

## SILICA CODE OF PRACTICE

### August 2006

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#### **DISCLAIMERS:**

(A) In accordance with Section 5(f) of the Occupational Health and Safety Act, the employer shall consult and cooperate with the OHS Committee, worker representative/designate on all matters respecting occupational health and safety. Therefore this document will not specifically reference consultation with the joint committee for each item since this is inferred as mentioned above.

(B) It is recognized that while there is a need to provide minimum criteria for the scheduling of medical testing (i.e. PLF, x ray, medical exam) it is recognized that specific scheduling be at the discretion of the Physician.

#### **DEFINITION OF TERMS**

**American Conference of Governmental Industrial Hygienists (ACGIH):** scientific organization who establish threshold limit values for exposure to various chemical and physical agents found in the workplace.

**Chief Occupational Medical Officer (COMO):** Occupational Physician as appointed by the Minister.

**Division:** means the Occupational Health and Safety Division.

**Employer:** means a person who employs 1 or more workers.

**Joint Occupational Health and Safety Committee (JOHSC):** a committee established under section 37 of the Occupational Health and Safety Act.

**Occupational Physician:** to be referred to as "Physician", a licensed physician in NL who, through appropriate experience and/or credentials, is competent and capable of dealing with dust related disease.

**PNOS:** Particles not otherwise specified.

**Respirable dust:** the fraction of dust particles which, due to their dimension (i.e. aerodynamic diameter), can be deposited the lower gas exchange regions of the lung. This term is further defined by the ACGIH.

**Silica:** crystalline silica in a respirable form.

**Silicosis:** is a progressive disease that belongs to a group of lung disorders called pneumoconiosis. Silicosis is marked by the formation of lumps (nodules) and fibrous scar tissue in the lungs.

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**Similar exposure group (SEG):** incorporates all those who can be grouped as being representative of the same dust exposure in terms of duration of exposure and exposure concentration.

**Threshold Limit Values (TLVs):** refer to airborne concentrations of substances as published by the American Conference of Governmental Industrial Hygienists. The TLV referred to in this document is the most current edition.

**Workplace Health and Safety Compensation Commission (WHSCC):** an employer-funded no fault insurance system that promotes safe and healthy workplaces, provides return-to-work programs and compensation to injured workers and their dependants.

**Workplace:** means a place where a worker or self-employed person is engaged in an occupation and includes a vehicle or mobile equipment used by a worker in an occupation.

## **1.0 PURPOSE**

The purpose of this Code of Practice is to control occupational exposure to silica to levels as low as reasonably achievable to minimize the risk of occupational disease, when elimination is not possible.

## **2.0 APPLICATION**

This Code of Practice is intended to provide a framework for managing silica dust in the workplace. This shall be achieved through the implementation of an ongoing program consisting of silica hazard identification, evaluation, control, and worker surveillance. Considering the dynamic nature of the work process, equipment and environment, ongoing preventive maintenance shall play a key role in controlling dust at the source and reducing overall fugitive dust emissions.

## **3.0 PROGRAM ELEMENTS**

Each employer to whom this code applies shall develop and implement a silica management program in consultation with the Joint Occupational Health and Safety Committee. The silica management program shall consist of the following elements, as a minimum.

- a. Dust exposure characterization / assessment
- b. Evaluation of exposure levels
- c. Dust control
- d. Dust Hazard Awareness Training
- e. Personal Protective Equipment/Respiratory protection
- f. Medical surveillance
- g. Record keeping

#### **4.0 DUST EXPOSURE ASSESSMENT**

- 4(1) For every facility to which this code applies, the employer shall conduct a hazard assessment to evaluate occupational exposure of a worker(s) to the inhalation of silica.

The strategy for dust exposure assessment shall outline the goals, methods, exposure assessment criteria, roles and responsibilities, and measures to address changes to the environment, process and worker activities.

