**USER INSTRUCTIONS**

**Exposure Control Plan Template for Respirable Crystalline Silica**

 **Artificial and Natural Stone Work**

Cal/OSHA requires California businesses with respirable crystalline exposures above the Action Level (AL) of 0.025 mg/m3 8-hr TWA and/or performing High-Exposure Trigger Tasks to have an [Exposure Control Plan for Respirable Crystalline Silica (RCS)](https://www.dir.ca.gov/title8/5204.html#:~:text=(3)%20Written%20exposure%20control%20plan.). Trigger tasks on natural or artificial stone are defined below.

**High-Exposure Trigger Tasks** include machining, crushing, cutting, drilling, abrading, abrasive blasting, grinding, chiseling, carving, gouging, polishing, buffing, fracturing, intentional breaking, or intentional chipping of artificial stone (containing more than 0.1% crystalline silica) and natural stone (containing more than 10% crystalline silica). Cleanup, disturbing, or handling of wastes, dusts, residues, debris, or other materials created during the above listed tasks are also included.

**This plan is designed to cover occupational exposures to respirable silica dust in general industry for tasks involving artificial stone (>0.1% silica) or natural stone (>10% silica).** For example**,** this plan covers stone countertop manufacturing, including cutting sinkholes and backsplashes, and polishing.

This plan **does NOT** apply to construction work covered under[*Title 8 CCR 1532.3*](https://www.dir.ca.gov/title8/1532_3.html)***,*** agriculture operations covered under[*Title 8 CCR 3436*](https://www.dir.ca.gov/title8/3436.html)***, or*** exposures from processing sorptive clays.

Quarries, mines, concrete or cement manufacturers, geologic field research, ceramic and porcelain manufacturing, and tombstone/monument finishing businesses have [exemptions](https://www.dir.ca.gov/title8/5204.html#:~:text=(3)%20This%20section%20applies%20to%20high%2Dexposure,months%2C%20in%20accordance%20with%20subsection%20(d)(3).) that allow them to use the [General Industry (non-stone countertop) Silica Template Plan](https://www.safeatworkca.com/siteassets/safety-resource-library/publications/silica-program-template-general-non-stone-industries.docx).

### **HOW TO USE THE TEMPLATE**

This plan template was developed to assist you in creating your own silica exposure control plan. You can use this template to create your program by customizing it to fit your business operations.

Begin by filling in the blanks and tables **marked in red** with your company’s own procedures.

Your silica exposure control plan must be specific to your business and accurately describe what you do at your workplace. Please be aware that regulators, including Cal/OSHA, expect you to put into action what you write in the plan.

We have given several examples of methods that reduce silica exposures in this template plan, as shown in [Table 1: Workplace silica exposure tasks, control measures and air sampling results](#Table1). You can use any of our examples that apply, but you must add in tasks and silica dust reduction methods unique to your operation.

Links to additional resources are provided. You can review and print any needed to help with your program.

### **WHAT YOU NEED TO KNOW**

* This is a template to help you create a silica exposure control plan that is specific to your business. It may not cover all details in the regulation ([*Title 8 CCR 5204*](https://www.dir.ca.gov/title8/5204.html)*)* that apply to your workplace. You should review the full text of the regulation to understand all the requirements.
* You are responsible for customizing the program to your business and worksite(s).
* You can delete this instruction page when your plan is finished. Click the “[Update Table](https://support.microsoft.com/en-us/office/update-a-table-of-contents-6c727329-d8fd-44fe-83b7-fa7fe3d8ac7a)” command to update page numbers in your table of contents.

# **Before you begin filling in your plan, review the requirements below:**

# **OVERVIEW OF THE SILICA STANDARD**

Businesses engaged in either artificial stone manufacturing or artificial and natural stone cutting and fabrication work are required to add protections for their workers who perform High-Exposure Trigger Tasks, and during other tasks with exposure to respirable crystalline silica (RCS). Employers must follow [Title 8 of the California Code of Regulations Section 5204­­](https://www.dir.ca.gov/title8/5204.html) as outlined below.

[**For high-exposure trigger tasks**](#HighExposureTriggerTasks)**:**

* Require employees to wear a full-face tight fitting powered air-purifying respirator (PAPR) with [Assigned Protection Factor (APF)](https://www.dir.ca.gov/title8/5144.html#:~:text=Table%201.%20%2D%20Assigned%20Protection%20Factors5) of 1,000, or a respirator providing equal or greater protection, per the RESPIRATORY PROTECTION section below.
	+ There are several exceptions where a lower APF respirator could be acceptable depending on air monitoring results and with more frequent air sampling required.
* Implement [wet methods](https://www.dir.ca.gov/title8/5204.html#:~:text=(17)%20%E2%80%9CWet%20Methods,to%20cut%20material).) to effectively suppress dust by ensuring water covers the entire surface of a work object where a tool or machine contacts the work object by one of the following methods:
	+ Apply continuous, appropriate volumes of water directly to work surface.
	+ Submerse the work object under water.
	+ Use water jet cutting.
* Prohibit employee rotation as an exposure control.
* Prohibit walking, or moving equipment, through dry dust.
* Conduct initial employee air testing and follow-up testing by a qualified person at least every 12 months to ensure silica controls are working properly.

