 M	$ 201,400
Annualized electronic submissions for private sector estabishments with 20 to 249 employees	$ 4.6 M	$ 120,800
Annualized costs for anti-discrimination requirements	$ 0.9 M	$ 24,100
Fully implemented, the first-year economic cost for all provisions of the final rule	$ 28.0 M	$ 752,000

The rule will be phased in, which moves the annual cost for reporting case characteristic data from OSHA Forms 300 and 301 by 33,000 establishments from 2017 to 2018. This phase-in removes about $6.9 million from the first year costs, but those costs would reappear in years two through 10.

OSHA estimates that every fatality avoided is valued at approximately $9 million as of 2012. "Many injuries, illnesses and fatalities can be prevented at minimal cost. For example, the costs of greater use of personal protective equipment are minimal, yet many fatalities described in OSHA's inspection data systems could have been prevented through the use of available personal protective equipment." OSHA believes that the annual benefits, although unquantified, exceed the annual costs. If the rule results in the prevention of 4.8 fatalities or 0.8 percent of injuries (or a combination of the two) per year, the regulation's benefits will exceed the costs.

H. **Economic Feasibility**

OSHA concluded that the final rule will be economically feasible, and certified that this final rule will not have a significant economic impact on a substantial number of small entities.

I. **Technological Feasibility**

The final rule is technologically feasible since it does not require employers to adopt an electronic system to record occupational injuries and illnesses and to maintain OSHA Forms 300, 301 and 300A. The new provisions only require employers to submit to OSHA electronically the information they have already recorded. Many employers have already submitted information through the OSHA Data Initiative and BLS SOII survey.

The only changes are that, under certain circumstances, employers will be obligated to submit information from these records to OSHA in an electronic format and to assure that employees have, and understand they have, a right to report injuries and illness without fear of discrimination. One or more methods of data transmission, other than manual data entry, will be provided, but use is not required.

Posting the new OSHA poster to inform employees of their rights will allow employers to meet the informational component of the non-discrimination provisions of the final rule.

Contact Person:

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Public Law 91-596
84 STAT. 1590
91st Congress, S.2193
December 29, 1970,
as amended through January 1, 2004.

An Act

To assure safe and healthful working conditions for working men and women; by authorizing enforcement of the standards developed under the Act; by assisting and encouraging the States in their efforts to assure safe and healthful working conditions; by providing for research, information, education, and training in the field of occupational safety and health; and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, **That this Act may be cited as the "Occupational Safety and Health Act of 1970."**

* * *

SECTION 11. Judicial Review

* * *

(c)(1) No person shall discharge or in any manner discriminate against any employee because such employee has filed any complaint or instituted or caused to be instituted any proceeding under or related to this Act or has testified or is about to testify in any such proceeding or because of the exercise by such employee on behalf of himself or others of any right afforded by this Act.

CODE of VIRGINIA

§ 40.1-51.2:1. Discrimination against employee for exercising rights prohibited.

No person shall discharge or in any way discriminate against an employee because the employee has filed a safety or health complaint or has testified or otherwise acted to exercise rights under the safety and health provisions of this title for themselves or others.
1979, Chapter 354.

§ 40.1-51.2:2. Remedy for discrimination.

A. Any employee who believes that he or she has been discharged or otherwise discriminated against by any person in violation of § 40.1-51.2:1 may, within 60 days after such violation occurs, file a complaint with the Commissioner alleging such discharge or discrimination. The employee shall be prohibited from seeking relief under this section if he fails to file such complaint within the 60-day time period. Upon receipt of such complaint, the Commissioner shall cause such investigation to be made as he deems appropriate. If, upon such investigation, he determines that the provisions of § 40.1-51.2:1 have been violated, he shall attempt by conciliation to have the violation abated without economic loss to the employee. In the event a voluntary agreement cannot be obtained, the Commissioner shall bring an action in a circuit court having jurisdiction over the person charged with the violation. The court shall have jurisdiction, for cause shown, to restrain violations and order appropriate relief, including rehiring or reinstatement of the employee to his former position with back pay plus interest at a rate not to exceed eight percent per annum.

B. Should the Commissioner, based on the results of his investigation of the complaint, refuse to issue a charge against the person that allegedly discriminated against the employee, the employee may bring action in a circuit court having jurisdiction over the person allegedly discriminating against the employee, for appropriate relief.

1979, c. 354; 2001, c. 332; 2005, cc. 743, 789.

RECOMMENDED ACTION

Staff of the Department of Labor and Industry recommends that the Safety and Health Codes Board adopt the Final Rule to Improve Tracking of Workplace Injuries and Illnesses, §§1904.35, 1904.36, and 1904.41; Final Rule; and the Correction to §1904.35(b)(2), as authorized by Virginia Code §§ 40.1-22(5) and 2.2-4006.A.4(c), with an effective date of January 1, 2017, except for §§1904.35 and 1904.36, which become effective on December 1, 2016.

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 above-cited subsection A.4(c) of the Administrative Process Act.

Improve Tracking of Workplace Injuries and Illnesses, §§1904.35, 1904.36, and 1904.41; Final Rule; and Correction to §1904.35(b)(2)

As Adopted by the

Safety and Health Codes Board

Date: _____

VIRGINIA OCCUPATIONAL SAFETY AND HEALTH PROGRAM

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

Effective Date: _____

16VAC85-1904.35, Employee Involvement, §1904.35
16VAC85-1904.36, Prohibition Against Discrimination, §1904.36
16VAC85-1904.41, Electronic Submission of Injury and Illness Records to OSHA, §1904.41

When the regulations, as set forth in the Final Rule to Improve Tracking of Workplace Injuries and Illnesses, §§1904.35, 1904.36, and 1904.41; and the Correction to §1904.35(b)(2), are applied to the Commissioner of the Department of Labor and Industry and/or to Virginia employers, the following federal terms shall be considered to read as below:

Federal Terms	VOSH Equivalent
29 CFR	VOSH Standard
Assistant Secretary	Commissioner of Labor and Industry
Agency	Department
January 1, 2017, except for: August 10, 2016 for §1904.36 and November 1, 2016 for §1904.35	January 1, 2017, except for: §§1904.35 and 1904.36 which become effective on December 1, 2016

Final Rule

For the reasons stated in the preamble, OSHA amends parts 1904 and 1902 of chapter XVII of title 29 as follows:

PART 1904—[AMENDED]

■ 2. Revise § 1904.35 to read as follows:

§ 1904.35 Employee involvement.

