



Healthy Workers in Healthy Workplaces

MSDs and Respiratory Hazards Initiative

September 1st to December 27, 2019

Mining Program

| September 10, 2019

Welcome to the webinar: Be prepared for the MOL MSDs and Respiratory Hazards Initiative

- Thank you for joining us!
- The webinar will begin at **10:00 a.m. Eastern Time**
- For audio, please use headphones or ear buds.
- Please note the **‘CHAT BOX’** to the right of the screen and feel free to type in your questions at any time during the presentation.
- We will have the phone lines on mute for the presentation,
- Questions will be addressed at the end of the presentation.
- For your reference, this presentation will be emailed to attendees within one business day of the webinar.
- For assistance with the webinar, phone the WSN office at:
1-888-730-7821 ext. 0

Webinar co-hosts

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Workplace Safety North

(www.workplacesafetynorth.ca)

- An independent not-for-profit, Workplace Safety North (WSN) is one of four provincial health and safety associations, and the only one based in the north.
- A leading provider of health and safety services, WSN offers Ministry-approved workplace health and safety training and consulting for the mining and forest products industries, as well as for businesses across northern Ontario.

Ministry-approved courses:

- Joint Health and Safety Committee Certification
- Occupational Health and Safety Representative
- Working at Heights Safety Training
- Mining and forestry common core mandatory skills training



Infrastructure Health and Safety Association

(www.ihsa.ca)

- IHSA is a safe workplace association designated under section 22.5 of the Occupational Health and Safety Act.
- The IHSA provides health and safety training and other services to 28 Rate Groups under the WSIB:
 - Construction
 - Electrical and Utilities
 - Ready-mix concrete
 - Natural gas
 - Transportation
 - Aggregates/Surface mining



Disclaimer

- The purpose of today's presentation is to assist the workplace parties in understanding their obligations under the Occupational Health and Safety Act (OHSA) and its regulations. It is not intended to replace the OHSA or the regulations, and reference should always be made to the official versions of the legislation.
- It is the responsibility of the workplace parties to ensure compliance with the legislation and the presentation does not constitute legal advice. If you require assistance with respect to the interpretation of the legislation and its potential application in specific circumstances, please contact your legal counsel.
- Ministry of Labour inspectors will apply and enforce the OHSA and its regulations based on the facts as they may find them in the workplace. This presentation does not affect their enforcement discretion in any way.

Overview

- Safe At Work Ontario
- Healthy Workers in Healthy Workplaces -MSDs and Respiratory Hazards Initiative
- What to Expect During an Inspection
- Focus and key priorities
- Awareness Month 2019 (October 2019)
- Resources and Contact Centre Information
- Q and A

Safe At Work Ontario

- The goal of Ontario's *Occupational Health and Safety Act* (OHSA) is to keep workers safe and healthy. The OHSA sets out the health and safety requirements for workplaces across Ontario.
- Safe At Work Ontario is the Ministry of Labour's compliance strategy that helps promote safe and healthy workplace practices.

Healthy Workers in Healthy Workplace MSDs and Respiratory Hazards – WHEN?

This initiative is taking place in all sectors (i.e., construction, health care, industrial and mining).

Education, Outreach and Awareness Phase - September 1 to December 27, 2019

- Compliance support and awareness campaign with our health and safety partners

Inspections Blitz Phase - October 1 to December 27, 2019

- Focused inspections campaign

[Provincial health and safety initiatives in 2019-20](#)

Healthy Workers in Healthy Workplace MSDs and Respiratory Hazards (Why?)

Upon consultation with system partners and stakeholders across Ontario, MSDs and respiratory hazards have been identified as priority initiative issues.

MSD Hazards:

- MSDs are the most common lost-time injury claim accepted by the WSIB in Ontario
- For mines in 2017, MSDs represented 33% of all accepted WSIB lost-time claims, which consisted of:
 - 113 claims
 - over 3,500 days lost from work
 - \$790,000 in direct WSIB costs
- In 2018, Hand-arm Vibration Syndrome (HAVS) was the second most common occupational disease experienced by mining workers

Healthy Workers in Healthy Workplace MSDs and Respiratory Hazards (Why?)

