

# Overview

Over the last five years, we've talked a lot about dust on site

- Talked at crew meetings
- Controlled dust by:
  - Adding four large capacity (240 ton) water trucks – units 801 - 804
  - Upgrading two 100-ton capacity water trucks – units 2005, 2006
  - Shutdown pad and motivator – another for 2010
  - Water tree strategy
  - Tested using oil on roads
- Monitored areas and people

One component of dust is silica.



## What is silica?

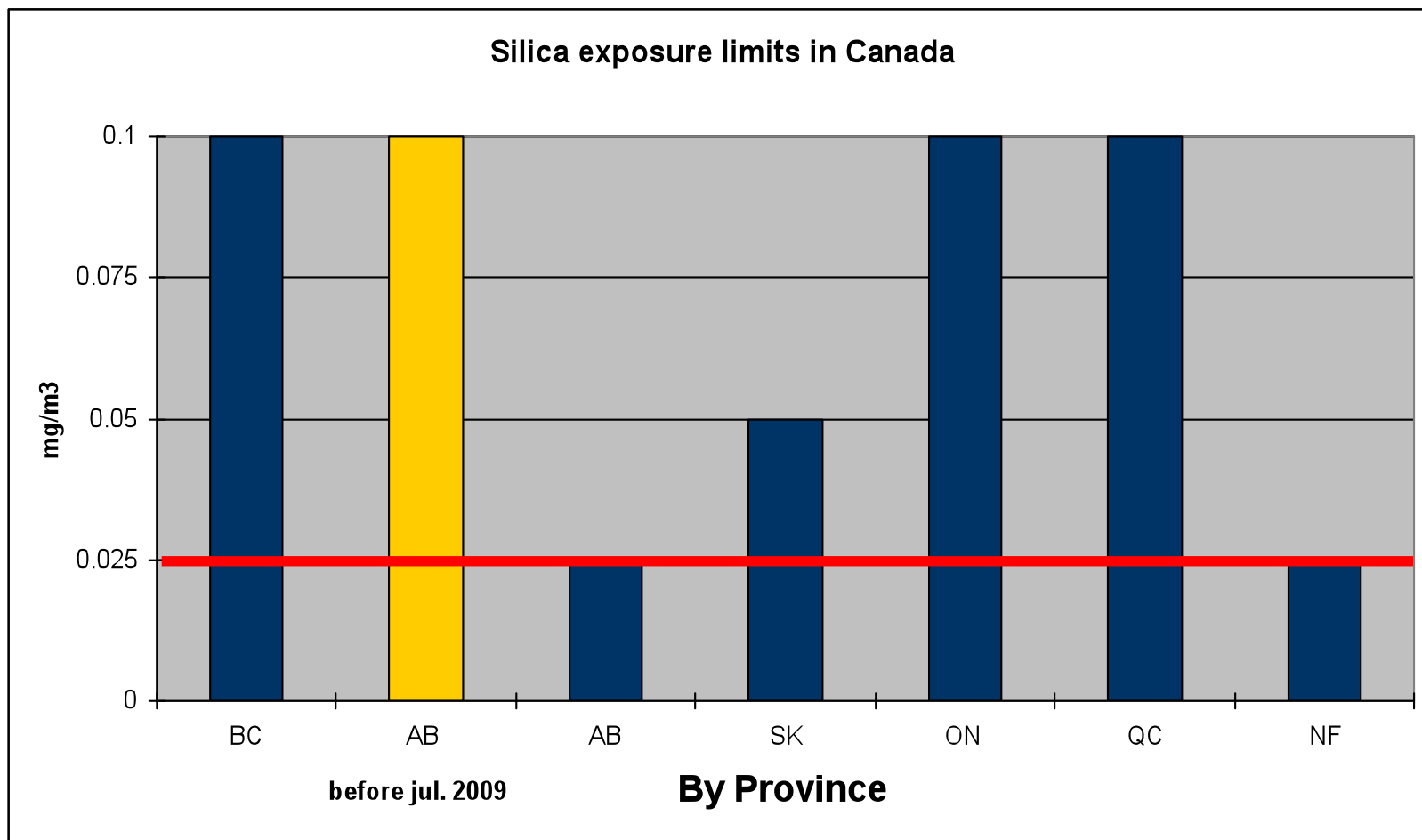
- The most abundant mineral on the Earth's crust
- Found nearly everywhere
- Common in mining, quarrying, tunneling and foundry operations
- Used everyday to make glass wear and pop bottles
- At Oil Sands: can be found in Ore, Overburden, Limestone and Sand

A possible long term health effect of silica is a disease called silicosis, which reduces lung function.