(a) *Basic requirement.* Your employees and their representatives must be involved in the recordkeeping system in several ways.

(1) You must inform each employee of how he or she is to report a work-related injury or illness to you.

(2) You must provide employees with the information described in paragraph (b)(1)(iii) of this section.

(3) You must provide access to your injury and illness records for your employees and their representatives as described in paragraph (b)(2) of this section.

(b) *Implementation*—(1) *What must I do to make sure that employees report work-related injuries and illnesses to me?* (i) You must establish a reasonable procedure for employees to report work-related injuries and illnesses promptly and accurately. A procedure is not reasonable if it would deter or discourage a reasonable employee from accurately reporting a workplace injury or illness;

(ii) You must inform each employee of your procedure for reporting work-related injuries and illnesses;

(iii) You must inform each employee that:

(A) Employees have the right to report work-related injuries and illnesses; and

(B) Employers are prohibited from discharging or in any manner discriminating against employees for reporting work-related injuries or illnesses; and

(iv) You must not discharge or in any manner discriminate against any employee for reporting a work-related injury or illness.

(2) [Reserved]

■ 3. Revise § 1904.36 to read as follows:

§ 1904.36 Prohibition against discrimination.

In addition to § 1904.35, section 11(c) of the OSH Act also prohibits you from discriminating against an employee for reporting a work-related fatality, injury, or illness. That provision of the Act also protects the employee who files a safety and health complaint, asks for access to the part 1904 records, or otherwise exercises any rights afforded by the OSH Act.

Subpart E—Reporting Fatality, Injury and Illness Information to the Government

■ 5. Revise § 1904.41 to read as follows:

§ 1904.41 Electronic submission of injury and illness records to OSHA.

(a) *Basic requirements*—(1) *Annual electronic submission of part 1904 records by establishments with 250 or more employees.* If your establishment had 250 or more employees at any time during the previous calendar year, and this part requires your establishment to keep records, then you must electronically submit information from the three recordkeeping forms that you keep under this part (OSHA Form 300A Summary of Work-Related Injuries and Illnesses, OSHA Form 300 Log of Work-Related Injuries and Illnesses, and OSHA Form 301 Injury and Illness Incident Report) to OSHA or OSHA's designee. You must submit the information once a year, no later than the date listed in paragraph (c) of this section of the year after the calendar year covered by the forms.

(2) *Annual electronic submission of OSHA Form 300A Summary of Work-Related Injuries and Illnesses by establishments with 20 or more employees but fewer than 250 employees in designated industries.* If your establishment had 20 or more employees but fewer than 250 employees at any time during the previous calendar year, and your establishment is classified in an industry listed in appendix A to subpart E of this part, then you must electronically submit information from OSHA Form 300A Summary of Work-Related Injuries and Illnesses to OSHA or OSHA's designee. You must submit the information once a year, no later than the date listed in paragraph (c) of this section of the year after the calendar year covered by the form.

(3) *Electronic submission of part 1904 records upon notification.* Upon notification, you must electronically submit the requested information from your part 1904 records to OSHA or OSHA's designee.

(b) *Implementation*—(1) *Does every employer have to routinely submit information from the injury and illness records to OSHA?* No, only two categories of employers must routinely submit information from their injury and illness records. First, if your establishment had 250 or more employees at any time during the previous calendar year, and this part requires your establishment to keep records, then you must submit the required Form 300A, 300, and 301 information to OSHA once a year. Second, if your establishment had 20 or more employees but fewer than 250 employees at any time during the previous calendar year, and your establishment is classified in an industry listed in appendix A to subpart E of this part, then you must submit the required Form 300A information to OSHA once a year. Employers in these two categories must submit the required information by the date listed in paragraph (c) of this section of the year after the calendar year covered by the form or forms (for example, 2017 for the 2016 forms). If you are not in either of these two categories, then you must submit information from the injury and illness records to OSHA only if OSHA notifies you to do so for an individual data collection.

(2) *If I have to submit information under paragraph (a)(1) of this section, do I have to submit all of the information from the recordkeeping form?* No, you are required to submit all of the information from the form *except* the following:

(i) Log of Work-Related Injuries and Illnesses (OSHA Form 300): Employee name (column B).

(ii) Injury and Illness Incident Report (OSHA Form 301): Employee name (field 1), employee address (field 2), name of physician or other health care professional (field 6), facility name and address if treatment was given away from the worksite (field 7).

(3) *Do part-time, seasonal, or temporary workers count as employees in the criteria for number of employees in paragraph (a) of this section?* Yes, each individual employed in the establishment at any time during the calendar year counts as one employee, including full-time, part-time, seasonal, and temporary workers.

(4) *How will OSHA notify me that I must submit information from the injury and illness records as part of an individual data collection under paragraph (a)(3) of this section?* OSHA will notify you by mail if you will have to submit information as part of an individual data collection under paragraph (a)(3). OSHA will also announce individual data collections through publication in the **Federal Register** and the OSHA newsletter, and announcements on the OSHA Web site. If you are an employer who must routinely submit the information, then OSHA will not notify you about your routine submittal.