Respiratory Hazards:

- Between 2008 and 2017, long latency illnesses accounted for the largest proportion of allowed WSIB benefit costs. 70% of allowed long latency illness claims over the past ten years come from: lung cancer, pleural plaques, mesothelioma, asbestosis and chronic obstructive pulmonary disease, which are all associated with respiratory exposures.
- Cancer Care Ontario (CCO) and the Occupational Cancer Research Centre (OCRC) estimate that exposure to asbestos, diesel engine exhaust, crystalline silica and welding fumes cause approximately 1300 cancer cases each year (2017).

Compliance Assistance – Provides MOL the opportunity:

- to work closely with its health and safety partners including labour and employer groups to raise awareness and develop compliance support resources for workplace parties.
- to promote compliance with the OHSA and its regulations.

What to Expect During an Inspection

- During a proactive inspection, inspectors will enforce the OHSA based on the facts at the time of the inspection.
- An inspector has the right to enter and be granted access to all areas of the workplace.
- When a ministry occupational health and safety inspector arrives at your workplace, they will introduce themselves, explain the reason for the visit and ask to have a worker and management representative accompany them during the inspection.
- The Inspector may conduct an administrative review and a physical inspection of the workplace.

What to Expect During an Inspection Cont'd..

If an inspector finds a contravention under the OHSA:

- The inspector will explain the contravention and may refer the workplace to an HSA for compliance assistance.
- An order may also be issued and the employer must comply.
- Inspectors issue stop work orders where an immediate threat to worker health and safety has been observed.
- A field visit report outlining the details of the visit including orders issued, will be provided to the employer.

For more information, please visit:

<https://www.ontario.ca/page/occupational-health-and-safety-inspections-and-investigations>

Musculoskeletal Disorders (MSDs)

MSD Hazard Focus

Manual Materials Handling and Hand-Arm Vibration

Mining inspectors will visit mines and mining plants to check:

- if and where MSDs are occurring
- JHSC meeting minutes to see if any MSD hazards have been identified
- if workers have been provided with information and instruction regarding MSD hazards in their work
- that manual materials handling duties are being performed in a safe manner
- if workers are being exposed to hand-arm vibration, and if so, what precautions are being taken

MSD Hazard Focus: Administrative Review

Review Injury/Illness History, Reporting, Investigation (OHSA s. 51 and 52, Reg. 854 s. 21)

- Hand-Arm Vibration Syndrome – Occupational Illness
- JHSC Minutes: Review

Measures and procedures: protection from MSD hazards – for example

- Manual Materials Handling procedures
- Purchasing: Consideration of handling demands, vibration

Information and Instruction (OHSA s. 25(2)(a))

- MSD hazard recognition

MSD Hazard Focus: Administrative Review

Acquaint with any Hazard in the Work (OHSA s. 25(2)(d))

- Worker or person in authority over a worker acquainted with MSD hazards in their work

Risk assessment (Reg. 854 s. 5.1, 5.2 and 5.3)

- Are MSD hazards considered in the Risk Assessment?
 - Manual Materials Handling
 - Work postures
 - Hand-Arm Vibration

MSD Hazard Focus: Manual Materials Handling

Items are being manually handling in a safe manner

- *Employers shall take every precaution reasonable in the circumstances for the protection of the worker (OHSA s. 25(2)(h))*
- *Employers shall maintain equipment, materials and protective devices in good condition (OHSA s. 25(1)(b))*
 - Is equipment being maintained, such as wheels on a cart, to ensure manual handling demands are minimized?
- *Employers shall provide information, instruction and supervision to a worker to protect the health or safety of the worker (OHSA s. 25(2)(a))*
 - Training provided to workers and supervisors for safe lifting / handling methods?

