



Job Specific Written Exposure Control Plan

Job Name: _____

Project Lead: _____

Job Number: _____

Project Coordinator: _____

Territory Safety Lead: _____

Operations Lead: _____

Site Designated Silica Competent Person: _____

- Check all activities that require Engineered Control Plans to be executed on your job:

☐ Grinding
☐ Chipping & Bushing
☐ Cutting Concrete (Electric Circular Saw)
☐ Cutting Concrete (Gas Powered Concrete Saw)
☐ Heavy Abrading & Fracturing Equipment

☐ Using Rotary Hammers or Drills
☐ Early Entry Walk Behind Saws
☐ Applying Hardener
☐ Cement / Grout Mixing
☐ Heavy Grading & Excavating Equipment

- Project team to ensure that the craft operates within the rules lined out in Attachment A, unless the task has been determined technically infeasible post task analysis.
- Project team is responsible for adding any objective data to the Exposure Plan provided by manufacturers to them on any tool that is not Table 1 Compliant and is to ensure we are functioning per the data which has been provided.
- Check method by which the team plans to protect co-workers working in the proximity of a silica generating activity.

- _____ In the case of an activity that creates an airborne silica hazard, ensure other employees are not working downwind of Silica generating area in which the activity is taking place, ensure bystanders are notified and/or diverted away from area.
- _____ Follow Attachment A engineered control requirements so that there is no elevated hazard posed to bystanders.

- Lithko will take specific Housekeeping Measures while executing certain tasks that pose a respirable crystalline silica hazard to our employees. These housekeeping measures are listed in the activity for (Housekeeping that creates a silica exposure) listed in the table below. By executing housekeeping activities with the engineered controls listed in the (Housekeeping that creates a silica exposure) row the employee executing said activity will be OSHA compliant.

By checking the activities above you are stating that the project team will adhere to Attachment A to execute all tasks selected. Also, all activities listed under Attachment A have a 5% error factor calculated in

Task	OSHA (Table 1) Compliant Or Objective Data	Task Specific Engineering Controls	Required Respiratory Protection	Other Hazards Potentially Present and Suggested PPE	Other Information
<u>Grinding – Concrete</u> 	Table 1	Use a grinder equipped with a commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. <i>Dust Collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter cleaning mechanism.</i>	≤ 4 hours / shift Requires <u>Outdoors</u> None Required <u>Indoors/Enclosed area</u> None Required >4 hours / shift <u>Outdoors</u> None Required <u>Indoors/Enclosed area</u> N95 Particulate Respirator Needed	Noise (90 – 108) dBA); downwind exposures; flying particles & Gloves, Safety Glasses, Hearing Protection	

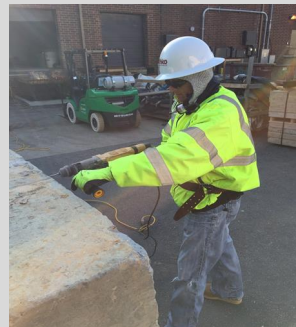
Task	OSHA (Table 1) Compliant Or Objective Data	Task Specific Engineering Controls	Required Respiratory Protection	Other Hazards Potentially Present and Suggested PPE	Other Information
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Grinding – Concrete	Objective Data	Outdoors A co-worker may grind ≤ 2.5 min a day when in an Outdoor environment. <i>Refer to Housekeeping for clean-up practices</i>	None Required	Noise (90 – 108) dBA); downwind exposures; flying particles & Gloves, Safety Glasses, Hearing Protection	
Grinding Chamfer – Concrete	Objective Data	Outdoors A co-worker may grind ≤ 2 1/2 hours a day when in an Outdoor environment. Use a grinder equipped with a commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. <i>Dust Collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and</i>	None Required	Noise (90 – 108) dBA); downwind exposures; flying particles & Gloves, Safety Glasses, Hearing Protection	