(5) *How often do I have to submit the information from the injury and illness records?* If you are required to submit information under paragraph (a)(1) or (2) of this section, then you must submit the information once a year, by the date listed in paragraph (c) of this section of the year after the calendar year covered by the form or forms. If you are submitting information because OSHA notified you to submit information as part of an individual data collection under paragraph (a)(3) of this section, then you must submit the information as often as specified in the notification.

(6) *How do I submit the information?* You must submit the information electronically. OSHA will provide a secure Web site for the electronic submission of information. For individual data collections under paragraph (a)(3) of this section, OSHA will include the Web site's location in the notification for the data collection.

(7) *Do I have to submit information if my establishment is partially exempt from keeping OSHA injury and illness records?* If you are partially exempt from keeping injury and illness records under §§ 1904.1 and/or 1904.2, then you do not have to routinely submit part 1904 information under paragraphs (a)(1) and (2) of this section. You will have to submit information under paragraph (a)(3) of this section if OSHA informs you in writing that it will collect injury and illness information from you. If you receive such a notification, then you must keep the injury and illness records required by this part and submit information as directed.

(8) *Do I have to submit information if I am located in a State Plan State?* Yes, the requirements apply to employers located in State Plan States.

(9) *May an enterprise or corporate office electronically submit part 1904 records for its establishment(s)?* Yes, if your enterprise or corporate office had ownership of or control over one or more establishments required to submit information under paragraph (a)(1) or (2) of this section, then the enterprise or corporate office may collect and electronically submit the information for the establishment(s).

(c) *Reporting dates.* (1) In 2017 and 2018, establishments required to submit under paragraph (a)(1) or (2) of this section must submit the required information according to the table in this paragraph (c)(1):

Submission year	Establishments submitting under paragraph (a)(1) of this section must submit the required information from this form/these forms:	Establishments submitting under paragraph (a)(2) of this section must submit the required information from this form:	Submission deadline
2017	300A	300A	July 1, 2017.
2018	300A, 300, 301	300A	July 1, 2018.

(2) Beginning in 2019, establishments that are required to submit under paragraph (a)(1) or (2) of this section will have to submit all of the required information by March 2 of the year after the calendar year covered by the form or forms (for example, by March 2, 2019, for the forms covering 2018).

■ 6. Add appendix A to subpart E of part 1904 to read as follows:

Appendix A to Subpart E of Part 1904—Designated Industries for § 1904.41(a)(2) Annual Electronic Submission of OSHA Form 300A Summary of Work-Related Injuries and Illnesses by Establishments With 20 or More Employees but Fewer Than 250 Employees in Designated Industries

NAICS	Industry
11	Agriculture, forestry, fishing and hunting.
22	Utilities.
23	Construction.
31–33	Manufacturing.
42	Wholesale trade.
4413	Automotive parts, accessories, and tire stores.
4421	Furniture stores.
4422	Home furnishings stores.
4441	Building material and supplies dealers.
4442	Lawn and garden equipment and supplies stores.
4451	Grocery stores.
4452	Specialty food stores.
4521	Department stores.
4529	Other general merchandise stores.
4533	Used merchandise stores.
4542	Vending machine operators.
4543	Direct selling establishments.
4811	Scheduled air transportation.
4841	General freight trucking.
4842	Specialized freight trucking.
4851	Urban transit systems.
4852	Interurban and rural bus transportation.
4853	Taxi and limousine service.
4854	School and employee bus transportation.
4855	Charter bus industry.
4859	Other transit and ground passenger transportation.
4871	Scenic and sightseeing transportation, land.
4881	Support activities for air transportation.
4882	Support activities for rail transportation.
4883	Support activities for water transportation.
4884	Support activities for road transportation.
4889	Other support activities for transportation.
4911	Postal service.
4921	Couriers and express delivery services.
4922	Local messengers and local delivery.
4931	Warehousing and storage.
5152	Cable and other subscription programming.
5311	Lessors of real estate.
5321	Automotive equipment rental and leasing.
5322	Consumer goods rental.
5323	General rental centers.
5617	Services to buildings and dwellings.
5621	Waste collection.
5622	Waste treatment and disposal.
5629	Remediation and other waste management services.
6219	Other ambulatory health care services.

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Parts 1904 and 1902

[Docket No. OSHA–2013–0023]

RIN 1218–AC49

Improve Tracking of Workplace Injuries and Illnesses; Correction

AGENCY: Occupational Safety and Health Administration (OSHA), DOL.

ACTION: Final rule; correction.

SUMMARY: OSHA published in the **Federal Register** of May 12, 2016, a final rule revising its Recording and Reporting Occupational Injuries and Illnesses Regulation. In the rule, a paragraph was inadvertently removed. This document reinserts that paragraph.

DATES: *Effective:* August 10, 2016.

FOR FURTHER INFORMATION CONTACT: For press inquiries: Frank Meilinger, Office of Communications, Room N–3647, OSHA, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210; telephone (202) 693–1999; email: *meilinger.francis2@dol.gov*.

For general and technical information: Miriam Schoenbaum, Office of Statistical Analysis, Room N–3507, OSHA, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210; telephone (202)693–1841; email: *schoenbaum.miriam@dol.gov*.

SUPPLEMENTARY INFORMATION: OSHA published in the **Federal Register** of May 12, 2016, a final rule revising its Recording and Reporting Occupational Injuries and Illnesses regulation (92 FR 29624).

This document was prepared under the direction of David Michaels, Ph.D., MPH, Assistant Secretary of Labor for Occupational Safety and Health. It is issued under Sections 8 and 24 of the Occupational Safety and Health Act (29 U.S.C. 657, 673), Section 553 of the Administrative Procedure Act (5 U.S.C. 553), and Secretary of Labor's Order No. 41–2012 (77 FR 3912 (Jan. 25, 2012)).

Need for Correction

Inadvertently § 1904.35(b)(2) was designated as reserved. This document reinserts that paragraph.