**For all silica dust-generating tasks:**

* Conduct high-exposure trigger tasks and any tasks exceeding the RCS permissible exposure limit (PEL) of 50 ug/m3 [8-hr time weighted average (TWA)] in regulated areas identified by warning signs per REGULATED AREA section below.
* Protect workers from silica dust exposure by:
	+ Ensuring prompt cleanup of debris to prevent dust buildup.
	+ Using only wet methods or high efficiency particulate air (HEPA) filter vacuums to clean.
	+ Prohibiting dry sweeping or use of compressed air to clean off surfaces or clothing.
	+ Ensuring that employees use appropriate respiratory protection.
* Ensure that employees understand the topics listed under the TRAINING section below.
* Report silicosis and cancer cases per the REPORTING SILICOSIS section below.
* Report to Cal/OSHA about employees’ exposure to silica dust, which is a regulated carcinogen, per the IMMINENT HAZARDS section below.

*You can also delete this regulation overview page when your plan is finished, but we recommend you keep it handy as a reference. Click the “*[*Update Table*](https://support.microsoft.com/en-us/office/update-a-table-of-contents-6c727329-d8fd-44fe-83b7-fa7fe3d8ac7a)*” command to update page numbers in your table of contents.*

**Artificial and Natural Stone Industry Silica Exposure Control Plan for (fill in your company name here)**

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**Artificial and Natural Stone Industry Silica Exposure Control Plan for**

**Fill in Your Company Name**

**DATE OF LAST REVIEW:** [Type the date of last review]

This program including air sampling results, engineering controls, respiratory protection use and requirements, and recordkeeping accuracy will be reviewed and updated as needed at least annually.

**INDIVIDUAL RESPONSIBLE FOR THE PROGRAM:** [Type the name of the responsible person and their job title]

**This silica exposure control plan covers employee silica exposures at the following location(s):**

[Insert address(es) where your business handles silica in any amount]

# **EXPOSURE ASSESSMENT**

**High-exposure trigger tasks**

In our business, we conduct high-exposure trigger tasks that may include machining, crushing, cutting, drilling, abrading, abrasive blasting, grinding, chiseling, carving, gouging, polishing, buffing, fracturing, intentional breaking, or intentional chipping of artificial stone (containing more than 0.1% crystalline silica) and/or natural stone (containing more than 10% crystalline silica). High-exposure trigger tasks also include clean up, disturbing, or handling of wastes, dusts, residues, debris, or other materials created during the above listed tasks.

All high-exposure trigger tasks, as well as associated clean up tasks, have been identified, assessed, and controls implemented, as shown in [Table 1](#Table1) below.

**Non-trigger tasks with exposures to silica dust**

For other tasks that have a reasonable expectation of silica dust exposure (non-trigger tasks), assessments have been made and controls have been implemented, as shown in [Table 1](#Table1) below. Some examples of these type of tasks include pouring sand and scooping crushed rock.

**Air sampling for all tasks with silica dust exposure**

[We have collected personal silica air samples](https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/OHB/CDPH%20Document%20Library/UpdatedAirMonitoringGuide2024.pdf) from employees exposed to silica dust at our facility (for both trigger and non-trigger tasks). The air samples were collected as an 8-hour time weighted average (TWA) exposure to silica dust. Initial and any ongoing air sampling results are shown in Tables 1. Air sampling reports are included in [Appendix A](#AppendixA).

If we chose to sample a representative fraction of employees for silica exposure, we made sure that the employees sampled were expected to have the highest exposure and represented the same job class, working on the same material, on the same task, in the same area, and on the same shift as the others.

Depending on the silica dust levels detected during initial air sampling, we have made process changes to reduce exposures and we repeat air sampling according to the schedule listed in [Table 2](#Table3) below.

***IMPORTANT NOTE - All high-exposure trigger tasks are assessed by scheduled air sampling***, ***consisting of initial air sampling and then follow-up air sampling done at least every 12 months. This requirement applies even when controls appear to be effective to ensure that exposures remain below the action level.***

In addition, based on air sampling results, we follow the requirements set out in [Table 3](#Table4) for regulated areas, engineering/work practice controls, medical surveillance, and respirators.

For non-trigger tasks, in some cases, objective data may be used in place of or to supplement air sampling data, per sections [(a)(2)](https://www.dir.ca.gov/title8/5204.html#:~:text=(2)%20This%20section%20does%20not%20apply%20where%20the%20employer%20has%20objective%20data%20demonstrating%20that%20employee%20exposure%20to%20respirable%20crystalline%20silica%20will%20remain%20below%2025%20micrograms%20per%20cubic%20meter%20of%20air%20(25%20%CE%BCg/m3)%20as%20an%208%2Dhour%20time%2Dweighted%20average%20(TWA)%20under%20any%20foreseeable%20conditions.) or [(n)(2)](https://www.dir.ca.gov/title8/5204.html#:~:text=with%20Section%203204.-,(2)%20Objective%20data.,-(A)%20The%20employer) of the silica regulation.