Task	OSHA (Table 1) Compliant Or Objective Data	Task Specific Engineering Controls	Required Respiratory Protection	Other Hazards Potentially Present and Suggested PPE	Other Information
		<i>have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter cleaning mechanism.</i> <i>Refer to Housekeeping for clean-up practices</i>			
<u>Handheld grinders for mortar removal (i.e., tuck-pointing)</u>	Table 1	Use a grinder equipped with a commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. <i>Dust Collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter cleaning mechanism.</i>	≤ 4 hours / shift Requires <u>Outdoors</u> N95 Particulate Respirator Needed <u>Indoors/Enclosed area</u> N95 Particulate Respirator Needed >4 hours / shift <u>Outdoors</u> APF 25 Respirator Needed <u>Indoors/Enclosed area</u> APF 25 Respirator Needed	Noise (90 – 108) dBA); downwind exposures; flying particles & Gloves, Safety Glasses, Hearing Protection	

Task	OSHA (Table 1) Compliant Or Objective Data	Task Specific Engineering Controls	Required Respiratory Protection	Other Hazards Potentially Present and Suggested PPE	Other Information
<u>Chipping/Bushing – Concrete</u> 	Table 1	Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact Or Use tool equipped with commercially available shroud and dust collection system. <i>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 filter-cleaning mechanism.</i>	≤ 4 hours / shift Requires <u>Outdoors</u> None Required <u>Indoors/Enclosed area</u> N95 Particulate Respirator Needed >4 hours / shift <u>Outdoors</u> N95 Particulate Respirator Needed <u>Indoors/Enclosed area</u> N95 Particulate Respirator Needed	Noise; vibration; ergonomic challenges & Gloves, Safety Glasses, Face Shield, Hearing Protection	 
<u>Chipping / Bushing – Concrete</u>	Objective Data	<u>CHIPPING/BUSHING AT FEET</u> Outdoors Co-worker may chip/bush concrete at their feet ≤ 3 hrs. Per day. <i>Refer to Housekeeping for clean-up practices.</i>	None Required	Noise; vibration; ergonomic challenges & Gloves, Safety Glasses, Face Shield, Hearing Protection	
<u>Cutting Concrete–with circular saw</u>	Table 1	For tasks performed outdoors only: Use saw equipped	≤ 4 hours / shift Requires <u>Outdoors</u> None Required	Noise (>95 dba); machine guarding issues; ergonomics; downwind exposures	

Task	OSHA (Table 1) Compliant Or Objective Data	Task Specific Engineering Controls	Required Respiratory Protection	Other Hazards Potentially Present and Suggested PPE	Other Information
		with commercially available dust collection system. <i>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collection must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency.</i>	<u>Indoors/Enclosed area</u> N95 Particulate Respirator Needed >4 hours / shift <u>Outdoors</u> N95 Particulate Respirator Needed <u>Indoors/Enclosed area</u> N95 Particulate Respirator Needed	& Gloves, Safety Glasses, Face Shield, Hearing Protection	
<u>Cutting Concrete— with concrete saw</u> 	Table 1	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. <i>Operate and maintain tool in the accordance with manufacturer's instructions to minimize dust emissions.</i>	≤ 4 hours / shift Requires <u>Outdoors</u> None Required <u>Indoors/Enclosed area</u> N95 Particulate Respirator Needed >4 hours / shift <u>Outdoors</u> N95 Particulate Respirator Needed <u>Indoors/Enclosed area</u> N95 Particulate Respirator Needed	Noise (92 – 100 dBA); carbon monoxide exposure; ergonomic challenges Noise; machine guarding issues & Gloves, Safety Glasses, Face Shield, Hearing Protection	Water nozzle from hand pump   

Task	OSHA (Table 1) Compliant Or Objective Data	Task Specific Engineering Controls	Required Respiratory Protection	Other Hazards Potentially Present and Suggested PPE	Other Information
<u>Using Rotary Hammers or Drills</u> 	Table 1	Use drill equipped with commercially available shroud or cowl with dust collection system. Operate and Maintain tool in accordance with manufacturer's instructions to minimize dust emissions. <i>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.</i> Use a HEPA-filtered vacuum when cleaning holes.	None Required	Eye and face, noise, wrist (re: drill spin) & Gloves, Safety Glasses, Face Shield, Hearing Protection	 (Hilti Dustless bit integrated system)  (Shroud based Dust Collection)
<u>Rotary Hammer (SDS + Hammer Drill drilling 3/16" holes)</u>	Objective Data	<u>DRILLING AT CHEST</u> <u>Outdoors</u> Co-worker may drill $\leq 65 - 3/16"$ diameter holes x 6" in depth in an 8-hour shift with no dustless attachment <u>Indoors</u> Co-worker may drill $\leq 14 - 3/16"$ diameter holes x 6" in depth in an 8-hour shift with no dustless attachment	None Required	Eye and face, noise, wrist (re: drill spin) & Gloves, Safety Glasses, Face Shield, Hearing Protection	

