Respirable Crystalline Silica Program

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Summary of Changes

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Section	Change
All Sections	Grammar, structural, and section changes
Intro	Added cover page
Terminology	Removed Terminology section
Definitions	Moved definitions section to the beginning of document from the end
D(1)(d)	Added Identifying a competent person
	Added specific tasks in the workplace which could cause exposure to silica
	Added purpose for medical surveillance
	Added OSHA standards 1910.1053 and 1926.1153
D(1)(f)(iv)	Added provide guidance on recordkeeping requirements and procedures
D(2)(h)	Changed identify regulated areas, if needed, and follow the requirements section in H to Section F
D(3)(e) & (f)	Removed lines e and f and combined into one statement
Appendices	Attached appendices directly to silica program document

A. SCOPE AND APPLICATION

The Respirable Crystalline Silica Program is established in accordance with 29 CFR 1910.1053 and 29 CFR 1926.1153, Respirable Crystalline Silica. The program describes the 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 WITH PROGRAM

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. 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.

(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).

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 professionals (PLHCP) and specialists who can provide examinations.

d. Provide training on the following:

i. Health hazards from exposure

ii. Specific tasks in the workplace that could result in exposure to silica

iii. Control measures

iv. OSHA Standards 1910.1053 and 1926.1153

v. Identifying a competent person

vi. Purpose and description of the medical surveillance program

vii. UNLV Respirable Crystalline Silica Program.

NOTE: Training under this program shall include both awareness level instruction for affected employees and competent person level training for designated personnel responsible for oversight and control of respirable crystalline silica hazards.

e. Maintain training records for those completing RMS courses.

f. Provide assistance to the departments, as needed:

i. Identifying exposure sources and applicable control methods, including tasks covered under Table 1 of the OSHA respirable crystalline silica standard (29 CFR 1926.1153).

ii. Implementing the UNLV Respirable Crystalline Silica Program.

iii. Preparing the exposure control plan and completing the annual review.

iv. Provide guidance on recordkeeping requirements and procedures.

v. Understanding requirements for air monitoring and medical evaluations.

vi. 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 the results of air sampling.

d. Assess possible exposure and identify/implement appropriate control methods and respiratory protection to protect employees from respirable crystalline silica.

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. Offer medical evaluations for employees at least once every 3 years who are exposed above the action level for 30 or more days a year.

h. Identify regulated areas, if needed, and follow the requirements in section F.

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 and perform the annual review.

b. Determine the appropriate PPE for the potential hazards encountered.

c. Perform regular inspections of job sites, materials, and equipment.

d. Maintain a file of exposure and medical evaluation data as specified in section G and provide exposure data to RMS, when requested.

i. Competent person shall provide timely communication and documentation to Risk Management & Safety (RMS) for all recordkeeping activities related to the Respirable Crystalline Silica Program.

ii. RMS shall be notified when new silica-related tasks or processes are introduced; exposure monitoring is conducted or updated; control measures are implemented or modified; or program records are created, updated, or retained.

e. Complete “Employee Information and Acknowledgement/Medical Surveillance Program” and have employees review and retain a copy for record keeping.

(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.

NOTE: Dry sweeping and the use of compressed air are prohibited for housekeeping activities involving respirable crystalline silica, in accordance with 29 CFR 1910.1053(h)(2).

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 away correctly.

(5) **Physicians or Licensed Healthcare Professionals (PLHCP)/Specialists**

a. Provide medical evaluations to exposed UNLV personnel.

b. Explain medical evaluations results to employee.

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 29 CFR 1910.1053 (General Industry) and 29 CFR 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 repair 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:

i. Danger

ii. Respirable crystalline silica

iii. May cause cancer

iv. Causes damage to lungs

v. Wear respiratory protection in this area

vi. Authorized personnel only

G. RECORD KEEPING

(1) Objective Data

a. The respirable crystalline silica material in question.

b. The source of objective data.

c. The testing protocol used and the 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 that analysis.

f. Type of protective equipment used by the employees being monitored.

g. Name and job classification of all employees being monitored.

(3) Medical Surveillance Program Data

a. Name of employees receiving medical evaluations.

b. PLHCPs and specialists written medical opinion.

c. Information provided to PLHCPs and specialists.

