ISLAND ACOUSTICS, LLC
Written Exposure Control Plan for Respirable Crystalline Silica Dust

Crystalline Silica:

Silica is the second most common mineral on earth, found in the common form as “sand” and “rock”. Silica is the compound formed from the elements silicon (Si) and oxygen (O) and has a molecular form of SiO2. The three main forms or ‘polymorphs’ of silica are alpha quartz, crisobalite and tridymite. The polymer most abundant and most hazardous to human health is alpha quartz and is commonly referred to as crystalline silica.

Health Hazards:

The health hazards of silica occur when breathing in dust. If crystalline silica becomes airborne through construction activities, exposures to fine crystalline silica dust (specifically exposure to the size fraction that is considered to be respirable) can lead to a disabling, sometimes fatal disease called silicosis. The fine particles are deposited in the lungs causing thickening and scarring of lung tissue.
Construction workers may develop one of three different types of exposure symptoms depending on the concentration of silica dust and the duration of the exposure. OSHA lists the following types within the Standard:

- Chronic Silicosis: Develops after 10 or more years of exposure to crystalline silica and relatively low concentrations.
- Accelerated Silicosis: Develops 5 to 10 years after initial exposure to crystalline silica at high concentrations.
- Acute Silicosis: Develops within weeks, or 4-5 years, after high exposure to very high concentrations of crystalline silica.

Initially, construction workers with silicosis may have no symptoms; however, as the disease progresses, workers may begin to experience:

- Shortness of breath
- Severe cough
- Weakness.

These symptoms worsen over time and can possibly lead to death.

In addition to silicosis, exposure may cause lung cancer, bronchitis, tuberculosis and/or have adverse effects to the immune system and kidneys.

Job Site Tasks:

Construction site tasks that have the potential for creating silica dust include:
Chipping, chopping, cutting, grinding and drilling material that contains respirable crystalline silica.

Introduction to the Corporate Plan:

This section of the Island Acoustics, LLC Corporate Health and Safety Plan is dedicated toward our obligation of addressing the revised OSHA Construction Standard Subpart Z 29 CFR 1926.1153 for Respirable Crystalline Silica. Island Acoustics, LLC will review and evaluate the effectiveness of the written exposure control plan at least annually. We will update this plan as necessary based upon the evaluation.

Oversight and Implementation of the Plan:

This written exposure control plan will be overseen and modified as necessary by our corporate safety director, Mr. Michael Cuttita.

Site compliance and enforcement of this written exposure control plan and the OSHA Standard will be conducted by our respective job site superintendents/ foremen who we, as their employer, deemed as "competent persons" as defined by OSHA.

Our designated site competent person(s) will, at a minimum, make frequent and regular job site inspections during the course of the work day to ensure the site conditions, materials and equipment implemented comply with this written exposure control plan. Further our designated competent persons will be responsible to ascertain employees on their designated job site are trained in compliance with this plan and the OSHA Subpart Z Respirable Crystalline Silica Standard.

Potential Exposure Work:

Island Acoustics, LLC anticipates minimal to no exposures of respirable crystalline silica based upon the construction operations we perform. This includes not reaching an action level of 25 micrograms per cubic meter or the permissible exposure limit of 50 micrograms per cubic meter.

The tasks performed on our projects are the occasional use of hand-held drills including impact hammers and rotary hammer drills, as well as drywall taping and sanding operations The drilling specific work task is found within the OSHA Compliance option # 7 of Table 1 within the Standard.

Compliance with OSHA Table 1, Task 7:

So as to be within compliance with the Standard, Island Acoustics, LLC will only use:

> Handheld Rotary Hammer Drills with integrated vacuum dust collection systems, (VDC) in accordance with the equipment manufacturer's requirements and Task #7 of Table 1. In addition, half mask N95 respirators will be worn while preforming any concrete drilling.

Compliance with OSHA in Regards to Taping and Sanding Operations:

So as to be within compliance with the Standard, Island Acoustics, LLC will only use:

- Handheld Drywall Pole Sanders with integrated vacuum dust collection systems (VDC) and shroud in accordance with the equipment manufacturer's requirements. Air monitoring of the area within 20 feet of the worker did NOT have exposure levels above the OSHA Action Level, therefore no CAZ is required.