- (2) The risk of a worker's occupational exposure to silica must be assessed by considering as a minimum:
- a) generation of silica within the workplace
  - b) methods and procedures used or to be used in the processing, use, handling, transport or storage of silica
  - c) extent and potential extent (quantity, duration, frequency, route of exposure) of the exposure of a worker to the inhalation of silica, and
  - d) measures and procedures necessary to control such exposure by means of engineering controls, work practices and hygiene practices and facilities
- (3) Where the assessment discloses there is a potential for workers (individually or as defined by the use of similar exposure groups) to inhale silica and that the health of the worker or workers may be affected thereby, the employer shall develop, establish, implement and maintain measures and procedures to further evaluate and control the exposure of the worker / occupational group to silica. The employer shall incorporate the same into a dust control program.
- (4) When a change is made in the methods and procedures in the use, handling or storage of silica the employer must cause a further assessment to be made in accordance with subsections 2 and 3.

#### **5.0 EVALUATION OF EXPOSURE LEVELS**

- 5(1) Respirable dust/silica sampling procedures, analytical methods and equipment must conform to current NIOSH methods, or equivalent.
- 5(2) Individuals within the company conducting sampling and/or analysis shall be trained in the applicable procedures and be deemed competent. This shall be accomplished through the establishment of competency criteria developed by the employer. The Division shall routinely audit this process. The Division shall be notified any time new sampling technicians are employed. Sampling and analytical procedures, including quality control procedures shall be available in writing.
- 5(3) Silica / dust analysis must be conducted by an accredited laboratory. Proof of participation in a quality control program, or equivalent, must be available and may be requested by the Division.

- 5(4) Steps involved in the dust exposure assessment shall include as a minimum:
- a) Identify sources of dust, based on visual inspections, instantaneous and integrated air monitoring, job task review, environmental conditions, and process related activities.
  - b) Identify “similar exposure groups” (SEG) based on job classification, work tasks, process and environmental conditions.
  - c) Observe, consider and document process and environmental conditions during the sampling period.
  - d) Determine airborne exposure levels for each similar exposure group and compare to ACGIH TLV’s. These TLV’s shall be adjusted for “similar exposure groups” as outlined in 5(10).
  - e) The frequency of sampling for SEG’s, as a minimum, shall be based on the table established in subsection 5(5).
  - f) All sampling shall be conducted randomly or based on “worst case” conditions, with respect to dates, shift and location / individuals, within each exposure group.
  - g) A system for the statistical management of the data shall be used. Such a system will utilize measure of central tendency in order to verify the accuracy of similar exposure groups. A system such as “A strategy for Assessing and Managing Occupational Exposures”, AIHA, 1998 shall be used (or an equivalent system acceptable to the Department).
  - h) All records pertaining to the development, implementation and maintenance of the dust exposure assessment program shall be available to the Division for review.
  - i) The dust exposure assessment program shall be reviewed by the employer and joint Occupational health and Safety committee no less than once each year. In addition, a review must be conducted in response to management of change (change in process, handling, storage, etc.) within the facility or organization.
- 5(5) The frequency of sampling for each similar exposure group shall be, as a minimum, as follows:

<b>Respirable Dust &amp;/or Respirable Silica Concentration (Use most preventative)</b>	<b>Sampling Frequency</b>
<0.25 * TLV	annual sampling / results
>0.25*TLV < 0.50 * TLV	sampling / results every 4 months
>0.5 * TLV < TLV	Assess controls sampling / results every 3 months
> TLV	Implement controls and resample

It is assumed:

- a. That sampling is random or worst case, and representative of the population, as a minimum. Worst-case conditions shall be used for the initial establishment of similar exposure group sampling frequency.
- b. That sampling of each similar exposure group is representative of the total number of workers within that group. (Guidance documents: NIOSH, Analytical Methods statistical table, AIHA)
- c. Any time conditions change to indicate an elevation in worker exposure, sampling of the similar exposure group affected shall be carried out irregardless of the frequency table requirements above.
- d. If extenuating circumstances exist that prevent the availability of analysis results within a timely manner, an extension may be granted by the Department.

