Scope
This protocol applies to: All Suncor workers in the Wood Buffalo Region (Suncor Oil Sands, In Situ, Major Projects, Fort Hills and East Tank Farm) engaged in any work that could potentially lead to silica exposure.

Purpose
To ensure consistent medical assessment of silica workers in accordance with the Alberta Occupational Health and Safety Code, Chemical Hazard Regulations for Silica.

Compliance
This document applies to work performed at Suncor Energy operating sites in the Wood Buffalo Region that includes Suncor Oil Sands, In Situ, Major Projects, Fort Hills and East Tank Farm.

Roles and Responsibilities
The following individuals and groups have the following roles and responsibilities:

Document Owner
- Ensures this document is reviewed according to the required revision cycle.
- Ensures the document is updated to accommodate changes to Suncor, provincial, and federal regulation.
- Ensures the document is updated to mitigate risks found as the result of an incident.

Document Approver
Manager, Health and Wellness Site Services
- Ensures this procedure is necessary and that it aligns with management and company direction.
Roles and Responsibilities

**Employer’s responsibilities**
- An employer must not coerce, threaten or force a worker into refusing part or all of a health assessment.
- An employer must pay the cost of the health assessment, medical interpretation and explanation required by this section.
- An employer must not make a deduction from the worker’s wages, salary or other remuneration or benefits for the time during which an exposed worker undergoes a health assessment, or travels to or from a health assessment.
- An employer must ensure that, if it is reasonably practicable, a health assessment is performed during normal hours of work.
- An employer must not make a deduction from the worker’s wages, salary or other remuneration or benefits for the time during which an exposed worker undergoes a health assessment, or travels to or from a health assessment.

**Health and Wellness**
- Silicosis is a reportable disease
- WCB claim will be filed when symptoms suggestive of Silicosis accompanying:
  - Chest X-ray (CXR)
  - Pulmonary Function Test (PFT)
  - Copy of Physicians Written Interpretation
  - Health history of worker

References
- LMS0099A Silica Code of Practice
- Alberta OHS Code: Part 4, Section 40 – Health assessments for workers exposed to asbestos, silica or coal dust
- LMS0052A Respiratory Protection Standard

Terms, Definitions and Acronyms
The following terms, definitions and acronyms are used in this procedure:

- **CXR** Chest X-Ray
- **PFT** Pulmonary Function Test (also known as spirogram)
- **OHS** Occupational Health and Safety
Procedure

1. The following Health Assessment shall be completed on all workers potentially exposed to silica as defined in the Suncor Silica Code of Practice (LMS0099A) within 30 days of becoming an exposed worker, then every 2 year after the first health assessment.

Responsibility  Step  Action

Health & Wellness Staff

1.1 Pre-placement and biennial health assessment will include the identity of the worker and the employer.

1.2 Chest x-ray (CXR): anterior/ posterior view.

1.3 Pulmonary Function Test (spirogram), conducted by a pulmonary function technician.

1.4 Assessment of workers fitness to wear a respirator and quantitative respirator fit testing (based on Suncor Respiratory Standard LMS0052A).

1.5 Respiratory history containing the following information:
   • Occupational exposure to silica, other industrial dust and carcinogens, with reference to occupational and non-work related activities.
   • Symptoms of respiratory compromise such as dyspnea, cough, sputum production, wheezing or chest tightness.
   • Incidence of asthma, chronic bronchitis, emphysema, lung cancer or other chronic lung disease
   • Smoking history

1.6 Exposed workers may refuse to undergo part or all of a health assessment by giving the employer a written statement refusing the test(s) (refer to Appendix A).

1.7 If a worker does not complete the CXR within 2 weeks of their Health Assessment a reminder letter will be sent to the worker. If not completed within 30 days or the worker refuses to sign a written statement refusing the test, it is deemed an incomplete assessment. The file will be sent to the Contract Occupational Health Physician for review with the CXR listed as incomplete.

