

Industrial Sector Plan 2016-2017

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

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Introduction

Safe At Work Ontario

Issued: October 14, 2016

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Safe At Work Ontario is a Ministry of Labour (MOL) initiative to raise awareness of, and to increase compliance with, Ontario's Occupational Health and Safety Act (OHSA) and its regulations.

As part of *Safe At Work Ontario*, the MOL develops annual sector-specific enforcement plans related to workplace hazards and describes the focus of inspectors.

The Industrial Sector Plan outlines the ministry's enforcement initiatives to protect Ontario's workers from occupational injury and illness.

Every year the ministry holds consultations to shape and improve its occupational health and safety compliance strategy and build closer partnerships with its stakeholders. These sessions:

- help the ministry to improve its approach to better meet the public's needs
- provide an opportunity to learn from the ministry's partners
- obtain feedback on how well the program is working
- increase support for new directions, and
- identify areas for improvement.

The Industrial Sector Plan for 2016-2017 describes hazards and compliance issues, and the ministry's enforcement focus for inspection in all sectors for the upcoming fiscal year.

The plan also acknowledges recent changes to the OHSA that will affect:

- occupational health and safety
- workplace parties, and
- the ministry's enforcement practices.

Basic health and safety awareness training is mandatory for every provincially regulated worker and supervisor as of July 1, 2014. This is required under Ontario's Occupational Health and Safety Awareness and Training Regulation, O. Reg. 297/13.

Under the OHSA, a worker is defined as a person who performs work or supplies services for monetary compensation. This does not include an inmate of a correctional institution or like institution or facility who participates inside the institution or facility in a work project or rehabilitation program.

In 2014, the definition of worker in the OHSA was expanded to cover unpaid co-operative education students, certain other learners and trainees participating in a work placement program.

Specifically, the new definition of worker includes:

- unpaid secondary school students who are participating in a work experience program, authorized by the school board that operates the school in which the students are enrolled
- other unpaid learners participating in a program approved by a post-secondary institution, and
- any unpaid trainees who are not employees for the purposes of the Employment Standards Act, 2000 (ESA) because they meet certain conditions.

Volunteers are **not covered** by this definition of worker.

This sector plan contains a brief description of some of the main issues that an inspector may address in the workplace. It provides a general overview of the ministry's focus even though each workplace is unique and the circumstances found by an inspector may result in a different inspection focus.

You are encouraged to familiarize yourself with this plan and share it with others in your workplace.

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

- Call any time to report critical injuries, fatalities or work refusals.
- Call 8:30 a.m. – 5:00 p.m., Monday – Friday, for general inquiries about workplace health and safety.

- In an emergency, always call 911 immediately.

The Industrial Program

The Industrial Health and Safety Program (IHSP) is the largest and most diverse of five MOL occupational health and safety programs. This program is responsible for enforcing the OHSA and applicable regulations in 28 complex sectors. Most workers in Ontario at provincially regulated workplaces are covered by the IHSP.

Most of these workplaces are covered by specific regulatory requirements made under the OHSA, such as the Regulation for Industrial Establishments.

However, workplaces in some sectors are not covered by sector-specific regulations. In such cases, workers are afforded protection from hazards in their workplace through the application of 25(2)(h), the general duty clause of the OHSA. Employers are required to take every precaution reasonable in the circumstances for the protection of workers from workplace hazards.

Farming is covered by the Regulation for Farming Operations (O. Reg. 414/05 made under the OHSA). These regulations set out which OHSA provisions and other regulations apply to farming operations.

In some cases, certain activities at industrial workplaces may be covered by other sector-specific regulations such as Ontario's Regulation for Construction Projects (O. Reg. 213/91) or Regulation for Mines and Mining Plants (R.R.O. 1990, Reg. 854).

Workplace parties are also reminded that there are several hazard-based regulations that may also apply at industrial workplaces. These regulations may impose requirements beyond the sector-specific regulations.

The IHSP's 29 sectors are listed below.

Industrial sectors

- Agriculture Services
- Automotive
- Ceramics, Glass and Stone
- Chemical, Rubber and Plastics
- Construction Premises
- Education
- Electrical and Electronics
- Farming Operations
- Film and TV
- Fire Service
- Fisheries
- Food, Beverage and Tobacco
- Government
- Industrial Services
- Live Performance
- Logging and Sawmills
- Office and Related Services
- Police Service
- Primary Metals
- Pulp and Paper
- Restaurants
- Retail
- Textiles and Printing
- Tourism, Hospitality and Recreation
- Transportation
- Utilities
- Vehicle Sales and Service
- Wholesale
- Wood and Metal Fabrication

Industrial enforcement statistics

MOL inspectors enforce the OHSA and its regulations at workplaces across the province. As part of the *Safe At Work Ontario* strategy, they focus on specific industry sectors where there are:

- high injury rates
- history of non-compliance or
- certain workplace hazards.

The ministry maintains a database where inspectors record their visits to workplaces in conducting inspections, consultations and investigations, along with orders issued. Events that are reported to the ministry, including fatalities, critical injuries, complaints, work refusals, etc., are also recorded.

The ministry analyzes these data when planning for enforcement initiatives and blitzes such as those outlined in this sector plan. A breakdown of the field visit activities conducted by industrial inspectors and key categories of reported events at industrial sector workplaces for the past five fiscal years are presented in the tables below.

Occupational health and safety inspectors:

- conduct proactive and reactive field visits, in either a lead or a support role.
- investigate each reported event, in part by conducting reactive field visits and issuing orders. This may include multiple field visits, including workplaces not categorized within their own occupational health and safety program.

A summary of activities of inspectors within this program, including those done as part of the *Safe At Work Ontario* blitzes and initiatives, is provided in Table 1.

Table 1. IHSP inspector field visit activities and orders issued

Program inspector activities	2011-12	2012-13	2013-14	2014-15	2015-16
Proactive – consultations	419	385	273	276	375
Proactive – inspections	21,360	19,315	16,376	13,864	17,901
Total proactive field visit activities	21,779	19,700	16,649	14,140	18,276
Total reactive field visit activities – investigations	17,159	17,820	18,006	16,497	19,897
Total field visit activities	38,938	37,520	36,655	30,637	38,173
Orders issued	65,744	63,200	54,944	55,499	68,567

Notes

- Proactive field visits are either inspections or consultations.
- Reactive field visits are investigations made in response to events reported to the MOL. Events and injuries are listed in Table 2.
- Orders issued represent all those issued by ministry inspectors within this occupational health and safety program.
- Data are subject to change due to updates in the enforcement database.

Occupational health and safety (OHS) events and injuries reported to the Ministry of Labour are summarized in Table 2. Only events reported to the ministry are included here. Except for fatalities, event categories in the ministry's data set are based on what was assigned at the time of the initial report to the ministry. The reported event category may not represent what actually occurred at the workplace.

Table 2. IHSP events and injuries

OHS events and injuries	2011-12	2012-13	2013-14	2014-15	2015-16
Complaints	6,873	6,329	6,796	6,706	7,404
Work refusals	115	157	114	197	213
Fatalities	23	26	44	31	24
Critical injuries	690	823	820	721	580
Other injuries (i.e., non-critical)	2,984	2,844	2,652	2,344	2,440

Notes

- Fatalities: The Ministry of Labour tracks and reports fatalities at workplaces covered by the Occupational Health and Safety Act (OHSA). These exclude death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is applicable) and death from occupational exposures that occurred many years ago.
- Critical injuries: The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by Regulation 834 under the OHSA. Non-workers who are critically injured may also be included in the ministry's data.
- Data are subject to change due to updates in the enforcement database.

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Priorities

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System priorities

In December 2013, the Ministry of Labour (MOL) released its first Healthy and Safe Ontario Workplaces Strategy designed to guide the efforts of the:

- Workplace Safety and Insurance Board (WSIB)
- Health and Safety Associations (HSAs), and
- MOL enforcement staff.

Safe At Work Ontario was refocused to:

- align with the priorities in the Healthy and Safe Ontario Workplaces Strategy, and
- deliver on the Healthy and Safe Ontario Workplaces Strategy's overall goals, which are to target the areas of greatest need and to enhance service delivery.

The priorities set out in the Healthy and Safe Ontario Workplaces Strategy are:

1. assist the most vulnerable workers
2. support occupational health and safety improvements in small businesses
3. address the highest hazards that result in occupational injuries, illnesses or fatalities
4. build collaborative partnerships
5. integrate service delivery and system-wide planning
6. promote a culture of health and safety.

To support the *Safe At Work Ontario* strategy, below is a brief overview of 2016-2017 enforcement focus areas for inspectors who will visit workplaces.

Enforcement focus

Assist the most vulnerable workers

During the Ministry's annual *Safe At Work Ontario* consultation sessions, stakeholders stressed the importance of improving general occupational health and safety awareness and communication to workplaces. They highlighted the challenges facing vulnerable groups such as new immigrants and young workers, and raised concerns surrounding changing workplaces, including the aging workforce and precarious employment.

The ministry's Healthy and Safe Ontario Workplaces Strategy includes activities to target those at greatest risk. While all workers are vulnerable to injury, illness and fatality, some workers are at greater risk than others. Those who are at greatest risk may experience vulnerability through a combination of individual, workplace and work activity characteristics.

The ministry's Prevention Division is leading development of a comprehensive Vulnerability in the Workplace Action Plan to:

- address recommendations of the Vulnerable Worker Task Group, and
- support the needs of vulnerable workers in Ontario's workplaces.

The Vulnerable Worker Task Group provided advice on how to improve outreach to increase awareness of the Occupational Health and Safety Act (OHSA) and its regulations among vulnerable workers and their employers.

The Occupational Health and Safety Branch at the Ministry of Labour collaborates with the Prevention Division and the Vulnerable Worker Task Group. As part of this Vulnerability in the Workplace Action Plan, the ministry will continue to place a strong emphasis on assisting workplaces to:

- maintain a functioning internal responsibility system (IRS)
- provide training to all workers, and

- ensure workers understand their rights under the OHSA.

Resources/compliance support

- [New and Young Workers](#)
- [Health and Safety Awareness Training for Workers and Supervisors](#)

Support occupational health and safety improvements in small businesses

Small businesses face unique occupational health and safety challenges.

The ministry's Healthy and Safe Ontario Workplaces Strategy includes a Small Business Action Plan that contains activities to support health and safety improvements at small businesses. The plan was developed in collaboration with the ministry's occupational health and safety partners and a Small Business Task Group.

An update on the plan is included in the [Occupational Health and Safety in Ontario 2014-2015 Annual Report](#).

During annual *Safe At Work Ontario* consultations, stakeholders mentioned that small businesses may be less aware of the legislation and may have fewer resources for complying with the legislation. They suggested that the ministry should continue developing simple resources and tools to assist small businesses.

The Small Business Task Group provided advice on how to improve small business outreach to help create healthy and safe workplaces. Emphasizing outreach and awareness, their report focuses on small businesses that lack the necessary knowledge to comply with the Occupational Health and Safety Act and its regulations.

The ministry will continue to support the Small Business Action Plan. It will do this by placing an added enforcement focus on small businesses to assist owners and workers with understanding their obligations complying with the OHSA.

Resources/compliance support

The MOL and the occupational health and safety system partners have many resources available to assist small businesses on a variety of topics.

The ministry continues to work with its system partners to develop new fact sheets, online tools and information guides. For updates on small business products and resources, please refer to the [Small Business](#) topic page on the MOL website.

- [Health and Safety Checklist](#)
- [Health and Safety System Partners](#)

Address the highest hazards that result in occupational injuries, illnesses or fatalities

Regardless of size, almost all Ontario workplaces employ workers who may be at risk of serious injury, illness or fatality.

Every year, the ministry plans provincial blitzes and enforcement initiatives based on stakeholder consultations, analysis of WSIB information and internal enforcement data. These planned activities are intended to raise awareness among workplace parties and mobilize the ministry's inspectorate to target workplace hazards in Ontario.

When blitzes or other enforcement initiatives are not under way, inspectors will still be inspecting workplaces for high hazards and workplace parties' compliance with the OHSA.

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Enforcement Initiatives

Safe At Work Ontario

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Enforcement initiatives are part of the province's *Safe At Work Ontario* compliance strategy. They may be announced to sectors in advance although individual workplaces are not identified in advance.

Results from province-wide initiatives are posted on the ministry's website. The initiatives are intended to raise awareness of workplace hazards and promote compliance with the Occupational Health and Safety Act (OHSA) and its regulations.

Inspectors' findings may influence the frequency and level of future inspections of individual workplaces. Inspectors may also refer employers to health and safety associations for compliance assistance and training.

New small business registrations and Internal Responsibility System initiative

The Industrial Health and Safety Program (IHSP) will conduct a new small business registrations and internal responsibility system (IRS) initiative throughout 2016-2017. This is the fifth consecutive year that IHSP has conducted this enforcement initiative.

One of the primary purposes of the OHSA is to facilitate a strong IRS in the workplace. To this end, the OHSA prescribes the duties of employers, supervisors, workers, constructors and workplace owners.

Workplace parties' compliance with their respective statutory duties is essential to the establishment of a strong IRS in the workplace. The IRS means that everyone in the workplace has a role to play in keeping workplaces safe and healthy.

The IRS helps support a safe and healthy workplace. In addition to the workplace parties' compliance with their legal duties, the IRS is further supported by well-defined health and safety policies and programs, including the design, control, monitoring and supervision of the work being performed.

Rationale

In Ontario, small businesses represent 95 per cent of all employers and employ 28 per cent of Ontario's workers, many of who may be vulnerable workers.

Small business has been identified as a priority in Ontario's Integrated Health and Safety Strategy ("Healthy and Safe Ontario Workplaces: A Strategy for Transforming Occupational Health and Safety").

Ministry of Labour (MOL) inspectors will continue to actively engage these employers. MOL inspectors will check that employers are:

- aware of the OHSA, regulations made under the OHSA that apply to their workplace and IRS requirements
- familiar with the ministry's support materials and the Health and Safety Checklist (available on the Ministry of Labour website), and
- aware of the compliance assistance available through the relevant health and safety associations.

The IHSP's small business initiative will support vulnerable workers by increasing their:

- awareness of their occupational health and safety rights, and
- access to resources such as the ministry's publications and Health and Safety Contact Centre.

Enforcement focus

The MOL will conduct a year-long initiative to promote the IRS and enforce the OHSA at new workplaces that employ fewer than 50 workers.

As part of this enforcement, inspectors will proactively inspect small businesses that have registered with the Workplace Safety and Insurance Board, but have not had prior contact with the MOL.

The inspectors will:

- conduct a physical inspection of the workplace, and
- check whether the requirements for establishing and maintaining a comprehensive IRS are being met.

Inspectors will take enforcement action, as appropriate, in response to any violations of the OHSA and its regulations.

Sector focus

Small businesses are commonly found in most industrial sectors. The initiative will focus on the following sectors:

- Ceramics, glass and stone
- Food, beverage and tobacco
- Industrial services
- Restaurants
- Retail
- Vehicle sales and service
- Wholesale
- Wood and metal fabrication.

Inspectors may also inspect and register new and small businesses in other industrial sectors.

Resources/compliance support

- [Small Business Resources and Tools](#)

Guides

- [A Guide to the Occupational Health and Safety Act](#)
- [A Guide for Joint Health and Safety Committees and Health and Safety Representatives in the Workplace](#)
- [Workplace Hazardous Materials Information System \(WHMIS\): A Guide to the Legislation](#)

Tools

- [Health and Safety Awareness Training for Workers and Supervisors](#)
- [How to Prepare an Occupational Health and Safety Policy](#)
- [Workplace Violence and Harassment: Understanding the Law](#)
- [Musculoskeletal Disorders/Ergonomics](#)

Health and Safety Association Resources for Small Business

- [Workplace Safety & Prevention Services \(WSPS\) – Small Business Centre](#)
- [Infrastructure Health & Safety Association \(IHSA\) – Small Business Section](#)
- [Public Services Health & Safety Association – Small Business Resources](#)
- [Workplace Safety North – Small Business Health and Safety](#)

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Regional Initiatives

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Each Ministry of Labour region may conduct its own local initiative(s) to raise awareness of and help address health and safety issues that:

- are specific to particular geographic areas of Ontario, and/or
- have a higher rate of occurrence than the rest of the province.

The table below outlines planned regional enforcement initiatives for April 1, 2016 to March 31, 2017.

Regional enforcement initiatives for April 1, 2016 to March 31, 2017

Region	Name of initiative	Date
Central East	Property management (phase 2)	April 1, 2016 to March 31, 2017
Central West	Marble and granite shops	April 1, 2016 to March 31, 2017
Central West	Landscapers and snow removal services	November 1, 2016 to March 31, 2017
Eastern	Property management services	April 1, 2016 to March 31, 2017
Eastern	Electrical hazards in retail	April 1, 2016 to March 31, 2017
Northern	Forestry equipment	April 1, 2016 to March 31, 2017
Northern	Struck-by mobile equipment / vehicles	April 1, 2016 to March 31, 2017
Northern	Aboriginal awareness	April 1, 2016 to March 31, 2017
Western	Industrial malls and re-purposed factories	July 1, 2016 to January 1, 2017
Western	Utility sector	April 1, 2016 to March 31, 2017
Western	Elevating work platforms in the farming sector	October 1, 2016 to March 31, 2017

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Inspection Blitzes

Safe At Work Ontario

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Ministry of Labour (MOL) inspectors are responsible for enforcing the Occupational Health and Safety Act (OHSA) and its regulations at workplaces across the province. As part of the *Safe At Work Ontario* strategy, they focus on specific industry sectors where there are high injury rates, a history of non-compliance, and specific workplace hazards. They will also continue to verify overall compliance with the OHSA and its regulations. Inspectors are not limited to inspecting the issues identified in this document as *Safe At Work Ontario* areas of focus, and will take enforcement action as appropriate to the situation at each workplace inspected.

