AEC Policy Regarding Crystalline Silica Related Construction Work

The Association of Environmental Contractors (AEC) wants to ensure that construction work that disturbs crystalline silica is conducted in a legal and safe manner. This document is designed to define, in brief, the roles and responsibilities of building owners, environmental consultants, contractors (general, prime and sub), environmental contractors, architects and construction managers regarding the disturbance of crystalline silica containing materials. Working together, we can assure that the disturbance of respirable crystalline silica during construction activities does not endanger workers or their families, building occupants, or the public in general.

Unlike most materials of concern to the AEC, respirable crystalline silica hazards and regulations apply to new construction and site work (earth moving) exactly the same as they apply to renovation and demolition activities.

Crystalline silica is a basic component of soil, sand, granite and many other minerals. Naturally-occurring crystalline silica is the most common element of solid materials, occurring naturally in every rock and stone in the world. It is used in a wide range of construction products including gypsum products, pressed wood products, cement products, grout and mortar, asphalt, and any other product containing, or made from sand, soil, rock or stone.

Crystalline silica is a construction hazard that must be handled properly, both legally and safely.[1] However, crystalline silica is not a hazardous waste. The level of hazard faced by workers handling crystalline silica containing materials is related more to the techniques used to disturb the materials than it is to the level of silica within the material being disturbed.

There are two main California regulations that govern the disturbance of crystalline silica, both based on Federal regulations, plus a third California regulation that remains in effect despite the respirable crystalline silica regulations that went into effect in September of 2017:

Cal/OSHA's 8 CCR 1532.3 Occupational Exposures to Respirable Crystalline Silica
Based on Fed/OSHA's 29 CFR 1926.1153 Respirable Crystalline Silica for Construction
Cal/OSHA's 8 CCR 5204 Occupational Exposures to Respirable Crystalline
Based on Fed/OSHA's for 29 CFR 1910.1053 Respirable Crystalline Silica
And

Cal/OSHA's 8 CCR 1530.1 - Control of Employee Exposures from Dust-Generating Operations Conducted on Concrete or Masonry Materials

Cal/OSHA's 8 CCR 1532.3 Occupational Exposures to Respirable Crystalline Silica 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 µg/m3) as an 8-hour time-weighted average (TWA) under any foreseeable conditions.

Cal/OSHA's 8 CCR 5204 Occupational Exposures to Respirable 1926.1153 Respirable Crystalline Silica applies to all occupational exposures to respirable crystalline silica, except:

Construction work covered under Section 1532.3;
Agricultural operations covered under Section 3436;
Exposures that result from the processing of sportive clays;
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/m^3) as an 8-hour time-weighted average (TWA) under any foreseeable conditions;

Where the employer complies with Section 1532.3;
When the task performed is indistinguishable from a construction task listed on Table 1 in subsection (c) of Section 1532.3; or
The task will not be performed regularly in the same environment and conditions.

Cal/OSHA's 8 CCR 1530.1 - Control of Employee Exposures from Dust-Generating Operations Conducted on Concrete or Masonry Materials applies to the use of powered tools or equipment to cut, grind, core, or drill, concrete or masonry materials.

Exceptions - 8 CCR 1530.1 does not apply to:
Stucco, plastering material, or other similar products.
Wall cladding, siding, or other similar products.
Downward drilling.
Jack-hammering or chipping when that work is incidental to the scope of work operations of a plumbing or landscaping activity.
Work with powder-actuated tools.
Work incidental to the installation of concrete and masonry materials such as the drilling of holes for plumbing fixtures.

Note: While 1530.1 remains in effect, and covers some activities not listed in Table 1 of 1532.3, when complying with 1532.3 contractors would satisfy the requirements of 1530.1

Contents

1.1 Unlike asbestos, lead and other hazardous materials [2] encountered during construction work, Building Owners are not required to notify occupants, tenants and short term contractors of the presence of crystalline silica within or on their buildings.

1.2 Building Owners are responsible/liable for how any hazard, including crystalline silica, is handled by anyone in their buildings. This includes tenants, maintenance and custodial workers, contractors and others. This regulatory liability cannot be transferred [3] to another party.

1.3 Building owners must train [4] in-house workers who disturb/remove material containing crystalline silica within their buildings to conduct this work in a legal and safe fashion.

1.4 Building owners conducting construction or demolition work should contract construction firms that are knowledgeable enough to conduct the work disturbing crystalline silica in a legal fashion and experienced/capable enough work disturbing crystalline silica safely. This includes assuring contractors have crystalline silica handling policy that has been reviewed for effectiveness on an annual basis starting no later than September of 2018, or one year from the start of work that disturbs crystalline silica.

1.5 When crystalline silica work is conducted, building owners and contractors alike, must concern themselves not only with crystalline silica, but also with other potential hazardous materials that may be disturbed on the project. These other common hazardous materials include lead, asbestos, PCBs, mercury, mold, and other materials.