## Where we are today

- OHS has decreased Occupational Exposure Limits (OEL) for silica
  - From 0.1mg/m<sup>3</sup> to 0.025mg/m<sup>3</sup> for 8-hour
  - To 0.0125mg/m<sup>3</sup> for 12-hour
- Up until this decrease Suncor has always been in compliance with silica OELs
- As a result of the new limits, people in certain roles in the mine have tested as being over the new OELs
- We are taking immediate action to comply with the new limits

## 8 hr Occupational Exposure Limits – across Canada



## Monitoring at Suncor

- Testing in the mine in October
- Received draft results
- Conducted follow-up testing in January and received final results from first tests
- Some readings exceeded the OELs
  - Their one-day levels exceeded the new OELs
  - OHS only defines a worker as “exposed” after 30 days of exposure in a 12-month period
  - Even though these employees only tested over the limit for one shift we are treating them as exposed workers
  - We are talking to these employees one-on-one

# Monitoring Results – Jan. 11



## RESPIRABLE PARTICULATE AND CRYSTALLINE SILICA ASSESSMENT

Table 1: Respirable Particulate and Crystalline Silica Sampling Results

Date	Sample No.	Sample Type	Location/ Activity	Concentration (mg/m <sup>3</sup> ) <sup>(1)</sup>		
				Dust	Quartz	Cristobalite
Alberta 8-Hour OEL (mg/m <sup>3</sup> )				3	0.025	0.025
Alberta 12-Hour Adjusted OEL (mg/m <sup>3</sup> )					0.0125	0.0125
Jan. 11, 2010 Day Shift	0S10-0001	Occupational	Haul Truck Operator – 0145, Top Cut Area.	<0.10 <sup>(2)</sup>	<0.010	<0.010
	0S10-0002	Occupational	Grader Operator – 7318, Top Cut Area	<0.10	<0.010	<0.010
	0S10-0003	Occupational	Utility Worker, Shovel Areas	0.14	<b>0.016<sup>(3)(4)</sup></b>	<0.010
	0S10-0004	Occupational	Utility Worker, All Over Minesite	0.10	<b>0.020</b>	<0.010
	0S10-0005	Area	MDA – Centre Berm Divider	<0.10	<0.010	<0.010
	0S10-0006	Area	Top Cut Road Near 1609 Entry	<0.10	<0.010	<0.010
	0S10-0007	Area	Top of Athabasca Ave. – 1607 Shovel Entrance	<0.10	<0.010	<0.010
	0S10-0008	Area	Intersection of North Ring Road and Bitumen Blvd.	<0.10	<0.010	<0.010
	BLANK-1	NA <sup>(5)</sup>	NA	ND <sup>(6)</sup>	ND	ND

**Legend:**

- (1) mg/m<sup>3</sup> means milligrams of substance per cubic meter of air measured at ambient work site conditions
- (2) < Indicates results are below the level of quantitation of the analytical method. Level of quantitation: Dust: 0.10mg; Quartz: 0.010 mg; Cristobalite: 0.010 mg.
- (3) **shaded cell** Indicates concentration exceeds 50% of the 12-hour adjusted OEL
- (4) **shaded cell and bolded number** Indicates concentration exceeds the 12-hour adjusted OEL
- (5) NA means not applicable
- (6) ND means not detected

**DRAFT RESULTS**

# Monitoring Results – Jan. 12



## RESPIRABLE PARTICULATE AND CRYSTALLINE SILICA ASSESSMENT

Table 1: Respirable Particulate and Crystalline Silica Sampling Results (continued)

Date	Sample No.	Sample Type	Location/ Activity	Concentration (mg/m <sup>3</sup> ) <sup>(1)</sup>		
				Dust	Quartz	Cristobalite
<b>Alberta 8-Hour OEL (mg/m<sup>3</sup>)</b>				<b>3</b>	<b>0.025</b>	<b>0.025</b>
<b>Alberta 12-Hour Adjusted OEL (mg/m<sup>3</sup>)</b>					<b>0.0125</b>	<b>0.0125</b>
Jan. 12, 2010 Day Shift	OS10-0009	Occupational	Haul Truck Operator – 0145, 1603 Shovel, Top Cut Area.	<0.10 <sup>(2)</sup>	<0.010	<0.010
	OS10-0010	Occupational	Grader Operator – 7320, Athabasca Ave.	<0.10	<0.010	<0.010
	OS10-0011	Occupational	Utility Worker, Shovel Areas	<0.10	<0.010	<0.010
	OS10-0012	Occupational	Utility Worker, All Over Minesite	<0.10	0.010 <sup>(3)</sup>	<0.010
	OS10-0013	Area	Intersection of North Ring Road and Bitumen Blvd.	<0.10	<0.010	<0.010
	OS10-0014	Area	Top of Athabasca Ave. – 1607 Shovel Entrance	<0.10	<0.010	<0.010
	OS10-0015	Area	MD-9, Centre Berm Divider	<0.10	<0.010	<0.010
	OS10-0016	Area	Top Cut Road Near 1505 and 1609 Shovel.	<0.10	<0.010	<0.010
	BLANK-2	NA <sup>(4)</sup>	NA	ND <sup>(5)</sup>	ND	ND