5(6) All respirable dust samples collected must be analyzed for respirable dust (PNOS) and samples must be submitted for analysis monthly (sample submitted within 30 days). All respirable dust samples as required by this Code must be analyzed for silica content. The department will allow the concept of equivalent dust values (EDV) to determine the need for silica analysis provided:

- The method to be used must be submitted to the department for approval.
- The company must use recognized sampling methods which maximize air volumes.
- Company has sufficient statistical data (historical) to formulate an equivalent dust value for a particular occupation code.
- Silica percent used in the EDV formulation is to be based on the highest value ever previously obtained for that group (worst case scenario).
- Respirable dust samples will be submitted for silica analysis, as a minimum, when the respirable dust concentration of a sample is equal to or greater than one half the EDV.

**Example:**

Respirable dust sample taken of shovel operator in a mine where company has sufficient data to formulate an EDV determined as follows:

$\text{EDV} \times \text{highest \% SiO}_2 = \text{RSC of TLV}$

$\text{EDV} \times 20 \% = 0.025$

$\text{EDV} = 0.125 \text{ mg/m}^3 \text{ respirable dust}$

Therefore, if any respirable dust sample for this occupation code exceeds  $0.0625 \text{ mg/m}^3$  ( $1/2 \text{ EDV}$ ) then it has to be sent for silica analysis

With respect to the frequency table above, silica analysis must be carried out for this minimum number of required samples.

The time allowed for silica analysis is dependant upon a calculation involving the respirable dust concentration (RDC) of the sample, the highest previous known percent of silica for the SEG, and the TLV established for silica, as follows:

- a) Where multiplying the respirable dust concentration of the sample by the highest percentage of silica for the SEG yields a value less than half of the silica TLV the sample must be analyzed for silica within two months. (From date respirable dust level is known)

$$\text{Highest \% silica} * \text{RDC} = < 0.5 \text{ Respirable Silica TLV}$$

- b) Where the highest percent silica multiplied by the Respirable Dust Concentration is greater than one half but less than the Respirable Silica TLV, silica analysis shall be completed and results submitted within one month. (From date respirable dust level is known)

$$\text{Highest \% silica} * \text{RDC} = \text{or} > 0.5 \text{ respirable silica TLV}$$

- c) Where the highest percent silica multiplied by the Respirable Dust Concentration is greater than the Respirable Silica TLV, silica analysis shall be required immediately.

$$\text{Highest \% silica} * \text{RDC} = > \text{Respirable silica TLV}$$

- 5(7) All respirable dust and respirable silica sample results shall be provided to the Joint Occupational Health and Safety committee in a timely manner and posted in a conspicuous location, readily accessed by the affected workers.
- 5(8) Where respirable dust and/or respirable silica dust concentrations exceed the TLV, analysis results must be immediately provided to the Joint Occupational Health and Safety committee and posted immediately where they are easily accessible the affected workers. The worker co-chair must be immediately notified and the appropriate actions must be taken for that area and affected similar exposure groups.
- 5(9) The duration of on- person sampling, for the purpose of determining compliance with the ACGIH-TLVs, shall be representative of full-shift exposure and in no circumstances shall it be less than 75 percent of the worker's full-shift. Samples submitted for silica analysis shall contain sufficient dust loading to ensure that the analytical limit of detection is exceeded. This may be achieved through a variety of methods (e.g. composite sampling), however, the method chosen shall be acceptable to the Division.
- 5(10) Where necessary, the ACGIH TLV time-weighted average (TWA) for silica shall be suitably adjusted using a recognized method for unusual work-shifts, those other than 8 hours five days per week. However, in no circumstances shall the limit be less strict than the prescribed level outlined by the ACGIH. The method shall be acceptable to the Division.

- 5(11) The results of monitoring the concentrations of airborne silica in the workplace and corresponding interpretation of these results, and the exposure of a worker as provided by this document shall be:
- (a) posted by the employer, as soon as the results are available, in a conspicuous place or places at the workplace where they are most likely to come to the attention of the workers affected thereby, for a period of at least fourteen days;
  - (b) furnished to the occupational health and safety committee; and
  - (c) kept by the employer until such time as they are turned over to the Division of Government Services
- 5(12) Employers shall, as requested by the Division, provide data from sampling and analysis programs to the Division for audit and record purposes.

