Plummer Concrete & Associates, Inc.

Silica Exposure Control Plan

Program Administration

This program was developed to help minimize, if not eliminate, employee exposure to respirable silica. Our competent person for this program is Deke Almsted, Vice President. This program will be reviewed and evaluated annually by Deke Almsted to determine its effectiveness. This review will determine if there are any additional silica producing tasks we perform that were not previously identified. This review will also determine if existing controls and equipment use are being followed per this program and manufacture specifications. This annual review and evaluation will be documented to include the date it was conducted, and if any changes are being made to the program. This will be documented on the Annual Program Review and Evaluation Form.

Tasks/Controls for Potential Silica Exposure

Our exposure assessment has identified potential exposures listed in the table below with corresponding controls. We will implement the Specified Exposure Control Methods listed in Table 1 of OSHA 1926.1153 Respirable Crystalline Silica or use equipment with manufacturer qualitative data when practical. Where Table 1 tasks or manufacturer qualitative data is not available, respirators must be used until we can conduct our own industrial hygiene monitoring.

We will reassess our exposures when there is a change in processes or tasks that can reasonably be expected to result in new or additional exposures at or above the Action Limit.

Tasks with Potential Silica Exposure	Implemented Controls/Work Practices per Table 1 of 1926.1153	Respirator Use	
		< 4 hours	>4 hours
Drilling into cast-in-place or precast concrete (including use of impact and rotary hammer drills)	1) Use drill equipped with commercially available shroud or cowling with dust collection system 2) Operate tool in accordance with manufacturer's instructions to minimize dust emissions	None	APF 10

Tasks with Potential Silica Exposure	Implemented Controls/Work Practices per Table 1 of 1926.1153	Respirator Use	
		< 4 hours	>4 hours
	3) Dust collection must meet the airflow rate recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism 4) Use a HEPA-filtered vacuum when cleaning holes 5) Cleaning of filter/shroud/catch basin must be done within sealed bag to eliminate exposure of residual dust		
Core drilling in cast-in-place or precast concrete	1) Use drill equipped with integral water delivery system 2) Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions	None	None
Cutting control joints in cured concrete flatwork with power saws	1) Use saw equipped with integral water delivery system that continuously feeds water to the blade 2) Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions - When used outdoors - When used indoors or in an enclosed area	None APF 10	APF 10 APF 10
Grinding cured concrete flatwork with walk-behind milling machines and floor grinders	1) Use machine equipped with integrated water delivery system that continuously feeds water to the cutting surface 2) Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. OR	None	None

Tasks with Potential Silica Exposure	Implemented Controls/Work Practices per Table 1 of 1926.1153	Respirator Use	
		< 4 hours	>4 hours
	3) Use machine equipped with dust collection system recommended by the manufacturer 4) Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions 5) Dust collector must provide the airflow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism 6) When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes.	None	None
Breaking up and removing cast-in-place or precast concrete with jackhammer and powered chipping tools	1) Use tool equipped with water delivery system that supplies a continuous stream or spray of water at the point of impact 2) Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. - When used outdoors - When used indoors or in an enclosed area OR 3) Use tool equipped with commercially available shroud and dust collection system. 4) Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions 5) Dust collector must provide the airflow recommended by the tool manufacturer, or greater, and	None APF 10	APF 10 APF 10

Tasks with Potential Silica Exposure	Implemented Controls/Work Practices per Table 1 of 1926.1153	Respirator Use	
		< 4 hours	>4 hours
	have a filter with 99% or greater efficiency and a filter-cleaning mechanism - When used outdoors - When used indoors or in an enclosed area	None APF 10	APF 10 APF 10
Mixing small batch of concrete for patching	Use dust mask and mix outdoors.	None	APF 10
Vehicle-mounted drilling rigs for rock and concrete	1) Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector. 2) Operate and maintain system in accordance with manufacturer's instructions to minimize dust emissions. OR 3) Operate from within an enclosed cab and use water for dust suppression on drill bit	None None	None None

Description of Housekeeping Measures to Reduce Silica Exposure

Housekeeping to remove silica containing dust must be done using wet sweeping or HEPA filtered vacuuming.

Dry sweeping/dry brushing or use of compressed air to clean-up silica containing dust will not be allowed.

