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Companywide	Program Requirements Document	For Additional Info: http://EDMS	Effective Date: 10/23/17
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Subcontractor Requirements Manual

USE TYPE 3Change Number: 356126

*The current revision can be verified on EDMS.

1. PURPOSE

This document provides requirements for controlling employee exposure to airborne respirable dust containing crystalline silica. This document lists requirements from 29 Code of Federal Regulations (CFR) 1926.1153, Respirable crystalline silica, and 10 CFR 851, Worker Safety and Health Program, along with *contractor* (see def.) requirements

2. APPLICABILITY

This document applies to all subcontractors working at the Idaho Cleanup Project Core (ICP Core) who perform activities that pose an occupational exposure to airborne dust containing crystalline silica. Stricter requirements may be imposed by subcontractors on their employees or subtier contractors. Implementation may be by any effective means determined by the subcontractor.

3. REQUIREMENTS

3.1 Code and Standard Requirements

- 3.1.1 Specific requirements for controlling worker exposure to airborne respirable crystalline silica during construction activities are listed in 29 CFR 1926.1153, Respirable crystalline silica. The requirements listed in this document supplement those requirements, but do not replace them. Code requirements must be met.

3.2 General Requirements

- 3.2.1 Subcontractors shall ensure that no employee is exposed to respirable crystalline silica above the OSHA PEL of $50 \mu\text{g}/\text{m}^3$ as an 8-hour time-weighted average (TWA).
- 3.2.2 Subcontractors shall evaluate employee exposure to respirable crystalline silica on the basis of any combination of air monitoring data or objective data that is sufficient to accurately characterize employee exposure.
- 3.2.3 If *objective data* (see def.) is relied upon for determination of employee exposure, it shall contain the following information:
- A. The crystalline silica-containing material in question
 - B. The source of the objective data
 - C. The testing protocol used

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- D. The results of the testing
- E. A description of the process, task or activity on which the objective data was based
- F. Other data relevant to the process, task, activity, material or exposure on which the objective data were based.

3.3 Exposure Control Methods

- 3.3.1 Subcontractors shall, for each task listed in 29 CFR 1926.1153(c), Table 1, “Specified Exposure Control Methods When Working With Materials Containing Crystalline Silica”, fully and properly implement the engineering controls, work practices and respiratory protection specified in Table 1 for the work task(s) performed.
- 3.3.2 When respirators are used, such use must be in accordance with PRD-2109, Respiratory Protection.
- 3.3.3 When implementing the control measures specified in Table 1 of 29 CFR 1926.1153, the subcontractor shall ensure that the requirements of 29 CFR 1926.1153(c) are followed, as applicable.
- 3.3.4 Ensure that, for tasks not listed in Table 1 of 29 CFR 1926.1153 exposure control methods such as HEPA-filtered dust collection and wet methods are implemented to reduce employee exposure to respirable crystalline silica to the lowest feasible level.
- 3.3.5 Subcontractor shall ensure compliance with other applicable contractor and OSHA standards where abrasive blasting is conducted using crystalline silica-containing blasting agents or where abrasive blasting is conducted on substrates containing crystalline silica.
- 3.3.6 When ventilation systems are used to control exposure to airborne respirable crystalline silica, systems shall be maintained in accordance with manufacturer’s recommendations to ensure continued effectiveness.
- 3.3.7 If air is recirculated into the workplace, subcontractor shall ensure that the returned air passes through a high efficiency particulate air (HEPA) filter that is monitored to ensure effectiveness.
- 3.3.8 Dust capture/filtration system maintenance and filter change-out shall be conducted in a manner that uses engineering controls, work practices and respirators to minimize employee exposure to respirable crystalline silica.

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- 3.3.9 Where subcontractors choose to monitor employee exposure to airborne respirable crystalline silica instead of fully and properly following the engineering, work practice and respiratory protection requirements in Table 1 of 29 CFR 1926.1153, employee exposure monitoring must be used to demonstrate that exposures do not exceed the PEL.
- 3.3.10 When exposure to respirable crystalline silica is determined through air sampling, exposure monitoring shall be conducted in accordance with National Institute of Occupational Safety and Health (NIOSH) methods; analysis of samples shall be by an American Industrial Hygiene Association-accredited laboratory.
- 3.3.11 Subcontractors shall select workers with the highest potential for exposure to respirable crystalline silica for exposure sampling and ensure that exposure determinations reflect each employee's 8-hour TWA exposure to respirable crystalline silica, at the frequency and pattern needed to ensure that sampling data reflect typical exposure levels given the variability of tasks, work practices, and environmental conditions.
- 3.3.12 Subcontractors shall repeat exposure sampling at the appropriate interval specified in 29 CFR 1926.1153(d), or when changes in the activity occur which could result in employee exposures to respirable crystalline silica at or above the OSHA action level of 25 $\mu\text{g}/\text{m}^3$.
- 3.3.13 Subcontractor shall notify monitored and represented employees, and their supervisor(s), in writing, of the results of employee exposure monitoring within five (5) working days.
- 3.3.14 When monitoring results indicate that employee exposures exceed the PEL, subcontractors shall ensure the written notice includes a statement that the PEL has been exceeded and a description of any corrective actions being taken to reduce exposures to or below the PEL.
- 3.3.15 Subcontractors shall provide affected employees or their designated representative an opportunity to observe any monitoring of employee exposure to respirable crystalline silica.
- 3.3.16 If needed, subcontractors shall provide observers with necessary respiratory protection, clothing, equipment, and briefing on applicable safety and health procedures.

