



Forest Products webinar: How to prepare for Ontario workplace inspections on hazardous materials training and worker exposure to chemical agents

Occupational Hygiene Workplace Inspection Campaigns 2024-2025

June 12, 2024

Welcome!

- Thank you for joining us! The webinar starts at 1:30 pm ET.
- Please use Q&A at the bottom of your screen for speaker questions and we will answer them at the end of the webinar.
- Please use chatbox for commentary or technical questions.
- A link to the webinar recording, a copy of the presentation slides, and reference material will be emailed to all registrants within a few days.

Webinar hosts

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Ministry of Labour, Immigration, Training and Skills Development

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FAIR, SAFE AND HEALTHY WORKPLACES DIVISION



Our Vision

We envision an Ontario that is the most attractive place to work in the world because every employee is treated fairly and comes home safely.

Our Mission

We set, communicate and enforce legislation to help make Ontario workplaces fair, safe and healthy. Through our professionalism, innovation and collaboration, we earn and maintain the public trust.

Ministry of Labour, Immigration, Training and Skills Development

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 this 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, Immigration, Training and Skills Development (MLITSD) 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.

Agenda



- MLITSD Occupational Hygienists
- 2024-2025 Workplace Inspection Campaigns
- Worker Exposure to Chemical Agents
- Updated WHMIS Training Requirements
- Training and Resources

MLITSD Occupational Hygienists

- Work in the Specialized Professional Services Unit.
- Provide technical support to ministry inspectors.
- Conduct inspections, investigations and industry-wide air quality surveys to identify and assess the risk factors that contribute to occupational diseases and illnesses in workers.
- Focus on industrial hygiene to protect workers from chemical, biological and physical agents that can make them ill.
- Follow the annual [health and safety inspection compliance plan](#).

MLITSD Occupational Hygienists

- Focus on these regulations:
 - [O. Reg. 833/90 - Control of Exposure to Biological or Chemical Agents](#)
 - [O. Reg. 860/90 - Workplace Hazardous Materials Information System \(WHMIS\)](#)
 - [O. Reg. 381/15 - Noise](#)
 - [O. Reg. 632/05 - Confined Spaces](#)
 - [O. Reg. 278/05: Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations](#)
 - [O. Reg. 490/09 - Designated Substances](#)
 - [O. Reg. 861: X-Ray Safety](#)
 - Sections of the industrial, mining and construction regulations that deal with occupational hygiene issues.

2024-2025 Compliance Plan

Occupational Hygiene Inspection Campaigns

Phases

1. Education and Outreach: April 1, 2024 to March 31, 2025

MLITSD hygienists may inform workplace parties that this campaign is taking place, with inspections starting in July. The MLITSD health and safety partners (WSPS, IHSA, PSHSA, WSN, OHCOW) will also be promoting the campaign.

2. Enforcement: July 2, 2024 to March 31, 2025

MLITSD hygienists will conduct proactive inspections in workplaces where the relevant regulations apply.

There is no specific focus on any particular exposure, job task or industry. Forestry workplaces such as sawmills, pulp and paper mills, silviculture and logging operations are included.

2024-2025 Compliance Plan

Occupational Hygiene Inspection Campaigns

Two Campaigns:

- Worker exposure to chemical agents in the workplace
- WHMIS training based on the amended Hazardous Products Regulations



Inspection Campaign: Worker Exposure to Chemical Agents

Worker Exposure to Chemical Agents

Rationale for the Campaign

Controlling chemical exposures lowers the risk of injury and occupational illness.

Workplace information is needed to develop an exposure surveillance system, in accordance with one of the goals in the MLITSD 5-year [Prevention Works strategy](#).

Exposure by all routes (inhalation, skin contact or ingestion) can cause [occupational illness](#) or injury.



Worker Exposure to Chemical Agents

Rationale for the Campaign

Short term effects:

- Respiratory, skin and eye irritation
- Headache, dizziness, nausea

Long term, delayed health effects:

- Lung diseases, respiratory or skin sensitization, effects on organs or body systems, cancer