1.6 To protect from both civil and regulatory liability [5] building owners should verify that work disturbing crystalline silica is conducted in both a legal and safe [6] fashion. This verification of crystalline silica safe work practices will at times include personal air monitoring, proper work practices and engineering controls [7] and must be documented.

1.7 Building owners must assure that specifications are written that require all contractor employees to follow project specific work practices and engineering controls that assure worker conducting crystalline silica disturbance, and those adjacent to, or who enter the work space after the crystalline silica work is conducted, are protected from exposure as well.

1.8 Building owner's employee health documentation must be retained for a minimum of 30 years. [8]

2.1 Environmental consultants are hired to inform clients about common environmental hazards [9] that may be created or encountered during construction. This includes informing clients about regulatory and practical requirements for identifying potential crystalline silica hazards. [10] Consultants also note that other potentially hazardous materials, such as lead, asbestos, mold, PCBs, mercury, and others exist, or may exist, within their buildings and what various regulations would require concerning those materials.

2.1 Consultants educate their clients in the difference between minimum legal requirements and recommended procedures to decrease the buildings owner's, as well as the project team's, [11] risk. Consultants assure their clients (building owners, project team or contractors) are aware they are responsible for the activities of the contractors on their projects when crystalline silica is (and other hazards are) disturbed.

2.2 Consultants write specifications for the disturbance, including the removal, of crystalline silica containing materials. Unlike most specifications written by the environmental consultant, crystalline silica handling specifications should be issued to every contractor working on a project, not just the environmental contractor.

2.3 Consultants assist with creating the bid specifications, conducting the bid walk, selection of the environmental contractor and assurance that the environmental contractor has the proper experience to conduct the project safely. With crystalline silica, this can include reviewing the work plans proposed by all contractors involved in the project, not just the environmental contractor, to assure silica safe techniques will be employed by everyone one on the project.

2.4 Environmental Consultants review value engineering submissions for increased liability that could be placed on the project team.[12]

2.5 The consultant assists in pre-construction communication and meetings.

2.6 Consultants' monitoring and documentation of the project starts with project set-up,[13] continues through project activities including disturbance/removal and assures all cleanup work, teardown activities [14] and paperwork requirements [15] are completed promptly and completely.

2.7 While consultants should be careful not the give direct direction to the workers conducting work, specification should allow the environmental consultant to stop work when conditions are such that those within, or adjacent to, the work area could be exposed to respirable crystalline silica at unsafe levels.

2.8 Consultants assure the project team is aware of training requirements for workers who are required to work around, or with, materials containing hazards such as crystalline silica. Crystalline silica training [16] is not required to be conducted by an accredited training provider, the project Competent Person can conduct this training. Crystalline silica training is required for any worker that may be exposed to respirable crystalline silica, either by their own activities or the activities of others.

2.9 Consultants design regulatory compliant actions, that also protect the health of workers and post project occupants, for hazards encountered during construction.

2.10 Consultants design responses to situations where exposures to hazards have occurred.

A - GENERAL

3.1 Crystalline Silica must be handled exactly the same by General/Prime/Sub contractors as by environmental contractors.

3.2 General/Prime Contractors can be held responsible by Cal/OSHA for the actions of their subcontractors.

3.3 Multi-Employer Worksites (see Appendix B for full text of Cal/OSHA Multiemployer worksite regulation):

3.3.1 When a violation occurs on a multi-employer project, Cal/OSHA considers general/prime/sub-contractors to be one of the following: Exposing Employer,[17] Creating Employer,[18] Controlling Employer,[19] Correcting Employer[20] – each of these levels of employer carries with it specific liability on projects. See Appendix B for complete explanation of Multi-Employer worksite liabilities and defenses against claims of responsibility. (Appendix B – Multi-Employer Worksites)

B – CRYSTALLINE SILICA SPECIFIC INFORMATION FROM 8 CCR 1532.3

3.4 While General/Prime/Sub contractors should assure hazardous materials, such as asbestos, lead, PCBs, etc., are identified prior to the start of work, crystalline silica is not one to the materials that is typically identified as part of a hazardous materials survey. Crystalline silica exists in nearly every construction material that is not solid wood (pressed wood products can contain silica), bare metal, plastic or a similar product.

3.5 General/Prime/Sub contractors should assure all workers are properly trained in the health hazards associated with exposure to respirable crystalline silica, and the proper work practices and engineering controls necessary to protect themselves and adjacent workers from exposure the respirable crystalline silica. Proof of training should be in a written format.

3.6 General/Prime/Sub contractors should assure crystalline silica disturbance is conducted in compliance with all applicable regulations, including 8 CCR 1532.3 – Occupational Exposures to Respirable Crystalline Silica.

