

# Chapter 9

## Medical Monitoring

### ⇒ ⇒ ⇒ **IF YOUR SHOP USES SILICA SAND, YOU SHOULD:**

#### ⇒ **Provide medical monitoring for employees.**

You must maintain medical monitoring records for the employee's duration of employment plus 30 years.

#### ⇒ **Notify workers of their medical monitoring results.**

#### ⇒ **Take actions to decrease the silica exposure hazards.**

The results of the medical monitoring will be one of your guides for further action. If the results show people with silicosis, additional safety measures may be needed. Remember, however, silicosis may take 20 or more years to develop. Medical monitoring is not a substitute for air sampling and ventilation controls.

**See Appendix V for information on Employee Medical Records and Trade Secrets.**

### ⇒ ⇒ ⇒ **WHY ARE THESE STEPS IMPORTANT?**

It is not always easy to tell whether you and other shop employees are being exposed simply by looking around the shop. Severe silicosis cases have occurred at companies that look quite clean. The people affected will not even know they are developing chronic silicosis until it is too late. Then the effects can be devastating for both you and the company.

Medical monitoring and air sampling (Chapter 4) do nothing to make your shop safer. Medical monitoring and air sampling results will show if there is a problem with overexposure to silica. Actions taken in response to these results make your shop safer. While engineering controls and administrative control options are being investigated, you should take steps immediately to protect yourself.

**ALL COMPANIES USING SILICA SAND SHOULD READ THIS CHAPTER.**

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### ⇒ ⇒ ⇒ WHAT REPORTING REQUIREMENTS APPLY?

A physician, hospital, clinic, **or employer** knowing of an individual having a case of occupational disease or a health condition aggravated by workplace exposures shall report the case to the Michigan Department of Labor and Economic Growth within 10 days after the discovery of the occupational disease or condition.

A physician, hospital, clinic, **or employer** knowing of a suspected case of occupational disease or a health condition aggravated by workplace exposures shall report the case to the department within 10 days after the discovery of the occupational disease or condition.

The report shall state the name and address of the individual, the name and business address of the employer, the business of the employer, the place of the individual's employment, the length of time of employment in the place where the individual became ill, the nature of the disease, and other information required by the department.

**Appendix XV** contains Michigan Administrative Rule Part 11 – Recording and Reporting of Occupational Injuries and Illnesses and the MIOSHA Form OH-51 - Known or Suspected Occupation Disease Report. The notification can be made by accessing the MIOSHA webpage at [www.michigan.gov/mioshastandards](http://www.michigan.gov/mioshastandards). Click on Recordkeeping and Statistics. Instructions for complying with Part 11, and options for reporting (mail and online) are available. Another option for reporting a suspected case of occupational disease or health condition aggravated by a workplace exposure is to access the MSU Occupational and Environmental Medicine (OEM) website at [www.oem.msu.edu/](http://www.oem.msu.edu/). On the MSU OEM home page is an online reporting option.

### ⇒ ⇒ ⇒ WHAT RECORDING REQUIREMENTS APPLY?

You must record information about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional, and work-related injuries and illnesses that meet any of the specific recording criteria listed in Public Law of 1970 (P.L. 91-596) and Michigan Occupational Safety and Health Act 154, P.A. 1974, Part 11, Michigan Administrative Rule for Recording and Reporting of Injuries and Illnesses. You must complete an injury and illness incident report (MIOSHA Form 301 or equivalent form) within 7 days after you receive information that a recordable work-related

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illness or injury has occurred. If you're not sure whether a case is recordable, call your local MIOSHA office for help. You may be fined for failure to comply.

If you have had more than 10 employees at any one time during the calendar year immediately before the current calendar year, you must prominently post the MIOSHA Log 300A annual summary at the worksite from February 1 to April 30 of the year following the year covered by the form.

**Appendix XV** contains copies of MIOSHA Log 300, Form 300 A and Form 301. The MIOSHA 300 log and Forms 300A and 301 can also be found as Excel spreadsheets on the MIOSHA website at:

[http://www.michigan.gov/documents/miosha300form2004\\_84615\\_7.xls](http://www.michigan.gov/documents/miosha300form2004_84615_7.xls)

The forms may be printed for hard copy use by accessing the MIOSHA website at:

[http://www.michigan.gov/cis/0,1607,7-154-11407\\_30929---,00.html](http://www.michigan.gov/cis/0,1607,7-154-11407_30929---,00.html)

### **⇒ ⇒ ⇒ WHAT ARE THE LEGAL REQUIREMENTS for MEDICAL MONITORING FOR SILICA?**

MIOSHA and OSHA do not have specific legal requirements, only recommendations, regarding medical monitoring for the abrasive blasting industry. For additional details, consult an occupational medicine expert.

