

Your Silica Control Plan

Company:
Brooks Construction Co., Inc.

Person Completing the Plan/Title:
Monty Richmond - Director of HR and Safety

Jobsite/Project:
Companywide

Description of Work:
Asphalt, Concrete and Dirt Work

Competent Person
Crew Foremen

1 **Material** **Task**
Asphalt Cutting/sawing

Equipment and Control(s)
Walk-Behind Saw with Water (Table 1 Entry)

Task/Control Description
We will use water to decrease or eliminate the dust created from cutting asphalt.

2 **Material** **Task**
Asphalt Drilling/coring

Equipment and Control(s)
Hand-Held Drill with Dust Extraction (Table 1 Entry)

Task/Control Description
Dust masks will be used where asphalt dust is created. We will also use water with our machines to reduce the dust created.

3 **Material** **Task**
Asphalt Milling

Equipment and Control(s)
Highway Milling Machine with Water (Table 1 Entry)

Task/Control Description
Dust masks will be used where asphalt dust is created. We will also use water with our machines to reduce the dust created.

4 **Material** **Task**
Asphalt Mixing/pouring

Equipment and Control(s)
Respiratory Protection

Task/Control Description
Dust masks will be used where asphalt dust is created.

5 **Material** **Task**
Asphalt Sweeping/cleaning up

Equipment and Control(s)
Respiratory Protection

Task/Control Description
Dust masks will be used where asphalt dust is created. We will also use water with our machines to reduce the dust created.

6 **Material** **Task**
Concrete Cutting/sawing

Equipment and Control(s)
1) Hand-Held Masonry Saw with Water (Table 1 Entry), 2) Walk-Behind Saw with Water (Table 1 Entry)

Task/Control Description
Dust masks will be used where concrete dust is created. We will also use water with our machines to reduce the dust created.

7 Material Task
Concrete Demolishing/disturbing

Equipment and Control(s)
Hydraulic Breaker

Task/Control Description

Dust masks will be used where concrete dust is created. We will also use water with our machines to reduce the dust created.

8 Material Task
Concrete Drilling/coring

Equipment and Control(s)
Core Drill with Water (Table 1 Entry)

Task/Control Description

Dust masks will be used where concrete dust is created. We will also use water with our machines to reduce the dust created.

9 Material Task
Concrete Milling

Equipment and Control(s)
Highway Milling Machine with Water (Table 1 Entry)

Task/Control Description

Dust masks will be used where concrete dust is created. We will also use water with our machines to reduce the dust created.

10 Material Task
Concrete Mixing/pouring

Equipment and Control(s)
Respiratory Protection

Task/Control Description

Dust masks will be used where concrete dust is created.

11 Material Task
Concrete Sweeping/cleaning up

Equipment and Control(s)
Water - Wet Surface

Task/Control Description

Dust masks will be used where concrete dust is created. We will also use water with our machines to reduce the dust created.

12 Material Task
Soil (fill dirt, top soil, soil w/ fly ash added) Demolishing/disturbing

Equipment and Control(s)
Respiratory Protection

Task/Control Description

Dust masks will be used where dust is created. We will also use water with our machines to reduce the dust created.

13 Material Task
Soil (fill dirt, top soil, soil w/ fly ash added) Earthmoving

Equipment and Control(s)
Heavy Equipment with Cab Filtration System (Table 1 Entry)

Task/Control Description

Dust masks will be used where dust is created.

14 Material Task
Soil (fill dirt, top soil, soil w/ fly ash added) Sweeping/cleaning up

Equipment and Control(s)
Respiratory Protection

Task/Control Description

Dust masks will be used where dust is created. We will also use water with our machines to reduce the dust created.

Safety of Others:

We will cone off, drum off, or use caution tape to restrict the work area.

Worker Training:

"The employer shall ensure that each employee covered by this section can demonstrate knowledge and understanding of at least the following:

- (A) The health hazards associated with exposure to respirable crystalline silica;
 - (B) Specific tasks in the workplace that could result in exposure to respirable crystalline silica;
 - (C) Specific measures the employer has implemented to protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, and respirators to be used;
 - (D) The content of this section;
 - (E) The identity of the competent person designated by the employer in accordance with paragraph (g)(4) of this section; and
 - (F) The purpose and a description of the medical surveillance program required by paragraph (h) of this section.
- (ii) The employer shall make a copy of this section readily available without cost to each employee covered by this section.

Housekeeping:

"(1) The employer shall not allow dry sweeping or dry brushing where such activity could contribute to employee exposure to respirable crystalline silica unless wet sweeping, HEPA-filtered vacuuming or other methods that minimize the likelihood of exposure are not feasible.

(2) The employer shall not allow compressed air to be used to clean clothing or surfaces where such activity could contribute to employee exposure to respirable crystalline silica unless:

- (i) The compressed air is used in conjunction with a ventilation system that effectively captures the dust cloud created by the compressed air; or
- (ii) No alternative method is feasible."

Medical Surveillance:

1) General. (i) The employer shall make medical surveillance available at no cost to the employee, and at a reasonable time and place, for each employee who will be required under this section to use a respirator for 30 or more days per year.

(ii) The employer shall ensure that all medical examinations and procedures required by this section are performed by a PLHCP as defined in paragraph (b) of this section.