  Please see attached Exposure Results and photos from air sampling performed on a representative jobsite. Samples dated November 2, 2017 (A1, B1, C1). Personal sample and ambient samples were taken performing the task as specified above. Lab analysis indicates respirable silica levels well below the OSHA Standard. Therefore, we intend to use this as objective data and evidence documenting proof of levels below the PEL and Action level so as to be in compliance with the Standard.

- If dry sanding of taped seams is performed, USG Green Lid joint compound will be used. Under normal conditions, performing this operation will not result in exposure to respirable crystalline silica that exceeds the OSHA PEL. Air monitoring of the area within 20 feet of the worker did NOT have exposure levels above the OSHA Action Level, therefore no CAZ is required.

  Please see attached Exposure Results and photos from air sampling performed on a representative jobsite. Samples dated November 3, 2017 (A2, B2, C2). Personal sample and ambient samples were taken performing the task as specified above. Lab analysis indicates respirable silica levels well below the OSHA Standard. Therefore, we intend to use this as objective data and evidence documenting proof of levels below the PEL and Action level so as to be in compliance with the Standard.

Housekeeping:

Island Acoustics, LLC will also not engage in dry sweeping for housekeeping purposes nor will compressed air be used to clean clothing, equipment or material on our projects.

In addition to the above tools will also be used in accordance to our Hand and Power Tool Policy found within this Manual.

Under strict compliance monitoring and in accordance with OSHA Table 1, including our air monitoring sample results/collective data:

respiratory protection, air monitoring and medical surveillance will not be required regardless of duration or location of the task we perform.

Employee Training:

Each superintendent/foreman, on their respective job sites, will be responsible to ensure all employees of Island Acoustics, LLC are trained in regard to the OSHA Standard including the following specific topics and requirements:

The Island Acoustics, LLC foreman is the designated competent person for ensuring compliance with this Plan and the OSHA Subpart Z Respirable Crystalline Silica Standard. Each employee will be made aware of this.

The OSHA Standard section for Respirable Crystalline Silica and the health hazards associated with exposure to respirable crystalline silica. This includes cancer, lung effects, immune system effects and kidney effects.

In conjunction with the OSHA Hazard Communication Standard we will inform our employees that they have access to labels and safety data sheets (SDS) for products that contain crystalline silica.

Any specific tasks we perform in the workplace that could result in exposure to respirable crystalline silica and the specific measures defined in this section we have implemented to protect our employees.

The use of specific tools that are equipped with water infiltration systems and/or vacuum dust collecting systems.

The purpose and description of the medical surveillance program within the OSHA Standard.

We will also make a copy of the OSHA Standard readily available without cost to each employee covered by this section.

Training will be performed at time of project/site orientations, new hire, if any changes are made within the work place that may affect this program and on a periodic basis including but not limited to “Tool-Box” talks and through notifications and bulletins.

All training performed will be documented and records of training and employee attendance will be retained on site for the duration of the project. Copies of all employee training will be sent to our main office and retained for at least 7 years after project completion.

- Use a vacuum with enough suction to remove dust at the drilling point.
- Use a high-efficiency particulate air (HEPA) filter in the vacuum exhaust.
- Use a 1½- to 2-inch diameter vacuum exhaust hose or a hose size that is recommended by the tool manufacturer.

VDCSs work best when workers are properly trained and use good work practices. For best results:

- **Keep** the vacuum hose clear and free of debris, kinks and tight bends.
- **Turn** the vacuum off and on regularly to reduce dust buildup on the filter, if it is not self-cleaning.
- **Change** vacuum-collection bags as needed.
- **Set up** a regular schedule for filter cleaning and maintenance.
- **Avoid** exposure to dust when changing vacuum bags and cleaning or replacing air filters.

Compressed Air
Do not use compressed air to clean surfaces, clothing, or filters because it can increase your exposure to silica. Clean only with a HEPA-filtered vacuum or by wet methods.

Wet Methods

Wet methods are generally not appropriate for use with electric rotary hammers; however, pneumatic drills can be used for wet drilling and some come equipped with water-feed capability. Wet drilling is commonly used in the tunneling and mining industries to limit dust getting in the air.

To stop dust, keep the water-supply equipment, including pumps, hoses and nozzles, in working order. Make sure that enough water is available for the job.

