

Silica Management Program

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I. Pp & Sp

II. Rg

III. HbAid

IV. Dg

V. RbRp

VI. Pgrn

a EpaAn

b RgAa

c WEpCPh

d EgpPbCb

e Hg

f MbSa

g HbCtn

VII. OSHA Ta: EpcMhCb

VIII. Tg

IX. Rg

Appendix A – FbEpcMh Ta

Appendix B – FbAepCMB

Appendix C – WEpCPhn

Appendix D – SbHbG

Occupational exposure to respirable silica dust is known to cause silicosis.

2. Occupational exposure to respirable silica dust is known to cause Silicosis.

Silicosis is a lung disease caused by the inhalation of respirable silica dust. It is characterized by the formation of scar tissue in the lungs, which can lead to shortness of breath, coughing, and chest pain.

There are three main types of silicosis: acute, chronic, and accelerated. Acute silicosis is the most severe form and can develop within a few years of exposure. Chronic silicosis is the most common form and can develop over a period of 10 to 20 years. Accelerated silicosis is a form of silicosis that develops more rapidly than chronic silicosis but is less severe than acute silicosis.

IV. Definitions

APF (APF) - T _____

TWA (TWA) _____ -

Annual Average Daily Exposure (AED) - _____

Control Measure _____

Control Measure _____

Control Measure _____

EiCb _____ - M

~~_____~~
~~_____~~
~~_____~~

s

Hä -Fe ERb _____ - A g -ga -gv

~~_____~~
~~_____~~
~~_____~~
~~_____~~

Hg -EPA(HEPA) Fb _____ - A 0.97 p

HIILFLHQW LQ UHPRYLQJ PRQRGLVSHUVHG SDUWLFQHV RI
P100 N100 HEPA.

PE _____ Lt(PEL) _____ - A 0.5 f

~~_____~~
~~_____~~
~~_____~~

650

gm

. F
0.05 gm

pa

, 8-

N-95 Rb _____ - A

~~_____~~
~~_____~~
~~_____~~
~~_____~~

N95'

EORFNV DW OHDVW

SHUFHQW RI YHUVDP

Op _____ - A

~~_____~~

Pe PE(PPE) _____ - P

~~_____~~
~~_____~~
~~_____~~
~~_____~~

R/Cb _____ - Rb

~~_____~~
~~_____~~

Sb _____ - A d

~~_____~~
~~_____~~

W/D/W/M _____ M

~~_____~~
~~_____~~

V. Roles and Responsibilities

1. Environmental Health and Safety (EHS)

EHS _____ UNC _____
_____ _____
_____ _____
_____ _____

2. Department Heads

DEA _____ _____
_____ _____
CPH _____ _____
_____ _____
_____ _____

3. Supervisors

UNC _____ _____
_____ _____
_____ _____
SP _____ _____
_____ _____
PPE _____ _____

4. Employees

EA _____ _____
_____ _____
en _____ _____
_____ _____
_____ _____
_____ _____

VI. Program Requirements

1. Exposure Assessment

a. Initial Exposure Assessment

- i. _____ _____
_____ _____
_____ _____
_____ _____
_____ _____

- ii. Substitution of less hazardous materials.
 - iii. Engineering controls such as enclosure, local exhaust ventilation, or other methods that reduce employee exposure.
- 29 CFR

b. Periodic Exposure Assessment

- i. Periodic exposure assessments shall be conducted at least annually for employees performing tasks that require the use of PPE.
- ii. Quarterly assessments shall be conducted for employees performing tasks that require the use of PPE.

c. Reassessment of Exposures

- i. When new tasks or processes are introduced, a reassessment of exposures shall be conducted.
- ii. New tasks or processes shall be reassessed.

d. Employee Notification

- i. If the employer determines that the employee's exposure to a hazardous substance exceeds the PEL, the employer shall notify the employee in writing.
- ii. If the employer determines that the employee's exposure to a hazardous substance exceeds the PEL, the employer shall notify the employee.

2. Regulated Areas

At least one PEL shall be established for each regulated area. The PEL shall be based on the health hazard of the substance and shall be no higher than the PEL for the substance.