Note: The program uses Workplace Safety and Insurance Board (WSIB) data to identify injury and illness trends. Trend analyses of the number of fatalities, critical injuries, lost-time injuries (LTIs), LTI rates and the costs associated with WSIB claims for each sector are used by the program to identify sectors for blitz initiatives. In addition to this information, inspectors also consider the compliance history and known hazards inherent to the type of work when they select workplaces to visit.

In addition to their general inspection duties, industrial inspectors will conduct three province-wide blitz campaigns in 2016-2017.

Province-wide blitz campaigns, 2016-2017

Month, Year	Enforcement campaign/blitz topic	Key points
May 16 to July 15, 2016	Falls	• Focus - falls less than 3 metres, falls at same level and ladder safety • Retail • Restaurants • Offices and related services • Tourism, hospitality and recreational services • Wholesale wood and metal fabrication
July 18 to September 2, 2016	New and young workers	• Two focus groups in this blitz: ◦ new young worker 14-24 ◦ new worker, older than 25 who has been on the job for less than 6 months or reassigned to a new job • Agricultural services (landscapers, arborist and veterinary services) • Restaurants • Retail • Tourism, hospitality and recreation (golf courses, hotels and motels)
September 19 to October 31, 2016	Chemical handling	• Enforcement of existing OHSA and <u>Regulation 860</u> requirements for: ◦ labels ◦ material safety data sheets, and ◦ worker training • for controlled products in the workplace. • Communication of components of WHMIS 2015 (GHS). • Focus on chemicals that cause occupational disease and specifically those that cause contact dermatitis, such as metalworking fluids. • Sectors to be determined.

Tips on how to prepare for a blitz inspection

Before the inspector's visit

- Check your accident experience in relation to the blitz topic.
- Review OHSA sections and regulations that may apply based on the blitz's focus.
- Determine whether you are currently meeting or exceeding the minimum legal requirements in those areas.
- Consult with MOL Health and Safety Partners for specific information and services that may help you prepare.
- Review the ministry's blitz-related material.

- Discuss compliance strategies with your Joint Health and Safety Committee (JHSC) or Health and Safety Representative (HSR).

During the visit

- Ensure all required documentation is available to the ministry inspector.
- Ensure supervisor and health and safety representative are available.
- Ensure the workplace parties co-operate with the ministry inspector.

What the inspector will verify

- compliance with the OHSA and its regulations
- health and safety programs and policies related to the blitz topic
- Internal Responsibility System, including training requirements and any related deficiencies
- record of injuries, including blitz-related issues
- workplace specific hazards related to the blitz.

Note: Inspectors can legally enter a project or workplace at any time without warrant or prior notice [OHSA section 54(1)(a)]. An inspector will identify himself/herself by means of ministry identification. No person shall hinder, obstruct, molest or interfere with or attempt to hinder, obstruct, molest or interfere with an inspector in the exercise of a power or the performance of a duty under this Act or the regulations or in the execution of a warrant issued under this Act or the Provincial Offences Act with respect to a matter under this Act or the regulations.

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Falls

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Date: May 16 to July 15, 2016

Type: Industrial provincial

Ministry inspectors will focus on falls less than 3 metres, same-level falls and ladder safety in selected sectors.

Rationale

Why focus on falls?

- Over the 10 year period from 2005 to 2014, falls accounted for 17.1% of the traumatic fatalities in all programs for schedule 1 employers.
- In 2014, fall on same level accounted for 15% of the injury events in all programs for schedule 1 employers.
- In 2014, fall on same level accounted for 21% of the injury events in all programs for schedule 2 employers.
- For the industrial program: between April 1, 2014, and March 1, 2015, there were four work-related deaths from falls involving ladders in industrial establishments. During the same period, there were 20 critical injuries to workers from falls involving ladders in industrial establishments.

Targeted

In particular, ministry inspectors will focus on falls in the following sectors:

- Retail
- Restaurants
- Offices and related services
- Tourism, hospitality and recreational services
- Wholesale
- Wood and metal fabrication

Blitz focus

Inspectors will focus on the following key priorities:

Policies and programs – Inspectors will check that employers have policies and programs in place to protect workers from falls such as requirements for safely using ladders and ensuring that an investigation is conducted when there are fall-related incidents. They will also check that employers have emergency rescue procedures for workers who fall.

Safe work practices – Inspectors will check that employers have developed safe work practices, including assessing fall risks. They will also check to see if workers are following safe work practices, for example, safely using ladders, mobile stands and platforms.

Falls from ladders, mobile stands and platforms – Inspectors will check that employers have assessed ladders, stands and platforms for hazards, and that this equipment is maintained and placed on firm footing when in use.

Falls from trucks/loads – Inspectors will check that workers are using safe work practices where they may be exposed to the hazard of falling from the beds of trucks, trailers or the top of loads.

Ergonomics – Inspectors will check that workers are performing tasks in a manner that prevents falls. This will include checking workers' posture, use of force and other ergonomic factors. For example, inspectors will check that workers are carrying objects so their view is not obstructed or they are working on a ladder in a safe manner that protects them from losing their balance.

Worker training – Inspectors will check that workers receive information, instruction and supervision to prevent injuries and deaths from fall hazards including the right to refuse unsafe work.

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New and Young Workers

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Date: July 18 to September 2, 2016

Type: Industrial provincial

Ministry inspectors will focus on new and young workers at workplaces in selected sectors.

Rationale

Why focus on the new and young worker?

Any new worker, of any age, is up to three times more likely to be injured during the first month of a new job than at any other time performing that job, according to the [Institute for Work and Health](#).

This applies to any worker who is “new” to the work he or she is performing, even if it is a new job with the same employer.

Lost-time claims

According to a Workplace Safety and Insurance Board (WSIB) report in 2014, workers in the age groups of 20-24 and 50-54 represented the largest groups for all allowed lost-time claims.

- The leading injuries in the age group 15-24 involved being struck by equipment or objects and they experienced mostly hand injuries.
- The leading injuries in the age group 25-54 involved overexertion and they experienced mostly back injuries.
- The leading injuries in the age group 55+ involved falls on the same level and they experienced mostly back injuries.

Targeted

The blitz will focus on the safety of:

- young workers aged 14 to 24 and
- new workers who are on the job for less than six months or assigned to a new job. This includes both “young workers” and those 25 and older.

New workers include:

- any new hire, either permanent or temporary, including supervisors, with or without experience in the industry where they are working
- current workers who are assigned new jobs
- student workers, co-op placements or apprentices
- seasonal workers.

In particular, ministry inspectors will focus on new and young worker safety in the following sectors:

- Agricultural services (landscapers, arborist and veterinary services)
- Restaurants
- Retail
- Tourism, hospitality and recreation (golf courses, hotels and motels).

Blitz focus

Inspectors will focus on the following key priorities:

Training, orientation and supervision – Inspectors will verify that employers have completed basic mandatory supervisor and worker awareness training. They will also check that orientation and Workplace Hazardous Materials Information System (WHMIS) training are in place, and that employers provide supervision to workers.

Internal Responsibility System – Inspectors will check and evaluate the Internal Responsibility System (IRS), check if the Health and Safety Representatives (HSRs) or Joint Health and Safety Committees (JHSCs) are in place, where appropriate, and that they are functioning as required under the Occupational Health and Safety Act (OHSA). They will also check that OHSA minimum requirements are being carried out, such as workplace inspections.

Policies and programs – Inspectors will check that employers have policies and programs in place to protect workers from workplace violence and harassment.

Minimum age requirements – Employers must ensure the workplace is employing workers who meet the minimum age requirements for industrial establishments.

Safe work practices – Inspectors will check that employers have safe work practices, including assessing the hazards such as machines that are unguarded and not locked out. They will also check for policies and procedures that ensure an investigation takes place into any related incidents.

Same-level slips and trips – Inspectors will check that employers ensure floors and other surfaces are kept free of obstructions, hazards (such as oily or greasy floors) and accumulations of refuse, snow or ice. Special attention will be paid to walkways, aisles and other areas where there is pedestrian traffic.

Falls from ladders, mobile stands and platforms – Inspectors will check that employers ensure workers work in a safe manner on ladders, stands and platforms. They will also check that ladders, stands and platforms have been assessed for hazards, properly designed, built and maintained and placed on firm footing.

Falls from heights – Inspectors will check that employers use fall arrest equipment and/or guardrails or other safety equipment for work on platforms, raised floors, mezzanines, balconies when workers are working at heights.

Personal protective equipment (PPE) and safety devices – Inspectors will check that employers ensure personal protective equipment is properly selected, used and maintained for tasks. Inspectors will also check on the availability, adequacy and condition of this equipment.

Resources/compliance support

- [Young workers](#)
- [Young workers on the job](#) (tips for young workers)
- [Parenting young workers](#)

Guides

- [A Guide to the Occupational Health and Safety Act](#)
- [A Guide for Joint Health and Safety Committees and Health and Safety Representatives in the Workplace](#)
- [Workplace Hazardous Materials Information System \(WHMIS\): A Guide to the Legislation](#)

Tools

- [Health and Safety Awareness Training for Workers and Supervisors](#)
- [How to Prepare an Occupational Health and Safety Policy](#)
- [Storage and Material Handling](#)
- [Prevent Workplace Pains & Strains! It's Time to Take Action!](#)
- [Workplace Violence and Harassment: Understanding the Law](#)
- [Information Resources about Reprisals](#)
- [Hazard Alerts](#)

Health and safety partners

The ministry works closely with its [workplace health and safety partners](#) to protect workers' health and safety on the job.

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Chemical Handling

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Date: September 19, 2016 – October 31, 2016

Type: Industrial provincial

Rationale

Why focus on chemicals?

During the ten years from 2005 to 2014, the Workplace Safety and Insurance Board (WSIB) recorded 16,207 chemical-related lost-time injuries from exposure to caustic, noxious or allergenic substances.

A secondary focus will be on chemicals causing occupational disease, especially those that cause contact dermatitis. According to the WSIB Occupational Disease 2011 report, contact dermatitis was found to be the second most prevalent disease.

Blitz focus

The primary focus of the blitz will be Workplace Hazardous Materials Information System (WHMIS) 1988 (Regulation 860) and will be carried out collaboratively with Ministry of Labour hygienists. Inspectors will enforce existing Occupational Health and Safety Act and Regulation 860 requirements for labels, material safety data sheets and worker training for controlled products in the workplace. This initiative will also include communication of components of WHMIS 2015 (Globally Harmonized System/GHS).

A secondary focus will be on chemicals causing occupational disease, especially contact dermatitis. Dermatitis is defined as inflammation of the skin caused by exposure to an allergen or irritant. Work-related contact dermatitis is a common skin disease caused by exposure in the workplace. In many cases, personal protective equipment (PPE) is the primary barrier between the skin and the irritant/allergen, and this PPE are typically gloves. Protective gloves and clothing must be matched to the substance, the work environment, the work and the worker. Among the chemicals that can cause contact dermatitis are metalworking fluids which are commonly used to cool and/or lubricate metal work pieces being machined, ground or milled.

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Resources

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Legislation

- [Occupational Health and Safety Act \(OHSA\)](#)
- [Industrial Establishments, R.R.O. 1990, Reg. 851](#)
- [Farming Operations, O. Reg. 414/05](#)
- [Critical Injury Defined, R.R.O. 1990, Reg. 834](#)
- [Firefighters – Protective Equipment, O. Reg. 714/94](#)
- [Roll-Over Protective Structures, R.R.O. 1990, Reg. 856](#)
- [Asbestos on Construction Projects and in Buildings and Repair Operations, O. Reg. 278/05](#)
- [Designated Substances, O. Reg. 490/09](#)
- [Teachers, R.R.O. 1990, Reg. 857](#)
- [University Academics and Teaching Assistants, R.R.O. 1990, Reg. 858](#)
- [Joint Health and Safety Committees – Exemption from Requirements, O. Reg. 385/96](#)
- [Control of Exposure to Biological or Chemical Agents, R.R.O. 1990, Reg. 833](#)
- [Confined Spaces, O. Reg. 632/05](#)
- [Occupational Health and Safety Awareness and Training, O. Reg. 297/13](#)
- [Inventory of Agents or Combinations of Agents for the Purpose of Section 34 of the Act, R.R.O. 1990, Reg. 852](#)
- [Workplace Hazardous Materials Information System \(WHMIS\), R.R.O. 1990, Reg. 860](#)
- [Needle Safety, O. Reg. 474/07](#)
- [Oil and Gas - Offshore, R.R.O. 1990, Reg. 855](#)
- [Noise, O. Reg. 381/15](#)

Note: Regulations made under the Occupational Health and Safety Act, Revised Statutes of Ontario, 1990, Chapter O.1 as amended. For the complete Table of Regulations reference, please see:

- [Ontario.ca e-Laws](#)
- [The Ontario Gazette](#)

Publications

Ministry of Labour

- [Publications by topic](#)
- [List of publications](#)

Industry groups – section 21 and other advisory committees

Section 21 committees (appointed by the Minister of Labour pursuant to OHSA section 21)

- Fire Service
- Police Service
- Film and Television
- Emergency Medical Services (EMS) Subcommittee (of the Health Care Section 21 Committee)

Other advisory committees

- Technical Advisory Committee (Farming Operations)
- Live Performance Advisory
- Provincial Forestry Tripartite Committee
- Arborist Safe Practice Committee
- Agricultural & Horticultural Advisory Committee

- Landscaping Safety Council
- Education and Culture Advisory Committee
- Municipal and Community Affairs Advisory Council
- Public Services Prevention Network
- Metal Trades Industry Group
- Food and Beverage Safety Group
- Petrochemical Forum
- Provincial Labour-Management Safety Committee – Utilities

Health and safety system partners

- Ministry of Labour (MOL)
- Workplace Safety and Insurance Board (WSIB)
- Occupational Health Clinics for Ontario Workers (OHCOW)
- Workers Health and Safety Centre (WHSC)
- Institute for Work and Health (IWH)
- Infrastructure Health and Safety Association (IHSA)
- Public Services Health and Safety Association (PSHSA)
- Workplace Safety North (WSN)
- Workplace Safety and Prevention Services (WSPS)

Learn more about our [health and safety system partners](#).

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Agricultural Services

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

See also: [Farming Operations](#)

Sector summary

The agricultural services sector comprises soil preparation, planting, crop dusting and spraying, tree surgery and removal, farm machinery, equipment and supplies, veterinary services, agricultural management and other services.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the agricultural services sector.

- Lockout: machine or transmission start-up
- Noise
- Unguarded equipment
- Falls
- Material handling
- Activities that may lead to musculoskeletal disorders (MSDs)
- Electrical proximity
- Heat stress
- Cold stress

Top five hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector specific Regulation are addressed through the application of clause 25(2)(h) of the [Occupational Health and Safety Act](#) (OHSA).

Workplace parties should refer to the narrative portion of the field visit report, if they have received one, for further information or contact their [health and safety association](#) for guidance.

Lockout: machine or transmission start-up

Injuries experienced by accidental machine start-up can include lacerations, crushing, and amputations. In severe circumstances these injuries can lead to permanent disability or death.

[Regulation 851](#) sets out the requirements for worker protection against start-up of machines, such as chippers, in sections 75 and 76.

- Review repair / maintenance of machinery [section 75].
- Review compliance with requirement for lockout procedures [sections 75 and 76].
- Review instruction and information provided to workers on the hazard and the requirements to isolate and lockout [OHSA clause 25(2)(a) and 25(2)(d)].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

[O. Reg. 381/15](#) sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [O. Reg. 381/15 subsection 2(2)].
- Review the availability and use of hearing protection [O. Reg. 381/15 subsection 2(6)].
- Review the type of hearing protection provided [O. Reg. 381/15 subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [O. Reg. 381/15 subsection 2(7)].

- Review the training provided to workers [O. Reg. 381/15 section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [O. Reg. 381/15 subsection 2(5)].

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review personal protective equipment required when working from heights [section 85].
- Review the training provided to a worker on the use of fall arrest equipment [section 79].
- Review areas requiring ladder access [section 73].
- Review work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].
- Review instruction and information provided to a worker on the hazards associated with working from heights [OHSA clause 25(2)(a) and 25(2)(d)].

Material handling: struck by object, caught between objects, and compression

Injuries associated with material handling can include workers being struck by objects, caught between objects, and/or crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Review operations / processes involving the movement of raw material and product from the receiving area to the production line and from the production line to the shipping area [section 45].
- Review operations / processes involving assembly line or similar style of raw material or product movement [clause 45(a)].
- Review warehousing / storage operations [clause 45(b)].

Trends

Table 1: Fatalities and critical injuries in agriculture by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	2	0	3	1	0
Critical injuries	10	16	14	11	11

- Only critical injury events reported to the ministry are included here
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA
- Non-workers who are critically injured may also be included in the ministry's data
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago
- Data are subject to change because of inspectors' updates to the database

Table 2: Events and activities in agriculture by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	368	386	395	497	493
Orders	560	442	713	497	929
Complaints	61	63	62	88	80
Work refusals	0	1	0	0	0

Most common orders issued under the OHSA

From April 1, 2015 to March 31, 2016 the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].
- At a project or other workplace where no committee is required under section 9 and where the number of workers regularly exceeds five, the constructor or employer shall cause the workers to select at least one health and safety representative from among the workers at the workplace who do not exercise managerial functions [OHSA subsection 8(1)].