**Legend:**

- (1) mg/m<sup>3</sup> means milligrams of substance per cubic meter of air measured at ambient work site conditions
- (2) < Indicates results are below the level of quantitation of the analytical method. Level of quantitation: Dust: 0.10mg; Quartz: 0.010 mg; Cristobalite: 0.010 mg.
- (3) **Shaded cell** Indicates concentration exceeds 50% of the 12-hour adjusted OEL.
- (4) NA means not applicable
- (5) ND means not detected

**DRAFT RESULTS**

# Monitoring Results – Jan. 13



## RESPIRABLE PARTICULATE AND CRYSTALLINE SILICA ASSESSMENT

Table 1: Respirable Particulate and Crystalline Silica Sampling Results (continued)

Date	Sample No.	Sample Type	Location/ Activity	Concentration (mg/m <sup>3</sup> ) <sup>(1)</sup>		
				Dust	Quartz	Cristobalite
<b>Alberta 8-Hour OEL (mg/m<sup>3</sup>)</b>				<b>3</b>	<b>0.025</b>	<b>0.025</b>
<b>Alberta 12-Hour Adjusted OEL (mg/m<sup>3</sup>)</b>					<b>0.0125</b>	<b>0.0125</b>
Jan. 13, 2010 Day Shift	OS10-0017	Occupational	Grader Operator – 7319, South Ring Road, Near Top Cut Road.	<0.10 <sup>(2)</sup>	<0.010	<0.010
	OS10-0018	Occupational	Utility Worker, All Over Minesite	0.21	<0.010	<0.010
	OS10-0019	Occupational	Grader Operator – 7309, Top Cut Area	<0.10	<0.010	<0.010
	OS10-0020	Occupational	Haul Truck Operator, Top Cut Area	<0.10	<0.010	<0.010
	OS10-0021	Area	Intersection of North Ring Road and Bitumen Blvd	<0.10	<0.010	<0.010
	OS10-0022	Area	Top of Athabasca Ave. – 1607 Shovel Entrance	<0.10	<0.010	<0.010
	OS10-0023	Area	MD-9, Centre Berm Divider	<0.10	<0.010	<0.010
	OS10-0024	Area	Top Cut Road Near 1505 and 1609 Shovel	<0.10	<0.010	<0.010
	BLANK-3	NA <sup>(3)</sup>	NA	ND <sup>(4)</sup>	ND	ND

**Legend:**

- (1) mg/m<sup>3</sup> means milligrams of substance per cubic meter of air measured at ambient work site conditions
- (2) < indicates results are below the level of quantitation of the analytical method. Level of quantitation: Dust: 0.10mg; Quartz: 0.010 mg; Cristobalite: 0.010 mg.
- (3) NA means not applicable
- (4) ND means not detected

**DRAFT RESULTS**

# Monitoring Results – Jan. 14



## RESPIRABLE PARTICULATE AND CRYSTALLINE SILICA ASSESSMENT

Table 1: Respirable Particulate and Crystalline Silica Sampling Results (continued)

Date	Sample No.	Sample Type	Location/ Activity	Concentration (mg/m <sup>3</sup> ) <sup>(1)</sup>		
				Dust	Quartz	Cristobalite
Alberta 8-Hour OEL (mg/m <sup>3</sup> )				3	0.025	0.025
Alberta 12-Hour Adjusted OEL (mg/m <sup>3</sup> )					0.0125	0.0125
Jan. 14, 2010 Day Shift	OS10-0025	Occupational	Grader Operator – 7319, South Ring Road, Near Top Cut Road.	<0.10 <sup>(2)</sup>	<0.010	<0.010
	OS10-0026	Occupational	Haul Truck Operator, Top Cut Road Area	<0.10	<0.010	<0.010
	OS10-0027	Occupational	Utility Worker, All Over Minesite	0.15	<b>0.027</b> <sup>(3),(4)</sup>	<0.010
	OS10-0028	Occupational	Grader Operator – 7320, Top Cut Area	0.14	<0.010	<0.010
	OS10-0029	Area	Intersection of North Ring Road and Bitumen Blvd.	<0.10	<0.010	<0.010
	OS10-0030	Area	Top of Athabasca Ave. – 1807 Shovel Entrance	<0.10	<0.010	<0.010
	OS10-0031	Area	MD-9, Centre Berm Divider	<0.10	<0.010	<0.010
	OS10-0032	Area	Top Cut Road Near 1505 and 1809 Shovel	<0.10	<0.010	<0.010
	BLANK-4	NA <sup>(5)</sup>	NA	ND <sup>(6)</sup>	ND	ND