3. Written Exposure Control Plan

For the purpose of this plan, the term "Written Exposure Control Plan" (WEL) refers to a written plan that describes the methods and procedures to be used to control occupational exposure to asbestos. The WEL must be developed and implemented by the employer and must be available to all employees who are exposed to asbestos. The WEL must include the following information:

4. Engineering and Work Practice Controls

Engineering controls are physical changes to the workplace that reduce or eliminate exposure to asbestos. Examples of engineering controls include: enclosure of asbestos-containing materials (ACM), use of local exhaust ventilation (LEV), and use of HEPA filtration. Work practice controls are changes in the way that work is performed that reduce or eliminate exposure to asbestos. Examples of work practice controls include: wet methods, prohibition of dry sweeping, and use of plastic sheeting to isolate work areas.

5. Housekeeping

Housekeeping is an important part of any asbestos abatement project. It involves the removal of dust and debris from the work area. This can be done by wet sweeping, vacuuming with HEPA filtration, and using other methods. Housekeeping should be performed frequently and thoroughly to prevent the re-entrainment of asbestos dust.

6. Medical Surveillance

Medical surveillance is a program of periodic medical examinations and tests designed to detect early signs of asbestos-related disease. The program should be based on the level of exposure and the duration of exposure. The program should include the following components:

- A written medical surveillance program (MSP) that describes the methods and procedures to be used to monitor the health of exposed employees.
- A written exposure assessment (WEA) that identifies the employees who are exposed to asbestos and the level of exposure.
- A written asbestos abatement plan (AAP) that describes the methods and procedures to be used to control exposure to asbestos.
- A written asbestos management plan (AMP) that describes the methods and procedures to be used to manage asbestos in the workplace.

Medical surveillance should be performed by a qualified medical professional. The program should be reviewed and updated as needed to reflect changes in the workplace or in the health of the employees.

- A copy of the WEL, WEA, AAP, and AMP should be available to all employees who are exposed to asbestos.

3. Table 1 Listed Tasks:

From
RCS
High
Site

Initial to
in
Use

ital.

F - Table 1

Equipment/task	Engineering and work practice control methods	Required respiratory protection and minimum assigned protection factor (APF)	
		hours/shift	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	None	APF 10
	-When used indoors or in an enclosed area	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	None	None

	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		
(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	None	None
	-When used indoors or in an enclosed area	APF 10	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		

<p>(vii) Handheld and stand mounted drills (including impact and rotary hammer drills)</p>	<p>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 filtercleaning mechanism Use a HEPAfiltered vacuum when cleaning holes</p>	<p>None</p>	<p>None</p>
<p>(viii) Dowel drilling rigs for concrete</p>	<p>For tasks performed outdoor only:</p>		
	<p>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</p>	<p>APF 10</p>	<p>APF 10</p>

(ix) Vehicle

(x) Jackhammers and handheld powered chipping tools	of water at the point of impact:		
	-When used outdoors	None	APF 10
	-When used indoors or in an enclosed area	APF 10	APF 10
	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 filtercleaning mechanism:		
	-When used outdoors	None	APF 10

	(cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic preseparator or filter-cleaning mechanism		
(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	None	None

	-When used indoors or in an enclosed area	None	APF 10
(xiii) Walk-behind milling machines and floor grinders			

	Operate and maintain machine to minimize dust emissions		
(xv) Large drivable milling machines (halfane 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	None	None
	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	None	None
	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	None	None
	Operate and maintain machine to minimize dust emissions		
(xvi) Crushing machines	Use equipment designed to deliver water spray or mist for dust suppression at	None	None

	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		
(xvii) Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials (e.g., hoerammimg, rock ripping) or use during demolition activities involving silica-containing materials	Operate equipment from within an enclosed cab	None	None
	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	None	None
	OR		
	When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab	None	None

W...
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VIII. Training

EHS is high, the
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Awareness Training

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Appendix A:

Appendix B:

Flowchart for

Appendix C:



**UNC WRITTEN EXPOSURE CONTROL PLAN
For Silica-Producing Tasks Not in OSHA's Table 1**

LOCATION:	REVIEW DATE:
EMPLOYEE:	DEPARTMENT:
SUPERVISOR:	WORK ORDER #:

DESCRIPTION OF TASK(S):

ENGINEERING CONTROLS:

WORK PRACTICES:

RESPIRATORY PROTECTION USED:

HOUSEKEEPING METHODS:

Appendix D:

SH-6g

