Silica in Construction

Train-the-Trainer Course
March/April 2017

Presented by:
State Building and Construction Trades Council of CA, AFL-CIO
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Train-the-Trainer Course 2017

OSHA Funding Disclaimer
This material was produced under grant SH29642SH6 from the Occupational Safety and Health Administration, U.S. Department of Labor. It does not necessarily reflect the views or policies of the U.S. Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

Acknowledgements
The State Building and Construction Trades Council of California, AFL-CIO (SBCTC) acknowledges the following organizations for providing information, training material, and technical support for this course:

- Cal/OSHA
- The Center for Construction Research and Training (CPWR)
- Commission on Health and Safety and Workers' Compensation, California, Department of Industrial Relations, Worker Occupational Safety and Health (WOSH) Specialist Training Program
- Federal OSHA
- International Union of Bricklayers and Allied Crafts
- Labor Occupational Health Program (LOHP), University of California, Berkeley
- West Virginia Archives
- Worksafe BC (Canada)

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Train-the-Trainer Course Objectives
After completing this course, participants will be able to:

1. Teach 6 modules of the SBCTC Silica in Construction curriculum:
   - Introduction to silica
     - Explain what it is
     - Discuss different forms and types
     - Identify where it occurs in construction
   - Silica as a hazard
     - Factors that determine potential for harm
     - Meaning of respirable dust
     - Explain the permissible exposure limit
   - Tasks and tools that create silica dust
     - Identify activities and equipment likely to overexpose workers
     - Connect tasks to construction materials
   - Health effects of silica exposure
     - Describe diseases associated with respirable crystalline silica
     - Explain how lungs are damaged
     - Define 3 types of silicosis
     - Show historic significance
   - Controlling silica hazards
     - Apply the Hierarchy of Controls
     - Describe effective engineering controls
     - Discuss best work practices
     - Identify personal protective equipment
   - The new OSHA standard
     - Discuss basic components of 2016 rule for construction
     - Control strategy options
     - Requirements for all employers

2. Practice best teaching methods and understand adult learning styles

3. Use resources provided through the training

4. Find additional training resources

5. Train a minimum of 20 workers about silica hazards
Train-the-Trainer Course Agenda

Day One:

8:00—9:00 a.m.  Introductions/Course Overview
                 Pre-Test
                 Introduction Section of PowerPoint

9:00—9:45 a.m.  Section 1—Introduction to Silica
                 Section 2—Silica as a Hazard

9:45—10:00 a.m. Break

10:00—11:30 a.m. Section 3—Tasks and Tools that Create Silica Dust
                  Section 4—Health Effects of Silica Exposure

11:30—Noon     Hosted Lunch

Noon—1:30 p.m.  Guest Speaker—Dr. Robert Harrison, M.D., M.P.H.
                  Clinical Experience/Case Studies/Medical Evaluation/Q&A

1:30—2:15 p.m.  Section 5—Controlling Silica Hazards

2:15—2:30 p.m.  Break

2:30—3:00 p.m.  Section 6—The New OSHA Standard

3:00—4:00 p.m.  Jeopardy Review Game
                 Post-Test
                 Choose Teach-back Teams and Topics

4:00 p.m.      Adjourn
Train-the-Trainer Course Agenda

Day Two:

8:00—8:45 a.m.    Welcome Back—Overview of Day Two
                  Review Post-Test Results
                  Cal/OSHA Quiz

8:45—9:30 a.m.    How Adults Learn Best
                  Teaching Best Practices
                  Elements of Good and Bad Training
                  Interactive Training Methods
                  Aim for the Bull’s Eye

9:30—9:45 a.m.    Break

9:45—11:15 a.m.   Guest Speaker—Patrick Corcoran, Sr. Safety Engineer, Cal/OSHA

11:15—Noon        Teach-Back Preparation

Noon—12:30 p.m.   Hosted Lunch

12:30—1:30 p.m.   Teach-Back Preparation continued

1:30—3:15 p.m.    Practice Teaching—Student Team Presentations

3:15—4:00 p.m.    Wrap-Up
                  Evaluations
                  Next Steps
                  Certificates

4:00 p.m.         Adjourn
How Training Materials Are Organized

The purpose of this training is to inform construction workers of the hazards associated with respirable crystalline silica. It is intended to be delivered by trainers who have completed the SBCTC 2-day train-the-trainer course. This training program consists of this course binder, a flash drive and laminated slides. All electronic files needed to present this training are included on the flash drive. Hard copies of the Curriculum and handouts are included in the binder.

Curriculum and PowerPoint: The complete program consists of an introduction plus 6 sections designed for a multi-craft, worker audience. It can be presented at one time in its entirety in approximately 3.25 hours. An "At-A-Glance" page describing each section and approximate teaching times is included. The curriculum is formatted as a table with a left column that displays the PowerPoint slides and a right column with talking points, teaching notes, background information associated with each slide as well as instructions for activities. Each section begins with an overview of key points and what you will need to teach the section. The PowerPoint presentation includes a total of 110 slides.

Videos: 3 videos are included with this training program. The following video files can be found on the flash drive in the "Video" folder:
"Silica Exposure" by Worksafe BC, Canada—describes how silica penetrates the lungs and causes disease. Run time 2 minutes.
"Silica in Construction—From danger to safety" by SBCTC—overview of silica hazards and history. Run time 8 minutes.
"Eliminate the Hazard—McCarthy Drilling Project" by SBCTC—shows practical application of engineering controls on a commercial construction project. Run time 7 minutes.

Audio: Excerpts of testimony made by members of the International Bricklayers and Allied Crafts at federal OSHA hearings are compiled in a 3:40 minute MP3 file. Workers describe how breathing silica dust on-the-job impacted their lives. The file can be found on the flash drive in the "Audio" folder.

Handouts: Material to aid workers in retaining information taught in this program are included in the "Handouts" tab of the binder. These factsheets and supplemental information come from reputable sources and are provided for training purposes only. The SBCTC is not responsible for the accuracy of this material or for changes that may have occurred after the original publication date. Any reliance you place on such information is therefore strictly at your own risk. We suggest you contact OSHA or Cal/OSHA for current regulatory compliance information.
Training Tips: The binder includes information on training techniques and best practices that you may find helpful when presenting this program to others. These factsheets are from the Worker Occupational Safety and Health Training and Education Program (WOSHTEP) funded by the CA Commission on Health and Safety and Workers’ Compensation.

Resources: There is a resource list provided in the binder. You can find useful references and website links related to silica in construction. This resource list is included as a Word file with active hyperlinks on the course flash drive.

SBCTC Training Forms: Train-the-trainer participants are expected to use this training material to train a minimum of 20 construction trades workers either on-the-job or through apprenticeship training programs. This is called "second-tier training" and must be accurately documented to be counted as part of this OSHA grant-funded program. Trainers will report training activity directly to the SBCTC Project Coordinator. We have provided training sign-in sheets, pre/post tests, evaluation forms, and instructions on how to report the training you accomplish. Second-tier training sessions must be at least 30 minutes in length and cover topics presented in this silica training material.