Most common orders issued under the Industrial Regulations

From April 1, 2015 to March 31, 2016 the most common orders issued by the Ministry of Labour under the Ontario Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- Where a machine or prime mover or transmission equipment has an exposed moving part that may endanger the safety of any worker, the machine or prime mover or transmission equipment shall be equipped with and guarded by a guard or other device that prevents access to the moving part [section 24].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- Material, articles or things shall be transported, placed or stored so that the material, articles or things, will not tip, collapse or fall, and can be removed or withdrawn without endangering the safety of any worker [clause 45 (b)].

Industrial Regulations identified by section

Inspectors may issue orders in the agricultural services sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection
- Section 85 – fall arrest

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Roll-Over Protective Structures](#), Regulation 856
- [Designated Substances](#), O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.

General resources

[Publications | Ministry of Labour](#)

For information on Guides, Fact Sheets, Information Bulletins, Guidelines, Alerts, Engineering Data Sheets, Extracts, Reports, Consultations, Codes, and Standards.

[Videos and Photos | Ministry of Labour](#)

To view Ministry of Labour videos and photos

[Health and Safety Partners](#)

To learn about sector-assigned health and safety associations.

[By The Numbers: WSIB Statistical Report](#)

To review Workplace Safety and Insurance Board (WSIB) injury experience data.

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Automotive

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector comprises establishments primarily engaged in the manufacturing of motor vehicles, including establishments that manufacture only motor vehicle chassis (including truck cabs), such as motor vehicle, truck body, and trailer and automotive parts manufacturers.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the automotive sector.

- Lockout: machine or transmission start-up
- Unguarded equipment
- Material handling hazards can include workers being struck by objects, or caught and/or crushed between objects
- Lifting devices
- Activities that may lead to musculoskeletal disorders (MSDs)
- Fire and explosion: dust collectors
- Noise
- Confined spaces
- Falls
- Vehicle traffic
- Designated substances: asbestos
- Occupational exposure limits (OELs): isocyanates, metal working fluids

Top eight hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector specific Regulation, hazards are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties should refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Lockout: machine or transmission start-up

Injuries experienced by accidental machine start-up can include lacerations, crushing, and amputations.

In some circumstances these injuries can cause permanent disability or death.

Regulation 851 sets out the requirements for worker protection against machine start-up in sections 75 and 76.

- Review repair/maintenance of machinery [section 75].
- Review requirement/compliance with lockout procedures [sections 75 and 76].
- Review instruction and information provided to workers on the hazard and the requirements to isolate and lockout [OHSA clauses 25(2)(a) and 25(2)(d)].

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations,

conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Material handling: struck-by objects, caught between and/or compressed by objects

Injuries associated with material handling can include workers being struck by objects, caught between objects, and/or crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Review operations/processes involving the movement of raw material and product from receiving area to production line AND from production line to shipping area [section 45].
- Review operations/processes involving assembly line or similar style of raw material or product movement [clause 45(a)].
- Review warehousing/storage operations [clause 45(b)].

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51 of Regulation 851:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)]
 - operator protection [clause 51(1)(d)]
 - control return to neutral [clause 51(1)(e)].
- Review employer training policy and program [clause 51(2)(a)].
- Review material handling operations [clause 51(2)(b)].

Musculoskeletal disorder (MSDs)

Workplace pains and strains can be serious and disabling for workers, causing pain and suffering ranging from discomfort to severe disability.

MSD is not a medical diagnosis; it is an umbrella term for a group of injuries. Some of these injuries include: back pain (low back strain, etc.), muscle strain, tendonitis, carpal tunnel syndrome, rotator cuff syndrome, tennis elbow, and shoulder pain.

- Review operations/processes involving manual material handling.
- Review work areas requiring use of ladders and material handling.
- Review operations/processes requiring stationary repetitive movements.
- Review training on job-specific MSD risk factors.
- Review controls to reduce worker exposure to MSDs.
- Identify and assess job-related MSD risk factors.
- Contact your health and safety association (see link below) for guidance in assessments and prevention of MSDs.

Fire and explosion: dust collectors

Industrial dust collectors, hoppers, and bins can contain combustible dusts, including metal shavings.

Injuries from fire and/or explosion can include burns, lacerations, fractures, and loss of consciousness. In some circumstances, injuries can lead to permanent disability or death.

O. Reg. 851 sets out requirements for dust collectors in sections 63, 64, and 65.

- Review the industrial process and requirements involving the use of dust collectors [sections 63-65].

Noise

Injuries to workers can include varying degrees of noise-induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Confined space

A "confined space" means a fully or partially enclosed space that is not both designed and constructed for continuous human occupancy, and in which atmospheric hazards may occur because of its construction, location or contents or because of work that is done in it.

Injuries to workers can include loss of consciousness and collateral injuries sustained as a result of loss of consciousness.

In some circumstances such as oxygen depletion, toxic substance inhalation, or explosive atmosphere, sustained injuries can lead to permanent disability or death.

O. Reg. 632/05 sets out workplace requirements regarding confined spaces.

- Review work locations that satisfy the definition of "confined space."
- Review compliance with requirement to have a program in place for confined spaces [section 5].
- Review compliance with requirement to have adequate assessments of confined spaces carried out [section 6].
- Review compliance with requirement to have an adequate plan developed and implemented for confined space entry [section 7].
- Review compliance with requirement for worker training [section 9].

Trends

Table 1: Fatalities and critical injuries in automotive by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	2	0	0	2	1
Critical injuries	26	35	35	34	31

- Only critical injury events reported to the ministry are included here
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA
- Non-workers who are critically injured may also be included in the ministry's data
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago
- Data are subject to change because of inspectors' updates to the database

Table 2: Events and activities in automotive by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	1,115	1,165	1,461	1,268	1,568
Orders	1,698	1,782	2,153	2,404	2,618
Complaints	252	15	13	311	399
Work refusals	11	15	13	9	10

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHS clause 25(2)(h)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHS clause 25(1)(b)].
- An employer shall post in the workplace a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHS clause 25(2)(i)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHS clause 25(2)(a)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- Where a worker is exposed to a potential hazard of injury to the eye due to contact with a biological or chemical substance, an eyewash fountain shall be provided [section 124].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice; it shall not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].

Industrial Regulations identified by section

Inspectors may issue orders in the automotive sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 81 – eye protection
- Section 82 – foot protection
- Section 124 – eyewash
- Section 125 – deluge shower

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of Regulation 851. Section 7 applies to a factory as defined by the OHS and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- Occupational Health and Safety Awareness and Training Regulation, O. Reg. 297/13

- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Roll-Over Protective Structures](#), Regulation 856
- [Designated Substances](#), O. Reg. 490/09
- [Confined Spaces](#), O. Reg. 632/05

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.

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It is the responsibility of the workplace parties to ensure compliance with the legislation. This web resource 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.

While this web resource will also be available to Ministry of Labour inspectors, they will apply and enforce the OHSA and its regulations based on the facts as they may find them in the workplace. This web resource does not affect their enforcement discretion in any way.

Ceramic, Glass and Stone

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector includes various forms of glass, concrete and non-metallic mineral products producers. Examples include clay product and refractory manufacturing, cement product manufacturing, ready-mix concrete, and lime and gypsum product manufacturing.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the ceramics, glass, and stone sector.

- Material handling: struck-by object, caught between and/or compressed by objects
- Unguarded equipment
- Lifting devices
- Noise
- Confined space
- Lockout
- Activities that may lead to musculoskeletal disorders (MSDs)
- Heat
- Falls

Top five hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector specific Regulation, hazards are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties should refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Material handling: struck by objects, caught between objects, and compression

Injuries associated with material handling can include workers being struck by objects, caught between objects and/or crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Review operations / processes involving the movement of raw material and product from the receiving area to the production line and from the production line to the shipping area [section 45].
- Review operations/processes involving assembly line or similar style of raw material or product movement [clause 45(a)].
- Review warehousing/storage operations [clause 45(b)].

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof-mounted affixed hydraulic and/or chain-operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)]
 - operator protection [clause 51(1)(d)]
 - control return to neutral [clause 51(1)(e)].
 - Review employer training policy and program [clause 51(2)(a)].
 - Review material handling operations [clause 51(2)(b)].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Confined space

A "confined space" means a fully or partially enclosed space that is not both designed and constructed for continuous human occupancy, and in which atmospheric hazards may occur because of its construction, location or contents or because of work that is done in it.

Injuries to workers can include loss of consciousness and collateral injuries sustained as a result of loss of consciousness.

In extreme circumstances such as oxygen depletion, toxic substance inhalation, or explosive atmosphere sustained injuries can lead to permanent disability or death.

O. Reg. 632/05 sets out workplace requirements regarding confined spaces.

- Review work locations that satisfy the definition of "confined space."
- Review compliance with requirement to have a program in place for confined spaces [section 5].
- Review compliance with requirement to have adequate assessments of confined spaces carried out [section 6].
- Review compliance with requirement to have an adequate plan developed and implemented for confined space entry [section 7].
- Review compliance with requirement for worker training [section 9].

Trends

Table 1: Fatalities and critical injuries in ceramics, glass, and stone by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	1	0	0	0
Critical injuries	5	7	7	13	8

- Only critical injury events reported to the ministry are included here
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace

- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA
- Non-workers who are critically injured may also be included in the ministry's data
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago
- Data are subject to change because of inspectors' updates to the database

Table 2: Events and activities in ceramics, glass, and stone by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	393	341	487	457	438
Orders	863	685	796	945	1,068
Complaints	69	50	78	74	60
Work refusals	1	0	0	0	0

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].
- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- Where a machine or prime mover or transmission equipment has an exposed moving part that may endanger the safety of any worker, the machine or prime mover or transmission equipment shall be equipped with and guarded by a guard or other device that prevents access to the moving part [section 24].
- Where a worker is exposed to a potential hazard of injury to the eye due to contact with a biological or chemical substance, an eyewash fountain shall be provided [section 124].

Industrial Regulations identified by section

Inspectors may issue orders in the automotive sector under the following sections of the [Regulation for Industrial Establishments](#) where appropriate.

- Section 7 – pre-start health and safety review
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device

- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 81 – eye protection
- Section 82 – foot protection
- Section 84 – protection from noxious gas, liquid fume or dust
- Section 85 - fall arrest
- Section 124 – eyewash
- Section 125 – deluge shower

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of [Regulation 851](#). Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- [Regulation for Industrial Establishments](#), Regulation 851
- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Noise Regulation](#), O. Reg. 381/15
- [Designated Substances](#), O. Reg. 490/09
- [Confined Spaces](#), O. Reg. 632/05

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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It is the responsibility of the workplace parties to ensure compliance with the legislation. This web resource 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.

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Chemical, Rubber and Plastics

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

The chemical, rubber, and plastics sector is made up of manufacturing facilities for the production of organic and inorganic chemicals, synthetic resins, paints, varnishes, refined petroleum products, and rubber products:

- Production of refined petroleum products including fuels and blended oils and greases
- Production of industrial organic chemicals and products (e.g., aliphatic acids, alcohols, glycols)
- Production of industrial inorganic chemicals and products (e.g., acids, alkalis, compressed gases and other inorganic compounds)
- Production of synthetic resins (e.g., powders, granules, flakes or liquids)
- Production of pesticide, fertilizer and other agricultural chemicals
- Pharmaceutical and medicine manufacturing
- Production of soap, cleaning compound and toilet preparation manufacturing
- Paint and varnish industry; other chemical industries (primarily engaged in manufacturing chemicals not elsewhere classified)
- Tire and rubber industry
- Plastic film and sheets.

Organic and inorganic defined

The Industrial Organic Chemical Industries produce organic compounds such as methane, ethanol, gasoline, and toluene. Organic compounds are carbon-based and contain a carbon to hydrogen bond. They are often used as solvents, propellants and fuels and in the manufacturing of plastics and other polymers. Petrochemicals are organic.

The Industrial Inorganic Chemical Industry produces inorganic chemicals including titanium dioxide, chlor-alkali products and carbon black. Inorganic compounds include all compounds that are not organic. Carbon may be included but only when there is no carbon to hydrogen bond (e.g. carbon dioxide, carbon black, cyanide). Inorganic compounds have unlimited uses in manufacturing and industrial processes. Examples include pickling and plating operations, welding, soldering, metallurgical processes, swimming pool maintenance, abrasive blasting, etc.

Key hazards

- Machine guarding
- Flammable liquids: storage and dispensing
- Chemical burns, sulfuric and other inorganic acids
- Lifting devices
- Slips, trips and falls
- Musculoskeletal disorder (MSDs)
- Noise
- Designated substances: asbestos and benzene
- 1,3 Butadiene
- Dust

Top eight hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Flammable liquids

Flammable liquids are defined in Regulation 851 as: “a liquid having a flash point below 37.8°C [100°F] and vapour pressure below 275 kilopascals absolute [40 psi] at 37.8°C.” While this definition covers flammable liquids in general, those that have a “flash point below 22.8°C [73°F] and a boiling point below 37.8°C” are highly volatile and, therefore, require greater control.

Injuries from fire and/or explosion can include burns, lacerations, fractures, and loss of consciousness. In extreme circumstances, sustained injuries can lead to permanent disability or death.

- Review the use of solvents such as acetone and toluene in the workplace.
- Review requirement/compliance for grounding and bonding [clause 22(4)(b)].
- Review storage [clause 22(2)(d)].
- Review compliance with requirement for ventilation and work area protection [clause 22(4)(a) and section 63].
- Review the requirements outlined in the WHMIS, Regulation 860 and the requirements to monitor and control exposure limits as identified in Regulation 833.

Chemical burns

Corrosive chemicals can present severe hazards to workers. They can attach and chemically destroy exposed body tissue. They begin to cause damage as soon as they touch skin, eyes and the respiratory tract. Most corrosive chemicals are either acids or bases.

- Review the use of common acids such as hydrochloric acid, sulfuric acid, nitric acid, chromic acid, acetic acid and hydrofluoric acid. Common bases such as ammonium hydroxide, potassium hydroxide (caustic potash) and sodium hydroxide (caustic soda).
- Review compliance with requirement for skin protection [Regulation 851 section 84].
- Review compliance with requirement for eye protection [section 81].
- Review compliance with requirement for eyewash facilities [section 124].
- Review compliance with requirement for shower facilities [section 125].

Lifting devices

The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof mounted affixed hydraulic and/or chain operated hoists.
- Review compliance with requirements of section 51:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)]
 - operator protection [clause 51(1)(d)]
 - control return to neutral [clause 51(1)(e)].
 - Review employer training policy and program [clause 51(2)(a)].
 - Review material handling operations [clause 51(2)(b)].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review personal protective equipment required when working from heights [section 85].
- Review the training provided to a worker on the use of fall arrest equipment [section 79].
- Areas requiring ladder access: review compliance with section 73.
- Work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines: review compliance with sections 11, 13, and 14.
- Review instruction and information provided to a worker on the hazards associated with working from heights [OHS clauses 25(2)(a) and 25(2)(d)].

Musculoskeletal disorder (MSDs)

Workplace pains and strains can be serious and disabling for workers, causing pain and suffering ranging from discomfort to severe disability.

MSD is not a medical diagnosis; it is an umbrella term for a group of injuries. Some of these injuries include: back pain (low back strain, etc.), muscle strain, tendonitis, carpal tunnel syndrome, rotator cuff syndrome, tennis elbow, and shoulder pain.

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

Regulation 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].
- Contact your health and safety association for guidance in reviewing noise assessments and hearing protection selection.

Confined space

A "confined space" means a fully or partially enclosed space that is not both designed and constructed for continuous human occupancy, and in which atmospheric hazards may occur because of its construction, location or contents or because of work that is done in it.

Injuries to workers can include loss of consciousness and collateral injuries sustained as a result of loss of consciousness.

In extreme circumstances such as oxygen depletion, toxic substance inhalation, or explosive atmosphere sustained injuries can lead to permanent disability or death.

O. Reg. 632/05 sets out workplace requirements regarding confined spaces:

- Review work locations that satisfy the definition of "confined space."
- Review compliance with requirement to have a program in place for confined spaces [section 5].
- Review compliance with requirement to have adequate assessments of confined spaces carried out [section 6].
- Review compliance with requirement to have an adequate plan developed and implemented for confined space entry [section 7].
- Review compliance with requirement for worker training [section 9].
- Contact your health and safety association for further guidance in the requirements for entry permits, on-site rescue, and personal protective equipment as well as other elements of confined space worker protection.

Trends

Table 1: Fatalities and critical injuries in chemical, rubber, and plastics by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	1	1	2	1	1
Critical injuries	13	24	25	20	23

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in chemical, rubber, and plastics by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	1,274	1,232	1,057	1,216	1,116
Orders	2,178	2,047	1,750	2,161	2,075
Complaints	243	194	177	203	222
Work refusals	1	3	3	4	5

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA.

- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].
- An employer shall prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy [OHSA clause 25(2)(j)].

Most common orders issued under the applicable Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851.

- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- Where a machine or prime mover or transmission equipment has an exposed moving part that may endanger the safety of any worker, the machine or prime mover or transmission equipment shall be equipped with and guarded by a guard or other device that prevents access to the moving part [section 24].
- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice; it shall not have any finish or protective material used on it that is likely to make the surface slippery [section 11].

Applicable regulations identified by section

Regulation for Industrial Establishments, Regulation 851

- Section 7 – pre-start health and safety review
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device

- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 81 – eye protection
- Section 82 – foot protection
- Section 84 – protection from noxious gas, liquid fume or dust
- Section 124 – eyewash
- Section 125 – deluge shower

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of [Regulation 851](#). Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Designated Substances Regulation](#), O. Reg. 490/09
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Inventory of Agents \(for section 34 of the OHSA\)](#), Regulation 852
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Noise Regulation](#), O. Reg. 381/15
- [Confined Spaces](#), O. Reg. 632/05

Construction

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Construction Premises

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector includes refrigeration and air conditioning installation and maintenance, commercial refrigeration work, environmental control work, dry and wet heating and gas piping work, process piping work, insulation work, thermal insulation work, duct work, mechanical specialty work, other industrial construction and other services incidental to construction. This sector also includes offices of the premise, maintenance garages, warehouse and equipment storage/yards, transportation of equipment and machinery to projects from the yard.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the construction sector.

- Lifting devices
- Material handling: struck-by, caught between, and compression
- Flammable liquids: storage and dispensing
- Noise
- Falls
- Lockout
- Unguarded equipment

Top five hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof-mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)]
 - operator protection [clause 51(1)(d)]
 - control return to neutral [clause 51(1)(e)].
- Review employer training policy and program [clause 51(2)(a)].
- Review material handling operations [clause 51(2)(b)].

Material handling: struck-by object, caught between and/or compressed by objects

Injuries associated with material handling can include workers being struck by objects, caught between objects, and/or crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Review operations / processes involving the movement of raw material and product from the receiving area to the production line and from the production line to the shipping area [section 45].
- Review operations/processes involving assembly line or similar style of raw material or product movement [clause 45(a)].

- Review warehousing/storage operations [clause 45(b)].

Flammable liquids: storage and dispensing

Flammable liquids are defined in Regulation 851 as: “a liquid having a flash point below 37.8°C [100°F] and vapour pressure below 275 kilopascals absolute [40 psi] at 37.8°C”. While this definition covers flammable liquids in general, those that have a “flash point below 22.8°C [73°F] and a boiling point below 37.8°C” are highly volatile and, therefore, require greater control.

Injuries from fire and/or explosion can include burns, lacerations, fractures, and loss of consciousness. In extreme circumstances, sustained injuries can lead to permanent disability or death.

- Review the use of solvents such as acetone and toluene in the workplace.
- Review use and dispensing of gasoline [section 61].
- Review compliance with requirement for grounding and bonding [clause 22(4)(b)].
- Review storage [subsections 22(1) and 22(3)].
- Review requirement/compliance for ventilation and work area protection [clause 22(4)(a) and section 63].
- Review the requirements outlined in the WHMIS, Regulation 860 and the requirements to monitor and control exposure limits as identified in Regulation 833.

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker’s exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review housekeeping practices [section 11].
- Review areas requiring ladder access [section 73].
- Review personal protective equipment required when working from heights [section 85].
- Review the training provided to a worker on the use of fall arrest equipment [section 79].
- Review work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].
- Review instruction and information provided to a worker on the hazards associated with working from heights [OHSA clauses 25(2)(a) and 25(2)(d)].

Trends

Table 1: Fatalities and critical injuries in construction premises by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	1	0	0	1
Critical injuries	11	7	31	29	19

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.

- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in construction premises by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	782	642	3,057	3,274	1,781
Orders	1,375	1,215	8,373	9,899	3,880
Complaints	645	615	549	620	407
Work refusals	1	1	1	1	0

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].
- At a project or other workplace where no committee is required under section 9 and where the number of workers regularly exceeds five, the constructor or employer shall cause the workers to select at least one health and safety representative from among the workers at the workplace who do not exercise managerial functions [OHSA subsection 8(1)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- Material, articles or things shall be transported, placed or stored so that the material, articles or things, will not tip, collapse or fall, and can be removed or withdrawn without endangering the safety of any worker [clause 45 (b)].
- A storage cylinder for compressed gas shall: have a valve connection that prevents an inadvertent connection which would result in a hazardous mixture of gases; be secured in position during transportation, storage or use; have the valve protection cap in position when the cylinder is not in use; be in an upright position when containing acetylene; and be protected from physical damage [section 49].

Industrial Regulations identified by section

Inspectors may issue orders in the construction sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 45 – material handling and storage

- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 79 – personal protective equipment instruction
- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of [Regulation 851](#). Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Roll-Over Protective Structures](#), O. Reg. 856/90
- [Designated Substances](#), O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines "construction" as including "erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine."

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Education

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

The education sector comprises early education centres, elementary, secondary, and post-secondary schools, colleges, universities, driving schools, other educational services, libraries, driving schools, and museums.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the education sector.

- Workplace violence and harassment
- Falls
- Unguarded equipment
- Welding on containers: shop class or similar
- Noise
- Material handling: struck-by, caught between, and compression
- Electrical contacts: maintenance department
- Heat stress
- Mould
- Designated substances: asbestos

Top six hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Workplace violence and harassment

The OHSA sets out requirements for workplace violence and harassment in sections 32.0.1 to 32.0.8.

- Review the employer's policy and program [OHSA section 32.0.1 and 32.0.2].
- Review worker training [OHSA section 32.0.5].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls.

- Review precautions for work at heights [section 85].
- Review requirements for personal protective equipment [section 85].
- Review the training provided on the use of fall arrest equipment [section 79].
- Review work areas requiring ladder access [section 73].
- Check work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].
- Review instruction and information provided to a worker on the hazards associated with working from heights [OHSA clauses 25(2)(a) and 25(2)(d)].

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Welding on containers: shop class or similar

Injuries can include burns, lacerations, and loss of consciousness.

In extreme circumstances, sustained injuries can lead to permanent disability (e.g. amputation, loss of vision) and death (e.g. from severe burns or explosive force).

- Workplace parties should review shop areas for welding equipment.
- Workplace parties should review projects involving the use of disposed industrial barrels.
- Review compliance with requirements of Regulation 851 section 78.

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Material handling: struck by objects, caught between objects, and compression

Injuries associated with material handling can include workers being struck by objects, caught between objects and/or crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Inspect for operations involving the movement of raw material and large equipment from a board or facility warehouse to school [section 45].
- Review warehousing/storage operations [clause 45(b)].

Trends

Table 1: Fatalities and critical injuries in education by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	0	1	1	0
Critical injuries	56	79	82	105	69

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.

- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in education by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	2,002	2,133	1,628	871	999
Orders	4,024	4,708	2,604	760	956
Complaints	219	193	222	239	285
Work refusals	3	9	7	8	11

Most common orders issued under the OHSA

From April 1, 2015 to March 31, 2016 the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].
- An employer shall prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy [OHSA clause 25(2)(j)].

Most common orders issued under the Industrial Regulations

From April 1, 2015 to March 31, 2016 the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice; it shall not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- Material, articles or things shall be transported, placed or stored so that the material, articles or things will not tip, collapse or fall, and can be removed or withdrawn without endangering the safety of any worker [clause 45 (b)].
- An industrial establishment shall be adequately ventilated by either natural or mechanical means such that the atmosphere does not endanger the health and safety of workers [section 127].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].

Industrial Regulations identified by section

Inspectors may issue orders in the construction sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 81 – eye protection
- Section 82 – foot protection
- Section 124 – eyewash

- Section 125 – deluge shower

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Regulation for Industrial Establishments](#), Regulation 851
- [Designated Substances](#), O. Reg. 490/09
- [Needle Safety Regulation](#), O. Reg. 474/07

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Electrical and Electronics

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector includes the following industries: small electrical appliance, major electric and non-electric appliance, electronic parts and components, lighting fixture, electric lamp and shade, receiver, telecommunication equipment, electrical transformer, electrical switchgear, battery, electronic computing and peripheral equipment, electronic office, store and business machine, other communication and electronic equipment industry.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the electrical and electronics sector.

- Material handling: struck-by object, caught between objects, and compression
- Unguarded equipment
- Lockout: machine or transmission start-up
- Electrical contact: high potential testing ("hi-pot")
- Noise
- Lifting devices
- Falls

Top five hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Material handling: struck by object, caught between objects, and compression

Injuries associated with material handling can include workers being struck by object, caught between objects, and/or crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections, 45, 46, 47, 48, 49, and 50.

- Review operations / processes involving the movement of raw material and product from the receiving area to the production line and from the production line to the shipping area [section 45].
- Review operations / processes involving assembly line or similar style of raw material or product movement [section 45(a)].
- Review warehousing/storage operations [section 45(b)].

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections, 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Lockout: machine or transmission start-up

Injuries experienced by accidental machine start-up can include lacerations, crushing, and amputations.

In severe circumstances these injuries can lead to permanent disability or death. Accidental start-up of equipment may be from any source such as of machinery and devices powered by electrical, pneumatic, or hydraulic means.

Regulation 851 sets out the requirements for worker protection against machine start-up in sections 75 and 76.

- Review repair/maintenance of machinery [section 75].
- Review requirement/compliance with lockout procedures [sections 75 and 76].
- Review instruction and information provided to workers on the hazard and the requirements to isolate and lockout [OHSA clauses 25(2)(a) and 25(2)(d)].

Electrical contact: high potential testing (“hi-pot”)

High potential tests, commonly known as "high voltage tests" (or "dielectric tests") are conducted to test dielectric strength of the insulation in electrical equipment and devices.

Testing is performed with the use of electrical safety testing instruments by adding high voltage to determine the amount of leakage current through the insulation of such electrical equipment and devices.

Injuries to workers can include loss of consciousness, burns, lacerations, and fractures as result of contact with live electrical apparatus or falls to the ground (from the same level, or from an elevated working height).

The lack of muscular self-control after electrical shock and the inability of workers to protect themselves or brace for the impact can contribute to serious head, neck and back injuries.

Severe incidents involving electrocution/electric shock can lead to permanent disability or death.

Workplace parties should:

- Inquire about high potential testing or dielectric testing work areas and equipment.
- Review compliance with Regulation 851 section 40.
- Ensure electrical equipment, insulating materials and conductors shall be
 - suitable for their use, and
 - certified by
 - the Canadian Standards Association, or
 - the Electrical Safety Authority, as defined in the Electricity Act.
- Ensure worker isolation from electrical hi-pot equipment (distance, cage or room).
- Ensure personal protective equipment (PPE) is used when required [section 79].
- Review qualifications and training of workers required to perform testing.
- Review training provided workers [OHSA clauses 25(2)(a) and 25(2)(d)].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Trends

Table 1: Fatalities and critical injuries in electrical and electronics by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	1	0	0	0
Critical injuries	5	7	9	4	5

- Only critical injury events reported to the ministry are included here.

- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the Occupational Health and Safety Act (OHSA).
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in electrical and electronics by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	633	565	531	487	499
Orders	1,229	1,082	873	914	902
Complaints	94	82	82	86	86
Work refusals	1	1	5	2	0

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy [OHSA clause 25(2)(j)].
- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- Material, articles or things shall be transported, placed or stored so that the material, articles or things will not tip, collapse or fall, and can be removed or withdrawn without endangering the safety of any worker [clause 45 (b)].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice; it shall not have any finish or protective material used on it that is likely to make the surface slippery [section 11].

Industrial Regulations identified by section

Inspectors may issue orders in the construction sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders

- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 81 – eye protection
- Section 82 – foot protection
- Section 124 – eyewash
- Section 125 – deluge shower

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of [Regulation 851](#). Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Designated Substances](#), O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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It is the responsibility of the workplace parties to ensure compliance with the legislation. This web resource 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.

While this web resource will also be available to Ministry of Labour inspectors, they will apply and enforce the OHSA and its regulations based on the facts as they may find them in the workplace. This web resource does not affect their enforcement discretion in any way.

Farming Operations

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

See also: [Agricultural Services](#), [Farming Operations Resources](#)

Sector summary

Farming operations can be described as primarily the production, cultivation, growing and harvesting of agricultural commodities and any practices performed as an integral part of a farming operation.

The [Occupational Health and Safety Act](#) (OHSA) applies to farming operations, subject to certain limitations and conditions. [O. Reg. 414/05, Farming Operations, section 1].

Generally, the Act and applicable regulations apply to a farming operation where there are paid workers. For example, where there is a paid worker at a farm, even for a short time, the employer and all other workplace parties (e.g., supervisors, suppliers and workers) at that farming operation must comply with all applicable requirements of the Act and regulations.

This includes workers who are residents of Canada and workers employed in Ontario through one of the federal government's Temporary Foreign Worker Programs such as the Seasonal Agricultural Workers Program.

The OHSA does not apply to a farming operation operated by a self-employed person without paid workers.

Subsection 9(2) of the Act (joint health and safety committee requirement) applies only to farming operations where 20 or more workers are regularly employed and have duties that include performing work related to one or more of the operations specified in subsection (2):

- Mushroom farming
- Greenhouse farming
- Dairy farming
- Hog farming
- Cattle farming
- Poultry farming.

Please refer to [O. Reg. 414/05](#) for further details and application of the regulation in farming operations.

The following regulations made under the OHSA apply to farming operations where the Act applies:

- O. Reg. 414/05, Farming Operations, which invokes the OHSA subject to specific conditions and limitations
- Regulation 834, Critical Injury – Defined
- O. Reg. 297/13, Occupational Health and Safety Awareness and Training
- O. Reg. 381/15, Noise.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the farming operations sector.

- Lockout: machine or transmission start-up
- Noise
- Entanglement with unguarded equipment
- Falls
- Material Handling
- Oxygen deficient spaces
- Heat/cold stress
- Struck by/hit by objects
- Chemical hazards
- Tip/roll-over of farm equipment
- Musculoskeletal disorders (MSDs)
- Electrical and fire

Top ten hazards described

The hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of OHSA clause 25(2)(h). Employers on a farming operation should be aware that in situations where construction work is undertaken, the Construction Projects Regulation, [O. Reg. 213/91](#), may apply (e.g., building a barn on the farm); and where an industrial establishment is present, the Industrial Regulation 861 may apply (e.g., processing of crops in plant on the farm).

Workplace parties should refer to the narrative portion of the field visit report, if they have received one, for further information or contact their [health and safety association](#) for guidance.

Lockout: machine or transmission start-up

Injuries experienced by accidental machine start-up can include lacerations, crushing, and amputations. In severe circumstances these injuries can lead to permanent disability or death.

[Regulation 851](#) for industrial establishments, including farming operations, sets out the requirements for worker protection against start-up of machines, such as farm equipment, in sections 75 and 76.

- Review repair/maintenance of machinery [section 75].
- Review compliance with requirement for lockout procedures [sections 75 and 76].
- Review instruction and information provided to workers on the hazard and the requirements to isolate and lockout [OHSA clauses 25(2)(a) and 25(2)(d)].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

[O. Reg. 381/15](#) sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Entanglement with unguarded equipment

Injuries to workers can include lacerations, amputations, crush by entanglement, and loss of consciousness. In extreme circumstances sustained injuries can lead to permanent disability or death.

Farm equipment may include any mechanical or electrical device that transmits or modifies energy to perform a variety of tasks. Examples of farm equipment include balers, conveyors, manure spreaders, bale choppers, mowers, shredders, harvesters, grinders, blowers, power washers and augers.

The OHSA requires the employer to take "every precaution reasonable in the circumstances for the protection of a worker." In most circumstances, the most reasonable precaution would be to provide a guard or a physical barrier to prevent worker access to moving parts such as roller shafts or to the moving machines.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards.

Regulation 851 sets out requirements for guarding of equipment in sections, 24, 25, 26, 28, 31 and 32. Unguarded machinery, when the worker has access to moving part such as, material cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans must be guarded.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness arising from same-level falls as well as falls from height.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review personal protective equipment required when working from heights [section 85].
- Review the training provided to a worker on the use of fall arrest equipment [section 79].
- Review areas requiring ladder access [section 73].
- Review work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].
- Review instruction and information provided to a worker on the hazards associated with working from heights [OHS clause 25(2)(a) and 25(2)(d)].

Material handling

Injuries associated with material handling can include workers' injuries associated with musculoskeletal disorders (MSDs) sustained while processing, harvesting and cultivating farm products; these can include soft-tissue injuries.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Review operations / processes involving the movement of raw material and product from the receiving area to the production line and from the production line to the shipping area [section 45].
- Review operations/processes involving assembly line or similar style of raw material or product movement [subsection 45(a)].
- Review warehousing/storage operations [subsection 45(b)].

Oxygen deficient spaces

There are many examples of potentially dangerous confined spaces on a farm including silos, grain bins, manure pits and spreaders, mixing or holding tanks, cisterns, valve pits and pump houses. Farmers and workers who enter a confined space, and those who attempt a rescue in an emergency, could quickly be overcome by a hazardous atmosphere, resulting in injury or death.

"Confined space" means a fully or partially enclosed space,

- a) that is not both designed and constructed for continuous human occupancy, and
- b) in which atmospheric hazards may occur because of its construction, location or contents or because of work that is done in it.

If you have a space that is fully or partially enclosed, the two conditions – (a) and (b) above – must both apply before the space can be considered a "confined space".

- Employers have a duty under OHS clause 25(2)(h) to take every precaution reasonable in the circumstances for the protection of a worker. This includes developing policies and procedures to protect workers in confined environments.