Access to a work place for Manual Material Handling

- *Safe means of access to a work place (Reg. 854 s. 46)*

MSD Hazard Focus: Manual Materials Handling

Inspections during the initiative will focus on:

- Storage and transport of material
 - Layout and assistive devices to control handling demands
- Material handling practices
 - Are procedures, assistive devices in place
- Access for material handling without undue effort or awkward postures
 - Condition of walkways
 - Suitable design of access systems: widths, heights

Consider set-up, production, maintenance activities

MSD Hazard Focus: Hand-Arm Vibration

- *Employers shall take every precaution reasonable in the circumstances for the protection of the worker (OHSA s. 25(2)(h))*
- *Employers shall provide information, instruction and supervision to a worker to protect the health or safety of the worker (OHSA s. 25(2)(a))*
 - Hazard identification, good work practices
- *Employers shall maintain equipment, materials and protective devices in good condition (OHSA s. 25(1)(b))*
 - Condition of tools, bits to reduce vibration

Inspections during the blitz will focus on:

- Are hand-arm vibration hazards present, identified?
- Are workers instructed in hazard identification and good practices?
- Are tools and equipment suitable and maintained?

MSD Resources

Ministry of Labour:

- [Ergonomics in the Workplace: www.Ontario.ca/ergonomics](http://www.Ontario.ca/ergonomics)
- [Ergonomics in the Workplace: Understanding the Law](#)
- [Manual Materials Handling](#)
- [Hand-Arm Vibration](#)

Other:

- [MSD Prevention Guideline for Ontario](#)
- [Centre for Research Expertise in Occupational Disease – HAVS](#)
- [European Union Guide to Good Practice on Hand-Arm Vibration](#)
- [CCOHS – Vibration Health Effects](#)

MSD Resources (Cont.)

Infrastructure Health and Safety Association (IHSA):

- [IHSA MSD Resources](#)
 - Includes various resources for MSDs such as prevention toolbox, prevention strategy, resource manual, training, safety talks, products, articles, statistics and resources, etc.
- IHSA MSD Training:
 - [Ergonomics: Manual Material Handling Workshop](#)
 - [Ergonomics: Implementing into the Workplace](#)
 - [Ergonomics for Skilled Trades – Practical Guidelines and Tips](#)
- IHSA MSD Products:
 - [Back Care and Materials Handling](#)
 - [FD038 - Back Care for Construction DVD](#)
 - [Safety Talks – for H & S Meetings](#)

MSD Resources (Cont.)

Workplace Safety North (WSN):

- [WSN MSD Web Resources](#)
 - Includes various resources such as leading practices, guidelines, office ergonomics, physical demands analysis, posters, safety talks and training
- [Tips for Eliminating and Controlling MSD Hazards](#)
- [Guideline for MSD Prevention Program](#)

Respiratory Hazard Focus

Respiratory Hazard Focus

Respiratory hazards for all sectors

- Construction: respiratory hazards (e.g. silica and asbestos)
- Health Care: respiratory hazards (e.g. cleaning agents as lung irritants and lung sensitizers)
- Industrial: respiratory hazards (e.g. diesel particulates)
- Mining: respiratory hazards for underground and surface mining (e.g. diesel particulates, silica, cyanide, SO₂)

Respiratory Hazard Focus

INSPECTIONS DURING THE BLITZ WILL FOCUS ON:

Mines, Mill and Smelter assessments for designated substances- Designated substances that may be found in Mines, Mills and Smelters include arsenic, asbestos (tramp material), isocyanates (maybe bolting), lead and silica. Inspectors will check:

Assessment/s

- Examine whether there have been any increases in production or changes in the process that may affect the current conclusions of the assessment, such that a re-assessment would be required.

Control program/s

- Ensure it includes:
- Engineering controls, work practices, hygiene facilities
- Methods and procedures to monitor airborne concentrations and worker exposure
- Worker training

Respiratory Hazard Focus

INSPECTIONS DURING THE BLITZ WILL FOCUS ON:

Exposure Sampling (Personal, Area)- Inspectors will check to see that employers are sampling workers who may be at risk of exposure as required by OHSA and its regulations.