Vacuums used for Housekeeping and Tools with Dust Collection Systems

Only vacuums with HEPA filters and filter cleaning mechanisms can be used for vacuuming as part of housekeeping requirements and for tools listed in Table 1 that require dust collection systems.

All emptying of vacuum canisters must be done in a manner that does not produce any airborne dust. Our procedure for emptying vacuum canisters will be to use plastic bags, zip tied, and carefully deposited into dumpsters.

Protection of others

When we are drilling, cutting, grinding, or performing other dust producing activities on silica containing material that are not controlled through water delivery systems or dust collection systems, no other workers should be in the area. Work generating suspected silica dust by other trades working near us that is not properly controlled will result in our employees evacuating the work are until such time the exposure no longer exists and any residual silica dust is properly cleaned-up. That work should be done within a containment system and all silica containing dust cleaned up prior to the containment system being taken down.

Enclosed Cabs

Where enclosed cabs are used as a control measure, the following must be implemented;

1) The cab should be maintained clean and as free as possible from settled dust
2) Has door seals, gaskets, and closing mechanism that work properly
3) Is under positive pressure maintained through continuous delivery of fresh air
4) Has intake air that is filtered through a filter that is 95% efficient
5) Has heating and cooling capabilities

Industrial Hygiene Monitoring

Where Table 1 tasks cannot be performed or manufacturer qualitative data is not available, then we will conduct industrial hygiene monitoring to determine employee exposure for each task. If the result of monitoring is below the Action Limit (25 $\mu g/m^3$), then no further monitoring is required. If the results of monitoring is above the Action Limit (25 $\mu g/m^3$) but below the PEL (50 $\mu g/m^3$), then follow-up monitoring must be conducted within six months. If the results of monitoring is above the PEL (50 $\mu g/m^3$), the follow-up monitoring must be conducted within three months. This monitoring schedule must continue until results are

below the Action Limit after controls have been implemented. If this follow-up monitoring is below the Action Limit then then one more monitoring session must be completed at least seven days apart. If that monitoring is below the Action Limit, then monitoring can discontinue for that task.

We will inform each affected employee in writing within five days of receiving an industrial hygiene report or post the results in an appropriate location accessible to all employees. When the results are above the PEL, we will describe in writing notification the corrective actions to be taken to reduce employee exposure to below the PEL.

Respiratory Protection

Where engineering controls or work practice controls (worker position relative to the wind, working outside, job rotation) does not adequately control the exposure below 50 $\mu g/m^3$ over an 8 hour time-weighted average (TWA) or Table 1 requires respirators, then employees must be included into our respiratory protection program. Those employees who perform tasks where the exposure is below 50 $\mu g/m^3$ over an 8 hour time-weighted average (TWA) can voluntarily wear respirators without being included into our respiratory protection control program. However, they must sign off on Appendix D.

When employees under this program must wear respirators for 30 days or more a year, we will make a baseline medical exam available at no cost by a physician or other licensed health care professional. This baseline exam must be made within 30 days upon initial assignment or determination workers will wear a respirator 30 or more days a year. This medical exam shall consist of;

1) 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. Also, any history or respiratory system dysfunction or respiratory disease
2) A physical exam with special emphasis on the respiratory system
3) A chest x-ray
4) A pulmonary function test to include forced vital capacity and forced expiratory volume
5) Test for latent tuberculosis infection and any other tests deemed appropriate

These exams must be offered every three years, or more frequently if recommended by the physician or licensed health care provider.

The employer must provide the physician or licensed health care provider with;

1) A copy of OSHA's Crystalline Silica Standard
2) A description of the employee's former, current and anticipated duties related to their potential occupation exposure to respirable crystalline silica
3) The employee's former, current, and anticipated levels of occupational exposure to crystalline silica

4) 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
5) Information from records of employment related medical examinations previously provided to the employee and currently within the control of the employer

We will ensure the physician or licensed health care provider explains the results of the exam and provide a written report within 30 days. The report must include the results, any conditions that would place the employee at increased risk, recommended limitations on respirator use, recommended limitations on the employee's exposure to crystalline silica, and a statement that the employee should be seen as a specialist if the x-ray reveals it is deemed appropriate and within 30 days of receiving the doctor's report.