3.7 General/Prime/Sub contractors should assure all tenants, occupants and visitors to a project are properly are restricted from entering areas of crystalline silica disturbance unless they have the proper training and personal protective equipment. This is required to be documented in the contractor's crystalline silica handling policy.

3.8 General/Prime/Sub contractors whose employees may be exposed to crystalline silica at or above the action level, either due to their own activities or through the activities of others, must conduct personal air sampling assessments [21] on such employees or remove those employees from the area of potential exposure. Air sampling is to be conducted for these workers at least every six months.

3.9 For each employee engaged in a task identified on Table 1 (See Appendix C for Table 1 activities), 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 subsection (d) of 8 CCR 1532.3. (See Appendix F for a complete breakdown of this requirement)

3.10 Contractors can use either work practices and engineering controls to maintain exposures below the action level and the permissible exposure level or they can collect air samples to prove the workers exposures are below these levels.

3.11 Contractors who choose to use the control measures, rather than collect air samples, must maintain documentation of the activities of the crew including the work practices and engineering controls employed, as well as proof that the equipment used was used and maintained properly. (See Appendix D for a complete breakdown of this requirement).

3.12 Contractors who choose to use air sampling must follow the air sampling protocols in 8 CCR 1532.3 section (d). (See Appendix F for a complete breakdown of this requirement)

3.13 Contractors whose workers are conducting activities that are not listed on Table 1 must either find an activity on Table 1 where the exposure would be the same or create a Table 2 listing these non-Table 1 activities. A Table 2 would require:

3.13.1 Description of the task

3.13.2 Description of the proper dust suppression work practices and engineering controls used to minimize air-borne dust levels

3.13.3 Description of the proper respiratory protection

3.13.4 Collection of air samples to prove your respirator protection is sufficient for the work.

3.14 No matter which method is chosen to show workers remain below the action level and permissible exposure level, all contractors whose workers are exposed to respirable crystalline silica must have a written exposure control plan. (See Appendix G for a complete breakdown of this requirement)

3.15 The employer shall make medical surveillance available at no cost to the employee for each employee who will be required under 8 CCR 1532.2 to use a respirator for 30 or more days per year.

3.16 This medical surveillance includes a chest x-ray.

4.1 Environmental contractors often remove crystalline silica containing materials while handing asbestos-containing materials, lead-coated materials and other hazardous materials on projects. When workers are properly protected from these hazardous materials, and especially while within containment, the workers and the job site are typically well protected from respirable crystalline silica due to the work practice, engineering controls and personal protective gear required to handle the hazardous materials.

4.2 Environmental contractor workers are most at risk for exposure to respirable crystalline silica when conducting "soft-demo," [22] setting up containment prior to remediation work, tearing down containment after remediation work, and from crystalline silica sources disturbed by other workers on the same project.

4.3 Remediation contractors must comply with all the same requirements as General/Prime/Sun Contractors while on construction projects, before, during and after remediation work is conducted. Please see Section 3 - *Responsibilities of General/Prime/Sub Contractors Regarding Crystalline Silica in Construction* of this policy for information pertaining to the legal and safe handling of crystalline silica for all contractors, environmental or not.

4.4 Environmental contractors must show compliance with the requirements of 8 CCR 1532.3 even during active remediation work. While the daily logs of the project's competent person or supervisor may be sufficient to assure sufficient work practices were followed, training and proper use of the equipment employed must also be documented. This would include, but may not be limited to:

- 4.4.1 A safety training program that includes crystalline silica issues.
- 4.4.2 Documentation that HEPA filtered equipment (vacuums, negative air machines, etc.) are maintained and working properly – including filter change logs and challenge testing documentation.
- 4.4.3 Documentation that workers wore, at a minimum, the proper personal protective equipment for the task being performed.
- 4.4.4 Documentation that workers properly used equipment designed to clean up dust and/or reduce exposures to respirable crystalline silica.
- 4.4.5 Documentation that workers conducted decontamination activities that prevented track out of respirable crystalline silica.

5.1 The architect/construction manager (architect/cm) must consider and incorporate into their work, compliance with applicable governmental regulations. [23]

5.2 On most projects, nearly every contractor will be affected by the respirable crystalline silica rule. Architects and Construction Managers must account for the increased costs of this compliance when cost estimating projects.

5.3 As with various engineering disciplines, the architect/cm cannot be expected to be an expert in everything that occurs on a project. An architect's/cm's best means of control for engineering issues is to have professional engineers on their project team. A competent and qualified environmental consultant is no less important.

5.4 As the penultimate contract administrative authority on a construction project, the architect/cm is ultimately responsible for assuring all activities on a project are conducted both legally and safely. If architect/cm firms choose to have the environmental consultant as a full member of the of the project team, the architect's/cm's responsibilities are similar to those of a general contractor for multi-employer worksites. This approach gives the architect/cm the ability to best protect both their risk/liability and the risk/liability of their client, the building owner.