- Does the sampling program match what is in the control program?
- How many occupations are part of the program?
- What is the frequency of personal and area sampling?
- Is there any description of activities during worker sampling?
- What happens if the limits are exceeded?
- Are there any other substances (in addition to designated substances) that are sampled (silica, total carbon, nitrogen dioxide, carbon monoxide, cyanide, SO₂)?

Respiratory Hazard Focus

Some examples of key occupational health hazards that can be found in the workplace, and their associated activities, include but not limited to:

- blasting gases: carbon dioxide, carbon monoxide, oxides of nitrogen, ammonia, and sulfur dioxide
- diesel emissions: elemental/organic carbon, carbon monoxide, nitrogen dioxide, sulfur dioxide
- silica, general dust from drilling, mucking, rock breaking
- metals, sulfur dioxide, dust from refining
- welding fumes, from the cutting and heating process

Respiratory Hazard Focus

Methods of eliminating or mitigating these hazards include:

- engineering controls that prevent worker exposure to chemical or biological hazards in underground and surface mines
- providing adequate ventilation that eliminates or reduces exposure to airborne hazards to within acceptable limits
- prescribed personal protective equipment (PPE) for specific tasks
- worker training in recognition of occupational disease hazards and selection, use and care of personal protective equipment (PPE) as prescribed

Respiratory Hazard Focus

Regulation 854 Mines and Mining Plants

- **Section 5.1, 5.2 and 5.3** requiring employers to conduct a risk assessment and develop, in consultation with the joint health and safety committee or health and safety representative, measures to eliminate or control identified hazards and potential hazards in the workplace.
- **Section 183** requires employers to maintain records/a chart of procedures relating to ventilation where diesel equipment is operating.
- **Section 183.1** sets out the minimum airflow requirements where diesel equipment is operating, and goes further to say that the flow of air must reduce the concentration of toxic substances to prevent exposure of a worker to a level in excess of the limits prescribed under section 4 of Regulation 833.
- **Subsection 183.1(5)** prescribes limits of total carbon and elemental carbon.
- **Section 183.2** sets out requirements for the testing for the volume of air flowing and quality of air in mines and testing of undiluted exhaust from diesel-powered equipment.

Respiratory Hazard Focus

- **Section 252** sets out requirements for ventilation for mining plant buildings.
- **Section 253** sets out the underground ventilation system requirements.
- **Section 266** requires that dust or other material that is likely to cause a hazard by becoming airborne shall be removed with a minimum of delay.
- **Sections 267, 268, & 269** include requirements for: annual surveys; assessments and monitoring of hazardous elements and compounds; and chemical records and records of injury
- **Section 286** sets out requirements for make up air supply and recirculated air.
- **Sections 287-293** includes requirements to monitor and manage radon emissions.

Respiratory Hazard Focus

Reporting Requirements:

Occupational Health and Safety Act (OHSA)

- **Section 52(2)** of the OHSA requires that if employers are advised by or on behalf of a worker that the worker has an occupational illness or that a claim in respect of an occupational illness has been filed with the Workplace Safety and Insurance Board, by or on behalf of the worker, the employer shall give notice in writing, within four days of being so advised to a director, the committee or health and safety representative and to the trade union, if any, containing such information and particulars as are prescribed.
- **Subsection 52(3)** provides that subsection (2) applies with all necessary modifications if an employer is advised by or on behalf of a former worker that the worker has or had an occupational illness or that a claim in respect of an occupational illness has been filed with the Workplace Safety and Insurance Board by or on behalf of the worker.
- For mines and mining plants, the content of the notice required under section 52 of the OHSA is set out in subsection 21(2) of Regulation 854.

Respiratory Hazard Focus

Requirements: Other OHS Regulations

Regulation 833 (Control of Exposure to Biological or Chemical Agents)

- Sets out occupational exposure limits (OELs) and requires that employers reduce risks of these hazards using a hierarchy of controls

Regulation 490 (Designated Substances)

- Includes employer requirements to take every precaution reasonable in the circumstances with regards to exposures to certain designated substances

Regulation 860 (WHMIS)

- Sets out requirements for labels, safety data sheets and worker education on hazardous materials, and worker training on safe use, storage, handling and disposal

Respiratory Hazard Focus

Requirements: *Occupational Health and Safety Act (OHSA)*

Additional Duties for Employers, Supervisors and Workers

- Sections 25, 26, 27, and 28 of the OHSA set out the general duties of all employers, supervisors, and workers, including those related to provision of information and instruction, use of personal protection equipment (PPE).