Examples of Common Exposure Hazards

Inhalation

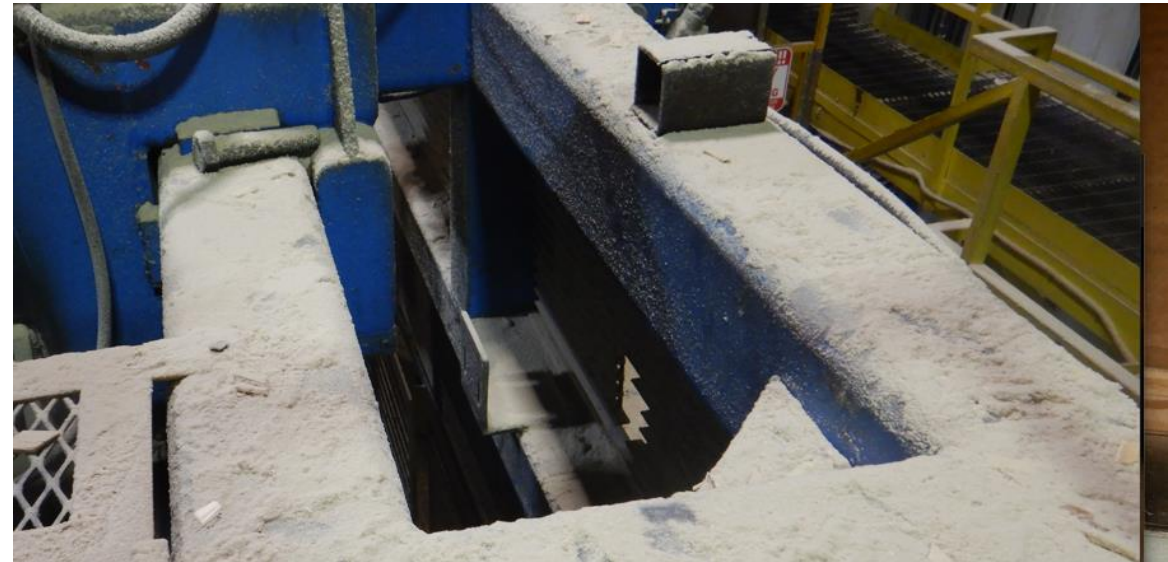
- **Wood dust:** during cutting, sanding wood, conveyor areas, fine finishing of wood surfaces
- **Dust:** paper processing area, maintenance shops, yard workers, glue mixing
- **Metal fumes:** hot work area, shops and field work, guide and blade shops



Examples of Common Exposure Hazards

Inhalation

- Diesel: mechanical shops
- Gases/fumes: Volatile Organic Compounds (VOC), human-made chemicals such as industrial solvents, during pulping process in kraft mills; CO in mechanical shops during hot work, ClO₂, H₂S, SO₂ and other gases during pulp or paper manufacturing process
- Biological hazards: moulds and other microorganisms



Examples of Common Exposure Hazards

Skin contact

- Liquids and solids: solvents, oils/cutting fluids, chemicals, wood dust, wood sap
- Biological hazards: insects, fungi



Ingestion

- Poor hygiene practices, swallowing contaminated mucus, eating and drinking contaminated food



Worker Exposure to Chemical Agents

MLITSD Occupational Hygienists will:

- Inspect workplaces to ensure compliance with [R.R.O. 1990, Regulation 833: Control of Exposure to Biological or Chemical Agents \(833/90\)](#).
- Assess whether employers are taking all reasonable measures to protect workers from exposures.
- Ensure that worker exposures to airborne chemical agents are below the Ontario occupational exposure limits (OEL).

Worker Exposure to Chemical Agents

What are the Ontario Occupational Exposure Limits (OEL)?

- Maximum airborne concentration limits allowed in workplace air.
- Time Weighted Average limits (TWA), for daily and weekly exposure, Short Term Exposure limits (STEL) and Ceiling limits (C).
- Where an agent does not have a STEL or a C limit, there are excursion limits of 3x the TWA for any 30-minute period and 5x the TWA at any time.
- For some chemical agents, the limits are set out in the “Ontario Table” in 833/90.
- For some chemical agents, 833/90 adopts the ACGIH 2017 TLVs.

The Ontario OELs are posted on the MLITSD website: [Current occupational exposure limits for Ontario workplaces under Regulation 833](#).

Worker Exposure to Chemical Agents

Compliance Considerations

Occupational hygienists may review sampling data and calculations:

Example: TWA exposure for a 12-hour shift

- If a worker has a measured airborne soft wood dust exposure of 4 mg/m^3 over a twelve-hour shift, is the exposure higher than the Ontario TWA limit of 5 mg/m^3
- The worker's daily TWA exposure is calculated according to Schedule 1 in Reg. 833:
 - **Daily TWA Exposure** = $\frac{C_1T_1+C_2T_2+ \dots C_nT_n}{8}$
- *Where:* C is the measured concentration, and T is the time the worker is taken to be exposed to that concentration.

- **Daily TWA Exposure** = $\frac{4 \frac{\text{mg}}{\text{m}^3} \times 12 \text{ hrs}}{8}$

- **Daily TWA Exposure** = 6 mg/m^3

The calculated Daily TWA exposure of 6 mg/m^3 is higher than the Reg. 833 soft wood dust TWA limit of 5 mg/m^3 .