## **6.0 DUST CONTROL**

- 6(1) The employer shall develop, implement and maintain a program for controlling dust within the workplace. This Dust Control Program shall be available in writing and updated, as necessary, and reviewed on a yearly basis.
- 6(2) The employer shall take all necessary measures by means of engineering controls, work practices and hygiene practices and facilities to ensure that the time-weighted average exposure of a worker to silica is reduced to the lowest practical level and in cases where a TLV is established by the ACGIH most current edition (as amended).
- 6(3) The extent of control measures shall to some extent be related to the degree of potential worker exposure. In order to facilitate the implementation of controls, the following table shall be used as a minimum standard for action.

<b>Respirable Dust &amp;/or Respirable Silica Concentration (Use most preventative)</b>	<b>Minimum Action Required</b>
<0.25 * TLV	<ul style="list-style-type: none"><li>✓ no additional controls</li><li>✓ continue preventive maintenance</li></ul>
>0.25 < 0.50 * TLV	<ul style="list-style-type: none"><li>✓ no additional controls</li><li>✓ continue preventive maintenance</li><li>✓ increase visual inspections for dust control sources</li></ul>

>0.5 * TLV < TLV	<ul style="list-style-type: none"> <li>✓ verify existing controls adequate</li> <li>✓ consider additional controls and upgrades to existing controls (documentation of decision logic)</li> <li>✓ worker awareness required</li> <li>✓ use of PPE must be promoted by the employer</li> <li>✓ employee PPE use is voluntary</li> </ul>
> TLV	<ul style="list-style-type: none"> <li>✓ engineering controls must be implemented</li> <li>✓ must upgrade existing controls and / or implement additional controls to reduce worker exposure to RDC &amp; RSC</li> <li>✓ PPE use is mandatory, as an interim measure</li> <li>✓ An inspection must be conducted immediately by relevant personnel (the JOHSC, engineering, area supervisor, safety / hygiene, etc.) (documentation must be maintained of findings and subsequent action)</li> <li>✓ Worker awareness mandatory</li> <li>✓ Division to be immediately notified</li> </ul>

6(4) There are a number of methods of reducing and controlling dust exposure. These methods include, but are not limited to:

- Substitution
- Isolation
- Process modification
- Local suppression
- Local and general ventilation / dust collection
- Personal hygiene and safe work practices
- Preventive maintenance / housekeeping

These control measures shall be evaluated, adopted as necessary, and reviewed periodically to ensure their effectiveness. The employer shall assess the condition of the local exhaust extraction system periodically to ensure it is operating in accordance with design specifications in terms of air flow.

6(5) The employer shall maintain a record of airborne dust complaints which shall be available to the Joint Occupational health and Safety committee at all times. The employer shall develop a system acceptable to the Division for responding to dust related complaints in an effective manner.

6(6) The personal dust sampling program as required by this Code, is not intended to be the sole determinant of the necessity for engineering controls. While personal sampling is an important component of the overall dust control program, other methods of assessing the need for controls must be used in conjunction with personal sampling. Other methods of assessing the need for controls shall include as a minimum:

- a) visual inspections,
- b) use of real time dust monitors to quantify ambient dust levels,



- c) regular review and evaluation of the preventative maintenance program for the dust collection system(s), ventilation system(s), dust suppression system(s), and dust generating and transport systems.
  - d) review of OHSC minutes and records of dust complaints
  - e) request for, requirement and use of respiratory protective equipment
  - f) number of workers and duration of worker exposure
  - g) evaluation of existing engineering controls and administrative controls
- 6(7) There shall be a written preventative maintenance program implemented with respect to dust control systems, which shall be reviewed annually.
- 6(8) On a monthly basis, the employer in consultation with the Joint Occupational Health and Safety committee shall carry out visual inspections of the workplace to assess the dust control measures. Tools which should be considered to assess dust exposure and ventilation performance may include instantaneous dust monitors, smoke tubes, velocity meters, and pressure differential gauges. Any relevant deficiencies noted as a result of these inspections shall be documented and actioned in a timely manner. This information shall be incorporated into the facility's Dust Control Program.
- 6(9) The frequency of these required visual inspections may be reduced at the discretion of the Division, based on review of the company's silica management program.
- 6(10) The Joint Occupational Health and Safety committee shall, as a minimum, review annually the effectiveness of the Dust Control Program.
- 6(11) The employer shall take every reasonable precaution to ensure that workers under his/her employ, as well as persons in the workplace not under his/her employ, whose health may be affected by silica dust, are protected.