In FR Rule Doc. No. 2016–10443 beginning on page 29624 in the issue of May 12, 2016, make the following correction:

On page 29692, in the first column, after the second paragraph, remove "(2) [Reserved]." and add the following in its place:

"(2) *Do I have to give my employees and their representatives access to the OSHA injury and illness records?* Yes, your employees, former employees, their personal representatives, and their authorized employee representatives have the right to access the OSHA injury and illness records, with some limitations, as discussed below.

(i) *Who is an authorized employee representative?* An authorized employee representative is an authorized collective bargaining agent of employees.

(ii) *Who is a "personal representative" of an employee or former employee?* A personal representative is:

(A) Any person that the employee or former employee designates as such, in writing; or

(B) The legal representative of a deceased or legally incapacitated employee or former employee.

(iii) *If an employee or representative asks for access to the OSHA 300 Log, when do I have to provide it?* When an employee, former employee, personal representative, or authorized employee representative asks for copies of your current or stored OSHA 300 Log(s) for an establishment the employee or former employee has worked in, you must give the requester a copy of the relevant OSHA 300 Log(s) by the end of the next business day.

(iv) *May I remove the names of the employees or any other information from the OSHA 300 Log before I give copies to an employee, former employee, or employee representative?* No, you must leave the names on the 300 Log. However, to protect the privacy of injured and ill employees, you may not record the employee's name on the OSHA 300 Log for certain "privacy concern cases," as specified in § 1904.29(b)(6) through (9).

(v) *If an employee or representative asks for access to the OSHA 301 Incident Report, when do I have to provide it?* (A) When an employee, former employee, or personal representative asks for a copy of the OSHA 301 Incident Report describing an injury or illness to that employee or former employee, you must give the requester a copy of the OSHA 301 Incident Report containing that information by the end of the next business day.

(B) When an authorized employee representative asks for copies of the OSHA 301 Incident Reports for an establishment where the agent represents employees under a collective bargaining agreement, you must give copies of those forms to the authorized employee representative within 7 calendar days. You are only required to give the authorized employee

representative information from the OSHA 301 Incident Report section titled "Tell us about the case." You must remove all other information from the copy of the OSHA 301 Incident Report or the equivalent substitute form that you give to the authorized employee representative.

(vi) *May I charge for the copies?* No, you may not charge for these copies the first time they are provided. However, if one of the designated persons asks for additional copies, you may assess a reasonable charge for retrieving and copying the records."

Signed at Washington, DC, on May 13, 2016.

David Michaels,

Assistant Secretary of Labor for Occupational Safety and Health.

[FR Doc. 2016–11817 Filed 5–19–16; 8:45 am]

BILLING CODE 4510–26–P

COMMONWEALTH of VIRGINIA

DEPARTMENT OF LABOR AND INDUSTRY

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VIRGINIA SAFETY AND HEALTH CODES BOARD

Briefing Package

September 13, 2016

Request to Initiate Notice of Intended Regulatory Action (NOIRA)

To Amend the Administrative Regulation for the

Virginia Occupational Safety and Health (VOSH) Program

I. Action Requested

The Virginia Occupational Safety and Health (VOSH) Program requests the Safety and Health Codes Board to authorize the Department to initiate the regulatory process to amend the Administrative Regulation for the VOSH Program by filing a Notice of Intended Regulatory Action (NOIRA), pursuant to the Virginia Administrative Process Act, § 2.2-4007 of the *Code of Virginia*.

II. Summary of the Issues Under Consideration for Amendment

This request to authorize a NOIRA is to establish procedures for the application of penalties for state and local government employers is in accordance with §40.1-2.1 of the *Code of Virginia*. Allowing VOSH to issue proposed penalties to state and local government employers for willful, repeat and failure-to-abate violations, as well as serious violations that cause a fatal accident or are classified as "high gravity", i.e., a violation that is classified as "high severity" and "high probability". An example of a "high gravity" serious violation would be one where a violation directly results in non-fatal but serious injuries such as broken bones or amputations. Violations that are classified as non-high gravity serious, and other-than-serious violations would not receive a penalty.

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

A. Basis

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

> "... adopt, alter, amend, or repeal rules and regulations to further, protect and promote the safety and health of employees in places of employment over which it has jurisdiction and to effect compliance with the federal OSH Act of 1970...as may be necessary to carry out its functions established under this title".
>
> "In making such rules and regulations to protect the occupational safety and health of employees, the Board shall adopt the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence that no employee will suffer material impairment of health or functional capacity".
>
> "However, such standards shall be at least as stringent as the standards promulgated by the federal OSH Act of 1970 (P.L.91-596). In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experiences gained under this and other health and safety laws."

Recent incidents which have resulted in the death of government employees, as well as other accident situations, have highlighted a need for an additional incentive for compliance with the safety and health laws and regulations. From January 1, 2007 to August 1, 2014, twenty-nine fatalities and catastrophes occurred in state and local government employment. The deterrent effect of a penalty can reduce this number by encouraging compliance. The Department introduced this legislation in 2007 based on what we viewed at the time as a high number of fatalities among government employees. Unfortunately, the rate of fatalities and catastrophes for state and local employees has increased from an average of 2.2 per year before the Department introduced the legislation to 3.9 per year since then.

Action by the General Assembly during the 2016 Session amended the language in the existing statute to allow the issuance of monetary penalties to state and local government employers for certain occupational safety and health program violations. On March 29, 2016, a statutory change approved by the General Assembly was signed by Governor McAuliffe with an effective date of July 1, 2016. *[Refer to Attachment-1 to this package.]*

B. Purpose

The purpose of amending the Administrative Regulation is to establish procedures for the application of penalties for state and local government employers in accordance with §40.1-2.1 of the *Code of Virginia.*

C. Impact on Employers

An average of three (3) willful violations have been issued by VOSH per year in the public sector. Since 2007 there have been 24 willful violations, all of which have been issued to local government employers. An average of 1.4 repeated violations are issued per year to local government and 3.3 to state agencies.