Any employee or their designated representative can observe the air monitoring, and we will provide the observer with protective clothing and equipment and ensure that it is used properly.

**Table 1: Workplace silica exposure tasks, control measures and air sampling results\***

| **TASK DESCRIPTION***(Include if high exposure trigger task or not. List tools/equipment used, silica-containing material to be worked on/with, and conditions, like inside/outside)* | **CONTROL MEASURES** *(Include engineering controls, work practices, and respiratory protection)* | **HOUSEKEEPING MEASURES TAKEN TO MINIMIZE SILICA EXPOSURE\*\*** | **AIR SAMPLING RESULTS FOR THIS TASK** |
| --- | --- | --- | --- |
| Task Example:*Example:*High exposure trigger taskYES NO*Cutting granite slab with an angle grinder. Silica content < 14% per SDS. Indoor work with natural ventilation.* | Control Measures: *Example:* * *Angle grinder equipped with an integrated water delivery system*
* *Ensuring that water covers the entire surface of the work object where the saw contacts the tile*
* *Using ground-fault circuit interrupters (GFCIs) and watertight, sealable electrical connectors for the grinder*

 Respiratory Protection: *Example:** *Employees are wearing PAPR respirators with P-100 filter*
 | *Example:* * *Employees use hoses to wash down dust & debris to a floor drain*
* *Water with silica residues is filtered before discharge*
* *Filter maintenance is done wet*
* *HEPA- filtered vacuums are used to clean up silica dust residues in corners*
 | *Example: John Blank – 0.013 mg/m3* *(8-hour time weighted average)**6-18-23**Tony Tiger – 0.009 mg/m3* *(8-hour TWA)**6-18-23* |
| *Example:* High exposure trigger taskYES NO*Cutting low silica content marble natural stone slab (5-8% silica content) with circular saw.* *Indoor work with natural ventilation.* | Control Measures: *Example:* *Use saw with integrated water delivery system.**Ensure water covers slab while cutting*Respiratory Protection:*Example:* *Employees wear half-face respirators equipped with P-100 filters to protect them from inhaling dust.* | *Example:* *Rinse off shop floor every hour to minimize employee exposure to dust.**Use a shop vac with HEPA filter to remove dust and debris from the area.**Filter recycled water to remove silica and change filters only when fully wetted.* | *Example:* *John Jones 0.015 mg/m3, 8 hour TWA, Jan 24, 2024* |
| Task 2: High exposure trigger taskYES NODescribe Task | Describe Control MeasuresControl Measures: Respiratory Protection:  | Describe Housekeeping Measures | List Air Sampling Results |
| Task 3: High exposure trigger taskYES NODescribe Task | Describe Control MeasuresControl Measures: Respiratory Protection: | Describe Housekeeping Measures | List Air Sampling Results |

Table 2: Further sampling required based on air sampling results1

| **RCS Exposure\*\***(8-hour TWA) | **Initial or Follow-up Air Sampling?** | **Action Required** |
| --- | --- | --- |
| Below AL | Initial | No further air sampling required, unless job monitored is a trigger task. If so, repeat sampling every 12 months to confirm still below the AL.  |
| Above PEL | Initial or Follow-up | Review task, take steps to reduce exposure2 and repeat air sampling within 3 months. |
| Above AL and Below PEL | Initial or Follow-up | Review task, take steps to reduce exposure 2 and repeat air sampling within 6 months. |
| Below AL (when sample collected after previous monitoring exceeded AL or PEL) | Follow-up | Repeat air sampling within 6 months of the most recent monitoring until two consecutive measurements, taken 7 or more days apart are below the AL.When 2 consecutive measurements taken per above are below the AL, for non-trigger tasks, discontinue sampling for those employees whose exposures are represented by such sampling unless there is a change in process.For trigger task, repeat air sampling every 12 months to confirm exposures are still below the AL. |
|  |  |  |
| In all cases | Initial and Follow-up | Employees wear respiratory protection until silica levels are shown to be below the Cal/OSHA permissible exposure limit (0.05 mg/m3), except for trigger tasks where powered air purifying respirators (PAPR) must be worn always with some exceptions which require additional air monitoring and medical exams. [See code for exceptions](https://www.dir.ca.gov/title8/5204.html#:~:text=Exception%3A%20The%20employer%20may,a%20more%20protective%20respirator.).Employees are notified of air sampling results in writing within 15 working days of completion of the exposure assessment/air monitoring report. If the employee exposure is above the Cal/OSHA Permissible Exposure Limit (PEL), the notice will include the actions being taken to reduce exposures to or below the PEL. |
| **Definitions:****AL:** Action Level**PEL:** (Cal OSHA) Permissible Exposure Limit**RCS:** Respirable Crystalline Silica**TWA:** Time-weighted Average |
| **Regulatory Exposure Limits and Information:**AL for RCS = 0.025 mg/m3PEL for RCS = 0.05 mg/m3**Notes:**1Depending on the initial air sampling results, we will perform follow up air monitoring in accordance with the above guidelines based on those in [Title 8 CCR 5204(d)(3)](https://www.dir.ca.gov/title8/5204.html#:~:text=(3)%20Scheduled%20monitoring%20option.).2Our company will implement engineering controls and process changes to reduce airborne silica as much as feasible per requirements in [Title 8 CCR5 5204(f).](https://www.dir.ca.gov/title8/5204.html#:~:text=(f)%20Methods%20of%20compliance.) |