## **7.0 RESPIRATORY PROTECTION**

- 7(1) The employer shall comply with subsection 6(2) without requiring a worker to wear and use respiratory equipment.
- 7(2) Where the strict duty imposed by subsection 7(1) cannot be complied with because, an emergency exists; or the measures and procedures necessary to control the exposure of a worker to airborne silica,
- a) do not exist or are unavailable, or
  - b) are not effective because of a temporary breakdown of equipment, the employer shall provide a worker with respiratory equipment which shall be used by the worker.

- 7(3) Where a worker is exposed to airborne silica, the worker may request a respirator and the employer shall provide it.
- 7(4) Where respiratory equipment is provided by an employer and used by a worker, the respiratory equipment shall,
- a) be appropriate in the circumstances for the concentration of airborne silica,
  - b) used in accordance with the requirements of the Code,
  - c) be provided, maintained, inspected and tested in accordance with CSA Standard Z94.4 "Selection, Care & Use of Respirators", as amended
- 7(5) The employer shall provide training and instruction to a worker in the proper care and use of respiratory equipment provided by the employer, in accordance with CSA Standard Z94.4.
- 7(6) If respiratory protection is required, the employer shall develop, implement and maintain in consultation with the Joint Occupational Health and Safety Committee, a respiratory protection program in accordance with CSA Z94.4, as amended. This program shall be documented and communicated to workers.

## **8.0 TRAINING AND EDUCATION**

- 8(1) The employer shall implement a comprehensive training program which shall outline the content, delivery, evaluation and periodic review of training. The training program shall be developed by the employer and submitted to the Department for review.
- 8(2) The content of the training program shall consist of both general and site-specific elements, including, but not limited to:
- a. Health hazards and potential risks of silica exposure
  - b. Nature of silica exposure (tasks, procedures, equipment, processes and areas which could result in / contribute to silica exposure)
  - c. Method of assessing and evaluating silica exposure
  - d. Control of silica hazards, including engineering, administrative and PPE
  - e. Safe work procedures for the handling, use, or release of silica
  - f. Personal hygiene procedures
  - g. Overview of Silica Management Program and its subcomponents
  - h. Administrative process related to medicals, handling of confidential information, communication, and follow-up.
- 8(3) The Joint Occupational Health and Safety Committee shall review the adequacy of the training program on an annual basis.

## **9.0 MEDICAL SURVEILLANCE**

- 9(1) The employer shall establish and maintain a system for the surveillance of the health of their employees arising from silica dust exposure in accordance with this Code. The guidelines as established in the “International Code of Ethics for Occupational Health Professionals” and the ILO document “Technical and Ethical Guidelines for Health Surveillance” shall serve as the founding principles for the health surveillance program.
- 9(2) The employer must provide information as required to the Division’s Chief Occupational Medical Officer on the surveillance of the health of their employees in accordance with this Code. The Chief Occupational Medical Officer reserves the right to prescribe additional medical surveillance requirements beyond those outlined in this section as deemed necessary.
- 9(3) Employees who do not require silica related health surveillance include:
- (a) those who normally works in an office or administration building, where there is no potential exposure to silica at levels above one half the TLV-TWA; or
  - (b) employees of a contractor or those who are self-employed, who work for a cumulative period not exceeding 3 months during a 12 month period.
  - (c) employees who work for a cumulative period not exceeding 3 months during a 12 month period,
- 9(4) Initial Health Assessments