(2) Initial examination. The employer shall make available an initial (baseline) medical examination within 30 days after initial assignment, unless the employee has received a medical examination that meets the requirements of this section

within the last three years. The examination shall consist of: (i) A medical and work history, with emphasis on: past, present, and anticipated exposure to respirable crystalline silica, dust, and other agents affecting the respiratory system; any history of respiratory system dysfunction, including signs and symptoms of respiratory disease (e.g., shortness of breath, cough, wheezing); history of tuberculosis; and smoking status and history; (ii) A physical examination with special emphasis on the respiratory system; (iii) A chest X-ray (a single posteroanterior radiographic projection or radiograph of the chest at full inspiration recorded on either film (no less than 14 x 17 inches and no more than 16 x 17 inches) or digital radiography systems), interpreted and classified according to the International Labour Office (ILO) International Classification of Radiographs of Pneumoconioses by a NIOSH-certified B Reader; (iv) A pulmonary function test to include forced vital capacity (FVC) and forced expiratory volume in one second (FEV1) and FEV1/FVC ratio, administered by a spirometry technician with a current certificate from a NIOSH-approved spirometry course; (v) Testing for latent tuberculosis infection; and (vi) Any other tests deemed appropriate by the PLHCP.

(3) Periodic examinations. The employer shall make available medical examinations that include the procedures described in paragraph (h)(2) of this section (except paragraph (h)(2)(v)) at least every three years, or more frequently if recommended by the PLHCP.

(4) Information provided to the PLHCP. The employer shall ensure that the examining PLHCP has a copy of this standard, and shall provide the PLHCP with the following information: (i) A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to respirable crystalline silica; (ii) The employee's former, current, and anticipated levels of occupational exposure to respirable crystalline silica; (iii) A description of any personal protective equipment used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and (iv) Information from records of employment-related medical examinations previously provided to the employee and currently within the control of the employer.

(5) PLHCP's written medical report for the employee. The employer shall ensure that the PLHCP explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of each medical examination performed. The written report shall contain: (i) A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to respirable crystalline silica and any medical conditions that require further evaluation or treatment; (ii) Any recommended limitations on the employee's use of respirators; (iii) Any recommended limitations on the employee's exposure to respirable crystalline silica; and (iv) A statement that the employee should be examined by a specialist (pursuant to paragraph (h)(7) of this section) if the chest X-ray provided in accordance with this section is classified as 1/0 or higher by the B Reader, or if referral to a specialist is otherwise deemed appropriate by the PLHCP.

(6) PLHCP's written medical opinion for the employer. (i) The employer shall obtain a written medical opinion from the PLHCP within 30 days of the medical examination. The written opinion shall contain only the following: (A) The date of the examination; (B) A statement that the examination has met the requirements of this section; and (C) Any recommended limitations on the employee's use of respirators. (ii) If the employee provides written authorization, the written opinion shall also contain either or both of the following: (A) Any recommended limitations on the employee's exposure to respirable crystalline silica; (B) A statement that the employee should be examined by a specialist (pursuant to paragraph (h)(7) of this section) if the chest X-ray provided in accordance with this section is classified as 1/0 or higher by the B Reader, or if referral to a specialist is otherwise deemed appropriate by the PLHCP. (iii) The employer shall ensure that each employee receives a copy of the written medical opinion described in paragraph (h)(6)(i) and (ii) of this section within 30 days of each medical examination performed.

(7) Additional examinations. (i) If the PLHCP's written medical opinion indicates that an employee should be examined by a specialist, the employer shall make available a medical examination by a specialist within 30 days after receiving the PLHCP's written opinion. (ii) The employer shall ensure that the examining specialist is provided with all of the information that the employer is obligated to provide to the PLHCP in accordance with paragraph (h)(4) of this section. (iii) The employer shall ensure that the specialist explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of the examination. The written report shall meet the requirements of paragraph (h)(5) (except paragraph (h)(5)(iv)) of this section. (iv) The employer shall obtain a written opinion from the

specialist within 30 days of the medical examination. The written opinion shall meet the requirements of paragraph (h)(6) (except paragraph (h)(6)(i)(B) and (ii)(B)) of this section.

Other Considerations:

Using Water as a Control:

- Collect the water -- tools with water collection systems can help avoid creating wet, slippery ground and walking surfaces. During cold weather a layer of ice can form on wet surfaces and increase the risk of slips and falls. Depending on the system, wet cutting can result in run-off that may need to be controlled.
- Remove silica-containing debris while wet to prevent the dust from becoming airborne and hazardous once dry.
- Avoid electric shocks when using an electric-powered tool with a water control by making sure that the electrical cords and extensions are rated for the tool's power requirements, regularly inspected, and used in combination with ground fault interrupt circuits.
- Factor in the impact of wet cutting on materials being used -- the time that may be required to allow masonry materials to dry after cutting and before use will depend on the material, the amount of water used, and the application. Concern that excess shrinkage as the units dry might lead to cracks has led some to prohibit wet cutting. The amount of water added to the unit during site cutting is insignificant, in terms of shrinkage. This was clarified in the ACI 530.01-05/ASCE6-05/TMS 602-05 Specification for Masonry Structures.

Avoid using gasoline-powered equipment in areas without adequate ventilation or confined spaces to prevent carbon monoxide poisoning. When using gas-powered equipment, small, inexpensive personal monitors can be worn by the operator to warn of unacceptable exposures.

- Monitor noise levels and ensure workers use hearing protection. Equipment-control combinations may generate sound levels that are greater than 90 decibels, the OSHA Permissible Exposure Limit (PEL). The NIOSH "Buy-Quiet" website provides helpful information on available tools and noise levels.