**Table 3: Other requirements based on air sampling results**

| **RCS Exposure** | **Regulated Area Requirement** | **Engineering/Work Practice Controls** | **Respiratory Protection Requirement** | **Medical Monitoring Requirement** |
| --- | --- | --- | --- | --- |
| **For High-Exposure Trigger Tasks** |
| At all exposure levels (even below the AL) | Establish a regulated area. All entries must be marked with appropriate signage and access limited to only authorized personal wearing appropriate PPE. | [Effective wet methods, such as constant flow of water, work object submersion under water, water jet cutting.](#WETMETHODREQUIREMENTS) Housekeeping, including bagging residues, cleaning at end of every shift, using HEPA vacuums or wet methods, and washing facilities for employees. **Forbidden Actions**-use of compressed air,-dry cleanup, -employee rotation,-walking or putting machinery through dry silica dust  | A full-face, tight-fitting PAPR or a respirator providing equal or greater protection (APF = 1000), with a HEPA, N100, R100, or P100 filter. [See Silica regulation for exceptions](https://www.dir.ca.gov/title8/5204.html#:~:text=Exception%3A%20The%20employer%20may,a%20more%20protective%20respirator.) when employer shows trigger task levels consistently below AL with air monitoring every 6 months. | For each employee who will be exposed to these tasks for 30 or more days per year, regardless of exposure assessments or objective data. |
| **For Non Trigger Tasks** |
| Below AL | -- | Use engineering and work practice controls to maintain exposure to RCS below the AL. | None required but may be offered for voluntary use. | -- |
| Above AL and Below PEL | -- | Use engineering and work practice controls to reduce exposure to respirable crystalline silica to or below the AL. | None required but may be offered for voluntary use. | For each employee who will be exposed to RCS at or above the action level (0.025 mg/m3) for 30 or more days per year. |
| Above PEL | Establish a regulated area. All entries must be marked with appropriate signage and access limited to only authorized personal wearing appropriate PPE. | Use engineering and work practice controls to reduce exposure to respirable crystalline silica to or below the AL and the PEL. | Respiratory protection is required. Best practice is to use same respiratory protection as for trigger tasks above. | For each employee who will be exposed to respirable crystalline silica at or above the action level (0.025 mg/m3) for 30 or more days per year. |

# **EMPLOYEE NOTIFICATION OF AIR SAMPLING RESULTS**

Employees are notified of results in writing within 15 working days of completion of the exposure assessment. If an exposure assessment indicates that employee exposure is above the PEL, the written notification to employees will include the corrective action being taken to reduce employee exposure to or below the PEL.

# **MEDICAL MONITORING**

Employees exposed to [high-exposure trigger tasks](#HighExposureTriggerTasks) (regardless of exposure monitoring data) or workers exposed above the action limit (> 0.025 mg/m3) for 30 or more days per year will be offered medical surveillance at no cost and at a reasonable time and place. The exam will be offered within 30 days of starting employment and then at least every 3 years thereafter, or more frequently if recommended by the medical provider, unless the employee had an equivalent exam within the last 3 years. The exams will follow the medical surveillance procedures in [8CCR5204(j).](https://www.dir.ca.gov/title8/5204.html#:~:text=(j)%20Medical%20surveillance.)

We will ensure that the occupational medical provider is qualified to do silica exams. We will give the provider descriptions of each employee’s job duties including exposure to trigger tasks, past and current silica exposure air monitoring records, a description of respiratory protection used and how long they have used it, and copies of previous employment related medical exam records (with provider’s contact information). We will ensure the medical provider knows they are required to report silicosis cases to Cal/OSHA and give them a copy of the silica standard, if needed.

The silica medical exam will include:

* Medical history, including past silica exposures and respiratory disease
* Physical exam with emphasis on the respiratory system
* Chest X-Ray read by NIOSH certified B-Reader OR a chest computed tomography (CT) scan at the lowest possible dose when ordered by the medical specialist, for any employee with suspected silicosis and for ALL employees exposed to high-exposure trigger tasks for at least 30 days a year
* Pulmonary function test
* Tuberculosis testing (initial exam only)
* Any other tests recommended by the medical provider

The provider gives the employee a written medical report of findings, including if they are at risk for medical impairment due to silica exposure and any limitations on respirator use or exposure to RCS or trigger tasks. The provider also will give us (company name) a written medical opinion which will include any limitations on the employee’s use of respirators and/or limits on exposure to RCS, including during trigger tasks. Any additional tests or examinations, including referral to a specialist, requested by the medical provider will be provided. We will ensure that both reports are provided timely, within 30 days of the exam.