Worker Exposure to Chemical Agents

Compliance Considerations

During inspections, MLITSD Occupational Hygienists will **identify** chemical exposures in the workplace.

They may:

- Review Safety Data Sheets and labels.
- Observe equipment, work tasks and work practices to assess the potential for exposure by inhalation, skin contact and ingestion.
- Examine gas monitors and calibration equipment.
- If air monitoring has been done, review the results.
- Collect and review other workplace information.



Worker Exposure to Chemical Agents

Compliance Considerations

During inspections, MLITSD Occupational Hygienists will **determine** the level of exposure.

They may:

- Test air quality with direct reading instruments.
- Test air flow at ventilation systems.
- Require the workplace to do air sampling.
- Identify what control measures are in place.
- Review the programs for respiratory protection or designated substance.



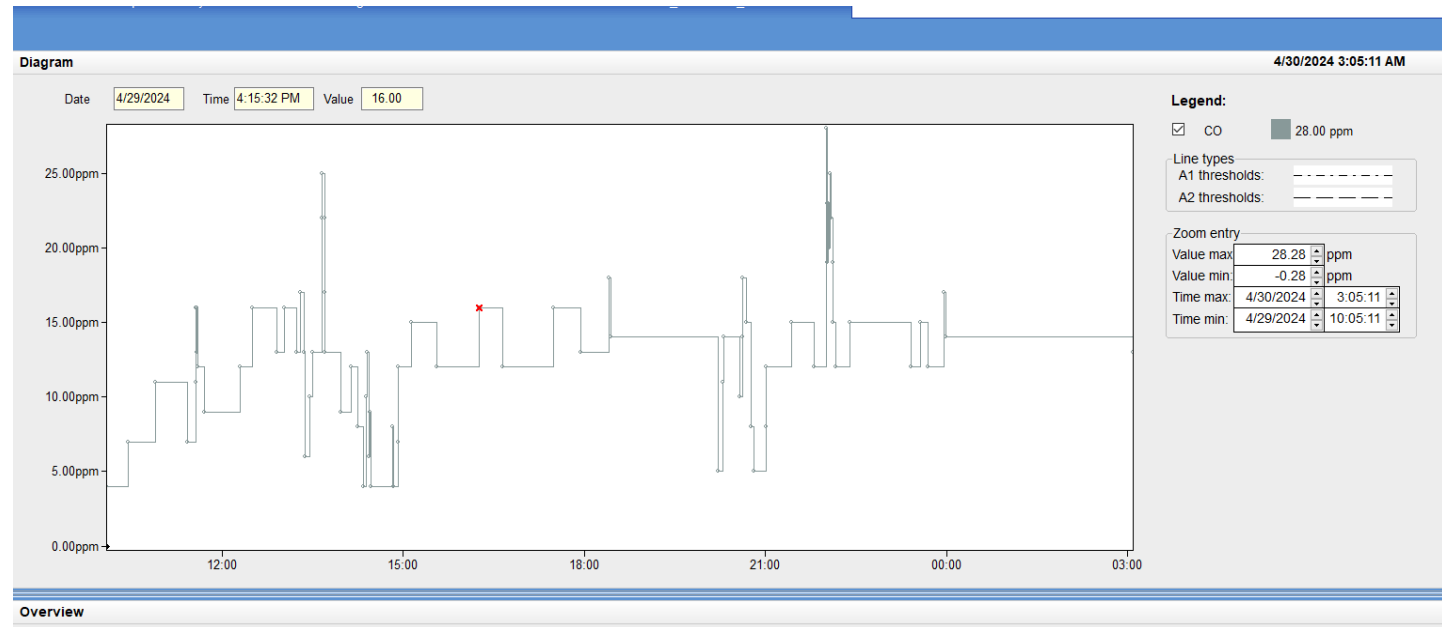
What Can I Do to Improve Compliance?

- Review Safety Data Sheets and labels
 - Inspect fire cabinets; is there a chemical that has no SDS?
 - Audit the SDS; are they current? Quick to recognize pictograms (red diamond), 16 sections, publication date.
- Observe equipment, work tasks and work practices to assess potential exposure by inhalation, skin contact and ingestion
 - Conduct site visits; are people wearing their PPE correctly? Is dust control present? Chemical spillage in storage areas?
- Examine gas monitors and calibration equipment
 - Is there a current calibration certificate? Calibration gas does expire. Does the operator understand how the equipment works and its limitations?



What Can I Do to Improve Compliance?

