



RESPIRABLE CRYSTALLINE SILICA PROGRAM

July 2018

A. SCOPE

The Respirable Crystalline Silica Program is established in accordance with 29 CFR 1910.1053 and 29 CFR 1926.1153, Respirable Crystalline Silica. It describes the program elements necessary to protect employees from the harmful effects of respirable crystalline silica exposure at all University of Nevada, Las Vegas (UNLV) properties.

B. COMPLIANCE

This program applies to all UNLV employees whose job assignments may expose them to respirable crystalline silica. If employee exposure to respirable crystalline silica remains below the action level (under any foreseeable condition), then the requirements of this program do not apply.

C. TERMINOLOGY

Requirements specific to either the general industry or construction OSHA Respirable Crystalline Silica standard will be identified by (General Industry) or (Construction), respectively, in this document. Definitions are provided in Section I.

D. DUTIES AND RESPONSIBILITIES

(1) Risk Management and Safety (RMS)

- a. Establish the UNLV Respirable Crystalline Silica Program.
- b. Identify those who can collect samples and perform lab analysis.
- c. Identify physicians or licensed health care professional (PLHCP) and specialists who can provide examinations.

- d. Provide training on the following:
 - i. Silica Competent Person.
 - ii. Health Hazards from Exposure.
 - iii. UNLV Respirable Crystalline Silica Program.
- e. Maintain training records for those completing RMS courses.
- f. Provide assistance to the departments, as needed:
 - i. Identifying exposure sources and control methods (form available at RMS/OSH).
 - ii. Implementing the UNLV Respirable Crystalline Silica Program.
 - iii. Preparing the exposure control plan and completing the annual review. (form available at RMS/OSH).
 - iv. Understanding requirements for air monitoring and medical evaluations.
 - v. Determining personal protective equipment (PPE) for the hazards encountered.

(2) Department Managers and Supervisors

- a. Implement the UNLV Respirable Crystalline Silica Program.
- b. Have employees attend training indicated and complete respirator medical evaluations and fit testing.
- c. Arrange for air sampling when required and provide employees an opportunity to observe. Provide employees results of air sampling.
- d. Assess possible exposure and identify/implement appropriate control methods and respiratory protection to protect employees from respirable crystalline silica (form available at RMS/OSH).
- e. Inform employees about tasks involving respirable crystalline silica and provide equipment to perform the job safely.

- f. Provide access to product labels and safety data sheets (SDS) for the products containing silica.
- g. Arrange medical evaluations for employees who are exposed above the action level for 30 or more days a year. (form available at RMS/OSH).
- h. Identify regulated areas, if needed, and follow the requirements in section H.
- i. Designate a competent person to fulfill the duties and responsibilities identified in section D (3).
- j. Follow the requirements specified for abrasive blasting. Reference: 1910.1053 (f)(3) General Industry and 1910.1153 (d)(3)(ii) Construction.

(3) Department - Competent Person

- a. Prepare the Respirable Crystalline Silica Exposure Control Plan (form available at RMS/OSH) and perform the annual review.
- b. Determine appropriate PPE for the potential hazards encountered.
- c. Perform regular inspections of job sites, materials and equipment (form available at RMS/OSH). (Construction)
- d. Maintain a file of exposure and medical evaluation data as specified in section H and provide exposure data to RMS, when requested.
- e. Complete page 1 of employee information and provide employees who have possible exposure with copies (form available at RMS/OSH).
- f. Have employees review and complete "Employee Acknowledgement" form (form available at RMS/OSH) and retain a copy for file.

(4) Employees

- a. Complete RMS and department specific training.
- b. Complete medical evaluations and respirator fit testing, when required.

- c. Perform job duties using the controls specified.
- d. Use equipment properly and follow good housekeeping practices.
- e. Perform equipment checks. Bring defective equipment to your supervisor's attention for repair or replacement.
- f. Wear PPE properly and inspect, clean, maintain and store PPE correctly.

(5) PLHCP/Specialist

- a. Provide medical evaluations to exposed UNLV personnel.
- b. Explain medical evaluations results to employees.
- c. Issue written medical evaluation reports to employees within 30 days of each examination.
- d. Provide written medical opinions to employee's department within 30 days of the medical examination that include the information specified in 29CFR 1910.1053 (General Industry) and 29CFR 1926.1153. (Construction).

E. RESPIRATOR REQUIREMENTS

- (1) Respirators will be used when exposures are at or above the PEL or as follows:
- a. When installing or implementing engineering and work practice controls.
 - b. When controls are not sufficient to reduce exposures below the PEL.
 - c. During maintenance and repairs tasks and engineering and work practice controls are not feasible.
 - d. Employees are in a regulated area (General Industry).
 - e. Required by OSHA Standard 1926.1153, Table 1.
 - f. Tasks are not listed in Table 1, or when not able to fully implement the requirements of Table 1.

- (2) When respirators are used, the requirements of 1910.134, Respiratory Protection, also apply.

F. REGULATED AREA (General industry)

- (1) Control access to regulated areas.
- (2) Grant access to those:
 - a. Required to perform work in the area.
 - b. Observing monitoring taking place.
 - c. Authorized by the department.
- (3) Provide and require respirators to be used by those listed above while inside regulated areas.
- (4) Post signage at the entrance to regulated areas:

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

G. RECORD KEEPING

- (1) Objective Data.
 - a. The respirable crystalline silica material in question.
 - b. The source of the objective data.
 - c. The testing protocol used and results of testing.
 - d. A description of the process, task or activity on which the objective data were based.
 - e. Other data relevant to the process, task, activity, material or exposure on which the objective data were based.

(2) Scheduled Air Monitoring Data.

- a. Date of measurement for each sample that was 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 protective equipment used by the employees being monitored.
- g. Name, social security number and job classifications of all employees being monitored.

(3) Medical Surveillance Program Data.

- a. Name and social security numbers of employees receiving medical evaluations.
- b. PLHCPs and specialists written medical opinion.
- c. Information provided to PLHCPs and specialists.

- (3) For the data shown above, maintain and make available in accordance with 1910.1020, Access to Employee Exposure and Medical Records.

H. DEFINITIONS

- (1) **Action Level** – A concentration of airborne respirable crystalline silica of 25 micrograms per cubic meter of air, calculated as an 8-hour TWA.
- (2) **Competent Person** – An individual who is capable of identifying existing and foreseeable respirable crystalline silica hazards in the workplace and 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 of the written exposure control plan.
- (3) **Objective Data** – 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.

- (4) **Permissible Exposure Limit (PEL)** - A concentration of airborne respirable crystalline silica in excess of 50 micrograms per cubic meter of air, calculated as an 8-hour TWA.
- (5) **Regulated Area** – 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.
(General Industry)
- (6) **Respirable Crystalline Silica** – 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).

I. APPENDICES

Please contact RMS, OSH to obtain access to the google drive containing the following forms:

- Exposure Sources and Control Methods – Silica Exposure Assessment
- Exposure Control Plan – Annual Review
- Medical Surveillance Program
- Job Site Inspection Worksheet