The health assessment must be carried out under the direction of a Physician and must include:

- (a) Occupational history to determine years of exposure – to be updated annually. Inquiring about materials used, tasks performed, and occupations;
- (b) a respiratory questionnaire; (Nationally or Internationally accepted. i.e. American Thoracic Society)
- (c) a pulmonary/lung function test (FEV1, FVC, DLCO standardized for alveolar volume); in accordance with criteria established by the American Thoracic Society (Pulmonary technicians administering tests should be deemed competent by a Physician).
- (d) a chest x-ray (Full size PA view) classified according to ILO Classification, B Reader recommended.
- (e) medical history and physical examination emphasizing the respiratory system. This examination shall consider the need for PPD skin testing for tuberculosis.

9(5) Periodic Health Assessments:

(1) The frequency of chest x rays shall be:

- a) every 3-5 years or at the Physician's discretion assuming previous x-ray was normal, and less than 20 years of exposure.
- b) every 1-3 years with normal x ray and greater than 20 years of exposure (at the Physician's discretion).
- c) annually with x ray evidence of silicosis (ILO 1/0 or greater or ILO results A, B, or C large opacities), massive exposure, or positive PPD test
- d) a chest x ray shall be recommended upon termination of employment and this recommendation shall be documented in writing.

(2) The medical examination emphasizing the respiratory system, should be repeated annually.

(3) Pulmonary/lung functions tests including FEV1, FVC, DLCO standardized for alveolar volume, should be repeated annually.

(4) Skin testing for tuberculosis should be considered for all individuals with x-ray evidence of silicosis (1/0 or greater under ILO classification).

9(6) General Requirements for Silica Related Health Surveillance:

(1) Health surveillance shall be performed under the direction of a Physician adequately trained in the requisite testing or medical examinations.

(2) Where the employee is undergoing health surveillance for silica, the Physician shall ensure, as soon as practicable, that:

- a) the employee is notified of the results, together with any necessary explanation of these results;
- b) the employer is notified of the outcome of health surveillance and is advised on the need for remedial action; and
- c) the Chief Occupational Medical Officer is notified of any prescribed adverse health effect that has been detected which is consistent with exposure to silica.

(3) Where the employer has been advised by the Physician on the need for remedial action, the employer shall, as soon as practicable, re-evaluate the assessment of the employee's exposure to silica and implement the control measures required.

(4) Where a Physician has certified that an employee is unfit for further exposure to silica in the workplace or should only work under conditions specified by the Physician, the employer shall follow these recommendations. This may involve relocating the employee to suitable alternative work or changes to the work to prevent exposure. This shall be done only after consultation with the employee, employee representatives and the Physician.

(5) The employer shall ensure that health surveillance results obtained are retained as confidential records.

(6) The employer shall ensure employees are informed of the purpose and procedures for health surveillance and make arrangements for employees to participate in the health surveillance program.

(7) The results of silica related health surveillance shall be kept by the employer for at least 30 years from the date of the last entry made in the records.

(8) The Physician's responsibilities shall include but not be limited to:

- assist with the planning and implementation of silica health surveillance.
- maintain medical records and ensure their confidentiality.
- consult with employees where necessary about the results of an employees health surveillance and advise on any explanation and treatment, preventive measures or rehabilitation.
- decide if a clinical finding or examination result is abnormal, if a trend is significant and whether this indicates an unacceptable level of exposure to silica.
- notify the employer of the outcome of health surveillance and of any trends which indicate inadequate control and the need for remedial action (maintaining medical confidentiality).
- notify the Division's Chief Occupational Medical Officer of any adverse effect arising from silica exposure as required under the OHS Act/Regulations and WHSCC Act/Regulations.
- ensure that silica related health surveillance results are maintained as confidential medical records.
- provide the Division's Chief Occupational Medical Officer with all silica related health surveillance records in their possession on cessation of their medical practice.

(9) An employer shall pay the expenses of any health assessment required under this section of the Code.

9(7) Record Keeping / Reporting:

(1) The Division, under the direction of the Chief Occupational Medical Officer, shall ensure that a system is established for keeping silica related health surveillance records.