5.5 The entire project team is responsible for assuring hazards on a project such as respirable crystalline silica, are known and addressed properly by all contractors during construction.

Appendix A – Crystalline Silica Definitions

Action Level means a concentration of airborne respirable crystalline silica of 25 µg/m^3, calculated as an 8-hour TWA.

Chief means the Chief of the Division of Occupational Safety and Health, 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 subsection (g) of 1532.3.

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 subsection (h).

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.

Appendix B – Multi-Employer Worksites

DIVISION OF OCCUPATIONAL SAFETY AND HEALTH POLICY AND PROCEDURES MANUAL
MULTI-EMPLOYER WORKSITE INSPECTIONS

Issue Date: 1/1/00
Revised: 12/8/00
AUTHORITY: California Labor Code Sections 6400, 6401, 6401.7, 6402 through 6404 and Title 8, California Code of Regulations, Sections 336.10 and 336.11.

POLICY: It is the policy of the Division of Occupational Safety and Health (1) to enforce the multi-employer worksite regulations in a manner that promotes workplace safety and health on multi-employer worksites; and (2) to gather sufficient evidence to determine whether employers at a multi-employer worksite are citable for violative conditions observed at that worksite.

PROCEDURES:

A. WHAT IS A "MULTI-EMPLOYER WORKSITE"?
A multi-employer worksite is any worksite, permanent or temporary, where more than one employer (and his or her employees) work, usually but not necessarily at the same time. The most common multi-employer worksites are temporary worksites at which construction activities take place. Other examples include permanent worksites at which outside contractors perform activities at that worksite, including, but not necessarily limited to, construction, environmental or janitorial services, repairs and deliveries.

B. MULTI-EMPLOYER WORKSITE VS. DUAL-EMPLOYER SITUATION
A multi-employer worksite should not be confused with a dual-employer situation. A dual-employer situation exists whenever an employee has two employers at the same time. The most common example of a dual-employer situation is when an employee of a temporary help agency works for another employer at the other employer's worksite. See P&P C-1D. The multi-employer and dual-employer concepts are not mutually exclusive. It is possible to have a dual-employer situation at a multi-employer worksite, e.g., where a temporary employee is supplied to a construction contractor to work at a multi-employer worksite.

C. CATEGORIES OF EMPLOYERS CITABLE UNDER SECTION 336.10
Before the adoption of 8 CCR Sections 336.10 and 336.11, only the employer whose employees were actually exposed to a violative condition could be cited for a violation. Such an employer is called the "exposing employer" (as defined in Section E.1. below).

Beginning in January of 2000, Labor Code Section 6400 and 8 CCR Section 336.10 now permit the Division to cite, in specified circumstances, an employer who is responsible for a violative condition, e.g., a creating, controlling and/or a correcting employer (as defined in Section E.2., 3. and 4. below), regardless of which employer's employees are exposed to the violative condition.

NOTE: A sole proprietor is not an employee. Therefore, if a sole proprietor is the only person exposed to a violative condition, there is no citable violation. See Labor Code Section 3300(c), which requires that, in order to be regarded legally as an employer, the "employer" must have a "natural person in service."

D. AFFIRMATIVE DEFENSE AVAILABLE TO "EXPOSING EMPLOYERS" UNDER SECTION 336.11
8 CCR Section 336.11 creates a defense for an exposing employer in specified circumstances where the violative condition is not the fault of the exposing employer and has been created, or allowed to go uncorrected, by another employer, and the exposing employer has taken reasonable steps to protect its employees. Section 336.11 obligates compliance personnel to determine whether the "exposing employer" defense applies in a multi-employer situation. If it is determined that the defense applies, then the exposing employer shall not be cited. If an exposing employer disagrees with a Division determination that the Section 336.11 defense is inapplicable and appeals a multi-employer citation on that basis, it is the employer's burden to demonstrate that the defense applies.

E. TYPES OF CITABLE EMPLOYERS AT A MULTI-EMPLOYER WORKSITE

1. Exposing Employer

The "exposing employer" is an employer whose employees were exposed to the violative condition at the worksite regardless of whether that employer created the violative condition. Before the adoption of 8 CCR Section 336.11, the exposing employer was the only category of employer that could be cited by the Division.

2. Creating Employer

The "creating employer" is an employer who actually created the violative condition.