Task	OSHA (Table 1) Compliant Or Objective Data	Task Specific Engineering Controls	Required Respiratory Protection	Other Hazards Potentially Present and Suggested PPE	Other Information
		<i>Refer to Housekeeping for clean-up practices.</i> <u>DRILLING AT FEET</u> <u>Outdoors</u> Co-worker may drill $\leq 175 - 3/16$" diameter holes x 6" in depth in an 8-hour shift with no dustless attachment <u>Indoors</u> Co-worker may drill $\leq 51 - 3/16$" diameter holes x 6" in depth in an 8-hour shift with no dustless attachment <i>Refer to Housekeeping for clean-up practices</i>			
Rotary Hammer (SDS + Hammer Drill drilling 3/16" holes <i>through</i> a 2x4)	Objective Data	<u>DRILLING AT FEET</u> <u>Outdoors</u> Co-worker may drill $\leq 253 - 3/16$" diameter holes x 6" in depth through a 2x4 in an 8-hour shift with no dustless attachment. <u>Indoors</u> Co-worker may drill $\leq 253 - 3/16$" diameter holes x 6" in depth through a 2x4 in an 8-hour shift with no dustless attachment. <u>DRILLING AT CHEST</u> <u>Outdoors</u> Co-worker may drill $\leq 253 - 3/16$" diameter holes x 6" in depth through a 2x4 in an 8-hour shift with no dustless attachment at chest	None Required	Eye and face, noise, wrist (re: drill spin) & Gloves, Safety Glasses, Face Shield, Hearing Protection	

Task	OSHA (Table 1) Compliant Or Objective Data	Task Specific Engineering Controls	Required Respiratory Protection	Other Hazards Potentially Present and Suggested PPE	Other Information
		<u>Indoors</u> Co-worker may drill $\leq 33 - 3/16"$ diameter holes x 6" in depth through a 2x4 in an 8-hour shift with no dustless attachment at chest. <i>Refer to Housekeeping for clean-up practices</i>			
Rotary Hammer (SDS + Hammer Drill drilling 3/16" holes through 3/4" reveal)	Objective Data	<u>DRILLING AT FEET</u> <u>Outdoors</u> Co-worker may drill $\leq 253 - 3/16"$ diameter holes x 6" in depth through a 3/4" reveal in an 8-hour shift with no dustless attachment.	None Required	Eye and face, noise, wrist (re: drill spin) & Gloves, Safety Glasses, Face Shield, Hearing Protection	
Rotary Hammer (SDS Max Drilling 1" Diameter or Smaller Holes)	Objective Data	<u>DRILLING AT CHEST</u> <u>Outdoors</u> Co-worker may drill $\leq 29 - 1"$ Diameter holes x 8" in depth in an 8-hour shift with no dustless attachment. <u>Indoors</u> Co-worker may drill $\leq 26 - 1"$ Diameter holes x 8" in depth in an 8-hour shift with no dustless attachment. <i>Refer to Housekeeping for clean-up practices</i> <u>DRILLING AT FEET</u> <u>Outdoors</u> Co-worker may drill $\leq 132 - 1"$ diameter holes x 8" in depth in an 8-hour shift with no dustless attachment.	None Required	Eye and face, noise, wrist (re: drill spin) & Gloves, Safety Glasses, Face Shield, Hearing Protection	

Task	OSHA (Table 1) Compliant Or Objective Data	Task Specific Engineering Controls	Required Respiratory Protection	Other Hazards Potentially Present and Suggested PPE	Other Information
		<u>Indoors</u> Co-worker may drill $\leq 73 - 1"$ diameter holes x 8" in depth in an 8-hour shift with no dustless attachment. <i>Refer to Housekeeping for clean-up practices</i>			
Heavy Equipment and Utility Vehicles used to abrade or fracture silica-containing materials (e.g. hoe-ramming, rock ripping) or used during demolition activities involving silica- containing materials 	Table 1	Operate equipment from within an enclosed cab. When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust Emissions.	None required	Mobile Hazards	
Using Early Entry Saws on freshly placed concrete 	Table 1	For tasks performed outdoors only: Use saw equipped with commercially available dust collection system. <i>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</i>	≤ 4 hours / shift Requires <u>Outdoors</u> None Required <u>Indoors/Enclosed area</u> N95 Particulate Respirator Needed	Noise (92 – 100 dBA); carbon monoxide exposure; ergonomic challenges Noise; machine guarding issues & Gloves, Safety Glasses, Face Shield, Hearing Protection	