NOTE: For the data shown above, maintain and make available in accordance with 1910.1020, Access to Employee Exposure and Medical Records.

H. APPENDICES

A. Exposure Control Plan

B. Annual Review – Exposure Control Plan

C. Employee Information and Acknowledgement/Medical Surveillance Program

D. Job Site Inspection Worksheet

Respirable Crystalline Silica

Exposure Control Plan

Department:_____ **Date**:_____

Instructions: For each task with silica containing materials, show the type of work performed, engineering and work practice controls used, PPE required and housekeeping measures implemented.

Job Task:

Controls:

PPE:

Housekeeping:

Restricting Access:

Special Considerations:

_____ _____

(Signature – Competent Person) **(Job Title – Competent Person)**

Annual Review – Exposure Control Plan

Department: _____ **Date:** _____

Effectiveness of Controls:

_____

_____

_____

_____

Changes Recommended/Instituted:

_____

_____

_____

_____

_____ _____

(Signature – Competent Person) **(Job Title – Competent Person)**

Respirable Crystalline Silica

Department Information

Competent Person for this Department

Department: Name: Job Title:

Work Phone:

Materials/Jobs – Possible Exposure to Respirable Crystalline Silica

_____

_____

_____

_____

Specific Measures to Protect Employees

Engineering Controls:

_____

_____

_____

_____

Work Practice Controls:

_____

_____

Respirator Use – When Required, Type of Respirators and Filters:

Care and Proper Storage of Respirators

Care of Respirator:

- Inspect thoroughly before each use.
- Check the tightness of all connections and conditions of all parts.
- Check for damage in facemask, straps, valves, hoses, and filters.
- Make sure the mask in pliable and not deteriorating.
- Report defective parts to your supervisor for replacement.

Storage of Respirator:

- Protect respirator from: Damage, contamination, dust, sunlight, extreme features, moisture, and chemicals.
- Storage in a bag or container in a clean, dry, and cool location.
- Do not store by hanging respirator by the straps or leaving it exposed on a workbench.

Medical Surveillance Program

- No cost to the employee and provided in at a reasonable time and place.
- Employees who are exposed at the action level for 30 or more days a year.
- Initial (baseline) examination within 30 days of being assigned to duties, unless:
    i. Employee received a medical examination within the past 3 years.
    ii. Meets the requirements of 29 CFR 1910.1053 (General Industry) or 29 CFR 1926.1153 (Construction).
- Periodic exams every 3 years, or more frequently, if recommended by the physician or licensed healthcare professional (PLHCP).
- PLHCP will explain results to employees and provide a written report to employees within 30 days. PLHCP will provide written medical opinion to UNLV Department within 30 days.
- UNLV Department will ensure employees receive a copy of the written medical opinion within 30 days. If PLHCP indicates employees should be examined by a specialist.
    i. UNLV Department shall ensure employee is seen by a specialist within 30 days of the medical opinion.
    ii. UNLV Department shall provide requested information to the specialist.
    - Specialist will explain results to employees and provide a written report within 30 days.
    - Specialist will provide written medical opinion to UNLV Department within 30 days.

Respirable Crystalline Silica

Employee Acknowledgement

I acknowledge receipt of the following information:

- Name and phone number – Department competent person
- Materials/jobs – possible exposure to respirable crystalline silica.
- Specific measures to protect employees.
- Care and proper storage of respirators.
- Medical surveillance program.

I have reviewed this information and understand the requirements.

Any questions I had during this review were answered by the department staff.

(Print name – Employee)	(Signature – Employee)
(Department)	(Date)

Respirable Crystalline Silica

Job Site Inspection Worksheet

Department: _____ **Date of Review**: _____

Job Task Location/Work Being Done

1. _____

2. _____

Employees Completing Job Task

1. _____ 2. _____

3. _____ 4. _____

Job Materials/Process (grinding, cutting, etc.)

1. _____

2. _____

Engineering Controls, Work Practice Controls, Housekeeping & PPE Used

1. _____

2. _____

Safety Issues Identified & Resolved

1. _____

2. _____

3. _____

_____ _____

(Signature – Competent Person) **(Job Title – Competent Person)**