Please refer to [Atmospheric Hazards Associated with Oxygen-Limited Structures \(Silos\) on Farms](#) for more information.

Heat / Cold stress

Working where it is hot or cold puts stress on your body. When heat or cold is combined with other stresses such as hard physical work, loss of fluids, fatigue or some pre-existing medical conditions, it may lead to heat- or cold-related illness, disability and even death.

- Employers have a duty under OHS clause 25(2)(h) to take every precaution reasonable in the circumstances for the protection of a worker. This includes developing policies and procedures to protect workers in environments that are hot/cold because of hot processes and/or hot or cold weather.

Struck by object, hit by objects, and compression

Injuries associated with handling large animals and other farm equipment can be included when workers are being struck by, caught between, and/or crushed by objects.

- Employers have a duty under OHS clause 25(2)(h) to take every precaution reasonable in the circumstances for the protection of a worker. This includes developing policies and procedures to protect workers in farm environments hazards.

- The employer shall provide information, instruction and supervision to a worker handling large farm animals and shall ensure that the worker is competent to do so safely.
- A worker coming into contact with an animal should wear appropriate personal protective equipment for the assigned work.
- A worker coming into contact with an animal should be made aware of any transmittable diseases that the animal may carry and should be instructed on how to prevent transmission, to themselves and to other animals.
- An employer should ensure that workers know how to safely separate themselves from an animal while working in an enclosure occupied by animals.

Chemical hazards

Injuries associated with handling chemicals can include workers being exposed to chemical burns and other skin conditions. Exposure to such agents can have serious and immediate consequences or they can cause long-term, chronic conditions. The employer should review the chemical hazards and put in place the appropriate controls to eliminate any exposure for the health and safety of workers.

- The employer shall provide information, instruction and supervision to workers exposed to hazardous biological, chemical or physical agents.
- The employer should carry out an assessment of the workplace and determine the risk that workers will be exposed to hazardous biological, chemical or physical agents and develop a plan for controlling worker exposure.
- Where workers are exposed to hazardous biological, chemical or physical agents and it is not possible to control exposure by means such as substituting a safer material or re-designing the work process, the employer and supervisor should ensure the use of appropriate personal protective equipment. For chemical agents, the protective equipment required will generally be identified on either the product label or material safety data sheet, where available.
- The employer should instruct workers on safe handling procedures and proper personal hygiene techniques to minimize contact with chemical or biological hazards.
- Employers have a duty under OHSA clause 25(2)(h) to take every precaution reasonable in the circumstances for the protection of a worker. This includes developing policies and procedures to protect workers from controlled chemical products.

Tip/roll-over of farming equipment

Serious, sometimes fatal, operator injuries are associated with using farming equipment without roll-over protection.

- Employers have a duty under OHSA clause 25(2)(h) to take every precaution reasonable in the circumstances for the protection of a worker. This includes developing policies and procedures to protect workers from rollover of equipment such as farming equipment.

Trends

Table 1: Fatalities and critical injuries in in farming operations by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	1	1	5	5	2
Critical injuries	7	4	8	4	4

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in farming operations by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	187	173	165	189	154
Orders	216	231	165	188	182
Complaints	33	33	26	30	30

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].
- At a project or other workplace where no committee is required under section 9 and where the number of workers regularly exceeds five, the constructor or employer shall cause the workers to select at least one health and safety representative from among the workers at the workplace who do not exercise managerial functions [OHSA subsection 8(1)].

Most frequent orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the Ontario Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- Where a machine or prime mover or transmission equipment has an exposed moving part that may endanger the safety of any worker, the machine or prime mover or transmission equipment shall be equipped with and guarded by a guard or other device that prevents access to the moving part [section 24].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- Material, articles or things shall be transported, placed or stored so that the material, articles or things, will not tip, collapse or fall, and can be removed or withdrawn without endangering the safety of any worker [subsection 45(b)].

Industrial regulations identified by section

Inspectors may issue orders in the farming operations sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection
- Section 85 – fall arrest

Applicable regulations

- Farming Operations, O. Reg. 414/05
- Critical Injury – Defined, Regulation 834

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines "construction" as including "erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine."

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Film and Television

Safe At Work Ontario

Issued: October 14, 2016

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Sector summary

The film and television sector involves the production of material to be shown on television or in a movie theatre; however, it excludes television broadcasting, which is under federal jurisdiction.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the film and television sector.

- Heat stress
- Falls
- Fire: pyrotechnics and other special effects
- Lifting devices
- Material handling: struck by objects, caught between objects, and compression
- Traffic protection: struck by vehicles or other objects
- Activities that may lead to musculoskeletal disorders (MSDs): stunts and moving equipment
- Chemical: Workplace Hazardous Material Information System (WHMIS)
- Cold stress
- Electrical hazards

Top six hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Heat stress

Workplace parties are reminded of the risk of heat related illnesses such as heat stroke and heat exhaustion.

- Review engineering/administrative controls related to ventilation and heat reduction, policy and procedures (hot weather plan), work and rest practices, and personal protective equipment to protect the worker [OHSA 25(2)(h)].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls.

- Review precautions for work at heights [section 85].
- Review requirements for personal protective equipment [section 85].
- Review the training provided on the use of fall arrest equipment [section 79].
- Review work areas requiring ladder access [section 73].
- Check work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].
- Review instruction and information provided to a worker on the hazards associated with working from heights [OHSA clauses 25(2)(a) and 25(2)(d)].

Fire: pyrotechnics and other special effects

Injuries from fire and/or explosion can include burns, lacerations, fractures, and loss of consciousness. In extreme circumstances, sustained injuries can lead to permanent disability (amputation, loss of vision/hearing) and death (severe burns and explosive force).

- Review use of pyrotechnics or similar props.
- Review compliance with requirements for personal protective equipment to be provided to workers to protect them from fire hazards.
- Review the training provided to a worker on the care, use, and limitations of the personal protective equipment provided [OHSA clauses 25(2)(a) and 25(2)(d) and Regulation 851 section 79].
- Review storage location and condition of the personal protective equipment [OHSA clause 25(1)(b)].

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)]
 - operator protection [clause 51(1)(d)]
 - control return to neutral [clause 51(1)(e)].
- Review employer training policy and program [clause 51(2)(a)].
- Review material handling operations [clause 51(2)(b)].

Material handling: struck by object, caught between objects, and compression

Injuries associated with material handling can include workers being struck by objects, caught between objects, and/or crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Inspect for operations involving the movement of set/prop equipment and material about the production area [section 45].
- Review prop staging area or temporary warehousing/storage [clause 45(b)].

Traffic protection: struck by vehicle or object

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances such as vehicle collisions, sustained injuries can lead to permanent disability or death as a result of high velocity/impact trauma.

- Review requirement for working in proximity to vehicular traffic [Regulation 851 section 20].
- Review compliance with requirement to have in place barriers, warning signs, or other safeguards [Regulation 851 section 20 or OHSA clause 25(2)(h)].
- Review compliance with the requirement to prepare a traffic protection plan [OHSA clause 25(2)(h)].
- Review instruction and information provided to a worker on the hazards associated with vehicular traffic and work area protection [OHSA clauses 25(2)(a) and 25(2)(d)].

Trends

Table 1: Fatalities and critical injuries in the film and television sector by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	0	0	0	0
Critical injuries	0	2	1	0	0

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.

- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in the film and television sector by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	47	36	24	47	40
Orders	49	47	24	77	28
Complaints	12	4	4	16	14
Work refusals	0	0	0	0	1

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].
- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall prepare a policy with respect to workplace violence, prepare a policy with respect to workplace harassment, and review the policies as often as is necessary, but at least annually [OHSA subsection 32.0.1(1)].
- The constructor or employer shall cause a joint health and safety committee to be established and maintained at the workplace [OHSA subsection 9(4)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A portable ladder shall: be free from broken or loose members or other faults; have non-slip feet; be placed on a firm footing; and where it exceeds six metres in length and is not securely fastened or is likely to be endangered by traffic, be inclined so that the horizontal distance from the top support to the foot of the ladder is not less than 1/4 and not more than 1/3 of the length of the ladder when not securely fastened [section 73].
- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- Where a worker is exposed to a potential hazard of injury to the eye due to contact with a biological or chemical substance, an eyewash fountain shall be provided [section 124].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice; it shall not have any finish or protective material used on it that is likely to make the surface slippery [section 11].

Industrial Regulations identified by section

Inspectors may issue orders in the film and television sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Section 73 – portable ladder
- Section 79 – personal protective equipment instruction
- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection
- Section 84 – protection from noxious gas, liquid fume or dust

- Section 85 – fall arrest

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Designated Substances](#), O. Reg. 490/09
- [Protecting Child Performers Act, 2015](#)
- [Needle Safety Regulation](#), O. Reg. 474/07

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Fire

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This subsector of government includes municipal and other firefighting services and has a Section 21 Committee that develops guidance materials that speak to health and safety issues.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the fire-fighting sector.

- Falls: aerial devices, ladder trucks, boom truck, and bucket trucks
- Fire and oxygen deficient atmospheres
- Traffic protection
- Noise
- Chemical, biological, radiological, and explosive hazards (occupational illness)
- Confined space entry

Top five hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties should refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Falls: aerial devices, ladder trucks, boom truck, and bucket trucks

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances sustained injuries as result of inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against falls.

- Review working at heights policy and procedures [section 85].
- Review compliance with requirements for fall protection [section 85].
- Review the training provided to a worker on the care, use and limitations of the fall arrest equipment [section 79].
- Review ladder compliance [section 73].
- Review instruction and information provided to a worker on the hazards associated with working from heights (aerial device operation) [OHSA clauses 25(2)(a) and 25(2)(d)].

Fire and oxygen-deficient atmospheres

Injuries from fire, explosion, or lack of oxygen can include burns, lacerations, fractures, and loss of consciousness.

In extreme circumstances, sustained injuries can lead to permanent disability (e.g. amputation, loss of vision/hearing) or death (e.g. from severe burns, explosive force, or asphyxiation).

Workplace parties should:

- Review compliance with the requirement for personal protective equipment to be provided to a worker to protect the worker from the hazard of fire and oxygen-deficient atmospheres [OHSA clause 25(2)(h)].
- Review the training provided to a worker on the care, use, and limitations of the personal protective equipment provided [OHSA clauses 25(2)(a) and 25(2)(d) and Regulation 851 section 79].
- Review storage location and condition of the PPE [OHSA clause 25(1)(b)].

Traffic protection

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances such as vehicle collisions, sustained injuries can lead to permanent disability or death as a result of high velocity/impact trauma.

- Review requirement for working in proximity to vehicular traffic.
- Review compliance with requirements to have in place barriers, warning signs, or other safeguards [Regulation 851 section 20 or OHSA clause 25(2)(h)].
- Review compliance with the requirement to prepare a traffic protection plan [OHSA clause 25(2)(h)].
- Review instruction and information provided to a worker on the hazards associated with vehicular traffic and work area protection [OHSA clauses 25(2)(a) and 25(2)(d)].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Potential occupational illness

If an employer is informed that a worker has an occupational illness or that a claim for an occupational illness has been filed with the Workplace Safety and Insurance Board, the employer must notify a director of the Ministry of Labour, the joint health and safety committee (or health and safety representative) and the union, if any, within four days.

- This notice must be in writing and must contain all prescribed information [OHSA subsection 52(2) and Regulation 851 subsection 5(2)].
- The duty to notify applies not only to current workers of the employer but also to former ones [OHSA subsection 52(3)].

Occupational asthma

- Review engineering controls and the effective use of adequate and properly fitted personal protective equipment.
- Review the training provided to a worker on the care, use and limitations of the personal protective equipment.

Heat stress

Heat stress can cause heat related illnesses such as heat exhaustion or heat stroke.

- Review engineering/administrative controls related to ventilation and heat reduction, policy and procedures (hot weather plan), work and rest practices, and personal protective equipment to protect the worker [OHSA clause 25(2)(h)].

Occupational Cancers

- Review workplace hazards that could expose a worker to a known or suspected carcinogen.

Trends

Table 1: Fatalities and critical injuries in fire services by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	0	0	0	0
Critical injuries	5	5	10	3	6

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in fire services by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	107	104	84	68	106
Orders	44	22	64	81	102
Complaints	12	14	12	14	18
Work refusals	0	1	0	0	0

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An inspector may, for the purposes of carrying out his or her duties and powers under this Act and the regulations, require the production of any drawings, specifications, licence, document, record or report, and inspect, examine and copy the same [OHSA clause 54(1)(c)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- Electrical equipment insulating materials and conductors shall be suitable for their use [clause 40(a)].
- Except as prescribed in the Buildings Part, the Building Code applies to all industrial establishments with respect to exit from a floor area [clause 120(b)].

Industrial Regulations identified by section

Inspectors may issue orders in the fire sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 79 – personal protective equipment instruction
- Section 80 – head protection

- Section 81 – eye protection
- Section 82 – foot protection
- Section 85 – fall arrest

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Roll-Over Protective Structures](#), Regulation 856
- [Designated Substances](#), O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Fisheries

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector comprises establishments primarily engaged in the catching of fish and other wild animals from their natural habitats. This includes other services incidental to fishing, hunting or trapping, fishing inspection, bait preparation, net mending, fish hatchery service, and fishing consulting service.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the fisheries sector.

- Water
- Lifting devices
- Activities that may lead to musculoskeletal disorders (MSDs)
- Unguarded equipment
- Noise
- Material handling
- Falls

Top five hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Water

Injuries to workers can include fractures, hypothermia, and loss of consciousness.

In extreme circumstances, sustained injuries can lead to permanent disability or death by drowning (asphyxiation) or cardiac arrest due to hypothermia.

- Review fishing or water operations worker safety.
- Review personal protective equipment required to protect a worker from the hazard of drowning [Regulation 851 section 86].
- Ensure personal protective equipment is maintained in good condition [OHSA clause 25(1)(b)].
- Review training provided to a worker on the care, use and limitations of the personal protective equipment [Regulation 851 section 79].
- Review the training provided to a worker on the hazards of working about open water [OHSA clauses 25(2)(a) and 25(2)(d)].

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)]
 - operator protection [clause 51(1)(d)]

- control return to neutral [clause 51(1)(e)].
- Review employer training policy and program [clause 51(2)(a)].
- Review material handling operations [clause 51(2)(b)].

Musculoskeletal disorders (MSDs)

Workplace pains and strains can be serious and disabling for workers, causing pain and suffering ranging from discomfort to severe disability.

MSD is not a medical diagnosis; it is an umbrella term for a group of injuries. Some of these injuries include: back pain (low back strain, etc.), muscle strain, tendonitis, carpal tunnel syndrome, rotator cuff syndrome, tennis elbow, and shoulder pain.

- Review operations/processes involving manual material handling.
- Review work areas requiring use of ladders and material handling.
- Review operations/processes requiring stationary repetitive movements.
- Review training on job-specific MSD risk factors.
- Review controls to reduce worker exposure to MSDs.
- Identify and assess job-related MSD risk factors.
- Contact your health and safety association for guidance in assessing and eliminating or reducing MSD hazards.

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Trends

Table 1: Fatalities and critical injuries in fisheries by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	0	1	0	0
Critical injuries	0	0	0	1	0

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.

- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in fisheries by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	3	1	12	7	7
Orders	0	0	41	15	9
Complaints	0	2	0	1	1
Work refusals	0	0	0	0	0

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].
- An employer shall prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy [OHSA clause 25(2)(j)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- A storage cylinder for compressed gas shall: have a valve connection that prevents an inadvertent connection which would result in a hazardous mixture of gases; be secured in position during transportation, storage or use; have the valve protection cap in position when the cylinder is not in use; be in an upright position when containing acetylene; and be protected from physical damage [section 49].

Industrial Regulations identified by section

Inspectors may issue orders in the fishing sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction

Applicable regulations

- Occupational Health and Safety Awareness and Training Regulation, O. Reg. 297/13
- Workplace Hazardous Materials Information System, Regulation 860
- Control of Exposure to Biological or Chemical Agents, Regulation 833
- Noise Regulation, O. Reg. 381/15
- Regulation for Industrial Establishments, Regulation 851
- Roll-Over Protective Structures, Regulation 856
- Designated Substances, O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Food, Beverage and Tobacco

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector includes workplaces that produce and/or manufacture food products, beverages, distillery products, brewery products, wine products, and tobacco products. It also includes slaughter houses and meat, fish and poultry processing plants.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the food, beverage and tobacco sector.

- Unguarded equipment
- Noise
- Falls
- Lifting devices
- Activities that may lead to musculoskeletal disorders (MSDs)
- Confined spaces (e.g., poultry processing plants)
- Electrical stunning equipment
- Machine guarding
- Lockout
- Material handling
- Heat stress
- Cold stress
- Chemicals and gases (e.g., CO₂ used as asphyxiant)

Top six hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort and that engineering controls and work practices must be used where practicable [subsection 2(5)].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review personal protective equipment required when working from heights [section 85].
- Review the training provided to a worker on the use of fall arrest equipment [section 79].
- Review areas requiring ladder access [section 73].
- Review work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].
- Review instruction and information provided to a worker on the hazards associated with working from heights [OHSa clauses 25(2)(a) and 25(2)(d)].

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)]
 - operator protection [clause 51(1)(d)]
 - control return to neutral [clause 51(1)(e)].
- Review employer training policy and program [clause 51(2)(a)].
- Review material handling operations [clause 51(2)(b)].