The employer should also receive a written medical opinion form the physician or licensed health care provider within 30 days that includes the date, statement that the exam has met the requirements above, and any recommended limitations on use of respirators.

The same reporting requirements of the physician or licensed health care provider apply if the employee sees a specialist.

All employees with more than 30 days of respirator use in a year, should sign the Medical Surveillance Acceptance/Declination Form.

Subcontractor Controls

Each subcontractor who may perform tasks that generate respirable silica dust, must provide us with a copy of their exposure control plan.

Each subcontractor is responsible for the control, containment, and cleanup of any dust they generation which may contain levels of respirable silica at or above the OSHA permissible exposure limit (PEL).

1) Containment should be managed at the point of generation through the use of tools/equipment equipped with integral water delivery systems or integral HEPA vacuum systems
2) Where the use of such tools is infeasible/impractical; temporary enclosures must be installed to adequately contain and prevent secondary exposures
3) Housekeeping measures used to clean up silica containing dust must be completed using HEPA vacuuming or other effective controls. Cleanup should be done immediately following completion of the task

Should a contractor have air-sampling documentation showing a particular task will not generate levels of respirable silica above OSHA PEL's or that control methods other than those previously described will adequately control the exposure; a copy of that

documentation must be presented to the Plummer Concrete & Associates, Inc., project manager, site supervisor, or safety department prior to commencement of that work and the copy kept on the jobsite for the duration of that work.

Hazard Communication

A copy of a respirable crystalline silica SDS will be contained in our SDS book which is located in the shop by the timeclock and online at PlummerConcrete.com.

Job Site Inspections

Our designated competent person, Deke Almsted, Vice President, will conduct regular job site inspections to evaluate work practices, changes in materials in use, and equipment to make sure the controls in this program are being met. These job site inspections will be documented on the Job Site Inspection Form.

Training

All employees with potential silica exposure will be required to review this program. Training will be provided to cover the following topics;

1) The health hazards of respirable crystalline silica exposure
2) Tasks in the workplace that could result in crystalline silica exposure
3) How to properly use, maintain, and safely clean the equipment we have chosen to protect our workers
4) Control measures we have implemented to help protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, housekeeping, personal hygiene, and respirators to be used
5) What they are to be trained on
6) The identity of the competent person
7) The purpose of the medical surveillance program

This training will be documented on the Employee Training Log.

Job Specific Program

This program will generally suffice as our job specific program. However, if unusual tasks will be performed or performed in unique situations, then a job specific exposure control plan must be produced and implemented. **If you notice a task that produces silica dust that is not**

addressed in this plan, bring it to the attention of Deke Almsted immediately so that a plan can be designed and implemented.

Program Availability

This program and a copy of it will be made available to all employees and designated representatives upon request.

Recordkeeping

All industrial hygiene monitoring that we conduct, objective data we obtain, and medical surveillance reports shall comply with 1910.1020 with records maintained for duration of employment plus 30 years.

Plummer Concrete & Associates, Inc.

Written Silica Exposure Control Plan

Contact Person:

Position Title:	Deke Almsted, Vice President
Phone Number:	715-273-3481 (office); 715-495-4471 (mobile)
Address:	P.O. Box 132, N5235 635th St, Ellsworth, WI 54011-0132

Other Information:

Last review:	April 18, 2018

Annual Program Review and Evaluation Form

On this date, this program was reviewed to determine if the tasks listed in this program are still being completed and if any additional tasks have been added to our daily activities that could pose potential silica exposure. At this time, we also evaluated the current effectiveness of the controls we put in place.

Check one of the three boxes below.

☐ No additional silica exposures were identified during this review and evaluation.

