FIBROGENIC DUST EXPOSURE
(Asbestos & Silica)

WORKER’S MEDICAL SCREENING
GUIDELINE

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Manitoba Labour & Immigration

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A. INTRODUCTION

This Guideline relates to those industries and worksites having potential for exposure to asbestos and silica dust.

In Manitoba, the two fibrogenic dusts of concern are asbestos and silica. There are a variety of workplaces where this hazard is present: (e.g. hard rock mining, gravel/stone crushing or cutting, grinding wheel use, silica sand using foundrys, insulation fitters and remediators (plumbers, electricians), building maintenance and remediation, etc.)

Employers must ensure that all workers who are at risk of repeated or excessive exposure to fibrogenic dusts in the workplace undergo regular monitoring (as per this Guideline). This requirement is part of the employer’s responsibilities under Part 36.2 of the Workplace Safety and Health Regulations and is consistent with Section 50 of the Workplace Safety and Health Act (WSH Act), empowering the Chief Occupational Medical Officer of the Workplace Safety and Health Division to order this monitoring activity.

B. PURPOSE OF A MEDICAL SCREENING PROGRAM

The purpose of this type of medical screening program is to identify risk factors for lung disease and early lung changes at a point where intervention can have maximum benefit. In the event that an abnormality is detected, both the individual worker and the workplace may be targeted for improvement in exposure control.

C. EMPLOYER and EMPLOYEE RESPONSIBILITIES

The employer is responsible for establishing a workplace screening program that is consistent with the screening guidelines in this document. All workers deemed to be at risk for exposure to asbestos and/or silica dust must have full access to the screening activities and comply with the health screening program components outlined in this document (see section 5 of the WSH Act). The employer is responsible for all expenses incurred in the normal screening program, including the cost of initiating the medical referral (ex: an abnormal lab test) which is required to establish a diagnosis and determine its work-relatedness. Medical evidence of silica or asbestos exposure shall also be reported to the Workers Compensation Board of Manitoba.

The Fibrogenic Dust Screening Program must be administered by a health care professional. The confidentiality of the worker’s specific, personal medical information must be protected and must not be included in the regular personnel file. Larger companies may have an Occupational Health Service (Occupational Health Nurse, Physician or Occupational Hygienist, etc.) to run the program. Smaller
employers may need to contract with community based healthcare providers (ex: MB Lung Association, local physician, etc.).

D. WHO SHOULD UNDERGO SURVEILLANCE

This Guideline applies to workplaces where employees may have at least one hundred (100) hours accumulated exposure to fibrogenic dust during a year of work.

Exposure to fibrogenic dust is defined as: working in an environment above the Occupational Exposure Limit, defined in Part 36.5(1) of the Chemical and Biological Substance Application Regulation, regardless of the type of respiratory protection being used.

SCREENING PROGRAM COMPONENTS

1. Preplacement, baseline medical screening

According to the risk assessment required under Part 36.2 of Manitoba Regulation (M.R.) 217/2006, all workers who are anticipated to be at risk for exposure to fibrogenic must have the following at the start of employment:

(a) A medical and occupational history, with emphasis on the respiratory system
(b) A physical examination, with emphasis on the respiratory system
(c) Pulmonary function test (PFT) - outlined in Appendix A, Table 1
(d) A baseline chest x-ray
(e) A respiratory health questionnaire (Appendix B)

2. Periodic medical screening

According to the requirement under Part 36.2 of M.R. 217/2006, all workers at risk for exposure to fibrogenic dusts must have the following examinations every two years, for the duration of their employment:

(a) A biennial occupational medical history, with emphasis on any exposures during the previous year
(b) A biennial pulmonary function test (PFT) – Appendix A, Table 1
(c) A biennial respiratory health questionnaire – Appendix B
(d) A physical medical examination (with emphasis on the respiratory tract) should be pursued if the occupational medical history indicates a possible health problem which may be adversely affected by the work or the work environment.
(e) A chest x-ray as outlined in the schedules in Appendix A, Table 2.

3. Reporting and Actions
A. **List of workers in the surveillance program**
   - List of those who participate in surveillance each year.
   - This list is to be shared with the Safety and Health Committee at the workplace.

B. **Recording and reporting of individual result**
   - Each worker is told the results of all his/her screening test results and provided with further instruction and advice as indicated. This may be carried out by the employer’s designated Occupational Health Physician / Occupational Health Nurse or the worker’s personal physician.
   - The name and address of the worker’s personal physician and date of screening must be recorded on the worker’s chart.
   - If the worker has gone or been sent to a private physician/clinic, the worker should provide the physician with an employer’s form for signature indicating whether the worker is: fit for usual work; able to work with specified restrictions; or is unfit for work. The worker is then to return this signed form to the employer.
   - A record of all individual workers’ medical test results must be kept in a confidential file by the employer and accessible only by designated occupational health personnel. This file must be made available for 10 years.
   - Confidential medical information, such as individual test results, can only be shared with the express written permission of the worker, except as stated above.

C. **Results**

   The employer is responsible for setting up an ‘Occupational Health Service’ which will ensure that the following instructions are carried out. This may be done by establishing a complete occupational health service which includes its own physician and nurse who then carry out all aspects of the Screening Guideline. Alternatively, especially for employers with fewer workers, the screening program may be contracted out or a system be devised for workers to attend their own physicians. If however a worker does not have a personal physician, the company will have to ‘contract’ with a physician to interpret and advise on the results.