Musculoskeletal disorders (MSDs)

Workplace pains and strains can be serious and disabling for workers, causing pain and suffering ranging from discomfort to severe disability.

MSD is not a medical diagnosis; it is an umbrella term for a group of injuries. Some of these injuries include: back pain (low back strain, etc.), muscle strain, tendonitis, carpal tunnel syndrome, rotator cuff syndrome, tennis elbow, and shoulder pain.

- Review operations/processes involving manual material handling.
- Review work areas requiring use of ladders and material handling.
- Review operations/processes requiring stationary repetitive movements.
- Review training on job-specific MSD risk factors.
- Review controls to reduce worker exposure to MSDs.
- Identify and assess job-related MSD risk factors.
- Contact your health and safety association for guidance in assessing and eliminating or reducing MSD hazards.

Confined space

A "confined space" means a fully or partially enclosed space that is not both designed and constructed for continuous human occupancy, and in which atmospheric hazards may occur because of its construction, location or contents or because of work that is done in it.

Injuries to workers can include loss of consciousness and collateral injuries sustained as a result of loss of consciousness.

In extreme circumstances such as oxygen depletion, toxic substance inhalation, or explosive atmosphere sustained injuries can lead to permanent disability or death.

O. Reg. 632/05 sets out workplace requirements regarding confined spaces.

- Review work locations that satisfy the definition of “confined space.”
- Review compliance with requirement to have a program in place for confined spaces [section 5].
- Review compliance with requirement to have adequate assessments of confined spaces carried out [section 6].
- Review compliance with requirement to have an adequate plan developed and implemented for confined space entry [section 7].
- Review compliance with requirement for worker training [section 9].

Trends

Table 1: Fatalities and critical injuries in food, beverage, and tobacco sector by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	2	0	1	0	1
Critical injuries	39	36	34	34	39

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in food, beverage, and tobacco sector by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	2,224	2,221	2,110	1,929	2,301
Orders	4,099	4,078	3,687	3,565	4,331
Complaints	410	365	388	412	465
Work refusals	6	7	5	6	4

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy [OHSA clause 25(2)(j)].
- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].
- At a project or other workplace where no committee is required under section 9 and where the number of workers regularly exceeds five, the constructor or employer shall cause the workers to select at least one health and safety representative from among the workers at the workplace who do not exercise managerial functions [OHSA subsection 8(1)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- Where a machine or prime mover or transmission equipment has an exposed moving part that may endanger the safety of any worker, the machine or prime mover or transmission equipment shall be equipped with and guarded by a guard or other device that prevents access to the moving part [section 24].

- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice; it shall not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- A lifting device shall be so constructed, of such strength and be equipped with suitable ropes, chains, slings and other fittings so as to adequately ensure the safety of all workers. It shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year; a permanent record shall be kept and signed by the competent person doing the examination [section 51].

Industrial Regulations identified by section

Inspectors may issue orders in the food, beverage and tobacco sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review requirement
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of Regulation 851. Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- Occupational Health and Safety Awareness and Training Regulation, O. Reg. 297/13
- Workplace Hazardous Materials Information System, Regulation 860
- Control of Exposure to Biological or Chemical Agents, Regulation 833
- Noise Regulation, O. Reg. 381/15
- Regulation for Industrial Establishments, Regulation 851
- Designated Substances, O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, O. Reg. 213/91 may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines "construction" as including "erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine."

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Government

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector includes municipal and provincial public administration and municipal and provincial entities (agencies, boards, and commissions), courts of law, and correctional institutions. Fire and Police Services are stand-alone sectors.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the government sector.

- Slips, trips and falls
- Workplace violence and harassment
- Activities that may lead to musculoskeletal disorders (MSDs)

Top three hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Slips, trips and falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review areas requiring ladder access [section 73].
- Review work areas and elevated access areas [sections 11, 13, and 14].
- Review instruction and information provided to a worker on the hazards associated with walking and working surface hazards and controls [OHSA clauses 25(2)(a) and 25(2)(d)].

Workplace violence and harassment

The OHSA sets out requirements for workplace violence and harassment in sections 32.0.1 to 32.0.8.

- Review the employer's policy and program [OHSA section 32.0.1 and 32.0.2].
- Review worker training [OHSA section 32.0.5].

Musculoskeletal disorders (MSDs)

Workplace pains and strains can be serious and disabling for workers, causing pain and suffering ranging from discomfort to severe disability.

MSD is not a medical diagnosis; it is an umbrella term for a group of injuries. Some of these injuries include: back pain (low back strain, etc.), muscle strain, tendonitis, carpal tunnel syndrome, rotator cuff syndrome, tennis elbow, and shoulder pain.

- Review operations/processes involving manual material handling.
- Review work areas requiring use of ladders and material handling.
- Review operations/processes requiring stationary repetitive movements.
- Review training on job-specific MSD risk factors.
- Review controls to reduce worker exposure to MSDs.

- Identify and assess job-related MSD risk factors.
- Contact your health and safety association for guidance in assessing and eliminating or reducing MSD hazards.

Trends

Table 1: Fatalities and critical injuries in government by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	0	1	1	0
Critical injuries	38	31	39	53	36

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in government by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	965	925	1,001	941	1,074
Orders	700	700	946	661	693
Complaints	185	176	136	205	238
Work refusals	21	34	13	99	109

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].
- An employer shall prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy [OHSA clause 25(2)(j)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice; it shall not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- Where a machine or prime mover or transmission equipment has an exposed moving part that may endanger the safety of any worker, the machine or prime mover or transmission equipment shall be equipped with and guarded by a guard or other device that prevents access to the moving part [section 24].

Industrial Regulations identified by section

Inspectors may issue orders in the government sector under the following sections of the [Regulation for Industrial Establishments](#) where appropriate.

- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 85 – fall arrest

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Regulation for Industrial Establishments](#), Regulation 851
- [Designated Substances](#), O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Industrial Services

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector comprises individuals and workplaces that produce a service in support of industry rather than a product. By contrast, individuals employed in the industrial manufacturing sector might produce goods such as cars, clothing, or toys. Some examples are elevator and escalator installation/maintenance, display and billboard advertising, power laundries, linen supply, and custom welding and metal fabricating.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the industrial services sector.

- Lockout: machine or transmission start-up
- Unguarded equipment
- Falls
- Electrical contact: less than 600 volts
- Noise
- Confined space
- Material handling
- Lifting devices
- Heat
- Activities that may lead to musculoskeletal disorders (MSDs)

Top six hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Lockout: machine or transmission start-up

Injuries experienced by accidental machine start-up can include lacerations, crushing, and amputations. In severe circumstances these injuries can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against machine start-up in sections, 75 and 76.

- Review repair/maintenance of machinery [section 75].
- Review compliance with requirement for lockout procedures [sections 75 and 76].
- Review instruction and information provided to workers on the hazard and the requirements to isolate and lockout [OHSA clauses 25(2)(a) and 25(2)(d)].

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].

- Review requirements for the guarding of pinch points [section 25].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review personal protective equipment required when working from heights [section 85].
- Review the training provided to a worker on the use of fall arrest equipment [section 79].
- Review areas requiring ladder access [section 73].
- Review work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].
- Review instruction and information provided to a worker on the hazards associated with working from heights [OHSA clauses 25(2)(a) and 25(2)(d)].

Electrical contact: less than 600 volts

Injuries to workers can include loss of consciousness, burns, lacerations, and fractures as result of contact with live electrical apparatus or fall to the ground (from the same level, or from an elevated working height).

The lack of muscular self-control after electrical shock and the inability of workers to protect themselves or brace for the impact can contribute to serious head, neck and back injuries.

Severe incidents involving electrocution/electric shock can lead to permanent disability or death.

Regulation 851 sets out requirements for working with electrical equipment and around electrical installations in sections 40 to 40.2.

- Review procedures when performing electrical maintenance [sections 42-44.2].
- Review lockout policy and procedures [subsections 42(1) and 42(7)].
- Review training provided workers on lockout [OHSA clause 25(2)(a)].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort and that engineering controls and work practices must be used where practicable [subsection 2(5)].

Confined space

A "confined space" means a fully or partially enclosed space that is not both designed and constructed for continuous human occupancy, and in which atmospheric hazards may occur because of its construction, location or contents or because of work that is done in it.

Injuries to workers can include loss of consciousness and collateral injuries sustained as a result of loss of consciousness.

In extreme circumstances such as oxygen depletion, toxic substance inhalation, or explosive atmosphere sustained injuries can lead to permanent disability or death.

O. Reg. 632/05 sets out workplace requirements regarding confined spaces.

- Review work locations that satisfy the definition of "confined space."
- Review compliance with requirement to have a program in place for confined spaces [section 5].

- Review compliance with requirement to have adequate assessments of confined spaces carried out [section 6].
- Review compliance with requirement to have an adequate plan developed and implemented for confined space entry [section 7].
- Review compliance with requirement for worker training [section 9].

Trends

Table 1: Fatalities and critical injuries in industrial services by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	2	2	1	8	4
Critical injuries	20	20	27	2	36

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in industrial services by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	1,179	1,287	1,659	1,333	2,021
Orders	2,228	2,386	2,749	2,633	3,539
Complaints	215	241	269	279	401
Work refusals	0	1	3	3	0

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice; it shall not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- Where a worker is exposed to a potential hazard of injury to the eye due to contact with a biological or chemical substance, an eyewash fountain shall be provided [section 124].

Industrial Regulations identified by section

Inspectors may issue orders in the industrial services sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review requirement
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection
- Section 84 – protection from noxious gas, liquid fume or dust
- Section 85 – fall arrest
- Section 124 – eyewash
- Section 125 – deluge shower

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of Regulation 851. Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- Occupational Health and Safety Awareness and Training Regulation, O. Reg. 297/13
- Workplace Hazardous Materials Information System, Regulation 860
- Control of Exposure to Biological or Chemical Agents, Regulation 833
- Noise Regulation, O. Reg. 381/15
- Regulation for Industrial Establishments, Regulation 851
- Roll-Over Protective Structures, Regulation 856
- Designated Substances, O. Reg. 490/09
- Confined Space Regulation, O. Reg. 632/05

Construction regulation

Employers should be aware that in situations where construction work is undertaken, O. Reg. 213/91 may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Live Performance

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

The live performance sector involves the production of staged entertainment by theatre companies, opera companies, and ballet companies. It also involves indoor concerts. This sector has an advisory committee that develops guidance that address workplace health and safety.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the live performance sector.

- Fire: pyrotechnics
- Falls
- Material handling: struck by object, caught between objects, and compression
- Noise
- Lifting devices
- Electrical contact

Top five hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Fire: pyrotechnics

Injuries from fire and/or explosion can include burns, lacerations, fractures, and loss of consciousness. In extreme circumstances, sustained injuries can lead to permanent disability (amputation, loss of vision/hearing) and death (severe burns and explosive force).

- Review use of pyrotechnics or similar props.
- Review compliance with requirement for personal protective equipment (PPE) to be provided to a worker to protect the worker from the hazard of fire.
- Review the training provided to a worker on the care, use, and limitations of the personal protective equipment provided [OHSA clauses 25(2)(a) and 25(2)(d)] and [Regulation 851 section 79].
- Review storage location and condition of the personal protective equipment [OHSA clause 25(1)(b)].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review personal protective equipment required when working from heights [section 85].
- Review the training provided to a worker on the use of fall arrest equipment [section 79].
- Review areas requiring ladder access [section 73].
- Review work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].

- Review instruction and information provided to a worker on the hazards associated with working from heights [OHSA clauses 25(2)(a) and 25(2)(d)].

Material handling: struck by object, caught between objects, and compression

Injuries associated with material handling can include workers being struck by objects, caught between objects and/or being crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Review operations involving the movement of stage equipment and material from receiving area to production [section 45].
- Review prop staging area or temporary warehousing/storage [clause 45(b)].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort and that engineering controls and work practices must be used where practicable [subsection 2(5)].

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of with section 51 of Regulation 851:
 - Annual Safety Inspection [clause 51(1)(b)]
 - Capacity Plate/Lifting Information [clause 51(1)(c)]
 - Operator Protection [clause 51(1)(d)]
 - Control Return to Neutral [clause 51(1)(e)].
- Review employer training policy and program [clause 51(2)(a)].
- Review material handling operations [clause 51(2)(b)].

Trends

Table 1: Fatalities and critical injuries in live performance by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	1	0	0	0
Critical injuries	3	1	2	2	0

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in live performance by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	65	60	46	39	40
Orders	83	110	72	53	38
Complaints	14	12	5	12	12
Work refusals	0	0	0	0	0

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall prepare a policy with respect to workplace violence, prepare a policy with respect to workplace harassment, and review the policies as often as is necessary, but at least annually [OHSA subsection 32.0.1(1)].
- An employer shall prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy [OHSA clause 252)(j)].
- Unless otherwise required by the regulations or by an order by an inspector, a member designated under subsection (23) shall inspect the physical condition of the workplace at least once a month [OHSA subsection 9 (26)].
- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice, and not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- A storage cylinder for compressed gas shall: have a valve connection that prevents an inadvertent connection which would result in a hazardous mixture of gases; be secured in position during transportation, storage or use; have the valve protection cap in position when the cylinder is not in use; be in an upright position when containing acetylene; and be protected from physical damage [section 49].
- Where a worker is exposed to a potential hazard of injury to the eye due to contact with a biological or chemical substance, an eyewash fountain shall be provided [section 124].
- A worker who may be exposed to a biological, chemical or physical agent that may endanger the worker's safety or health shall be trained,
 - a) to use the precautions and procedures to be followed in the handling, use and storage of the agent;
 - b) in the proper use and care of required personal protective equipment; and
 - c) in the proper use of emergency measures and procedures [section 130].

Industrial Regulations identified by section

Inspectors may issue orders in the live performance sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 79 – personal protective equipment instruction
- Section 85 – fall arrest

Applicable regulations

- Occupational Health and Safety Awareness and Training Regulation, O. Reg. 297/13
- Workplace Hazardous Materials Information System, Regulation 860
- Control of Exposure to Biological or Chemical Agents, Regulation 833

- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Designated Substances](#), O. Reg. 490/09
- [Needle Safety Regulation](#), O. Reg. 474/07
- [Protecting Child Performers Act, 2015](#)

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines "construction" as including "erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine."

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Logging and Sawmills

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector is made up of establishments engaged in cutting timber and pulpwood; mills engaged in producing lumber and wood basic materials; and establishments engaged in manufacturing finished articles made entirely or mainly of wood or related materials.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the logging and sawmill sector.

- Unguarded equipment
- Lockout: machine or transmission start-up
- Falls
- Material handling: struck by object, caught between objects, and compression
- Noise
- Fire and explosion: dust collectors
- Lifting devices
- Hang-ups: tree and branch
- Activities that may lead to musculoskeletal disorders (MSDs)

Top seven hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Lockout: machine or transmission start-up

Injuries experienced by accidental machine start-up can include lacerations, crushing, and amputations. In severe circumstances these injuries can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against machine start-up in sections, 75 and 76.

- Review repair/maintenance of machinery [section 75].
- Review compliance with with lockout requirements/procedures [sections 75 and 76].
- Review instruction and information provided to workers on the hazard and the requirements to isolate and lockout [OHSA clauses 25(2)(a) and 25(2)(d)].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review personal protective equipment required when working from heights [section 85].
- Review the training provided to a worker on the use of fall arrest equipment [section 79].
- Review areas requiring ladder access [section 73].
- Review work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].
- Review instruction and information provided to a worker on the hazards associated with working from heights [OHSa clauses 25(2)(a) and 25(2)(d)].

Material handling: struck by object, caught between objects, and compression

Injuries associated with material handling can include workers being struck by objects, caught between objects, and/or crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Logging operations: review felling and material loading [sections 109, 110, 113].
- Logging operations: review skidding location and work area protection [section 112].
- Review operations/processes involving the movement of raw material and product from receiving area to production line AND from production line to shipping area [section 45].
- Review operations/processes involving assembly line or similar style of raw material or product movement [clause 45(a)].
- Review warehousing/storage operations [clause 45(b)].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort and that engineering controls and work practices must be used where practicable [subsection 2(5)].

Fire and explosion: dust collectors

Industrial dust collectors, hoppers, and bins can contain sawdust and other combustible dusts. Injuries from fire and/or explosion can include burns, lacerations, fractures, and loss of consciousness. In extreme circumstances, sustained injuries can lead to permanent disability or death.

Regulation 851 sets out requirements for dust collectors in sections 63, 64, and 65.

- Review the industrial process and requirements involving the use of dust collectors [sections 63-65].

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51:

- annual safety inspection [clause 51(1)(b)]
- capacity plate/lifting information [clause 51(1)(c)]
- operator protection [clause 51(1)(d)]
- control return to neutral [clause 51(1)(e)].
- Review employer training policy and program [clause 51(2)(a)].
- Review material handling operations [clause 51(2)(b)].

Trends

Table 1: Fatalities and critical injuries in logging and sawmills by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	1	1	5	1	3
Critical injuries	18	9	20	13	12

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in logging and sawmills by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	565	411	474	493	496
Orders	636	414	484	567	568
Complaints	32	40	28	36	48
Work refusals	0	0	0	1	0

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].
- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- Where a machine or prime mover or transmission equipment has an exposed moving part that may endanger the safety of any worker, the machine or prime mover or transmission equipment shall be equipped with and guarded by a guard or other device that prevents access to the moving part [section 24].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice, and not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less

frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].