**INDIVIDUAL RESPONSIBLE FOR OUR MEDICAL SURVEILLANCE PROGRAM:** [Type the name of the responsible person and their job title]

**THE MEDICAL PROVIDER OR OCCUPATIONAL HEALTH CLINIC USED FOR SILICA MEDICAL EXAMS:** [Type the name of the medical provider and their contact information]

# **MEDICAL REMOVAL**

Employees will be removed from a job assignment, or their job will be modified if recommended by a PLHCP to reduce exposure to respirable crystalline silica. We will maintain their current earnings, seniority, and other benefits for up to 6 months. We will follow all requirements listed in [T8CCR5204(k)](https://www.dir.ca.gov/title8/5204.html#:~:text=subsection%20(j)(7).-,(k)%20Medical%20Removal,-(1)%20When%20the).

# **CHANGES IN PROCESS**

Air monitoring will be conducted for any change in process, production, control equipment, personnel, or work practice that may reasonably be expected to result in new or additional exposure to silica dust above the action level.

**REGULATED AREAS**

[Regulated areas](https://www.dir.ca.gov/title8/5204.html#:~:text=clothing%20and%20equipment.-,(e)%20Regulated%20areas,-.) have been established as follows:

* Where employees participate in high-exposure trigger tasks.
* Where employees perform any task where the airborne concentrations of respirable crystalline silica can, or are reasonably expected to, exceed the PEL.

**All high-exposure trigger tasks must be done in a regulated area regardless of employee exposures, exposure assessments, or other objective data.**

The boundaries of the regulated area will be clearly marked and isolated to minimize the number of employees entering the area. [Signs](https://www.dir.ca.gov/title8/5204.html#:~:text=(3)%20Signs.%20The,SOLO%20PERSONAL%20AUTORIZADO) will be posted at entrances to regulated areas. Signs will depict the [Health Hazard Pictogram](https://www.osha.gov/hazcom/pictograms) and contain the following language and warnings:

DANGER

RESPIRABLE CRYSTALLINE SILICA

CAUSES PERMANENT LUNG DAMAGE THAT MAY LEAD TO DEATH

MAY CAUSE CANCER

WEAR RESPIRATORY PROTECTION IN THIS AREA

AUTHORIZED PERSONNEL ONLY

PELIGRO

SÍLICE CRISTALINA RESPIRABLE

PROVOCA DAÑO PERMANENTE A LOS PULMONES QUE PODRIA CAUSAR LA MUERTE

PUEDE PROVOCAR CÁNCER

USAR PROTECCIÓN RESPIRATORIA EN ESTA ÁREA

SOLO PERSONAL AUTORIZADO

Signs in other languages that are understandable to our employees will be posted, as appropriate.

Access to the regulated area will be limited to:

* Persons authorized by employer who need to work there
* Person (such as union reps) that are observing air monitoring
* Persons authorized by Cal/OSHA

Anyone who enters a regulated area must wear appropriate PPE, including respiratory protection as indicated by air sampling results or high-exposure trigger task requirements. When air monitoring results demonstrate exposure within a regulated area established for high-exposure trigger tasks is maintained below the action level as evidenced by air sampling every 6 months, the regulated area can be entered for up to 5 minutes in an eight-hour period without a respirator. Even so, respirators will be available and encouraged to be used voluntarily when entering high-exposure trigger task regulated areas.

**REPORTING CARCINOGEN USE**

Because silica dust is a regulated carcinogen, [we report our use of crystalline silica to Cal/OSHA](https://www.dir.ca.gov/dosh/Employer-RCS-Report) and take other actions pertaining to temporary worksites, emergency conditions, and posting of notices for employees, according to [Section 5203 Cal/OSHA Carcinogen Report of Use Requirements.](https://www.dir.ca.gov/title8/5203.html)

**SILICA USE WAS REPORTED TO CAL/OSHA:** [Type date the name of the reporting person and their job title]

Documentation of this reporting is included in [Appendix B](#_Appendix_B).

For questions about reporting carcinogens, contact [Cal/OSHA Consultation Service](https://www.dir.ca.gov/dosh/consultation.html).

# **ENGINEERING AND WORK PRACTICES CONTROLS**

**HIGH-EXPOSURE TRIGGER TASKS**

**Effective wet methods will be used for all high-exposure trigger tasks to reduce silica dust. Effective wet methods maintain employees’ exposures below the Cal/OSHA Action Level (<0.025 mg/m3 RCS).**

**Wet method requirements** - For high-exposure trigger tasks, we require that water cover the entire surface of all work objects where tools, equipment, or machinery contacts it. We suppress dust by using one of the wet methods listed below:

(Include/check methods below that you use and delete the rest. Add in more detail to describe your specific operations and wet methods used to keep dust levels down)

[ ] Applying a constant, continuous, and appropriate volume of running water directly on the surface of the work object. If we use this wet method, we ensure that:

* Integrated water flow tools, machines, or equipment have water flow rates that equal or exceed the manufacturer recommendations and specifications.
* All tools and water systems are working properly to ensure effective dust suppression.
* Any recycled water is filtered to remove silica before reuse.

[ ] Submersing the work object underwater.

[ ] Water jet cutting that uses high pressure water to cut material.

[ ] Additional methods you fill in\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Prohibition of compressed air** – We do not allow use of compressed air for any purpose, including cleaning clothes and countertops. We do not use it to backflush, backwash, or clean filters for water, air, or other types that may contain crystalline silica.