   The employer must have a process in place for ensuring that the worker is properly assessed for medically indicated work restrictions. This may be provided by the designated occupational health physician or if necessary, by the worker’s own physician.

   All abnormal results are to be forwarded to the worker’s physician, if the worker agrees.
The appropriate medical investigation, treatment and follow-up are the responsibility of the worker’s primary care physician. This follow-up includes the explanation of test results and their implications, especially as they relate to working. **Note:** A lung CT scan may be ordered for any worker whose chest x-ray report indicates the possibility of silica or asbestos related abnormality – this is based on a case-by-case evaluation.

All abnormalities reported as work-related and which require medical investigation and or further treatment are to be reported to the Chief Occupational Medical Officer.

The Chief Occupational Medical Officer may be in contact with the worker’s physician to discuss the work-relatedness and prognosis for cure. A workplace safety and health investigation and improved preventive steps may be necessary to ensure worker protection from exposure.

Work-related disease must also be reported to the Workers Compensation Board on a case-by-case basis.

**D. Annual Report**

The employer must produce an annual report which includes a summary of the screening program test results and a summary of the actions taken by the employer to reduce worker exposure to fibrogenic dust. The report must also include the number of workers who undergo screening, the work location and type of work performed by each worker.

This Annual Fibrogenic Dust Surveillance Report must be forwarded to the Chief Occupational Medical Officer at the Workplace Safety and Health Division, and be shared with the joint workplace safety and health committee.
Appendix A

Table 1

PULMONARY FUNCTION TESTING

- FEV1
- FVC
- FEV1 / FVC ratio

* Table 2

<table>
<thead>
<tr>
<th>Duration of exposure*</th>
<th>Chest x-ray frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 15 years</td>
<td>Every 4 years</td>
</tr>
<tr>
<td>Over 15 years</td>
<td>Every 2 years</td>
</tr>
</tbody>
</table>

* “duration of exposure” includes the cumulative time from all previous employment

Chest x-rays must be interpreted and reported on by a licensed Radiologist

All abnormal Pulmonary Function Tests (PFT) must be interpreted and reported by a licensed physician experienced in reporting such tests.
# Appendix B

## Fibrogenic Dust – Health Questionnaire

(This questionnaire focuses on respiratory health, however other health issues may be of equal or more important to the individual worker – this should be elaborated on and noted as necessary)

<table>
<thead>
<tr>
<th>Interview Date (M/D/Y)</th>
<th>Worker ID Number</th>
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</thead>
<tbody>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
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</table>

<table>
<thead>
<tr>
<th>Address</th>
<th>City</th>
<th>Postal Code</th>
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<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
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<table>
<thead>
<tr>
<th>MHSC # (medical)</th>
<th>Occupational code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Company Name &amp; Company Business</th>
<th>WCB firm number</th>
</tr>
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<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>Family Physician</th>
<th>Physician Clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clinic Address</th>
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<tbody>
<tr>
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</table>

## Past Occupational History

Have you ever had a serious lung problem, like TB

<table>
<thead>
<tr>
<th>Answer</th>
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<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

Have you had exposure to asbestos/silica in your previous job?

<table>
<thead>
<tr>
<th>Answer</th>
</tr>
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<tbody>
<tr>
<td>No</td>
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<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

Have you been exposed to gas or chemical fumes since last surveillance or on previous job?

<table>
<thead>
<tr>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

When was your last Chest x-ray

## Present Occupational History

Position/Job title

How long have you been working at this job?

Do you work under ground or on surface?

<table>
<thead>
<tr>
<th>Answer</th>
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<tbody>
<tr>
<td>No</td>
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<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

Do you work in quarry/ gravel pit/pit

<table>
<thead>
<tr>
<th>Answer</th>
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</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

Do you work in casting/smelter?

<table>
<thead>
<tr>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
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</tbody>
</table>

Do you work in pottery/grinding?

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<thead>
<tr>
<th>Answer</th>
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<tbody>
<tr>
<td>No</td>
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<tr>
<td>Yes</td>
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</table>

Do you work in an asbestos/silica dusty environment?

<table>
<thead>
<tr>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

Do you need to wear respirator at work?

<table>
<thead>
<tr>
<th>Answer</th>
</tr>
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<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>
**Medical History**

<table>
<thead>
<tr>
<th>Question</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your health interfere or impair your performance at work?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have you ever been diagnosed with T.B., interstitial fibrosis, asbestosis, silicosis, lung cancer</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Have you ever been diagnosed with asthma, bronchitis or emphysema?</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Have you had any chest injuries or surgeries?</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Have you ever or are you now experiencing**

1. Shortness of breath (SOB) or wheezing when:
   a. walking at a brisk pace on ground level or up slight hills | No | Yes |
   b. walking with other people of your age on a ground level | No | Yes |
   c. at rest | No | Yes |
2. Coughing frequently and most days? | No | Yes |

If yes, for how long? | No | Yes |
Do your symptoms change during the working day? | No | Yes |
Do you use a puffer (bronchodilator or inhaled steroids) | No | Yes |
If yes, how often do you use it? | No | Yes |
What causes a more frequent puffer use? | No | Yes |
Have you had a cold, bronchitis or pneumonia within last 3 weeks? | No | Yes |

**Tobacco Smoking**

<table>
<thead>
<tr>
<th>Question</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever smoked?</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Do you smoke now?</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

When was the last time when you smoked? | No | Yes |
How old were you when started smoking? | No | Yes |
On average, how many cigarettes, cigars or pipes do you or did you smoke per day? | No | Yes |