Approximately five percent (5%) of the serious violations issued are classified as high gravity. VOSH estimates that 15 such violations in state and local government would be subject to penalty per year. The average penalty issued for high gravity serious items is $6,300.

VOSH estimates up to three willful violations per year and up to five repeat violations per year. The average penalty for a "high gravity" willful violation is $63,000 and for a repeat is $12,600. VOSH estimates that total penalties on a per year basis could range from zero to $346,500.[a] In 2015, the National Safety Council (NSC) reported that the average cost of a medically consulted occupational injury in 2013 was $42,000. *(NSC Injury Facts, 2015 Edition, p. 69 - includes estimates of wage losses, medical expenses, administrative expenses, and employer costs; excludes property damage costs except to motor vehicles).* See reference at:

http://www.nsc.org/Membership%20Site%20Document%20Library/2015%20Injury%20Facts/NSC_InjuryFacts2015Ed.pdf

If the proposed imposition of penalties has the anticipated deterrent effect, pro-active steps to develop and implement injury and illness prevention programs can have a significant positive impact in reducing injury and illness rates and the significant associated costs for employers.

The Washington State Plan, which is tied directly into the states' workers' compensation system, conducted a study on "The Impact of DOSH Enforcement and Consultation Visits on Workers' Compensation Claims Rates and Costs, 1999-2008",[b] May, 2011. The study reviewed ten annual studies on the topic and found that:

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[a] Va. Code §40.1-49.4.A.4(a) provides that the calculation of penalties shall take into account the size of the business of the employer being charged, the gravity of the violation, the good faith of the employer, and the history of previous violations.

[b] http://www.lni.wa.gov/Safety/Research/Files/OccHealth/DoshEnforce19992008.pdf

"...**enforcement inspections** conducted at fixed worksites 'were associated with a 7.4% larger decrease in non-MSD [musculoskeletal disorder] compensable claims rates relative to employers with no DOSH activity. DOSH **consultation visits were associated with a 24.8% larger decrease** in non-MSD compensable claims rates relative to employers with no DOSH activity.' *(Emphasis added)*.

and

"...**enforcement** inspections were associated with a **3.1% larger decrease** in compensable claims rates relative to employers with no DOSH activity. DOSH **consultation** visits were associated with an **8.5% larger decrease** in compensable claims rates relative to employers with no DOSH activity." *(Emphasis added)*.

D. Impact on Employees

Employees will benefit from the identification and correction of workplace hazards as a result of cited violations and issued penalties, the development and implementation of injury and illness prevention programs, and the anticipated reduction in injuries and illnesses.

According to OSHA publication "Adding Inequality to Injury: The Costs of Failing to Protect Workers on the Job", "the costs of workplace injury and illness are borne primarily by injured workers, their families, and tax-payer supported safety net programs....workers' compensation payments cover only a small fraction (about 21%) of lost wages and medical costs of work injuries and illnesses, workers, their families and private health insurance pay for nearly 63 percent of these costs, with taxpayers shouldering the remaining 16%."[c]

E. Impact on the Department of Labor and Industry

No significant impact on agency operations is anticipated. Adding penalties to citations issued does not significantly increase the workload for an individual VOSH Compliance Safety and Health Officer (CSHO). As referenced above, it is only anticipated that approximately 21 violations per year will carry a penalty for state and local government employers.

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[c] https://www.osha.gov/Publications/inequality_michaels_june2015.pdf

RECOMMENDED ACTION

Staff of the Department of Labor and Industry recommends that the Safety and Health Codes Board direct the Department to initiate a Notice of Intended Regulatory Action (NOIRA) to amend the Administrative Regulation for the VOSH Program by filing a Notice of Intended Regulatory Action (NOIRA), pursuant to the Virginia Administrative Process Act, § 2.2-4007 of the *Code of Virginia*.

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

VIRGINIA ACTS OF ASSEMBLY -- 2016 SESSION

CHAPTER 526

An Act to amend and reenact § 40.1-2.1 of the Code of Virginia, relating to the occupational safety and health program applicable to employees of agencies of the Commonwealth, political subdivisions, and other public bodies.

[S 607]

Approved March 29, 2016

Be it enacted by the General Assembly of Virginia:

1. That § 40.1-2.1 of the Code of Virginia is amended and reenacted as follows:

§ 40.1-2.1. Application of title to Commonwealth and its agencies, etc.; safety and health program for public employees.

The provisions of this title and any rules and regulations promulgated pursuant thereto shall not apply to the Commonwealth or any of its agencies, institutions, or political subdivisions, or any public body, unless, and to the extent that, coverage is extended by specific regulation of the Commissioner or the ~~Safety and Health Codes~~ Board. The Commissioner is authorized to establish and maintain an effective and comprehensive occupational safety and health program applicable to employees of the Commonwealth, its agencies, institutions, political subdivisions, or any public body. Such program shall be subject to any State plan submitted to the federal government for State enforcement of the Federal Occupational Safety and Health Act of 1970 (P.L. 91-596), or any other regulation promulgated under Title 40.1. The Commissioner *or the Board* shall establish procedures *and adopt regulations* for enforcing the program ~~which~~ *that* shall include provisions for *(i) the issuance of proposed penalties; (ii) the payment of such penalties or a negotiated sum in lieu of such penalties; (iii) the deposit of such payments into the general fund of the state treasury; (iv)* fair hearings, including judicial review*;* and *(v) other* sanctions to be applied for violations.