**Prohibition of job rotation** - We do not use employee rotation through different jobs as a way to reduce silica exposures.

**Prohibition on creating dry dust clouds** - We do not allow walking or moving equipment on or through dried dust, debris, residue, or anything that may contain crystalline silica. Dry sweeping of any surfaces or materials is not allowed.

**NON-TRIGGER TASKS**

For non-trigger tasks, engineering and work practice controls will be used to reduce and maintain employee RCS exposure at or below the PEL, unless it can be demonstrated that such controls are not feasible. Wherever feasible engineering and work practice controls are not sufficient to reduce employee exposure to or below the PEL, these controls will be used nonetheless to reduce employee exposure as much as possible and the controls will be supplemented with the use of respiratory protection.

Any dust reduction systems are installed, operated, and maintained in accordance to manufacturer recommendations (to the extent they exist). Their operation is monitored by employees and supervisors for proper function throughout the work shift. Local exhaust ventilation systems are tested annually, and waste materials collected on filters or other catch mechanisms are disposed of properly so as not to expose workers to silica dust.

**RESPIRATORY PROTECTION**

**ALL RESPIRATOR USE MUST BE IN ACCORDANCE WITH A RESPIRATORY PROTECTION PROGRAM MEETING THE REQUIREMENTS OF TITLE 8,** [**SECTION 5144**](https://www.dir.ca.gov/title8/5144.html)

**High-exposure trigger tasks**

When employees perform high-exposure trigger tasks or work within a regulated area where high-exposure trigger tasks occur, we provide and ensure employees properly use, a full face, tight-fitting powered air purifying respirator (PAPR) or a respirator providing equal or greater protection (APF = 1000) equipped with a HEPA, N100, R100, or P100 filter.

The silica regulation allows two exceptions to this respirator requirement:

1. If exposures to RCS are maintained below the action limit, employees may use a loose-fitting or half-face PAPR, full-face air purifying respirator, or another equivalent type of respirator providing equal or greater protection (APF ≥ 25). This is contingent on:
* The employee being medically cleared to wear one of these respirator types.
* The employer providing representative RCS air sampling by a qualified person at least every 6 months that verifies that exposures are continuously maintained below the RCS AL.

2. We can provide a respirator with APF of 10 or greater with HEPA, N100, R100, or P100 filter if all of the following conditions are met:

* Air monitoring every 6 months shows RCS exposure is below AL.
* All employees are fully participating in our medical surveillance program, with no employee (current or formerly employed) diagnosed with silicosis or suspected silicosis.
* Medical provider does not recommend a more protective respirator.

Any employee with confirmed or suspected silicosis must use a full-face, tight-fitting supplied air respirator in pressure demand or other positive pressure mode to perform high-exposure trigger tasks.

**Non-trigger tasks**

When employees perform tasks not considered high-exposure, and they do not work within a regulated area where high-exposure trigger tasks occur, appropriate respiratory protection will be provided to these employees with exposures over the Cal/OSHA PEL for respirable crystalline silica. This includes:

* The interim time while improved engineering and work practice controls are being implemented
* During tasks, such as repair and maintenance, where engineering controls or work practice controls are not feasible
* If all feasible controls are not sufficient to reduce exposures to or below the PEL
* In regulated areas

# **PUTTING ON AND TAKING OFF PPE**

Employees will be provided with personal protective equipment (PPE) of proper design, fit, and durability to provide adequate protection against the hazards of the workplace. PPE will be maintained in a safe, sanitary condition and employees will be trained on proper workplace use following the manufacturer’s instructions.

Employees will follow the manufacturer’s instructions when putting on PPE. Respirators should be the first piece of PPE put on and the last taken off. Always wear PPE before entering any regulated area.

When removing work clothes or coveralls, workers should first vacuum any visible dust from their clothing, skin, or hair. A wet cloth can also be used to wipe down the dust on a person. Dust will become airborne as clothing is removed, so the worker should keep their respirator on as they remove their work clothes. Keep silica contaminated clothing separate from other household laundry and pre-wet before handling.

Manufacturer’s instructions for putting on and taking off PPE and respirators are found in [Appendix C.](#_Appendix_C) [Find instructions with PPE or online at manufacturer website)

# **HOUSEKEEPING**

Clean-up and housekeeping practices at our facility are critical to reducing exposure to silica dust and are outlined in [Table 1](#Table1) above.

**High-exposure trigger tasks**

In general, we protect workers that clean-up wastes, debris, and dust generated from trigger tasks by:

* Ensuring [frequent cleanup of debris](https://www.dir.ca.gov/title8/5204.html#:~:text=(B)%20Housekeeping%20and,in%20the%20workplace.) to prevent visible dust buildup, at a minimum by the end of each shift or more often as needed
* Placing any RCS containing wastes, dusts, residues or debris in leak-tight containers, bags, or equivalent
* Using only [wet methods or high efficiency particulate air (HEPA) filter vacuums](https://www.dir.ca.gov/title8/5204.html#:~:text=2.%20Wet%20methods%20or%20vacuum%20cleaners%20equipped%20with%20HEPA%20filters%20shall%20be%20used%20to%20collect%20all%20wastes%2C%20dusts%2C%20residues%2C%20debris%2C%20or%20other%20materials%20that%20are%20generated%20from%20high%2Dexposure%20trigger%20tasks%20or%20that%20otherwise%20contain%20or%20are%20contaminated%20with%20respirable%20crystalline%20silica.)
* Prohibiting dry sweeping or use of compressed air to clean off surfaces or clothing
* Ensuring that employees engaged in housekeeping tasks use the same [respiratory protection](https://www.dir.ca.gov/title8/5204.html#:~:text=3.%20Employees%20engaged%20in%20housekeeping%20tasks%20shall%20use%20respirator%20protection%20in%20accordance%20with%20subsection%20(h)(3).) used for high-exposure trigger tasks
* Provide [readily accessible washing facilities](https://www.dir.ca.gov/title8/5204.html#:~:text=4.%20The%20employer%20shall%20provide%20reasonably%20accessible%20washing%20facilities%20in%20accordance%20with%20Section%203366%20(Washing%20Facilities).) for employees to use

**Non-trigger tasks**

During cleanup of non-trigger task areas, we ensure that employees use appropriate respiratory protection. Our cleaning practices will not include dry sweeping, dry brushing, or use of compressed air. The only exception is if a ventilation system effectively captures the dust cloud created by the compressed air-include this if you use compressed air with ventilation, otherwise delete this red font sentence.

# **IMMINENT HAZARDS**

Cal/OSHA can shut down our business if an [imminent hazard](https://www.dir.ca.gov/title8/5204.html#:~:text=(g)%20Imminent%20Hazards.) is present at our facility. To avoid creating an imminent hazard, we do the following:

* Always use wet methods to control silica dust during high-exposure trigger tasks as defined in this plan.
* Prohibit the following:
	+ Any use of compressed air
	+ Any dry sweeping, shoveling, disturbing, or dry cleanup of wastes, dusts or anything that may contain RCS.
	+ Using employee job rotation to reduce employee exposures
	+ Walking or moving equipment through dry dust, debris, residue, or any material that may contain RCS.
* Where respiratory protection is required, our company provides each employee with an appropriate respirator that complies with the requirements of the [Cal/OSHA Respiratory Standard](https://www.dir.ca.gov/title8/5144.html). For high-exposure trigger tasks, this is generally a PAPR with APF = 1000.
* [Report to Cal/OSHA about our employees’ exposure to silica dust](https://www.dir.ca.gov/dosh/Employer-RCS-Report), which is a [regulated carcinogen.](https://www.dir.ca.gov/title8/5203.html)
* Report silicosis cases or lung cancer related to silica dust exposure to the [California Department of Public Health (CDPH)](https://forms.office.com/pages/responsepage.aspx?id=URsxH9n2U0GbrFXg75ZBuINJKo63kkpFiUnUDR-imO1UNk02VkFHR0c1S0g1QVRJS0ZSVjZFMUhYVyQlQCN0PWcu) and to [Cal/OSHA](https://www.dir.ca.gov/dosh/report-accident-or-injury.html#:~:text=Related%20Accident%20%2D%20Employers-,Report%20a%20Work%2DRelated%20Accident%20%2D%20Employers,by%20telephone%2C%2024%20hours%20a%20day%2C%207%20days%20a%20week%3A,-In%20what%20type) within 24 hours of receiving information regarding these kinds of illnesses.

# **HAZARD COMMUNICATION**

Respirable crystalline silica is included in our company’s Hazard Communication Standard (HCS) per the [Cal/OSHA Hazcom Regulations](https://www.dir.ca.gov/title8/5194.html). Each employee has access to labels on containers of crystalline silica and safety data sheets and is trained in accordance with the provisions of the HCS. We ensure that at least the following hazards are addressed in our HCS: Cancer, lung effects, immune system effects, and kidney effects.

All trainings, communications, signs, labels, or written information are provided in an appropriate language and at an appropriate education/literacy level so our employees can understand them.

# **EMPLOYEE TRAINING**

All employees, including supervisors, who are exposed to silica dust will be trained (in a language they best understand) so they have a good understa­nding of the following topics:

1. [The health hazards associated with exposure to silica](https://www.osha.gov/silica-crystalline/health-effects) dust, including a review of safety data sheets and labels:
	1. Lung cancer, silicosis (an incurable lung disease that can lead to disability and death), chronic obstructive lung disease (COPD), immune system effects, and kidney disease.
2. Symptoms related to exposure to respirable crystalline silica, such as cough, difficult breathing, fatigue, shortness of breath, weakness, fever, chest pain, or unexplained weight loss.
3. Specific tasks in the workplace that could result in exposure to respirable crystalline silica.
4. Specific measures the employer has implemented to prevent employees in each task from exposure to respirable crystalline silica, including engineering controls, work practices, and respirators to be used.
5. How to properly use and implement engineering controls, work practices, and respiratory protection to prevent employee exposure to respirable crystalline silica.
6. Personal practices to reduce silica exposures:
	1. The importance of good personal hygiene and housekeeping practices, such as not smoking tobacco products or eating prior to removing silica dusts from their persons.
	2. How to clean clothes and skin without releasing silica dust on selves or household.
	3. Avoiding activities that increase employee exposures to silica dusts.
7. Proper use and maintenance of dust reduction systems, including the safe handling and disposal of waste materials collected in connection with their use.
8. The contents of the [Cal/OSHA General Industry Silica Standard (8CCR5204)](https://www.dir.ca.gov/title8/5204.html). Copies must be readily available free of charge to employees.
9. The purpose and a description of the medical surveillance program required if exposures are to high-exposure trigger tasks or at or above the action level for more than 30 days per year.
10. The increased risk of death that results from the combined effects of smoking and RCS exposure.
11. The increased risk of a latent tuberculosis infection becoming active after exposure to RCS.
12. They are encouraged by us to report any symptoms related to RCS exposure without fear of reprisal. We, (insert company name), will not take or threaten to take any adverse action against employees who report symptoms or who suffer from silica-related illness.