Respiratory Hazards Resources

Workplace Safety North:

- [Mining Workplace Environment Checklist](#) (2015, 72 pg. Free Download)
- [Respiratory Hazards – Mining](#) (short video on respiratory hazards in mining)
- [Free training resources on diesel emission hazards for all industries](#)
- [Diesel Exhaust Infographic - Health Effects](#) (free download)
- [Infographic: Proper use of respirators in mines and mining plants](#) (free download)
- [Air Contaminants Safety Meeting Talk](#)
- [WSN - Auxiliary Mine Ventilation Manual](#) (version 1.6, 182 pg.) Price \$50 Hard copy.
 - Manual is intended to provide overview of Auxiliary ventilation design, effective operation and management of auxiliary ventilation systems primary for underground hard rock operations.
- [WSN Industrial Hygiene, Radon and Ventilation Assessment](#) (services provided by WSN)
 - WSN offers a variety of mining-specific health and safety assessments for a fee such as air sampling, radon and ventilation.
- [Mining Common Core for First Line Supervisors-Mining](#) (training provided by WSN)
 - [Supervisor Common Core: Occupational Health & Industrial Hygiene \(mining\)](#)
 - [Supervisor Common Core: Mine Ventilation - Underground \(mining\)](#)

Respiratory Hazards Resources (Cont.)

Infrastructure Health and Safety Association (IHSA):

- [IHSA Respiratory Hazards Resources](#)
- [Exposures to Hazardous Agents by Industry](#)
- [Training and Awareness - Occupational Health Risk Profiles by Trade](#)
- PPE and Fit Testing:
 - [Respirators - Types](#)
 - [Respirators - Fit](#)
 - [Respirators – Maintenance](#)
- Engineering Controls and Work Practices:
 - [Construction Health and Safety Manual: Mould](#)
 - [Silica - Cutting and grinding concrete](#)
 - [Spray Polyurethane Foam Insulation](#)

Respiratory Hazards Resources (Cont.)

Other:

- [Prevent Occupational Disease](#)
 - Resources on different Occ Disease including Respiratory Hazards)
- [Dust Control Handbook for Industrial Minerals Mining and Processing](#)
 - CDC-NIOSH 2nd Edition March 2019 - free download)
- [Good Practice Guidance on Occupational Health Risk Assessment-ICMM](#)
- [WHMIS - A guide to the legislation](#)

Ministry of Labour Resources **COMPLIANCE**



- [Compliance Plans](#)
- [Regulations for Mines and Mining Plants](#)
- [Occupational Disease in Mines](#)
- [Designated Substances Regulation 490/09](#)
- [Control of Exposure to Biological or Chemical Agents Regulation 833](#)
- [Workplace Hazardous Materials Information System \(WHMIS\) Regulation 860](#)
- [Sampling for Diesel Particulate in Mines](#)
- [Testing Undiluted Exhaust in Underground Mines](#)
- [Final Report: Mining Health and Safety Prevention Review](#)

Health and Safety Awareness

- October:
 - Global Ergonomics Month
 - OHCOW's Occ-tober occupational disease conference
- November:
 - Lung Cancer Awareness Month

**For compliance resources please visit:
Ontario.ca**

Questions?

Ontario provides a toll-free province-wide telephone number to report unsafe work practices and workplace health and safety incidents. Call the Ministry of Labour Health & Safety Contact Centre at **1-877-202-0008**.

Call any time to report **critical injuries, fatalities or work refusals**.

For general inquiries about workplace health and safety, call between **8:30 a.m. and 5:00 p.m., Monday to Friday**.



Thank You

Thank you for attending today's webinar and helping make workplaces safer.

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