COMMONWEALTH of VIRGINIA
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VIRGINIA SAFETY AND HEALTH CODES BOARD

BRIEFING PACKAGE

For September 13, 2016

Report of Periodic Review of Certain Existing Regulations
Departmental Review and Findings

I. Background and Basis

In accordance with the Administrative Process Act (§ 2.2-4017 of the *Code of Virginia*), Governor McAuliffe's Executive Order 17 (2014), "Development and Review of State Agency Regulations," governs the periodic review of existing regulations. This Executive Order requires that state agencies conduct a periodic review of regulations every four years. Four regulations of the Safety and Health Codes Board were identified for review in 2016:

- 16 VAC 25-11, Public Participation Guidelines;
- 16 VAC 25-50, Boiler and Pressure Vessel Rules and Regulations;
- 16 VAC 25-160, Construction Industry Standard for Sanitation; and
- 16 VAC 25-180, Virginia Field Sanitation Standard, Agriculture

II. Current Status and Process

Upon the approval of the Board to proceed, at the March 3, 2016 meeting, the process of periodic review by the Department of Labor and Industry (Department) began for the above-noted regulations with publication of a Notice of Periodic Review in the Virginia Register. At the March meeting, the Board approved the periodic review of these regulations, with a public

comment period of the required 21 days. The public comment period began on May 23, 2016, when the Notice of Periodic Review was published, and closed on June 14, 2016. No comments were received for any of the regulations during the public comment period. Following the public comment period, Department staff reviewed the regulations and prepared recommendations for the Board's consideration at this meeting. If approved by the Board, the Department will post a report on the Town Hall website indicating for each regulation either that (1) the Board will retain the regulation as is, or (2) the Board will begin a regulatory action to amend the regulation.

III. Review and Analysis

Pursuant to § 2.2-4007.1 E and F of the *Code of Virginia*, the Department is obligated to evaluate the economic impact of these regulations on small business. The following factors must be considered:

- the continued need for the regulation;
- the complexity of the regulation;
- the extent to which the regulation overlaps, duplicates, or conflicts with federal or state law or regulation; and
- the length of time since the regulation has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the regulation.

As required, the discussion below includes the Department's determination as to whether the regulation should be amended, repealed, or retained consistent with the stated objectives of applicable law, to minimize the economic impact of regulations on small businesses.

A. 16 VAC 25-11, Public Participation Guidelines

Section 2.2-4007.02 of the *Code of Virginia* states public participation guidelines (PPGs) "for soliciting the input of interested parties in the formation and development of its regulations shall be developed, adopted, and used by each agency pursuant to the provisions of this chapter."

An agency's PPGs "...shall afford interested persons an opportunity to (i) submit data, views, and arguments, either orally or in writing, to the agency, to include an online public comment forum on the Virginia Regulatory Town Hall, or other specially designated subordinate and (ii) be accompanied by and represented by counsel or other representative."

Chapter 795 of the 2012 Acts of Assembly changed the PPG requirements under the Administrative Process Act. The related provision provides that in formulating any regulation an interested party shall be entitled to be accompanied by and represented by counsel or other representative. The Safety and Health Codes Board's Public Participation Guidelines, 16 VAC 25-11, must be amended to conform to the underlying statute, § 2.2-4007.02 of the *Code of Virginia*. The rulemaking is appropriate for the

fast-track rulemaking process because the proposed amendment is not expected to be controversial and no individual or entity will be adversely affected by the regulatory change.

Determination: It is the determination of the Department that the regulation be amended to conform with the 2012 change to the PPG provision of the Administrative Process Act. This regulation is not overly complex and is clearly written. There is no negative impact on the regulated community and the regulation does not overlap, duplicate, or conflict with federal or state law or regulation. As a result of this periodic review, the Department has determined that the regulation has no negative economic impact on small business.

During the Public Comment Period, the Department received no comments on the Periodic Review of this Regulation.

See the Briefing Package for 16 VAC 25-11, Amendment to Public Participation Guidelines, for more information.

Recommendation: The Department recommends that this regulation be amended through the fast-track rulemaking process.

B. 16 VAC 25-50, Boiler and Pressure Vessel Rules and Regulations

Section 40.1-51.6.A. of the *Code of Virginia* authorizes the Safety and Health Codes Board "...to formulate definitions, rules, regulations and standards which shall be designed for the protection of human life and property from the unsafe or dangerous construction, installation, inspection, operation, maintenance and repair of boilers and pressure vessels in this Commonwealth." In promulgating such rules, the Board shall consider "Standards, formulae and practices generally accepted by recognized engineering and safety authorities and bodies...."

The Boiler and Pressure Vessel regulations are intended to protect life and property through regular inspections of boiler and pressure vessel equipment and to ensure compliance with state laws, rules, and regulations governing the construction, installation, operation, maintenance, and repair of boilers and pressure vessels. Rules and practices codified elsewhere are included within 16 VAC 25-50 via the "Documents Incorporated by Reference" (DIBR). It is necessary to amend the DIBR section to comply with the most recent editions of the boiler and pressure vessel industry required guidance documents to take advantage of the latest technical advance in safety.

The intended regulatory action further protects human life and property from the unsafe or dangerous construction, installation, inspection, operation, and repair of boilers and pressure vessels in the Commonwealth of Virginia.

During the Public Comment Period, the Department received no comments on the Periodic Review of this Regulation.

Determination: The existing DIBR fails to include the more recent national consensus standards that impact regulatory compliance. At the March 3, 2016 Board meeting, the Department requested and the Board authorized the Department to begin the regulatory amendment process by filing a Notice of Regulatory Action (NOIRA) on behalf of the Board for the purpose of amending the Boiler and Pressure Vessel Rules and Regulations 16VAC25-50 to include the more recent national consensus standards that impact regulatory compliance.

This regulation is not overly complex, is clearly written, and does not overlap, duplicate, or conflict with federal or state law or regulation. As a result of this periodic review, the agency determines that the regulation has no negative economic impact on small business.