3. Controlling Employer

A "controlling employer" is an employer who is responsible for safety and health conditions at the worksite and who has the authority to correct the violation. Evidence of an employer's "control" can be demonstrated in any of three ways:

a. Explicit Contract Provisions Pertaining To Worksite Safety

Control can be demonstrated through explicit contract provisions pertaining to worksite safety. This means that an employer is a controlling employer because it has the power under a written contract to require another employer to adhere to safety and health requirements and to correct violations the controlling employer discovers.

b. Any Type of Contract Authority that Directly Affects Worksite Safety

Where there is no explicit contract provision granting the right to control safety, or where the contract says the employer does not have such a right, an employer may still be a controlling employer. In this case, the power to control safety results from exercising, or failing to exercise, contract authority in a manner that directly affects worksite safety. For example, if an employer controls the scheduling of work and fails to adjust the work schedule when that becomes necessary to prevent a worksite safety hazard, then the employer becomes potentially citable as a controlling employer because of the direct connection between the employer's failure to act and the exposure of employees to the worksite hazard. Similarly, an employer who controls the flow of essential information at a worksite can be become citable as a controlling employer by failing to deliver information to another employer when that information is necessary to prevent exposure of employees to a worksite hazard.

c. Actual Practice

Regardless of whether a contract exists, or if a contract exists, regardless of what provisions it contains, an employer's control over worksite safety can be shown to exist by obtaining evidence of the employer's actual practices at the worksite. It is not necessary to rely on contract provisions as evidence of an employer's authority when such authority is clear from actual behavior among employers at the worksite.

4. Correcting Employer

The "correcting employer" is an employer who has the specific responsibility to correct the violative condition.

NOTE: It is important to remember that the four categories of employers at a multi-employer worksite are not necessarily mutually exclusive. Each type of employer may or may not exist at the particular worksite under inspection. In addition, an employer may fit into more than one category. For example, an employer may be both a creating and a correcting employer, or a correcting and controlling employer.

F. CONDUCTING A MULTI-EMPLOYER WORKSITE INSPECTION

1. Opening Conference

For information on how to conduct an Opening Conference at a multi-employer worksite, see P&P C-1A, Section C.3.a.

2. Documenting Evidentiary Foundation for Employer Citability

a. General

When a violative condition is observed at a multi-employer worksite, compliance personnel shall obtain and document evidence of all of the following items with respect to each potentially citable employer:

(1) Name and address of the employer;
(2) Description of the type of activity performed by the employer at the worksite;
(3) A copy of the contract or contracts describing the respective roles and obligations of all the employers at the worksite.
NOTE: When considering citing a "controlling" employer, compliance personnel shall evaluate all provisions of the written contract between the owner or general contractor and the controlling employer.

(4) For each violative condition found, the specific facts that describe the employer's involvement in creating or failing to correct the violation, including those facts that identify the employer as an exposing, creating, controlling and/or correcting employer;
(5) For each violative condition found, a specific determination as to whether the employer is an exposing, creating, controlling and/or correcting employer.
NOTE: If an employer fits into more than one category for a violation, each applicable category shall be identified.

(6) For each violative condition found for which a creating, controlling or correcting employer has been identified, evidence which will determine the degree of responsibility on the part of each creating, controlling and correcting employer for the violative condition(s) as follows:

(a) Awareness of Violative Condition
When, if ever, did the employer become aware of the violative condition? Awareness of the violation indicates greater responsibility. Similarly, the longer an employer is aware of a violation without correcting it, the greater will be the employer's responsibility.

(b) Foreseeability
How foreseeable was the occurrence of the violative condition? Did the violation exist as a matter of custom and practice at the worksite?

Even if an employer is not aware of the violative condition, if it is foreseeable the employer may have some responsibility for it. The more foreseeable a violation is for an employer, the greater will be the employer's responsibility for it. The most foreseeable violations are those which occur most frequently in the employer's particular line of work, those which are recognized and addressed as a matter of standard practice in the employer's industry and those which have existed for a substantial period of time at the worksite.

(c) Reasonable Steps to Protect Employees

Did the employer exercise reasonable steps to protect employees given the information known and available to the employer? An employer who is aware of the violation and takes no action to correct it or prevent employee exposure to it has a high degree of responsibility for the violation. In general, an employer's responsibility for a violation diminishes as the evidence becomes clearer that the employer acted reasonably to protect employees given (1) the information known by or available to the employer before the violation occurred, (2) the foreseeability of the violation, (3) the employer's degree of control over the violation or employee exposure to it, and (4) the actual steps taken by the employer to protect employees from the violative condition.
(7) Any other evidence which supports or weighs against citing the employer for the violation.

b. Exposing Employer Defense

For exposing employers, compliance personnel shall additionally document answers to the following questions, to the extent that the preceding documentation does not fully answer them:

(1) Did the exposing employer create the violative condition?
(2) Did the exposing employer have responsibility or the authority to correct the violative condition?
(3) Did the exposing employer have the ability to correct or remove the violative condition?
(4) Can the exposing employer demonstrate that the appropriate employers were specifically notified, or were aware, of the violative conditions to which the employees of the exposing employer were exposed?
(5) Did the exposing employer take appropriate alternative measures, to the extent feasible, to protect employees from the violative condition, instruct the employees to recognize the violative condition, and, where necessary, inform the employees how to avoid the dangers associated with it.