Task	OSHA (Table 1) Compliant Or Objective Data	Task Specific Engineering Controls	Required Respiratory Protection	Other Hazards Potentially Present and Suggested PPE	Other Information
		<i>Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency.</i>	>4 hours / shift <u>Outdoors</u> None Required <u>Indoors/Enclosed area</u> N95 Particulate Respirator Needed		
<u>Wet Sweeping Post Early Entry Saw Cutting</u>	Table 1	Any dust left behind by our dust less saw must be swept before the dust becomes dry and disposed of per <i>housekeeping</i>		Noise (92 – 100 dBA); carbon monoxide exposure; ergonomic challenges Noise; machine guarding issues & Gloves, Safety Glasses, Face Shield, Hearing Protection	
<u>Heavy Equipment and Utility</u> vehicles for tasks such as <u>grading and excavating</u> but not including: demolishing, abrading, or fracturing silica-containing materials 	Table 1	Apply water and/or dust suppressants as necessary to minimize dust emissions. Or When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab	None Required		

Task	OSHA (Table 1) Compliant Or Objective Data	Task Specific Engineering Controls	Required Respiratory Protection	Other Hazards Potentially Present and Suggested PPE	Other Information
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<u>Application of Shake-On Hardener</u> using a BEAM shake machine behind a laser screed slab placement	Objective Data	<u>Indoors</u> An N-95 Particulate Respirator must always be worn when applying shake on hardener. Project Team to develop ventilation plan pre pour to be validated by TSL and Operations	N95 Particulate Respirator Needed	Gloves, Safety Glasses, Tyvek suits or other protective clothing for coworkers loading the shake machine	For this objective data, the Slab on Grade was installed during an 8-10 hour shift using a laser screed, operated by 1 coworker. The dry shake hardener was applied using a shake machine directly after the laser screed for 8-10 hours followed by a bull float floated over the shake. All coworkers involved in dry shake hardener placing operations need to wear N-95 respirator.
<u>Application of Shake-On Hardener by Hand</u>	Objective Data	An N-95 particulate respirator must always be worn when applying shake on hardener by hand.	N95 Particulate Respirator Needed	Gloves, Safety Glasses	
<u>Cement / Grout Mixing</u> 	Objective Data	<u>Outdoors</u> Co-worker may mix grout outdoors ≤ 10 hours a day	None Required	Skin contact; ergonomic challenges (lifting/twisting) & Gloves, Safety Glasses	Slowly pour contents as close to the destination as possible to eliminate dust, perform this activity in an open-air environment.

Task	OSHA (Table 1) Compliant Or Objective Data	Task Specific Engineering Controls	Required Respiratory Protection	Other Hazards Potentially Present and Suggested PPE	Other Information
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<u>Housekeeping that creates a silica exposure</u>	Table 1	Lithko will not allow dry sweeping 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. <i>All silica dust should be disposed of in a bag into a jobsite trash container.</i>	None Required	Gloves, Safety Glasses	Utilize the Silica competent person on site to identify if the housekeeping task at hand to produce a Silica hazard. Also, never use compressed air to clean silica base products off of employee cloths.
<u>Sweeping slabs post stripping activities</u> 	Objective Data	<u>Outdoors</u> A co-worker may sweep post a typical stripping activity ≤ 8 hours a day <i>All silica dust should be disposed of in a bag into a jobsite trash container.</i>	None Required	Gloves, Safety Glasses	While sweeping utilize safe working practices as to not create any excessive pluming of dust.
<u>Sweeping Utilizing Sweeping Compound</u>	Objective Data	<u>Outdoors</u> Co-worker is allowed to utilize sweeping compound to ensure silica does not become airborne during sweeping <i>All silica dust should be disposed of in a bag into a jobsite trash container.</i>	None Required	Gloves, Safety Glasses	When utilizing sweeping compound, ensure the co-worker distributes the compound generously on the surface to be swept as to eliminate any possibility of respirable silica.