3.4 Housekeeping

- 3.4.1 Subcontractor shall not allow dry sweeping or dry brushing where such activity could contribute to employee exposure to airborne respirable crystalline silica unless wet sweeping, HEPA-filtered vacuuming or other methods that minimize exposure are not feasible.

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- 3.4.2 Subcontractor shall ensure that compressed air is not used to clean clothing or surfaces where such activity could contribute to employee exposure to respirable crystalline silica, unless the compressed air is used in conjunction with a HEPA- filtered ventilation system that effectively captures any dust generated by the compressed air.

3.5 Written Exposure Control Plan

- 3.5.1 Subcontractor shall designate a competent person to supervise work involving respirable crystalline silica, and make frequent and regular inspections of the job site(s), materials and equipment to ensure compliance with this document.
- 3.5.2 Subcontractor shall complete an ICP form, FRM-3053, Construction Activity-Specific Control Plan For Respirable Crystalline Silica or another method, to document the following information:
- A. A description of the tasks(s) involving exposure to respirable crystalline silica
 - B. A description of the engineering controls, work practices and respiratory protection from Table 1 of 29 CFR 1926.1153 to be 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.
 - D. Verification that employees have received the required training on hazards associated with exposure to respirable crystalline silica.
 - E. Date and time of inspection(s) performed by the competent person, including the activity (ies) observed and any corrective actions needed to be taken.
- 3.5.3 The subcontractor shall ensure copies of the completed FRM-3053 or equivalent documentation are available to employees or authorized employee representatives, upon request.
- 3.5.4 The subcontractor shall ensure that the completed FRM-3053 or equivalent documentation is updated as often and as promptly as necessary to reflect significant changes in compliance status or significant changes in the airborne respirable crystalline silica level.
- 3.5.5 Upon completion of the activity, ensure that a copy of the completed FRM-3053 or equivalent documentation is provided to the contractor representative/point of contact.

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3.6 Medical Surveillance

- 3.6.1 Subcontractor shall ensure that employees who are required to wear a respirator for 30 or more days per year for protection from respirable crystalline silica are enrolled in a medical surveillance program that meets the requirements of 1926.1153(h) and that is provided at no cost to employees.

3.7 Hazard Communication and Training

- 3.7.1 Subcontractors shall ensure that employees have access to safety data sheets for materials containing crystalline silica and are trained in accordance with PRD-2101, Hazard Communication.
- 3.7.2 Subcontractors shall ensure that containers of hazardous chemicals containing crystalline silica are labeled in accordance with 29 CFR 1910.1200.
- 3.7.3 Subcontractors shall ensure that persons performing work, or who are assigned competent person responsibilities for, work involving respirable crystalline silica which could result in exposure to respirable crystalline silica in excess of the action level, receive training prior to work assignment that addresses the following:
- A. The following health hazards associated with respirable crystalline silica exposure: cancer; lung effects; immune system effects, and kidney effects;
 - B. The tasks that could result in exposure to respirable crystalline silica;
 - C. Measures that the Subcontractor has implemented to protect employees, including engineering controls, work practices, and respiratory protection;
 - D. Measures employees can take to protect themselves from exposure to respirable crystalline silica, including engineering controls, work practices, respiratory protection and other PPE;
 - E. The purpose and a description of the medical surveillance program required by OSHA;
 - F. The contents of the OSHA regulation for occupational exposure to respirable crystalline silica in construction, 1926.1153, and how to obtain/access a copy of the regulation; and
 - G. Employee rights of access to exposure and medical surveillance records.

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- 3.7.4 Subcontractors shall ensure that employees required to participate in respirable crystalline silica training demonstrate knowledge and understanding of the concepts presented in the training.
- 3.7.5 Subcontractors shall ensure that employees receive additional training under the following conditions:
- A. Employees are observed to perform activities that contradict knowledge gained through training regarding respirable crystalline silica.
 - B. There is a change in assigned work, operation of engineering controls, or other changes that could result in increased exposure to respirable crystalline silica.

3.8 Recordkeeping

- 3.8.1 Subcontractors shall make and maintain accurate and complete records as required by 29 CFR 1926.1153(j).

4. DEFINITIONS

Action level. A concentration of airborne respirable crystalline silica of 25 micrograms per cubic meter ($25 \mu\text{g}/\text{m}^3$) of air, calculated as an 8-hour time-weighted average.

Competent person. A person designated by the employer 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 control such hazards.

High efficiency particulate air (HEPA filter). A filter that is 99.97% efficient in removing mono-dispersed particles of 0.3 micrometers (μm) in diameter.

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. 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 that are present in the current operations.

Permissible exposure limit (PEL). A concentration of airborne respirable crystalline silica of fifty micrograms per cubic meter ($50.0 \mu\text{g}/\text{m}^3$) of air, calculated as an 8-hour time weighted average.

Respirable crystalline silica. 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.

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Written exposure control plan. A completed FRM-3053 or equivalent documentation that provides activity-specific information which meets the requirements of 29 CFR 1926.1153(g).

5. REFERENCES

10 CFR 851, “Worker Safety and Health Program”

29 CFR 1926.1153, “Respirable crystalline silica”

FRM-3053, “Construction Activity-specific Control Plan for Respirable Crystalline Silica”

5.1 Related Requirements

The following documents contain requirements applicable to this activity:

PRD-2030, Occupational Medicine

PRD-2101, Hazard communication

PRD-2109, Respiratory Protection

PRD-2111, Exposure Assessments

PRD-5001, Training and Indoctrination

6. APPENDIXES

None