# **REPORTING OF SILICOSIS**

Within 24 hours of receiving information regarding a confirmed silicosis case or lung cancer related to respirable crystalline silica exposure, we shall report the following information to the [California Department of Public Health (CDPH)](https://forms.office.com/pages/responsepage.aspx?id=URsxH9n2U0GbrFXg75ZBuINJKo63kkpFiUnUDR-imO1UNk02VkFHR0c1S0g1QVRJS0ZSVjZFMUhYVyQlQCN0PWcu) and to the [Cal/OSHA](https://www.dir.ca.gov/dosh/report-accident-or-injury.html#:~:text=Related%20Accident%20%2D%20Employers-,Report%20a%20Work%2DRelated%20Accident%20%2D%20Employers,by%20telephone%2C%2024%20hours%20a%20day%2C%207%20days%20a%20week%3A,-In%20what%20type) by phone or a specified online mechanism established by these agencies:

* 1. The name, phone number, email, and mailing address of each employee identified with silicosis or lung cancer, or their next of kin
	2. Date of birth of employee
	3. The employer’s business name, including any aliases or dba identifiers, and the employer’s phone number, email, and mailing address
	4. The name, phone number, email, physical address, and mailing address of the manager responsible for the facility where each employee with silicosis or lung cancer is, or was, employed
	5. The name, phone number, email, and mailing address of the diagnosing medical provider, and the date of diagnosis
	6. The number of years each employee identified with silicosis has been, or was, employed by the employer, and the tasks the employee engaged in during this time period, including the number and frequency of high-exposure tasks
	7. The specific protections, if any, that were implemented by the employer throughout the employee’s period of employment, to prevent exposure to respirable crystalline silica
	8. Results of air monitoring for respirable crystalline silica conducted throughout the employee’s period of employment
	9. A description of any personal protective equipment provided and used by the employee throughout the employee’s period of employment
	10. Whether or not we have reported our facility’s use of RCS with the Cal/OSHA as required by [Section 5203, Carcinogen Reporting](https://www.dir.ca.gov/title8/5203.html)
	11. Prior employers, if known, where employee had respirable crystalline silica exposure

# **RECORDKEEPING**

Records of the following documents will be retained, maintained, and made available, in accordance with T8CCR5204:

1. All air sampling and objective data used to determine safe work practices and controls to reduce/eliminate silica exposures (Appendix A). Air monitoring and objective data records will include the information required per [T8CCR5204(n)](https://www.dir.ca.gov/title8/5204.html#:~:text=of%20affected%20employee.-,(n)%20Recordkeeping.,-(1)%20Air%20monitoring) and be maintained and available per [T8CCR3204](https://www.dir.ca.gov/title8/3204.html#:~:text=(B)%20Employee%20Exposure,the%20specific%20regulation.).
2. Accurate records for each employee covered by medical surveillance under [T8CCR5204(j)](https://www.dir.ca.gov/title8/5204.html#:~:text=(j)%20Medical%20surveillance.) will be made and maintained by [describe where these records will be stored and what person/job title maintain them]. Records will be maintained and available per [T8CCR3204](https://www.dir.ca.gov/title8/3204.html#:~:text=(A)%20Employee%20Medical%20Records,the%20termination%20of%20employment.).
3. A copy of this written exposure control plan and annual updates will be maintained by [provide name of person responsible and describe where plans will be stored electronically, paper, both, or other].
4. If employees want a copy of medical or air sampling records they should contact [Fill in Name and job title] and the record will be provided within 15 days.

# **EXPOSURE CONTROL PLAN REVIEW AND AVAILABILITY**

The effectiveness of the written exposure control plan will be evaluated at least annually and updated as necessary by [describe how this will be accomplished and by what person and their job title].

It will be made readily available for examination and copying upon request to each affected employee (or their designated representative) by [describe how this will be accomplished].

# Appendix A

**Air Sampling Reports for Respirable Crystalline Silica Exposures**

[Employers –please attach your air sampling records here]

# Appendix B

**Employer Report of Silica (Carcinogen) Use to Cal/OSHA**

[Employers – please attach documentation of reporting here]

# Appendix C

**Instructions for Putting on and Taking off Work Clothes, PPE and Respirators**

[Employers – Please attach instructions here for how employees put on and remove PPE to prevent silica at-work and take-home exposures]