**See Appendix XIV - Recommended Medical Screening Protocol for Silica Exposed Workers.**

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### ⇒ ⇒ ⇒ MEDICAL MONITORING

Medical monitoring is recommended for all employees who work with crystalline silica. Monitoring should include a baseline medical and occupational history for new employees. The occupational history should include questions about the materials used, tasks performed, and all of the occupations and industries in which you have been employed. The baseline should also include a complete physical (including smoking history), chest x-ray and a pulmonary function test (PFT). Be sure that the examining physician is familiar with occupational diseases, particularly silicosis.

If any employees show signs of overexposure, scarring of the lungs, or nodules forming in the lungs, they should be reassigned to a silica-free area. The chest x-ray should be read by a “B-reader,” a physician who is trained and certified to read and interpret chest x-rays in a systematic way with special emphasis on detecting abnormalities caused by the inhalation of dusts.

### ⇒ Notification

Workers must be notified of the medical monitoring test results. The results should be kept on record by the company for the duration of employment plus thirty (30) years.

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⇒ ⇒ ⇒ **MEDICAL MONITORING - WHAT TO DO.**

1	Choose a doctor or occupational clinic. A doctor specializing in occupational medicine is recommended.	Some qualified medical specialists are “board certified” in occupational medicine.
2	Make a list of the workers to be included in the medical monitoring program.	Include all shop workers who work with silica or in areas of the shop where silica materials are handled.
3	Have a meeting with your doctor or occupational clinic to work out the details of your company-specific program.	Make sure you understand all of the services the doctor or clinic will provide, and their costs. Learn what your company’s responsibilities include.
4	Arrange for employees to be medically monitored.	Be certain your coworkers understand the importance of the medical monitoring program and their individual test results.
5	When you get the monitoring results, look them over and discuss them with your doctor.	Your doctor or clinic can help you understand what the results mean and help you plan any follow-up measures if needed.
6	If any worker shows signs of overexposure to silica, move the worker immediately to a job that involves no contact with silica.	Reassignment is important to reduce the likelihood of the progression of scarring.
7	Inform each worker of his or her individual monitoring results. Ask your doctor or clinic to help with these meetings.	MIOSHA recommends that workers be informed in writing. You may wish to have the physician talk with each person about their results.
8	File the results of the monitoring and any reports from your doctor or clinic so you can find them when they’re needed. Individual employee files work best for confidential information.	MIOSHA requires that this information be kept available for the employee’s duration of employment plus thirty (30) years.

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### ⇒ ⇒ ⇒ SILICA AND SMOKING

Silica alone can cause lung disease. But, if you smoke, your lungs are at even greater risk of becoming diseased. If you are an abrasive blaster, it is very important that you stop smoking.

#### **Your body goes through many changes when you quit smoking:**

##### **Within 20 minutes of your last cigarette:**

- \* Blood pressure drops to normal.
- \* Pulse rate drops to normal rate.
- \* Body temperature to hands and feet increases to normal.

##### **8 Hours:**

- \* Carbon Monoxide level in blood drops to normal.
- \* Oxygen level in blood increases to normal.

##### **24 Hours:**

- \* Chance of a heart attack decreases.

##### **48 Hours:**

- \* Nerve endings start growing.
- \* Ability to smell and taste things enhances.

##### **72 Hours:**

- \* Bronchial tubes relax, making breathing easier.
- \* Lung capacity increases.

##### **2 Weeks to 3 Months:**

- \* Circulation improves.
- \* Walking becomes easier.

##### **1 Month to 9 Months:**

- \* Coughing, sinus congestion, fatigue, shortness of breath decreases.
- \* Cilia regrow in lungs, increasing ability to handle mucus, clean the lungs, and reduce infection.
- \* Body's overall energy level increases.
- \* Lung function increases up to 30%.

##### **1 Year:**

- \* Excess risk of coronary heart disease is half that of a smoker.

##### **5 Years:**

- \* Lung cancer death rate for average smoker (1 pack a day) decreases from 137 per 100,000 to 72 per 100,000 (after 10 years, rate drops to 12 per 100,000 - or, almost the rate of nonsmokers.

##### **10 Years:**

- \* Precancerous cells are replaced.
- \* Other cancers decrease - such as those of the mouth, larynx, esophagus, bladder, kidney and pancreas (There are 69 chemicals in tobacco smoke that cause cancer).

American Cancer Society.

Internet Address:

<http://www.cancer.org/docroot/home/index.asp?level=0>

### ⇒ ⇒ ⇒ FOR MORE INFORMATION

If you require additional information, or have further questions, please direct your request to:

American Lung Association

1-800-LUNG-USA

(1-800-586-4872)

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### **Notes**