See the Briefing Package for 16 VAC 25-50, Amendment to Boiler and Pressure Vessel Rules and Regulations, for more information.

Recommendation: The Department recommends that this regulation be amended as a proposed regulation of the Board to include the most recent editions of the Documents Incorporated by Reference.

C. **16 VAC 25-160, Construction Industry Standard for Sanitation**

Section 40.1-22(5) of the *Code of Virginia* states that "...the Board shall adopt the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity. However, such standards shall be at least as stringent as the standards promulgated by the Federal Occupational Safety and Health Act of 1970 (P.L. 01-596)."

The regulation requires construction employers to provide potable drinking water, handwashing facilities, and toilet facilities that meet more stringent requirements than those set forth by the federal OSHA regulation (29 CFR 1926.51). During a previous periodic review, the Safety and Health Codes Board requested further study of the federal standard to evaluate its effectiveness in protecting Virginia construction employees from illness disease. The more stringent Virginia unique regulation adopted was determined to more adequately protect the health, safety, and welfare of Virginia construction workers.

The Construction Sanitation regulation has three goals:

- Reduce the incidence of material impairment of the health of Virginia workers due to workplace exposure to known hazards.
- Require sanitary facilities for construction workers equal to those required for agricultural workers.
- Protect the public's health, safety and welfare with the least possible cost and intrusiveness to the citizens and businesses of the Commonwealth.

Provision of sanitary facilities and potable drinking water serve to reduce or eliminate the following major categories of occupational diseases: heat-related illnesses, communicable diseases, and urinary tract infections. This regulation is designed to address health hazards associated with poor sanitation conditions at construction sites, such as, insufficient potable water, insufficient hand washing facilities, inadequate toilet facilities, and the physical harm which may occur due to retention of urine and feces over long periods of time.

Determination: The Construction Sanitation regulation provides for potable drinking water, handwashing facilities, and toilet facilities, which are in accordance with public health sanitation standards, and protects employee well-being by addressing health hazards associated with poor sanitation conditions at construction sites. This regulation is not overly complex and is clearly written. There is no negative impact on the regulated community and the regulation does not overlap, duplicate, or conflict with federal or state law or regulation. As a result of this periodic review, the agency determines that the regulation has no negative economic impact on small business.

During the Public Comment Period, the Department received no comments on the Periodic Review of this Regulation.

Recommendation: The Department recommends that this regulation be retained with no changes.

D. 16 VAC 25-180, Virginia Field Sanitation Standard, Agriculture

Section 40.1-22(5) of the *Code of Virginia* states that "...the Board shall adopt the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity. However, such standards shall be at least as stringent as the standards promulgated by the Federal Occupational Safety and Health Act of 1970 (P.L. 01-596)."

The regulation requires agricultural employers to provide potable drinking water, regardless of the number of employees, hand washing and toilet facilities to field workers performing hand agricultural labor. It is identical to the current federal OSHA standard, except for the requirement that employers provide potable drinking water regardless of the number of employees.

The Field Sanitation regulation has three goals:

- Reduce the incidence of material impairment of the health of Virginia workers due to workplace exposure to known hazards.
- Require sanitary facilities for agricultural workers equal to those required for construction workers.
- Protect the public's health, safety, and welfare with the least possible cost and intrusiveness to the citizens and businesses of the Commonwealth.

Provision of sanitary facilities and potable drinking water serve to reduce or eliminate the following four major categories of occupational diseases: heat-related illnesses, communicable diseases, urinary tract infections, and pesticide-related illnesses.

Determination: The Field Sanitation regulation is essential to reduce or eliminate the health problems faced by agricultural laborers in the field by providing them with potable drinking water and sanitary facilities. This regulation is not overly complex and is clearly written. There is no negative impact on the regulated community and the regulation does not overlap, duplicate, or conflict with federal or state law or regulation. As a result of this periodic review, the agency determines that the regulation has no negative economic impact on small business.

During the Public Comment Period, the Department received no comments on the Periodic Review of this Regulation.

Recommendation: The Department recommends that this regulation be retained with no changes.

IV. Recommended Action

At this time, the Department of Labor and Industry recommends to the Safety and Health Codes Board to retain the following with no changes:

- 16 VAC 25-160, Construction Industry Standard for Sanitation
- 16 VAC 25-180, Virginia Field Sanitation Standard, Agriculture

The Department recommends the following be amended:

- 16 VAC 25-11, Public Participation Guidelines
- 16 VAC 25-50, Boiler and Pressure Vessel Rules and Regulations

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VIRGINIA SAFETY AND HEALTH CODES BOARD

BRIEFING PACKAGE

For September 13, 2016

Public Participation Guidelines, 16VAC25-11-50; Amendment

I. Action Requested

The Virginia Occupational Safety and Health (VOSH) Program requests the Safety and Health Codes Board to consider for adoption an amendment to Subsection A of the Public Participation Guidelines, 16VAC25-11-50, pursuant to the fast-track regulatory process of §2.2-4012.1 of the *Code of Virginia*.

II. Summary of the Amendment

Chapter 795 of the 2012 Acts of Assembly amended the Administrative Process Act at §2.2-4007.02 of the *Code of Virginia,* which addresses the Public Participation Guidelines (PPGs) [*See Attachment 1 of this briefing package*]. As a result of the March 3, 2016, Notice of Periodic Review of the Board's PPGs, 16VAC25-11, the Department of Planning and Budget (DPB) informed the Department of Labor and Industry of a required revision to the Public Comment section of the PPGs of the Board.

Therefore, this proposed amendment to the PPGs of the Board at Subsection A of 16VAC25-11-50 includes the requirement for the Board to afford interested persons an opportunity to present their views and be accompanied by and represented by counsel or other representative in the promulgation of any regulatory action.