1.8 When tests have been completed, the Contract Occupational Health Physician will review the following:
   • Results of Pulmonary Function Test
   • Results of CXR
   • Respiratory Assessment

Continued on next page
Responsibility | Step | Action
--- | --- | ---
Health & Wellness Staff | 1.9 | Physician Written Interpretation: (refer to Appendix B) the physician must give the written interpretation and explanation of the results of the health assessment to the worker within 60 days after the tests are completed.

|  |  | Worker education: provide and discuss “Silica Client Fact Sheet” (refer to Appendix C). Particular emphasis will be on risks, synergistic effect of smoking, personal hygiene and protective equipment. Stress the irreversible nature of Silicosis with protection and prevention as the only defense

|  |  | The records of the health assessment will be kept for not less than 30 years.

|  |  | An employer must not make a deduction from the worker’s wages, salary or other remuneration or benefits for the time during which an exposed worker undergoes a health assessment, or travels to or from a health assessment.

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End of Procedure

Feedback:

Please submit your feedback for this document to your Supervisor.

Comments on this document (Is this document up to date?):

Suggested Improvements:

Sign: ___________________________ Date: yyyy/mm/dd

Print:
Appendix A – Health Assessment Services Declined

Health Assessment Services Declined

Declining Health assessment for workers exposed to asbestos, silica or coal dust:

Pursuant to Section 40(9), Part 4 of the Alberta Occupational Health and Safety Code, an exposed worker has the right to refuse to undergo part or all of a health assessment for workers exposed to asbestos, silica or coal dust by giving the employer a written statement refusing it. A health assessment of the worker includes a chest x-ray, spirogram (pulmonary function test) and history of occupational exposures, past and current medical diagnoses of respiratory disease, and the workers smoking history.

This is to certify that I, ____________________________,

[Full Name] [Badge #] [Date of Birth (YY/MM/DD)]

am declining to undergo all or part of the following health assessment: ____________________________ offered to me by my employer pursuant to Section 40(2), Part 4 of the Occupational Health and Safety Code,

____________________________________________________________________________________

Examinee Name: ____________________________ Signature: ____________________________ Date: ____________________________

(YY/MM/DD)

Witness to complete:

Witness Name: ____________________________ Signature: ____________________________ Date: ____________________________

(YY/MM/DD)
Appendix B – Physician Written Interpretation

## Examinee Information

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<thead>
<tr>
<th>Name (Print)</th>
<th>Birthdate (yy/mm/dd)</th>
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<tr>
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<th>Badge Number</th>
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**Exposure:** Silica

### Physician Written Interpretation of Respiratory Surveillance Results

I have reviewed the report of your chest x-ray and lung function test and, for your information, the reports indicate the following:

**Chest X-Ray**

- [ ] No significant abnormalities were reported on your chest x-ray.
- [ ] The chest x-ray shows a condition which may be related to your work.
- [ ] The chest x-ray shows a condition which is probably not related to your work.
- [ ] The chest x-ray does not appear to have changed since your last one in.
- [ ] The chest x-ray appears to have changed since the last one in.

Next Steps Related to your Chest X-ray Results

- [ ] Normal Results: Follow-up in 2 years.
- [ ] Abnormal Results: Further investigation recommended. Please follow up with your family doctor. If unable to do so, please call the Health Centre (780-743-6076) to arrange further investigation. This information has been communicated to you by registered letter.
- [ ] Abnormal Results: Previously present; no further investigation required. Repeat medical in 2 years.
- [ ] Abnormal Results: Not related to silica/asbestos; no follow up required; copy of report provided for you to review with your family doctor.

### Lung Function Testing

- [ ] The lung function tests are in the normal range.
- [ ] The lung function tests are below the normal range.
- [ ] Your lung function test does not appear to have changed significantly since the last test.
- [ ] Several of the tests, over time, show that your lung function may be decreasing faster than the usual decrease associated with aging.

Next Steps related to your Lung Function Testing Results

- [ ] Normal Results: Follow-up in 2 years.
- [ ] Abnormal Results: Follow up required with your family doctor.
- [ ] Abnormal Results: Not related to silica/asbestos; no follow up required; copy of report provided for you to review with your family doctor.