☐ Additional tasks were identified with the following tasks and controls added to the table above. Those tasks are;

_____

_____

_____

_____

_____

☐ Tasks that were previously listed in this program are no longer performed and are being removed from the table. Those tasks are;

_____

_____

_____

_____

_____

_____

Printed Name

_____

Signature

_____

Date

Job Site Silica Inspection Form

Job Site Evaluated: _____

List the task(s) that were evaluated for potential silica exposure

1) _____

2) _____

3) _____

List the equipment used to control potential silica exposure as part of this evaluation

1) _____

2) _____

3) _____

List the material(s) worked on that might contain silica

1) _____

2) _____

3) _____

☐ Controls adequate for tasks performed? (If not list corrective action below)

_____

☐ Equipment being used properly? (If not list corrective action below)

_____

☐ Housekeeping controls adequate? (If not list corrective action below)

_____

_____

Printed Name of Competent Person

_____

Signature

_____

Date

Medical Surveillance Acceptance/Declination Form

All employees required to wear respirators 30 or more days a year according to OSHA Standard 1926.1153 Respirable Crystalline Silica must be offered medical surveillance at no cost and at a reasonable time and place. This offer must be made within 30 days of initial assignment to tasks that will require 30 or more days a year of respirator use when working with silica based materials. This medical exam must be performed by a physician or licensed health care provider. This exam includes an initial baseline exam and follow-up exam every three years, or more frequently if deemed necessary. This exam will include the following;

1) A medical and work history evaluation, with emphasis on past, present, and anticipated exposure to respirable crystalline silica and history of respiratory system dysfunction/disease
2) A physical exam with special emphasis on the respiratory system
3) A chest x-ray
4) A pulmonary function test to include forced vital capacity and forced expiratory volume
5) Test for latent tuberculosis infection and any other tests deemed appropriate

This medical examination could reveal a medical condition that results in recommendations for (1) limitations on respirator use, (2) limitations on exposure to crystalline silica, or (3) examination by a specialist in pulmonary disease or occupational medicine. The following results of this exam will be given to your employer:

(A) The date of the exam;
(B) A statement that the exam met the requirements of 29 CFR 1926.1153;
(C) Any limitation on your use of respirators

☐ I hereby authorize Plummer Concrete & Associates, Inc., to provide the above medical surveillance as outlined in 29 CFR 1926.1153.

☐ I hereby do not authorize Plummer Concrete & Associates, Inc., to provide the above medical surveillance as outlined in 29 CFR 1926.1153.

If you want your employer to know additional information concerning your crystalline silica exposure or recommendations for a specialist examination, you will need to give authorization for the written opinion to the employer to include one or both of those recommendations.

☐ I hereby authorize the opinion to Plummer Concrete & Associates, Inc., to contain the following information, if relevant (please initial all that apply):

- o _____ Recommendations for limitations on crystalline silica exposure.
- o _____ Recommendation for a specialist examination.

☐ I do not authorize the opinion to the employer to contain anything other than recommended limitations on respirator use.

Please read and initial:

___ I understand that if I do not authorize my employer to receive the recommendation for specialist examination, the employer will not be responsible for arranging and covering costs of a specialist examination.

JOB SITE SPECIFIC WRITTEN EXPOSURE CONTROL PLAN FOR MITIGATING SILICA

Project Name: _____ Project No.: _____

Competent Person: _____ Date: _____ Time: _____

Source(s) of respirable silica: _____

_____

Description of task(s) that may be affected by identified silica:

_____

_____

Personnel on the task or working in affected area:		**Trained in Silica:**	
1	_____	Y	N
2	_____	Y	N
3	_____	Y	N
4	_____	Y	N
5	_____	Y	N
6	_____	Y	N
7	_____	Y	N
8	_____	Y	N
9	_____	Y	N
10	_____	Y	N

Detailed description of method(s) used to protect worker(s) from exposure: _____

_____

Housekeeping method(s) used to limit exposure: _____

_____

Method to restrict access to affected area: _____

_____

Respirator Protection: _____

Competent Person: Complete and submit to: _____

_____ _____

Competent Person Signature Date

Employee Training Log

This Silica Exposure Control Plan was reviewed with me and I understand the requirements of this program.

I have also received training on the following topics;

1) The health hazards of respirable crystalline silica exposure
2) Tasks in the workplace that could result in crystalline silica exposure
3) How to properly use, maintain, and safely clean the equipment we have chosen to protect our workers
4) Control measures we have implemented to help protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, housekeeping, personal hygiene, and respirators to be used
5) What they are to be trained on
6) The identity of the competent person
7) The purpose of the medical surveillance program

_____

Printed Name

_____

Signature

_____

Date