- After air monitoring has been done, review the results
 - Has the monitoring been shared with workers and the Joint Health and Safety Committee?
 - Have the recordings been updated within the last 12 months? Are workers trained in asbestos exposure hazards?
- Area monitoring is a good start to identify exposure hazards



Worker Exposure to Chemical Agents

Compliance Considerations

During an inspection, if an MLITSD Occupational Hygienist **recognizes** non-compliance or needs more information, they may:

- Issue [orders or requirements](#) under the Occupational Health and Safety Act O. Reg. 833/90 or other applicable Ontario regulations.
- Orders can be time-based or tied to a “stop work” or a “compliance plan.”
- To comply with a requirement for air sampling, the employer may have to retain the services of a qualified occupational hygiene consultant.

WSN Support

- Field visits and general recommendations for improvement.
- Exposure assessment, designated substance assessment, ventilation assessments.
- Gap assessments of industrial hygiene management system.
- Provide or develop training material, control programs and policies.
- Provide recommendations for sampling equipment.
- Meet with JHSC members to provide additional information and answer questions.
- Review of documentation; recommendations for improvement.
- Mentor on-site professionals to increase knowledge of IH related topics.





Inspection Campaign: WHMIS training

WHMIS Training

Rationale for the Campaign

Health Canada amended the Hazardous Products Regulations in December 2022.

Suppliers have three years, until December 2025, to comply with hazard classification and safety data sheet (SDS) requirements.

Employers need to be aware of the changes.

Workers may need updated WHMIS training.



WHMIS Training

MLITSD Occupational Hygienists will:

- Inspect workplaces to ensure compliance with [O. Reg. 860/90 Workplace Hazardous Materials Information System](#).
- See if any ‘hazardous products’ are used in the workplace.
- Ensure that current safety data sheets (SDS) are available to workers.
- Examine labels and SDS to see if they comply with the amended HPR requirements.
- Review workers’ WHMIS training to see if it is current and specific to the hazardous products and tasks in the workplace.

WHMIS Training

Compliance Considerations

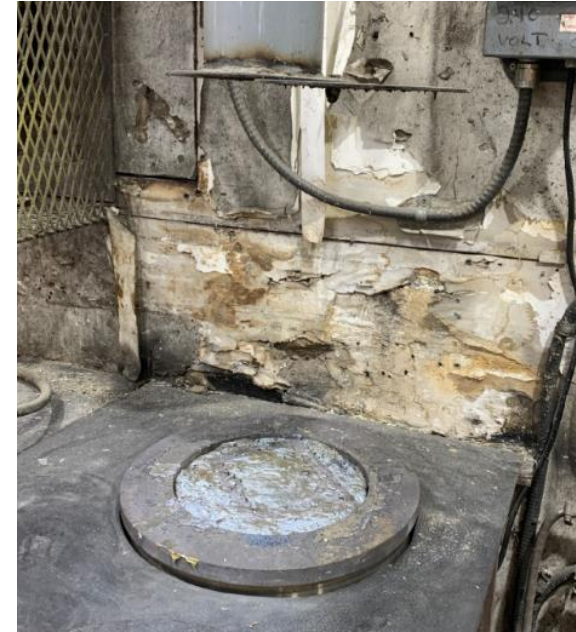
During inspections, MLITSD Occupational Hygienists may:

- Look at how chemical products are stored, handled and used in the workplace.
- Look at containers, tanks and piping systems.
- Talk to workers about the products they use, hazards, protective measures and training.
- Look at WHMIS training materials.



WSN Support

- On site inspection of work areas, recommendations for improvement.
- Review of SDS; provide recommendations for controls.
- Provide additional training to demonstrate safe handling of chemicals.
- Help develop workplace labels.
- Provide recommendations for proper storage and control of spillage.
- Review of in-house WHMIS training material.



WHMIS Training

Compliance Considerations

During an inspection, if an MLITSD occupational hygienist **recognizes** non-compliance or needs more information, they may:

- Issue requirements, for example, for WHMIS training records.
- Issue orders for retraining, for example, WHMIS training that includes informing workers about the HPA amendments that may change the information on labels and SDS, or may change the precautions for safely working with the chemicals.
- Orders can be time-based or tied to a “stop work” or a “compliance plan.”

WHMIS Training

Resources

[Ontario WHMIS regulation](#)

[Workplace Hazardous Materials Information System - A guide to the legislation](#)

[Fact Sheet on WHMIS](#) - CCOHS

Health and Safety Contact Centre: 1-877-202-0008

Resources

Occupational Health

[Amendments to the Hazardous Products Regulations](#) – Government of Canada

[International Agency for Research on Cancer](#) – World Health Organization

[Occupational disease prevention](#) – WSN

[Occupational disease risks in key industries: Protecting workers' health](#) – WSN

[Wood Dust – Health Effects](#) – CCOHS

[Workplace exposure and illnesses](#) - Ministry

Thank you for helping make workplaces safer

Questions?

For addition information, please contact:

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[Health and Safety Contact Centre](#)