### Medical Fitness for Respirator Use

- [ ] Cleared for respirator use.
- [ ] Some restrictions apply. Details:
- [ ] Respirator use is not permitted.
- [ ] Further follow-up required. Details:

### Employee Education

Educational material related to the hazards of airborne exposure has been provide to you. If you have additional questions or concerns please call the Health Centre (780-743-6074).

### Physician Comments

<table>
<thead>
<tr>
<th>Physician Name (Print):</th>
<th>Date (yy/mm/dd):</th>
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**WARNING** - Uncontrolled when printed. The current revision of this document is available in LiveLink.

Approved By: Jean Myers, Manager Health and Wellness Site Services, EHS
# Appendix C – Silica Client Fact Sheet

**Industrial Hygiene Monitoring**

Industrial Hygiene conducts air monitoring for silica on a regular basis. Personal air monitoring results are sent to the Health and Wellness Centre for inclusion on your medical record. Previous air monitoring for silica has occasionally exceeded the Occupational Exposure Limit of 0.05 mg/m³. Using recommended silica handling procedures and proper PPE effectively prevents any exposure to the worker.

**Industrial Hygiene Contact Information**

IH On-Call: 780-715-6642  
Or ihoncall@suncor.com

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**Silica Client Fact Sheet**

Health and Wellness Centre  
Contact Information:  
Suncor Health Centre  
Tel: 780-743-6004  
Area Health and Wellness Advisor  

September 2016

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**WARNING - Uncontrolled when printed. The current revision of this document is available in LiveLink.**

Approved By: Jean Myers, Manager Health and Wellness Site Services, EHS
Appendix C continued – Silica Client Fact Sheet

Silica at Suncor

Introduction
Silica is a mineral made up of silicon and oxygen in a variety of patterns. Of particular concern is crystalline silica, including quartz and cristobalite.

At Suncor Energy, there is the potential for exposure to respirable crystalline silica when working with any of the following materials: limestone, refractory, oil sands, sand, sand blasting material or tailings sand. Refractory material is typically found in high temperature furnaces. Tailings sand can generally be found at the tailings dykes, ponds, final tailings pump house. Sand from natural sand pits can be found at the Mine haul roads. Limestone is found at the Base Plant Flue Gas Desulphurization plant and Mine roads.

Health Effects
Acute health effects of high level silica exposure over short duration include irritation to the eyes, nose, throat and respiratory tract.

When low to moderate crystalline silica levels are inhaled over a long period (greater than 10 years), workers may develop one of the following health effects: silicosis, lung cancer, or chronic obstructive pulmonary disease. Early detection is critical as these health effects are irreversible.

Long-term health effect due to repeated exposure over 10 years or more could cause severe scarring of the lungs, known as silicosis. Symptoms include persistent coughing and difficulty breathing. This leads to an inability of the heart and blood vessels to pump blood through the scar tissue in the lungs and may ultimately cause heart failure.

Smoking adds to the lung damage caused by respirable crystalline silica exposure. Both also increase the risk of other diseases such as tuberculosis.

Medical Surveillance
Silica exposure workers (exposed to elevated concentrations of silica at least 50 working days in a 12 month period) will undergo a health assessment every two years for as long as the worker continues to be a silica exposed worker. The following will be conducted during a silica health assessment:

- Respiratory Fit Test
- Pulmonary Function Test
- Chest X-Ray

Collection of Health History, including:
- Previous occupational exposures to asbestos or other industrial dust or carcinogens
- Previous exposure to the above substances during non work related activities
- Symptoms that may indicate asbestosis, pneumoconiosis or cancer
- Past and current medical diagnoses of respiratory disease
- Smoking history

Completed health assessments are sent to Suncor’s physician for interpretation.
The following individuals have approved and signed this document.

UserName: Jean Myers (jmyers)
Title: Mgr Health & Wellness Site Services
Date: Tuesday, 28 February 2017, 03:10 PM Mountain Time
Meaning: Approver 1 Signed

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