Electrical Safety
Use ground-fault circuit interrupters (GFCIs) and watertight, sealable electrical connectors for electric tools and equipment on construction sites. These features are particularly important in wet or damp areas, such as where water is used to control dust.

Respiratory Protection

When dust controls are used, most rotary hammer drilling should not require respirators. When VDCSs and wet methods are not feasible or do not reduce silica exposures to OSHA's permissible exposure limit, workers need respiratory protection. Where respirators are required, employers have to put in place a written respiratory protection program in accord with OSHA's Respiratory Protection standard. It must include the following:

- How to select a respirator;
- Fit testing;
- Directions on proper use, maintenance, cleaning and disinfecting;
- Medical evaluations of workers; and
- Training.

For more information on how to determine proper respiratory protection, visit OSHA's web site at www.osha.gov.

For more detailed information on controlling silica exposures when using rotary hammers, refer to OSHA Publication 3362, *Controlling Silica Exposures in Construction*.

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

For assistance, contact us. We can help. It's confidential.

OSHA® Occupational Safety and Health Administration

U.S. Department of Labor
www.osha.gov (800) 321-OSHA (6742)

DSG FS-3630 02/2013

TABLE 1 EXPOSURE RESULTS		
EMPLOYEE / OPERATION	Respirable Particulates (mg/m^3)	Respirable Quartz (mg/m^3)
November 2nd, 2017		
Henry Rosario / Drywall Finishing (A1)	0.54	0.012
Ambient Air Sample (B1)	0.33	0.012
Ambient Air Sample (C1)	0.31	< 0.0085
November 3rd, 2017		
Ambient Air Sample (A2)	0.37	< 0.0085
Ambient Air Sample (B2)	0.53	< 0.0080
Henry Rosario / Drywall Finishing (C2)	0.68	0.0081
OSHA PEL	**5**	**0.05**
OSHA Action Level	**---**	**0.025**
ACGIH TLV	**3**	**0.025**

1. *See Appendix A for Glossary of table notes and definitions.*
2. *See included Laboratory Report.*
3. *See included Data Sheet.*

We appreciate your business and the opportunity to help you reduce exposures and minimize loss. If you have questions regarding our discussions or the content of this report, or if I can be of further assistance, please contact me. Thank you for choosing Travelers.

Sincerely,

Cydney Green

Cydney Green
Risk Control – IH Group

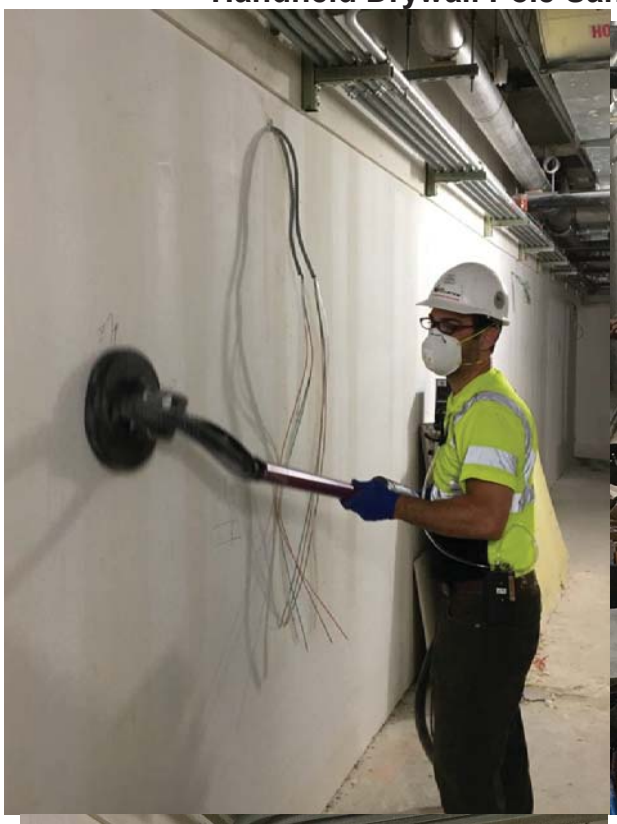
Reviewed By:

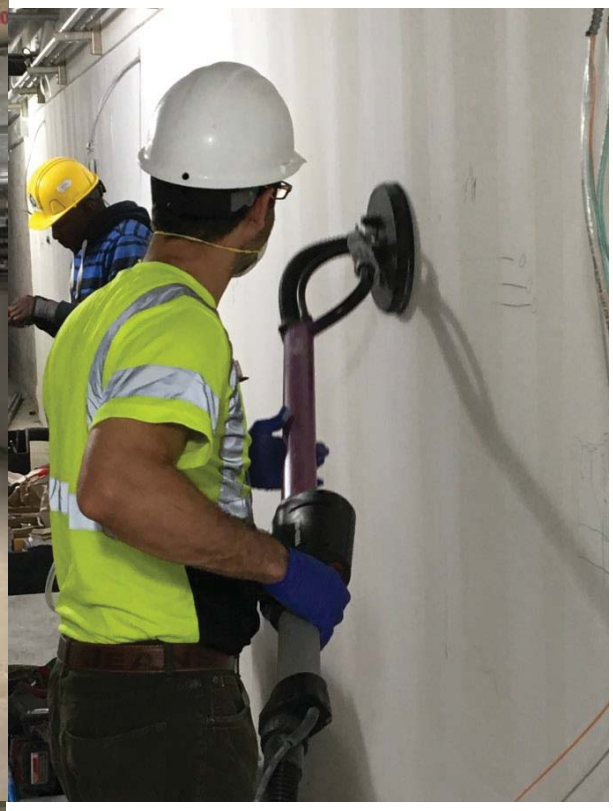
David J. Anderson

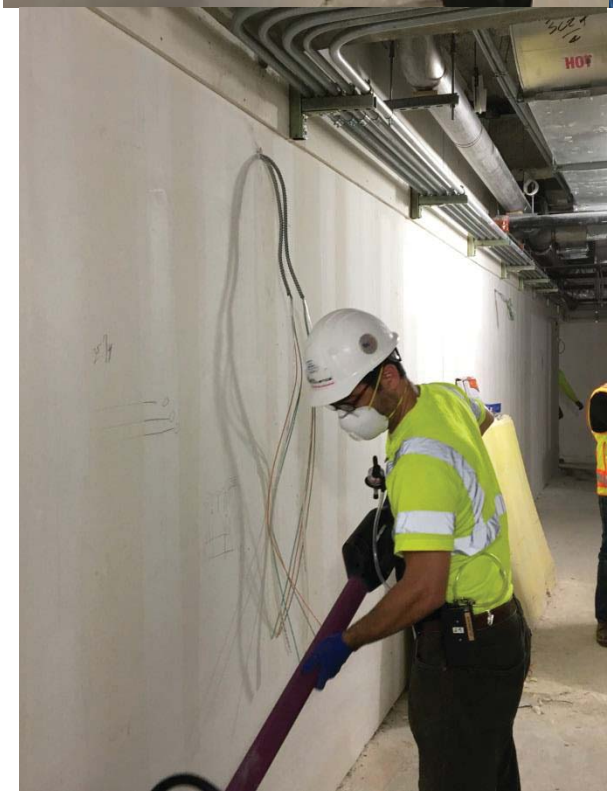
David J. Anderson, CIH
Technical Director – IH Specialist Group

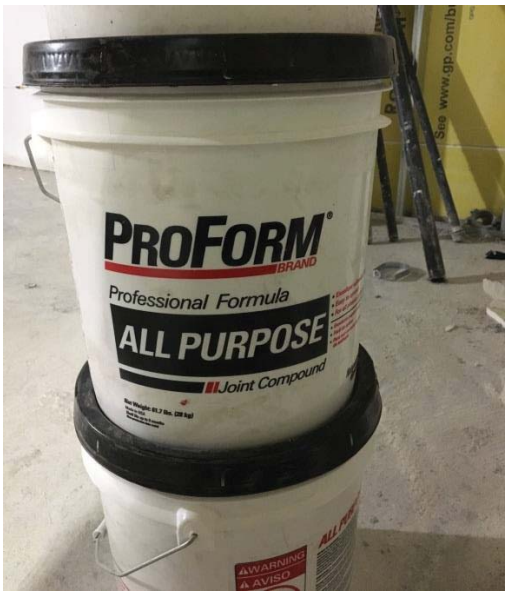
DAY 1 RESPIRABLE SILICA AIR SAMPLING

Handheld Drywall Pole Sanders with Integrated VDC









DAY 2 RESPIRABLE SILICA AIR SAMPLING

Dry Sanding of Taped Seams