**Legend:**

- (1) mg/m<sup>3</sup> means milligrams of substance per cubic meter of air measured at ambient work site conditions
- (2) < results are below the level of quantitation of the analytical method. Level of quantitation: Dust: 0.10mg; Quartz: 0.010 mg; Cristobalite: 0.010 mg
- (3) **shaded cell** indicates concentration exceeds 50% of the 12-hour adjusted OEL
- (4) **shaded cell and bolded number** indicates concentration exceeds the 12-hour adjusted OEL
- (5) NA means not applicable
- (6) ND means not detected

**DRAFT RESULTS**

# Monitoring Results – Jan. 15



## RESPIRABLE PARTICULATE AND CRYSTALLINE SILICA ASSESSMENT

Table 1: Respirable Particulate and Crystalline Silica Sampling Results (continued)

Date	Sample No.	Sample Type	Location/ Activity	Concentration (mg/m <sup>3</sup> ) <sup>(1)</sup>		
				Dust	Quartz	Cristobalite
<b>Alberta 8-Hour OEL (mg/m<sup>3</sup>)</b>				<b>3</b>	<b>0.025</b>	<b>0.025</b>
<b>Alberta 12-Hour Adjusted OEL (mg/m<sup>3</sup>)</b>					<b>0.0125</b>	<b>0.0125</b>
Jan. 15, 2010 Day Shift	0S10-0033	Occupational	Grader Operator – 7319, South Ring Road, Near Top Cut Road	<0.10 <sup>(2)</sup>	<0.010	<0.010
	0S10-0034	Occupational	Haul Truck Operator, Top Cut Road Area, 1809 Shovel	<0.10	<0.010	<0.010
	0S10-0035	Occupational	Grader Operator – 7316, Athabasca Ave. Near Top Cut Area	<0.10	<0.010	<0.010
	0S10-0036	Occupational	Haul Truck Operator, Top Cut Road Area, 1808 Shovel	<0.10	<0.010	<0.010
	0S10-0037	Area	Intersection of North Ring Road and Bitumen Blvd.	<0.10	<0.010	<0.010
	0S10-0038	Area	Top of Athabasca Ave. – 1807 Shovel Entrance	<0.10	<0.010	<0.010
	0S10-0039	Area	MD-9, Centre Berm Divider	<0.10	<0.010	<0.010
	0S10-0040	Area	Top Cut Road Near 1505 and 1809 Shovel	<0.10	<0.010	<0.010
	BLANK-5	NA <sup>(3)</sup>	NA	ND <sup>(4)</sup>	ND	ND

**Legend:**

- (1) mg/m<sup>3</sup> means milligrams of substance per cubic meter of air measured at ambient work site conditions
- (2) < results are below the level of quantitation of the analytical method. Level of quantitation: Dust: 0.10mg; Quartz: 0.010 mg; Cristobalite: 0.010 mg
- (3) NA means not applicable
- (4) ND means not detected

# What are we doing today?

## Monitoring

- Conducting more testing across site
- Getting employees involved
- Worker and area monitoring

## Hygiene

- Creating Silica Code of Practice
- Developing robust mitigation plan

## Working Together

- Working with union
- Working with industry (not just a Suncor or even an Oil Sands issue)

## Communication

- One on one meetings with employees over limits
- Points of Contact (JHS Rep)
- On going conversations

## Interim Measures

- Disposable respirators for workers outside for more than 4 hours
- Disposable respirators for employees who want them

## Putting on your approved respirator

1. Pre-stretch top and bottom straps
2. Cup respirator in hand, with nosepiece at fingertips. Allow headbands to hang below hand
3. Position respirator under chin with nosepiece up
4. Pull top strap over head resting it high on top back of head
5. Pull bottom strap over head and position around neck below ears
6. Place fingertips from both hands on top of metal nosepiece
7. Use two hands, mould nose area to shape of your nose by pushing inward while moving fingertips down both sides of nosepiece.

**Workers must be properly shaved to provide adequate facial seal**

## Communications Protocol

- We want employees to feel informed about silica, but it's difficult to tell everyone at the same time.
- As we learn more information we will:
  - Share information with union management
  - Share updates with workers in high potential areas and the JHS reps
  - Then update the broader employee group

## Questions later?

- **Resources**

- **Contact your supervisor or manager**
- **[employeehotline@suncor.com](mailto:employeehotline@suncor.com)**
- **Employee hotline: 780-743-6992**

**Questions?**