Adopting this regulatory action will allow the Board's PPGs to conform to the current Administrative Process Act, §2.2-4007.02, which reads as follows (*new language in bold and underlined*):

> "B. In formulating any regulation, including but not limited to those in public assistance and social services programs, the agency pursuant to its public participation guidelines shall afford interested persons an opportunity to (i) submit data, views, and arguments, either orally or in writing, to the agency, to include an online public comment forum on the Virginia Regulatory Town Hall, or other specially designated subordinate and **(ii) be accompanied by and represented by counsel or other representative.** However, the agency may begin drafting the proposed regulation prior to or during any opportunities it provides to the public to submit comments."

The fast-track rulemaking process is being used for this regulation because this amendment is expected to be non-controversial, the Board has no discretion over the proposal, and no individual or entity will be adversely affected by this required regulatory change.

III. Basis, Purpose and Impact of the Amendment

A. Basis

Code of Virginia §2.2-4007.02, part of the Administrative Process Act, mandates that each agency develop, adopt and use PPGs for soliciting the input of interested parties in the formation and development of its regulations. The guidelines shall set out any methods for identification and notification of interested parties and any specific means of seeking input from interested persons or groups that the agency intends to use in addition to the Notice of Intended Regulatory Action (NOIRA). This regulation also provides that interested persons shall be afforded an opportunity to submit data, views, and arguments as part of the regulatory process.

B. Purpose

The purpose of this amendment is to conform the Safety and Health Codes Board's PPGs to the revised requirements of the Administrative Process Act, §2.2-4007.02, to allow interested parties to be accompanied by and represented by counsel or other representative.

C. Impact on Employers

The Department does not anticipate any impact on Virginia employers.

D. **Impact on Employees**

The Department does not anticipate any impact on Virginia employees.

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

No impact on the Department is anticipated.

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VIRGINIA ACTS OF ASSEMBLY -- 2012 RECONVENED SESSION

CHAPTER 795

An Act to amend and reenact §§ 2.2-4007.02 and 2.2-4009 of the Code of Virginia, relating to the Administrative Process Act; right to counsel in rule-making proceedings.

[H 1199]

Approved April 18, 2012

Be it enacted by the General Assembly of Virginia:

1. That §§ 2.2-4007.02 and 2.2-4009 of the Code of Virginia are amended and reenacted as follows:

§ 2.2-4007.02. Public participation guidelines.

A. Public participation guidelines for soliciting the input of interested parties in the formation and development of its regulations shall be developed, adopted, and used by each agency pursuant to the provisions of this chapter. The guidelines shall set out any methods for the identification and notification of interested parties and any specific means of seeking input from interested persons or groups that the agency intends to use in addition to the Notice of Intended Regulatory Action. The guidelines shall set out a general policy for the use of standing or ad hoc advisory panels and consultation with groups and individuals registering interest in working with the agency. Such policy shall address the circumstances in which the agency considers the panels or consultation appropriate and intends to make use of the panels or consultation.

B. In formulating any regulation, including but not limited to those in public assistance and social services programs, the agency pursuant to its public participation guidelines shall afford interested persons an opportunity to *(i)* submit data, views, and arguments, either orally or in writing, to the agency, to include an on-line *online* public comment forum on the Virginia Regulatory Town Hall, or other specially designated subordinate *and (ii) be accompanied by and represented by counsel or other representative*. However, the agency may begin drafting the proposed regulation prior to or during any opportunities it provides to the public to submit comments.

RECOMMENDED ACTION

Staff of the Department of Labor and Industry recommends that the Safety and Health Codes Board consider for adoption an amendment to Subsection A of the Public Participation Guidelines, 16VAC25-11-50, pursuant to the fast-track regulatory process of §2.2-4012.1 of the *Code of Virginia,* as indicated in the attachment.

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 above-cited subsection A.4(c) of the Administrative Process Act.

Public Participation Guidelines, 16VAC25-11; Amendment

As Adopted by the

Safety and Health Codes Board

Date: _____

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

VIRGINIA OCCUPATIONAL SAFETY AND HEALTH PROGRAM

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

Effective Date: _____

16VAC25-11, Public Participation Guidelines

16VAC25-11-50. Public comment.

A. In considering any nonemergency, nonexempt regulatory action, the agency shall afford interested persons an opportunity to (i) submit data, views, and arguments, either orally or in writing, to the agency, (ii) be accompanied by and represented by counsel or other representative. Such opportunity to comment shall include an online public comment forum on the Town Hall.

1. To any requesting person, the agency shall provide copies of the statement of basis, purpose, substance, and issues; the economic impact analysis of the proposed or fast-track regulatory action; and the agency's response to public comments received.

2. The agency may begin crafting a regulatory action prior to or during any opportunities it provides to the public to submit comments.

B. The agency shall accept public comments in writing after the publication of a regulatory action in the Virginia Register as follows:

1. For a minimum of 30 calendar days following the publication of the notice of intended regulatory action (NOIRA).

2. For a minimum of 60 calendar days following the publication of a proposed regulation.

3. For a minimum of 30 calendar days following the publication of a reproposed regulation.

4. For a minimum of 30 calendar days following the publication of a final adopted regulation.

5. For a minimum of 30 calendar days following the publication of a fast-track regulation.

6. For a minimum of 21 calendar days following the publication of a notice of periodic review.

7. Not later than 21 calendar days following the publication of a petition for rulemaking.

C. The agency may determine if any of the comment periods listed in subsection B of this section shall be extended.

D. If the Governor finds that one or more changes with substantial impact have been made to a proposed regulation, he may require the agency to provide an additional 30 calendar days to solicit additional public comment on the changes in accordance with § 2.2-4013 C of the Code of Virginia.

E. The agency shall send a draft of the agency's summary description of public comment to all public commenters on the proposed regulation at least five days before final adoption of the regulation pursuant to § 2.2-4012 E of the Code of Virginia.