G. CITATION POLICY

1. Exposing Employer -- When to Cite

Each exposing employer shall be cited for each violative condition to which that employer's employees were exposed, unless it is determined that the answers to the questions in Section F.2.b.(1) through (3) are "No", and the answers to questions F.2.b.(4) and (5) are "Yes."

2. Creating, Controlling and Correcting Employers

a. When to Cite

Each creating, controlling and correcting employer shall be cited for each violative condition as to which it has been determined, pursuant to Section F.2.a.(6), that the employer's degree of responsibility for the violative condition warrants issuance of a citation.

b. Sample Citation Allegations

The following are sample citation allegations based on the Examples in Section E. If compliance personnel issue a citation to a creating, controlling and/or a correcting employer, they shall utilize the following basic approaches:

(1) Creating Employer
"On (date) employees were exposed to scaffolding without guardrails. (Creating employer) removed the guardrails from the scaffolding at (location), which resulted in the employees of (the exposing employer) being exposed to the violation."

(2) Controlling Employer
"On (date) employees were exposed to scaffolding without guardrails, (Controlling employer) was responsible for safety and health conditions at the site (by explicit contract provisions, by other type of contract authority that directly affects safety and health, or by actual practice) and failed to protect the employees of (exposing employer) from unguarded scaffolding."

(3) Correcting Employer
"On (date) employees were exposed to asbestos which was not worked wet. (Correcting employer) was specifically designated to remove asbestos at (location) and failed to do so, resulting in the employees of (exposing employer) contacting and handling asbestos in a dry state."

(4) Combination of Creating Employer and Controlling Employer
"On (date) employees were exposed to scaffolding without guardrails. (Creating employer) removed the guardrails from the scaffolding at (location), which resulted in the employees of (the exposing employer) being exposed to the violation. The employer was also responsible for safety and health conditions at the site and failed to protect the employees of (exposing employer) from unguarded scaffolding."

NOTE: If other citation allegation formats are utilized, they shall be written as concisely as possible, consistent with the requirements of particularity. See P&P C-1B, Section B.3.

c. Penalty Calculations

When determining "extent" and "likelihood" for the purpose of penalty calculations, the total number of employees exposed to the violative condition, regardless of who is the employer, shall be used.

H. PRE-ISSUANCE CITATION REVIEW

1. Compliance Personnel

After completing the gathering of the evidence listed in Section F.2.a. and b., compliance personnel shall make a recommendation for the issuance of citations for exposing, creating, controlling and/or correcting employers to the District Manager as soon as possible following completion of the inspection.

2. District Manager

a. General

The District Manager shall review all recommendations from compliance personnel for issuance of citations to exposing, creating, controlling or correcting employers at a multi-employer worksite to determine the appropriateness of citation issuance and shall complete District review as soon as possible after receiving the citation issuance recommendations from compliance personnel.

b. Creating, Controlling and Correcting Employer

If the District Manager determines that a citation should be issued to a creating, controlling or correcting employer, the District Manager shall forward the proposed citation, along with a copy of the Documentation Worksheet (See P&P C-1B) to the Regional Manager for review and concurrence.

c. Exposing Employers

(1) When a citation is to be issued to an exposing employer at a worksite which is the subject of citations to creating, correcting and/or controlling employer, the District Manager shall forward the proposed citation, along with a copy of the Documentation Worksheet to the Regional Manager for review.

(2) The District Manager shall review all proposals not to cite an exposing employer pursuant to Section G.1. If the District Manager believes that a citation should not be issued because the employer meets the exposing employer defense, the District Manager shall consult with, and receive concurrence from the Regional Manager, before making the decision not to cite the exposing employer.

3. Regional Manager

The Regional Manager shall ensure a prompt and complete review of, and response to, all District proposals to cite a creating, controlling or correcting employer, and all District proposals not to cite an exposing employer.

I. CITATION APPEALS

Any citation issued to a creating, correcting or controlling employer, whose own employees are not exposed to the violative condition, which is appealed by the employer shall be immediately referred to the Legal Unit for representation.

Appendix C – Crystalline Silica Table 1

Table 1 - Specified Exposure Control Methods When Working With Materials Containing Crystalline Silica

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 subsection (d) of 8 CCR 1532.3.