(2) The following protocol deals with the radiographic interpretation that forms part of the required medical examination:

WHSCC shall be provided with and shall maintain a file of the chest radiographs ordered by the appointed Physician for each worker requiring an x-ray.

- a) The current radiograph of each worker ordered by the medical examiner together with the relevant file of previous radiographs shall be forwarded to WHSCC for screening for radiologic appearances compatible with occupational lung disease in accordance with ILO Classification.
- b) WHSCC shall report all findings to the Physician. In addition, WHSCC shall report all dust related abnormal findings to the Chief Occupational Medical Officer of the Department of Government Services.
- c) A determination by the radiologist(s) of radiologic appearances compatible with occupational lung disease will constitute a prima facie case for recommending the further investigation of the worker.
- d) The Physician when advising the worker with radiographic appearances suspicious of occupational lung disease shall recommend that the worker register a claim with the WHSCC and the Physician shall notify the Chief Occupational Medical Officer to this effect.
- e) The WHSCC shall notify the Chief Occupational Medical Officer of all claims adjudicated for occupational lung disease and/or any restrictions placed on the workers' employment. WHSCC will also advise the COMO as to the degree of impairment.
- f) The chest x-ray films will be sent to the WHSCC for reading by a radiologist who reads to the ILO classification, while all other confidential medical information is to be maintained under the control of the patient's Physician. Employers must also ensure that any records of the results of outcomes of health surveillance are retained as confidential records.
- g) Employees may at any time apply to WHSCC or their employer for a copy of their silica related health surveillance records.
- h) The Chief Occupational Medical Officer shall provide a copy of an employee's silica health surveillance records in his or her possession, upon written request by the employee.
- i) If an employer at a mine receives information from an employee or a person on behalf of an employee that the employee has silica related disease, the employer must, as soon as practicable, notify the Chief Occupational Medical Officer in writing to that effect.
- j) A physician acting on behalf of a worker or the Chief Occupational Medical Officer, at their request, shall be provided by the employer with the worker's cumulative respirable silica dust exposure record.

## **10.0 RECORD KEEPING**

(1) The employer shall retain all pertinent records of air sampling and analysis to written quality control procedures, training requirements, listing of similar exposure groups, as well as relevant statistics. These records shall be available for inspection by OHS Officers as required by the Division.

(2) The employer shall retain copies of the dust exposure assessment and silica management program, as amended.

(3) The employer shall provide to the medical examiner and Chief Occupational Medical Officer, as requested, copies of worker's dust exposure records.

(4) The records of medical examinations and clinical tests of a worker obtained and made under this Regulation and of the exposures of the worker to airborne silica furnished by the employer shall be kept in a secure place for the longer of,

- (a) the period of 40 years from the time such records were first made;
- (b) the period of twenty years from the time the last of such records were made.

(5) Where the physician is no longer able to keep the medical records pertaining to occupational exposure, the Chief Occupational Medical Officer, of the Department of Government Services, is to be notified in advance to make alternate arrangements. The guideline from the College of Physicians and Surgeons of Newfoundland and Labrador (2005) regarding the retention and storage of medical records, shall serve as a guidance document in this regard.

(6) Copies of the exposure records and the records and results of physical examinations and clinical tests of a worker shall be given by the physician conducting the examinations or tests,

- (a) to the worker or his or her physician upon the request in writing of the worker; and
- (b) in the case of a deceased worker, to the next of kin or personal representative of the worker, upon the request in writing of such next of kin or personal representative.

(7) The employer shall report on an annual basis, or as directed, to the Division the personal dust sampling results required by this Code in an electronic format.

(8) An adequate program of data handling and verification will be required of each employer where a sampling program is required. These programs shall be submitted to the Division for review at their request.

(9) The employer shall compile and maintain the work history of each worker designated to be in a hazardous health occupation. This record shall be retained by the employer, extracts from which shall be forwarded to the Division when requested and the records shall be turned over to the Division at the time of cessation of operations.