		Required respiratory protection and minimum assigned protection factor	
Equipment/task	*Engineering and work practice control methods*	*(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 --- - When used indoors or in an enclosed area	None APF 10	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 --- -When used indoors or in an enclosed area	None --- APF 10	None --- 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 ---------- -When used indoors or in an enclosed area ---------- 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 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 ---------- -When used indoors or in an enclosed area	None ---------- APF 10 ---------- None ---------- APF 10	APF 10 ---------- APF 10 ---------- 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: -When used outdoors ---------- -When used indoors or in an enclosed area	None None --- None	None 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	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
(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 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 ---------- When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.	None ---------- None	None ---------- None

Appendix D – Use of Control Measure To Meet Crystalline Silica AL and PEL

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

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

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

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

1. Is maintained as free as practicable from settled dust;

2. Has door seals and closing mechanisms that work properly;

3. Has gaskets and seals that are in good condition and working properly;

4. Is under positive pressure maintained through continuous delivery of fresh air;

5. 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

6. Has heating and cooling capabilities.

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.

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.

A work area shall be established and demarcated whenever disturbing materials that can cause airborne respirable crystalline silica. Work area shall be demarcated from rest of work area to minimize the number of employees that can exposed to airborne respirable crystalline silica within the work area.

Work areas shall be demarcated with OSHA-approved signage.

Contractors must keep very detailed records of workers compliance with the requirements in 8 CCR 1532.1 For a detailed example of what type of records must be kept, see Appendix E.

Appendix E – Crystalline Silica Control Measure Record Keeping Requirements

From 1532.3:

(2) Written exposure control plan.

(A) The employer shall establish and implement a written exposure control plan that contains at least the following elements:

1. A description of the tasks in the workplace that involve exposure to respirable crystalline silica;
2. A description of the engineering controls, work practices, and respiratory protection used to limit employee exposure to respirable crystalline silica for each task; and
3. A description of the housekeeping measures used to limit employee exposure to respirable crystalline silica.

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

(C) 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 Chief and the Director.

Note: Following Table 1 is **NOT A TRIVIAL TASK**. Daily attention to detail and daily documentation is necessary for the workers to be successfully protected using Table 1.

Appendix F – Air Sampling To Prove Exposures Are Below The AL and PEL

From 8 CCR 1532.3:

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 µg/m3, calculated as an 8-hour TWA.

(2) Exposure assessment.

(A) 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 subsection (d)(2)(B) or the scheduled monitoring option in subsection (d)(2)(C.

(B) 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.

(C) Scheduled monitoring option.

1. 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.

2. 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.

3. 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.

4. 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.

5. 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 subsection (d)(2)(D).

(D) 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.

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

(F) Employee notification of assessment results.

1. Within five working days after completing an exposure assessment in accordance with subsection (d)(2), 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.

2. 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.

Appendix G – Written Exposure Control Plan For Crystalline Silica

From 8 CCR 1532.3:

(1) 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;

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

(D) 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 Chief and the Director.

(4) The employer shall designate a competent person to make frequent and regular (daily) inspections of job sites, materials, and equipment to implement the written exposure control plan.

[1] **Difference Between Projects Conducted Legally and Projects Conducted Safely –** Projects conducted safely are conducted in a fashion that complies with the current understanding of what is safe for workers, and the environment in general, even if the regulations have not yet adopted these *safe* limits on the level of exposure. For instance, Cal/OSHA's regulations contain a "permissible" level of exposure to asbestos (0.1 fiber per cubic centimeter for an 8-hour time weighted average) for which a worker can be exposed to without being required to wear a respirator, yet Cal/OSHA also states that there is no "safe" level of exposure to asbestos. For lead this issue exists as well, where Cal/OSHA, as of 2018, allows a worker to work without respiratory protection when there is less than 50 micrograms of lead per cubic meter of air, while the National Institute of Occupational Safety and Health (NIOSH) claims the "safe" level of lead exposure over an eight hour time weighted average is between 0.5 and 2.3 micrograms of lead per cubic meter of air. Crystalline silica has an action level of 25 micrograms of crystalline silica per cubic meter of air and a permissible exposure level of 50 micrograms of crystalline silica per cubic meter of air – but neither of these levels are based strictly on health related issues.

[2] **While crystalline silica is a hazard that must be considered and dealt with properly, it is not a "hazardous material**." It does not require special packaging or waste disposal. How the material is handled determines the level of hazard faced by the worker.

[3] **Regulatory Liability Cannot Be Transferred** –Regulatory, and civil, liability remains with the building owner regardless of contract language/format or wording in specifications. Contract language/format, and various types of specification language can add parties which are liable for the hazards on a project are dealt with, but they cannot transfer this liability from one entity (themselves) to another entity (Architects, CMs, Contractors, Consultants, etc.).

[4] **Training** for crystalline silica is required to be part of an employer's injury and illness protection program. This training is not required to be conducted by an accredited training provider, and can be conducted by the Competent Person on a project.

[5] **Civil** and **Regulatory Liability –** For the purposes of this document, civil liability is based on one entity (person or organization) suing a second entity due to the second entity having caused avoidable harm; Regulatory liability is based on whether the action of an entity could result in one or more citations being issued by a regulatory agency.

[6] **Legal and Safe are different issues.** To conduct silica work legally, Building Owners must assure their employees follow the requirements in 8 CCR 5204. To assure construction work is conducted legally, the requirements of 8 CCR 1532.3 must be followed by all construction workers working within their buildings. To assure work is conducted safely, it is often necessary to go above and beyond the requirements set forth in applicable regulations.

[7] **Safe Work Practices (including the use of PPE by the workers), Personal Air Monitoring, Proper Work Practices and Engineering Controls –** means that Workers did not simply follow the minimum required regulatory processes but rather conducted their work in a fashion that protected their short and long-term health, as well as avoided track out of respirable crystalline silica on their persons.

[8] **Documented and Retained for Decades** - Health related records, such a medical surveillance of workers exposed to respirable crystalline silica at level requiring respirators, personal air samples, and physicals, are required by Cal/OSHA to be retained by the employer for 30 years. If the employer goes out of business, these health-related records are to be sent to Cal/SOHA. Due to the potentially long latency period between exposure and symptoms of respirable crystalline silica related disease developing, records of proper work practices, PPE, and decontamination activities employed by workers on projects should be retained indefinitely for liability and insurance reasons.

[9] **Common Environmental Hazards –** can include construction materials that contain crystalline silica, heavy metals (lead, mercury, beryllium, cadmium, chromium, etc.), mold, asbestos (naturally occurring or in materials), PCBs, silica, refrigerant gases (such as Freon), volatile organic compounds, hydrocarbons, etc.

[10] **Potential Crystalline Silica Hazards –** Crystalline Silica hazards are based more on the work activities conducted by those handling materials that contain crystalline silica than by the type of materials or the concentration of crystalline silica in the material.

[11] **The Project Team** often, though not always, consists of the Owner, the Architect, the Construction Manager (the Architect may serve in this capacity), the Architect's Consultants, the General Contractor, and the Environmental Consultant.

[12] **Value Engineering** - Consultants should be open to contractor approaches that save the project either time or money. On publicly bided projects, value engineering must provide some benefit to the project for a change to be valid, it cannot be solely to the benefit of the environmental contractor. The most important issue for the consultant to consider when reviewing value engineering submissions from contractors is whether regulatory or civil liability on the project is increased. If the value engineering submission increases the liability associated with environmental work, it should be rejected.

[13] While crystalline silica disturbance does not require full containment of the work area, containment is sometimes used to assure workers in adjacent areas are not being exposed while the crystalline silica containing materials are being disturbed. If the containment is set up poorly, there is no guarantee that the work has been properly isolated from the surrounding environment. If the containment is set-up properly, even if things go significantly wrong inside the contained work area, the surrounding environment is much less likely to suffer exposures and contamination.

[14] **Tear Down Activities include:**

assuring all containment poly and tape have been removed,
assuring no unanticipated damage has been done to the work area or adjacent areas of the building,
assuring that any material, dust or debris, that may have gotten behind the containment poly, is properly cleaned up.

[15] **Paperwork Requirements** for crystalline silica would include documentation of the safe work practices conducted by the contractor, documentation that the contractor either followed the requirements of Table 1 for each crystalline silica disturbing activity, or conducted air sampling to assure the workers were not over exposed to respirable crystalline silica during the project.

[16] **Crystalline Silica Training** – must be conducted by a Competent Person. This training includes, but is not limited to, numerous topics covering health hazards, specific tasks in the workplace that cause exposure, steps taken to protect employees, and the requirements of 8 CCR 1532.3. Shall be provided at initial employment as required by 8 CCR 5194 (Haz-Comm). Recommended training is provided annually at a minimum.

[17] **Exposing Employer** - The "exposing employer" is an employer whose employees were exposed to the violative condition at the worksite regardless of whether that employer created the violative condition. Before the adoption of 8 CCR Section 336.11, the exposing employer was the only category of employer that could be cited by the Division.

[18] **Creating Employer** - is an employer who actually created the violative condition.

[19] **Controlling Employer** - is an employer who is responsible for safety and health conditions at the worksite and who has the authority to correct the violation.

[20] **Correcting Employer** - is an employer who has the specific responsibility to correct the violative condition.

[21] 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. 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. 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. 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.

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. 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.

[22] **Soft Demo** refers to the removal of materials that do not contain asbestos, lead, or other hazardous materials.

[23] **Architects/cm are responsible for assisting their clients in complying with applicable regulations**. Architects should ensure that their clients understand the need to utilize qualified contractors to conduct construction work. Contractors without the necessary training and work practices may contaminate the building with respirable crystalline silica dust. This may result in exposure hazards to the building occupants and improper exposure for the contractors' employees and others working on the construction project.