Industrial Regulations identified by section

Inspectors may issue orders in the logging and sawmills sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review requirement
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection
- Section 85 – fall arrest
- Sections 105.1 and 106.1 – training for logging operations
- Section 110 – hang-ups in logging operations

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of Regulation 851. Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- Occupational Health and Safety Awareness and Training Regulation, O. Reg. 297/13
- Workplace Hazardous Materials Information System, Regulation 860
- Control of Exposure to Biological or Chemical Agents, Regulation 833
- Noise Regulation, O. Reg. 381/15
- Regulation for Industrial Establishments, Regulation 851
- Roll-Over Protective Structures, Regulation 856
- Designated Substances, O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, O. Reg. 213/91 may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Office and Related Services

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector comprises establishments primarily engaged in providing general management and/or administrative support services. Activities can include corporate functions such as strategic organizational planning, communications, tax planning, legal services, marketing, finance, human resources, information technology, and other professional or technical or scientific services.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the office related services sector.

- Workplace violence and harassment
- Falls
- Activities that may lead to musculoskeletal disorders (MSDs)
- Noise
- Chemicals
- Machine guarding
- Electrical contact hazards
- Material handling and storage

Top four hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Workplace violence and harassment

The OHSA sets out requirements for workplace violence and harassment in sections 32.0.1 to 32.0.8.

- Review the employer's policy and program [OHSA section 32.0.1 and 32.0.2].
- Review worker training [OHSA section 32.0.5].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review personal protective equipment required when working from heights [section 85].
- Review the training provided to a worker on the use of fall arrest equipment [section 79].
- Review areas requiring ladder access [section 73].
- Review work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].
- Review instruction and information provided to a worker on the hazards associated with working from heights [OHSA clauses 25(2)(a) and 25(2)(d)].

Musculoskeletal disorders (MSDs)

Workplace pains and strains can be serious and disabling for workers, causing pain and suffering ranging from discomfort to severe disability.

MSD is not a medical diagnosis; it is an umbrella term for a group of injuries. Some of these injuries include: back pain (low back strain, etc.), muscle strain, tendonitis, carpal tunnel syndrome, rotator cuff syndrome, tennis elbow, and shoulder pain.

- Review operations/processes involving manual material handling.
- Review work areas requiring use of ladders and material handling.
- Review operations/processes requiring stationary repetitive movements.
- Review training on job-specific MSD risk factors.
- Review controls to reduce worker exposure to MSD hazards.
- Identify and assess job-related MSD risk factors.
- Contact your health and safety association for guidance in assessments and prevention of MSDs.

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort and that engineering controls and work practices must be used where practicable [subsection 2(5)].

Trends

Table 1: Fatalities and critical injuries in office and related services by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	1	1	0	1	0
Critical injuries	23	37	32	33	26

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in office and related services by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	1,488	1,177	1,418	1,057	1,158
Orders	2,184	1,554	1,748	1,628	1,625
Complaints	353	321	358	344	400
Work refusals	1	0	2	3	5

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].
- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall ensure the workplace violence and workplace harassment policies be in written form and shall be posted at a conspicuous place in the workplace [OHSA subsection 32.0.1(2)].
- An employer shall prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy [OHSA clause 25(2)(j)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice, and not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- Material, articles or things shall be transported, placed or stored so that the material, articles or things, will not tip, collapse or fall, and can be removed or withdrawn without endangering the safety of any worker [clause 45 (b)].
- Where a worker is exposed to a potential hazard of injury to the eye due to contact with a biological or chemical substance, an eyewash fountain shall be provided [section 124].
- Machinery, equipment or material that may tip or fall and endanger any worker shall be secured against tipping or falling [section 46].

Industrial Regulations identified by section

Inspectors may issue orders in the office and related services sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 79 – personal protective equipment instruction

Applicable regulations

- Occupational Health and Safety Awareness and Training Regulation, O. Reg. 297/13
- Workplace Hazardous Materials Information System, Regulation 860
- Noise Regulation, O. Reg. 381/15
- Regulation for Industrial Establishments, Regulation 851
- Designated Substances, O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, O. Reg. 213/91 may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines "construction" as including "erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine."

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Police Services

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This subsector of government is made up of provincial and municipal police services. Police personnel include first responders, specialized units, dispatchers, and other office staff.

The Ontario Police Health and Safety Committee, appointed by the Minister of Labour under section 21 of the Occupational Health and Safety Act (OHSA), develops guidance on the application of the OHSA to police services.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the police sector.

- Traffic protection: struck by vehicle or object
- Workplace violence and harassment
- Noise
- Communicable diseases

Top three hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the OHSA.

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Traffic protection: struck-by vehicle or object

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances such as vehicle collisions, sustained injuries can lead to permanent disability or death as a result of high velocity/impact trauma.

- Review requirement for working in proximity to vehicular traffic [Regulation 851 section 20].
- Review compliance with requirement to have in place barriers, warning signs, or other safeguards [Regulation 851 section 20 or OHSA clause 25(2)(h)].
- Review compliance with the requirement to prepare a traffic protection plan [OHSA clause 25(2)(h)].
- Review instruction and information provided to a worker on the hazards associated with vehicular traffic and work area protection [OHSA clauses 25(2)(a) and 25(2)(d)].

Workplace violence and harassment

Unique to the police sector is the hazard of injury due to firearms and other weapons, apprehension of suspects, proximity to vehicular traffic, and containing incident scenes.

Injuries can include lacerations (firearms and other weapons), fractures, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability, or death.

The OHSA sets out requirements for workplace violence and harassment in sections 32.0.1 to 32.0.8.

- Review the employer's policy and program [OHSA section 32.0.1 and 32.0.2].
- Review worker training [OHSA section 32.0.5].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort and that engineering controls and work practices must be used where practicable [subsection 2(5)].

Trends

Table 1: Fatalities and critical injuries in police services by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	0	0	0	0
Critical injuries	11	11	4	18	10

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in police services by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	95	70	70	69	58
Orders	23	13	20	29	16
Complaints	10	12	11	20	11
Work refusals	0	0	0	0	0

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- The employer shall cause a joint health and safety committee to be established and maintained at the workplace [OHSA subsection 9(4)].
- An employer shall ensure that at least one member of the committee representing the employer and at least one member representing workers are certified members [OHSA subsection 9(12)].
- An inspector may in writing order that the assessment of the risks of workplace violence required under subsection 32.0.3(1) and a reassessment required under subsection 32.0.3(4) be in written form [OHSA section 55.2].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].

Industrial Regulations identified by section

Inspectors may issue orders in the police services sector under the following sections of the [Regulation for Industrial Establishments](#) where appropriate.

- Section 11 – safe work surfaces
- Sections 22 and 23 – flammable liquids
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 130 – biological, chemical, or physical agents

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Designated Substances](#), O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Primary Metals

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector includes foundries, steel mills, and other metal smelting, refining, casting, extruding, and rolling operations. Examples are iron ferro-alloy manufacturing, alumina and aluminium production and processing, and non-ferrous metal (except aluminum) production and processing.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the primary metals sector.

- Unguarded equipment
- Lockout: machine or transmission start-up
- Lifting devices
- Material handling: struck by object, caught between objects, and compression
- Noise
- Heat stress
- Falls
- Activities that may lead to musculoskeletal disorders (MSDs)
- Occupational exposure limits (OELs): carbon monoxide, nickel, and cadmium.

Top five hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Lockout: machine or transmission start-up

Injuries experienced by accidental machine start-up can include lacerations, crushing, and amputations. In severe circumstances these injuries can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against machine start-up in sections, 75 and 76.

- Review repair/maintenance of machinery [section 75].
- Review compliance with required lockout procedures [sections 75 and 76].
- Review instruction and information provided to workers on the hazard and the requirements to isolate and lockout [OHSA clauses 25(2)(a) and 25(2)(d)].

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)]
 - operator protection [clause 51(1)(d)]
 - control return to neutral [clause 51(1)(e)].
- Review employer training policy and program [clause 51(2)(a)].
- Review material handling operations [clause 51(2)(b)].

Material handling: struck by object, caught between objects, and compression

Injuries associated with material handling can include workers being struck by objects, caught between objects, and/or crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Review operations/processes involving the movement of raw material and product from receiving area to production line AND from production line to shipping area [section 45].
- Review operations/processes involving assembly line or similar style of raw material or product movement [clause 45(a)].
- Review warehousing/storage operations [clause 45(b)].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort and that engineering controls and work practices must be used where practicable [subsection 2(5)].

Trends

Table 1: Fatalities and critical injuries in primary metals sector by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	1	0	0	0	1
Critical injuries	15	18	11	10	11

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in primary metals sector by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
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Field visits	409	410	439	445	497
Orders	548	476	586	590	769
Complaints	69	78	69	84	69
Work refusals	4	12	4	6	8

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].
- An employer shall prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy [OHSA clause 25(2)(j)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice, and not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- A lifting device shall be so constructed, of such strength and be equipped with suitable ropes, chains, slings and other fittings so as to adequately ensure the safety of all workers, and be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [section 51].
- Where a machine or prime mover or transmission equipment has an exposed moving part that may endanger the safety of any worker, the machine or prime mover or transmission equipment shall be equipped with and guarded by a guard or other device that prevents access to the moving part [section 24].
- Where natural lighting is inadequate to ensure the safety of any worker, artificial lighting shall be provided and shadows and glare shall be reduced to a minimum [section 21].

Industrial Regulations identified by section

Inspectors may issue orders in the primary metals sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review requirement
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection
- Section 84 – protection from noxious gas, liquid fume or dust
- Section 85 – fall arrest
- Section 124 – eyewash

- Section 125 – deluge shower

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of [Regulation 851](#). Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Designated Substances](#), O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Pulp and Paper

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

The pulp and paper sector comprises establishments primarily engaged in manufacturing pulp, paper or paperboard, either alone or in combination with newsprint and converted paper products. Examples are pulp and paper mills, and paperboard mills.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the pulp and paper sector.

- Unguarded equipment
- Lockout: machine or transmission start-up
- Lifting devices
- Material handling: struck-by object, caught between objects, and compression
- Noise
- Confined space
- Material storage and racking systems
- Falls
- Activities that may lead to musculoskeletal disorders (MSDs)

Top six hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Lockout: machine or transmission start-up

Injuries experienced by accidental machine start-up can include lacerations, crushing, and amputations. In severe circumstances these injuries can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against machine start-up in sections, 75 and 76.

- Review repair/maintenance of machinery [section 75].
- Review compliance with required lockout procedures [sections 75 and 76].
- Review instruction and information provided to workers on the hazard and the requirements to isolate and lockout [OHSA clauses 25(2)(a) and 25(2)(d)].

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)]
 - operator protection [clause 51(1)(d)]
 - control return to neutral [clause 51(1)(e)].
- Review employer training policy and program [clause 51(2)(a)].
- Review material handling operations [clause 51(2)(b)].

Material handling: struck by object, caught between objects, and compression

Injuries associated with material handling can include workers being struck by objects, caught between objects, and/or crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Review operations/processes involving the movement of raw material and product from receiving area to production line AND from production line to shipping area [section 45].
- Review operations/processes involving assembly line or similar style of raw material or product movement [clause 45(a)].
- Review warehousing/storage operations [clause 45(b)].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort and engineering controls and work practices must be used where practicable [subsection 2(5)].

Confined space

A "confined space" means a fully or partially enclosed space that is not both designed and constructed for continuous human occupancy, and in which atmospheric hazards may occur because of its construction, location or contents or because of work that is done in it.

Injuries to workers can include loss of consciousness and collateral injuries sustained as a result of loss of consciousness.

In extreme circumstances such as oxygen depletion, toxic substance inhalation, or explosive atmosphere sustained injuries can lead to permanent disability or death.

O. Reg. 632/05 sets out workplace requirements regarding confined spaces.

- Review work locations that satisfy the definition of "confined space."
- Review compliance with requirement to have a program in place for confined spaces [section 5].
- Review compliance with requirement to have adequate assessments of confined spaces carried out [section 6].
- Review compliance with requirement to have an adequate plan developed and implemented for confined space entry [section 7].
- Review compliance with requirement for worker training [section 9].

Trends

Table 1: Fatalities and critical injuries in pulp and paper by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	1	0	0	0	0
Critical injuries	0	2	10	9	7

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in pulp and paper by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	391	234	268	250	252
Orders	640	409	356	496	379
Complaints	51	28	40	46	45
Work refusals	1	2	1	3	1

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An inspector may, for the purposes of carrying out his or her duties and powers under this Act and the regulations, require the production of any drawings, specifications, licence, document, record or report, and inspect, examine and copy the same [OHSA clause 54(1)(c)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice, and not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- Where a machine or prime mover or transmission equipment has an exposed moving part that may endanger the safety of any worker, the machine or prime mover or transmission equipment shall be equipped with and guarded by a guard or other device that prevents access to the moving part [section 24].

Industrial Regulations identified by section

Inspectors may issue orders in the pulp and paper sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review requirement
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection
- Section 84 – protection from noxious gas, liquid fume or dust
- Section 85 – fall arrest
- Section 124 – eyewash
- Section 125 – deluge shower

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of [Regulation 851](#). Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

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- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Designated Substances](#), O. Reg. 490/09
- [Confined Space Regulation](#), O. Reg. 632/05

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Restaurants

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

The restaurant sector comprises restaurants, take-out food establishments, caterers, taverns, bars and nightclubs. Family-run businesses and small businesses dominate the industry.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the restaurant sector.

- Slip, trips, and falls
- Material handling: hot liquid burns
- Electrical contact: less than 600 volts
- Workplace violence and harassment
- Heat stress
- Activities that may lead to musculoskeletal disorders (MSDs)
- Guarding
- Electrical contact

Top six hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Slips, trips and falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review operations/processes involving the dispensing of liquids (washing facilities “dish-pits”) [section 11].
- Review work areas requiring ladder access [section 73].
- Review work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].

Material handling: hot liquid burns

Injuries to workers can include burns and scalds, with collateral injuries such as fractures and loss of consciousness due to inadvertent movement or falls to the floor.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Review cleaning procedures for deep-frying equipment or similar.
- Review compliance with requirements of material handling sections with respect to the transfer of hot (boiling) liquids such as oil, grease, or water to prevent injury [section 45 and clauses 84(c), (e), and (f)].
- Review compliance with requirement to provide workers with training on the care, use, and limitations of personal protective equipment [section 79].
- Review compliance with requirement to ensure that workers wear appropriate apparel to protect a worker from being burned by hot liquids [clause 84(c), (e), and (f)].
- Review compliance with requirement for employers to acquaint workers with the hazards of transferring hot liquids [OHSA clause 25(2)(d)].

- Review compliance with requirement for employers to provide workers information, instruction and supervision on equipment [OHSA clause 25(2)(a)].

Workplace parties should review the OHSA to ensure they are familiar with their legislated duties.

Musculoskeletal disorders (MSDs)

Workplace pains and strains can be serious and disabling for workers, causing pain and suffering ranging from discomfort to severe disability.

MSD is not a medical diagnosis; it is an umbrella term for a group of injuries. Some of these injuries include: back pain (low back strain, etc.), muscle strain, tendonitis, carpal tunnel syndrome, rotator cuff syndrome, tennis elbow, and shoulder pain.

- Review operations/processes involving manual material handling.
- Review work areas requiring use of ladders and material handling.
- Review operations/processes requiring stationary repetitive movements.
- Review training on job-specific MSD risk factors.
- Review controls to reduce worker exposure to MSDs.
- Identify and assess job-related MSD risk factors.
- Contact your health and safety association for guidance in assessing and eliminating or reducing MSD hazards.

Electrical contact: less than 600 volts

Injuries to workers can include loss of consciousness, burns, lacerations, and fractures as result of contact with live electrical apparatus or fall to the ground (from the same level, or from an elevated working height).

The lack of muscular self-control after electrical shock and the inability of workers to protect themselves or brace for the impact can contribute to serious head, neck and back injuries.

Severe incidents involving electrocution/electric shock can lead to permanent disability or death.

Regulation 851 sets out requirements for working with electrical equipment and around electrical installations in sections 40 to 40.2.

- Review lockout policy and procedures [subsections 42(1) and 42(7)].
- Review training provided workers on lockout [OHSA clause 25(2)(a)].

Workplace violence and harassment

The OHSA sets out requirements for workplace violence and harassment in sections 32.0.1 to 32.0.8.

- Review the employer's policy and program [OHSA section 32.0.1 and 32.0.2].
- Review worker training with respect to workplace violence and harassment [OHSA section 32.0.5].

Heat stress

Heat stress can cause heat related illnesses such as heat exhaustion or heat stroke.

- Review engineering/administrative controls related to ventilation and heat reduction, policy and procedures (hot weather plan), and personal protective equipment to protect the worker [OHSA clause 25(2)(h)].

Trends

Table 1: Fatalities and critical injuries in restaurants by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	1	1	0	0	0
Critical injuries	17	14	10	15	7

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic

accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.

- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in restaurants by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	2,541	2,567	2,235	1,921	2,313
Orders	6,373	6,084	5,161	4,815	6,027
Complaints	437	433	458	414	531
Work refusals	1	0	0	1	0

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].
- An employer shall prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy [OHSA clause 25(2)(j)].
- At a workplace where no committee is required under section 9 and where the number of workers regularly exceeds five, the employer shall cause the workers to select at least one health and safety representative from among the workers at the workplace who do not exercise managerial functions [OHSA subsection 8(1)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice, and not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- A storage cylinder for compressed gas shall: have a valve connection that prevents an inadvertent connection which would result in a hazardous mixture of gases; be secured in position during transportation, storage or use; have the valve protection cap in position when the cylinder is not in use; be in an upright position when containing acetylene; and be protected from physical damage [section 49].
- Where a worker is exposed to a potential hazard of injury to the eye due to contact with a biological or chemical substance, an eyewash fountain shall be provided [section 124].
- Material, articles or things shall be transported, placed or stored so that the material, articles or things, will not tip, collapse or fall, and can be removed or withdrawn without endangering the safety of any worker [clause 45 (b)].

Industrial Regulations identified by section

Inspectors may issue orders in the restaurants sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review requirement
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Section 73 – portable ladder
- Section 76 – machine lockout

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of Regulation 851. Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Designated Substances](#), O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Retail

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector comprises establishments primarily engaged in the retailing of merchandise, generally without transformation, and providing services related to the sale of merchandise. Examples are liquor, beer and wine stores, food stores, pet stores and pharmacy and drug stores.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the retail sector.

- Workplace violence and harassment
- Falls
- Activities that may lead to musculoskeletal disorders (MSDs)
- Lifting devices
- Unguarded equipment
- Material handling
- Lockout

Top five hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Workplace violence and harassment

The OHSA sets out requirements for workplace violence and harassment in sections 32.0.1 to 32.0.8.

- Review the employer's policy and program [OHSA section 32.0.1 and 32.0.2].
- Review worker training with respect to workplace violence and harassment [OHSA section 32.0.5].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review personal protective equipment required when working from heights [section 85].
- Review the training provided to a worker on the use of fall arrest equipment [section 79].
- Review areas requiring ladder access [section 73].
- Review work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].
- Review instruction and information provided to a worker on the hazards associated with working at heights [OHSA clauses 25(2)(a) and 25(2)(d)].

Musculoskeletal disorders (MSDs)

Workplace pains and strains can be serious and disabling for workers, causing pain and suffering ranging from discomfort to severe disability.

MSD is not a medical diagnosis; it is an umbrella term for a group of injuries. Some of these injuries include: back pain (low back strain, etc.), muscle strain, tendonitis, carpal tunnel syndrome, rotator cuff syndrome, tennis elbow, and shoulder pain.

- Review operations/processes involving manual material handling.
- Review work areas requiring use of ladders and material handling.
- Review operations/processes requiring stationary repetitive movements.
- Review training on job-specific MSD risk factors.
- Review controls to reduce worker exposure to MSD.
- Identify and assess job-related MSD risk factors.
- Contact your health and safety association for guidance in assessing and eliminating or reducing MSD hazards.

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)]
 - operator protection [clause 51(1)(d)]
 - control return to neutral [clause 51(1)(e)].
- Review employer training policy and program [clause 51(2)(a)].
- Review material handling operations [clause 51(2)(b)].

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Trends

Table 1: Fatalities and critical injuries in retail by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	1	3	4	0	0
Critical injuries	65	60	65	64	53

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in retail by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	5,354	4,950	5,031	4,530	6,360
Orders	9,457	8,370	8,252	8,756	13,148

Complaints	734	739	739	797	840
Work refusals	4	2	6	3	5

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy [OHSA clause 25(2)(j)].
- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice, and not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- Material, articles or things shall be transported, placed or stored so that the material, articles or things, will not tip, collapse or fall, and can be removed or withdrawn without endangering the safety of any worker [clause 45 (b)].
- Machinery, equipment or material that may tip or fall and endanger any worker shall be secured against tipping or falling [section 46].
- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].

Industrial Regulations identified by section

Inspectors may issue orders in the retail sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Section 73 – portable ladder

Applicable regulations

- Occupational Health and Safety Awareness and Training Regulation, O. Reg. 297/13
- Workplace Hazardous Materials Information System, Regulation 860
- Noise Regulation, O. Reg. 381/15
- Regulation for Industrial Establishments, Regulation 851
- Designated Substances, O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, O. Reg. 213/91 may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting,

the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine."

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Textiles and Printing

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

The textiles subsector comprises the production of leather and textile goods, including knitted products, clothing, footwear, carpets, mats, rugs and household products of textile materials; the printing subsector includes commercial printing.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the textiles and printing sector.

- Lockout: machine or transmission start-up
- Unguarded equipment
- Heat: flammable liquids
- Noise
- Lifting devices
- Occupational exposure limits (OELs)
- Falls
- Musculoskeletal disorders (MSDs)
- Dust

Top five hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Lockout: machine or transmission start-up

Injuries experienced by accidental machine start-up can include lacerations, crushing, and amputations. In severe circumstances these injuries can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against machine start-up in sections 75 and 76.

- Review repair/maintenance of machinery [section 75].
- Review compliance with required lockout procedures [sections 75 and 76].
- Review instruction and information provided to workers on the hazard and the requirements to isolate and lockout [OHSA clauses 25(2)(a) and 25(2)(d)].

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Flammable liquids

Flammable liquids are defined in Regulation 851 as: “a liquid having a flash point below 37.8°C [100°F] and vapour pressure below 275 kilopascals absolute [40 psi] at 37.8°C”. While this definition covers flammable liquids in general, those that have a “flash point below 22.8°C [73°F] and a boiling point below 37.8°C” are highly volatile and, therefore, require greater control.

Injuries from fire and/or explosion can include burns, lacerations, fractures, and loss of consciousness. In extreme circumstances, sustained injuries can lead to permanent disability or death.

- Review the use of solvents such as acetone and toluene in the workplace.
- Review compliance with requirements for grounding and bonding [Regulation 851 clause 22(4)(b)].
- Review storage [Regulation 851 clause 22(2)(d)].
- Review compliance with requirements for ventilation and work area protection [Regulation 851 clauses 22(4)(a) and 63].
- Review the requirements outlined in the WHMIS, Regulation 860 and the requirements to monitor and control exposure limits as identified in Regulation 833.

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)]
 - operator protection [clause 51(1)(d)]
 - control return to neutral [clause 51(1)(e)].
- Review employer training policy and program [clause 51(2)(a)].
- Review material handling operations [clause 51(2)(b)].

Trends

Table 1: Fatalities and critical injuries in textiles and printing by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	0	0	0	0
Critical injuries	6	13	8	10	7

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic

accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.

- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in textiles and printing by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	788	632	500	444	508
Orders	1,642	1,173	806	838	1,174
Complaints	89	87	101	73	84
Work refusals	1	0	1	1	1

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].
- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].
- An employer shall prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy [OHSA clause 25(2)(j)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- Where a machine or prime mover or transmission equipment has an exposed moving part that may endanger the safety of any worker, the machine or prime mover or transmission equipment shall be equipped with and guarded by a guard or other device that prevents access to the moving part [section 24].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice, and not have any finish or protective material used on it that is likely to make the surface slippery [section 11].

Industrial Regulations identified by section

Inspectors may issue orders in the textiles and printing sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review requirement
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 80 – head protection

- Section 81 – eye protection
- Section 82 – foot protection
- Section 84 – protection from noxious gas, liquid fume or dust
- Section 124 – eyewash
- Section 125 – deluge shower

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of [Regulation 851](#). Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Designated Substances](#), O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Tourism, Hospitality and Recreational Services

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector comprises establishments primarily engaged in operating facilities or providing services to meet the cultural, entertainment and recreational interests of their patrons. This includes lodging houses, laundries, golf courses, hotels and motels, amusement and recreation camp grounds, and personal and household services.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the tourism, hospitality and recreational sector.

- Workplace violence and harassment
- Falls
- Activities that may lead to musculoskeletal disorders (MSDs)
- Material handling: equipment roll-over
- Flammable liquids
- Unguarded equipment
- Heat stress
- Occupational exposure limits (OELs): chemical handling
- Electrical contact
- Drowning

Top five hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Workplace violence and harassment

The OHSA sets out requirements for workplace violence and harassment in sections 32.0.1 to 32.0.8.

- Review the employer's policy and program [OHSA section 32.0.1 and 32.0.2].
- Review worker training with respect to workplace violence and harassment [OHSA section 32.0.5].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review personal protective equipment required when working from heights [section 85].
- Review the training provided to a worker on the use of fall arrest equipment [section 79].
- Review areas requiring ladder access [section 73].
- Review work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].
- Review instruction and information provided to a worker on the hazards associated with working at heights [OHSA clauses 25(2)(a) and 25(2)(d)].

Musculoskeletal disorders (MSDs)

Workplace pains and strains can be serious and disabling for workers, causing pain and suffering ranging from discomfort to severe disability.

MSD is not a medical diagnosis; it is an umbrella term for a group of injuries. Some of these injuries include: back pain (low back strain, etc.), muscle strain, tendonitis, carpal tunnel syndrome, rotator cuff syndrome, tennis elbow, and shoulder pain.

- Review operations/processes involving manual material handling.
- Review work areas requiring use of ladders and material handling.
- Review operations/processes requiring stationary repetitive movements.
- Review training on job-specific MSD risk factors.
- Review controls to reduce worker exposure to MSDs.
- Identify and assess job-related MSD risk factors.
- Contact your health and safety association for guidance in assessing and eliminating or reducing MSD hazards.

Material handling: equipment roll-over

The Roll-Over Protective Structure (ROPS) Regulation (Regulation 856) applies to all workplaces (except farming operations) covered by the Occupational Health and Safety Act.

Machines that fall into the categories of “lawn ride-on tractors” and “lawn and garden ride on tractors” accept implements and are properly considered “tractors,” a type of machine to which the ROPS regulation can apply. The smaller riding lawn mowers are unable to accommodate implements; they are not “tractors” within the commonly understood meaning of the term, and are not machines to which the ROPS regulation applies.

Injuries can include fractures, loss of consciousness, internal injuries, and lacerations.

Severe incidents can lead to permanent disability (e.g. amputation) or death (e.g. from mechanical compression) when workers are trapped or caught between equipment and the ground, or other object.

Regulation 856 sets out the requirements regarding ROPS.

The ROPS regulation applies to a “lawn tractor” or “lawn and garden tractor” that is designed to accommodate other implements and that is rated at more than 15 kW [20 hp] or weighs more than 700 kg [1500 lb].

- Review exemptions [Regulation 856 section 2]:
 - a) 15 kW [20 hp] or less OR 700 kg [1500 lb] or less
 - b) manufactured before 1980.
- Logging skidder operators are exempt from the use of a seat-belt; however the skidder must be equipped with ROPS.
- Review compliance with requirement for worker to use a seatbelt [subsection 3(1)].
- Workplace parties should review the OHSA to ensure they are familiar with their legislated duties.
 - Employers must acquaint a worker of any known hazards [OHSA clause 25(2)(d)].
 - Employers must provide information, instruction and supervision to a worker on the machine and the requirement of ROPS [OHSA clause 25(2)(a)].

Flammable liquids

Flammable liquids are defined in Regulation 851 as: “a liquid having a flash point below 37.8°C [100°F] and vapour pressure below 275 kilopascals absolute [40 psi] at 37.8°C”. While this definition covers flammable liquids in general, those that have a “flash point below 22.8°C [73°F] and a boiling point below 37.8°C” are highly volatile and, therefore, require greater control.

Injuries from fire and/or explosion can include burns, lacerations, fractures, and loss of consciousness. In extreme circumstances, sustained injuries can lead to permanent disability or death.

Regulation 851 sets out requirements for storage and dispensing of flammable liquids in in sections 22, 23, 61, and 63.

- Review procedures for the storage and dispensing of gasoline [section 61].
- Review procedures for refuelling gasoline engines [section 61].
- Review compliance with requirements grounding and bonding [clause 22(4)(b)].
- Review storage and handling of flammable liquids [clause 22(2)(d)].
- Review compliance with requirement for ventilation and work area protection [clause 22(4)(a) and section 63].
- Review the requirements outlined in the WHMIS, Regulation 860 and the requirements to monitor and control exposure limits as identified in Regulation 833.

Trends

Table 1: Fatalities and critical injuries in tourism, hospitality, and recreation by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	1	3	1	1
Critical injuries	29	36	29	32	22

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in tourism, hospitality, and recreation by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	2,222	1,755	1,616	1,454	1,441
Orders	4,098	3,377	2,709	3,113	2,638
Complaints	425	315	359	316	308
Work refusals	2	1	1	0	4

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice, and not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- Where a worker is exposed to a potential hazard of injury to the eye due to contact with a biological or chemical substance, an eyewash fountain shall be provided [section 124].
- A storage cylinder for compressed gas shall: have a valve connection that prevents an inadvertent connection which would result in a hazardous mixture of gases; be secured in position during transportation, storage or use; have the valve protection cap in position when the cylinder is not in use; be in an upright position when containing acetylene; and be protected from physical damage [section 49].
- Material, articles or things shall be transported, placed or stored so that the material, articles or things, will not tip, collapse or fall, and can be removed or withdrawn without endangering the safety of any worker [clause 45 (b)].

Industrial Regulations identified by section

Inspectors may issue orders in the tourism, hospitality and recreational services sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review requirement

- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection
- Section 84 – protection from noxious gas, liquid fume or dust
- Section 85 – fall arrest

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of [Regulation 851](#). Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Roll-Over Protective Structures](#), Regulation 856
- [Designated Substances](#), O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Disclaimer: This web resource has been prepared to assist the workplace parties in understanding some of their obligations under the Occupational Health and Safety Act (OHSA) and the regulations. It is not intended to replace the OHSA or the regulations and reference should always be made to the official version of the legislation.

It is the responsibility of the workplace parties to ensure compliance with the legislation. This web resource 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.

While this web resource will also be available to Ministry of Labour inspectors, they will apply and enforce the OHSA and its regulations based on the facts as they may find them in the workplace. This web resource does not affect their enforcement discretion in any way.

Transportation

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector includes transportation, including freight trucking, courier service, taxis, school buses, GO Transit, urban transit systems, transit companies, and emergency medical services.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the transportation sector.

- Material handling: struck by object, caught between objects, and compression
- Traffic protection: struck by vehicle or object
- Activities that may lead to musculoskeletal disorders (MSDs)
- Noise
- Slips, trips and falls
- Workplace violence and harassment
- Occupational exposure limits (OELs): carbon monoxide, cadmium and beryllium
- Inadvertent vehicle movement

Top six hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Material handling: struck by object, caught between objects, and compression

Injuries associated with material handling can include workers being struck by objects, caught between objects, and/or crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Review operations/processes involving the movement of raw material and product from receiving area to production line AND from production line to shipping area [section 45].
- Review operations/processes involving assembly line or similar style of raw material or product movement [clause 45(a)].
- Review warehousing/storage operations [clause 45(b)].

Traffic protection: struck-by vehicle or object

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances such as vehicle collisions, sustained injuries can lead to permanent disability or death as a result of high velocity/impact trauma.

- Review requirement for working in proximity to vehicular traffic [Regulation 851 section 20].
- Review compliance with requirement to have in place barriers, warning signs, or other safeguards [Regulation 851 section 20 or OHSA clause 25(2)(h)].
- Review compliance with the requirement to prepare a traffic protection plan [OHSA clause 25(2)(h)].
- Review instruction and information provided to a worker on the hazards associated with vehicular traffic and work area protection [OHSA clauses 25(2)(a) and 25(2)(d)].

Musculoskeletal disorders (MSDs)

Workplace pains and strains can be serious and disabling for workers, causing pain and suffering ranging from discomfort to severe disability.

MSD is not a medical diagnosis; it is an umbrella term for a group of injuries. Some of these injuries include: back pain (low back strain, etc.), muscle strain, tendonitis, carpal tunnel syndrome, rotator cuff syndrome, tennis elbow, and shoulder pain.

- Review operations/processes involving manual material handling.
- Review work areas requiring use of ladders and material handling.
- Review operations/processes requiring stationary repetitive movements.
- Review training on job-specific MSD risk factors.
- Review controls to reduce worker exposure to MSDs.
- Identify and assess job-related MSD risk factors.
- Contact your health and safety association for guidance in assessments and prevention of MSDs.

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Slips, trips and falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review areas requiring ladder access [section 73].
- Review work areas and typical conditions that require manual material handling over uneven working surfaces [sections 11, 13, and 14].
- Review instruction and information provided to a worker on the hazards associated with walking and working surface hazards and controls [OHSA clauses 25(2)(a) and 25(2)(d)].

Workplace violence and harassment

The OHSA sets out requirements for workplace violence and harassment in sections 32.0.1 to 32.0.8.

- Review the employer's policy and program [OHSA sections 32.0.1 and 32.0.2].
- Review worker training [OHSA section 32.0.5].

Trends

Table 1: Fatalities and critical injuries in transportation by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	6	4	3	0
Critical injuries	31	32	33	41	48

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.

- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in transportation by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	1,299	1,045	1,196	1,117	959
Orders	1,700	1,169	1,324	1,490	1,056
Complaints	258	223	260	294	276
Work refusals	8	13	16	15	18

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].
- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- Material, articles or things required to be lifted, carried or moved, shall be lifted, carried or moved in such a way and with such precautions and safeguards, including protective clothing, guards or other precautions as will ensure that the lifting, carrying or moving of the material, articles or things does not endanger the safety of any worker [clause 45(a)].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice, and not have any finish or protective material used on it that is likely to make the surface slippery [section 11].

Industrial Regulations identified by section

Inspectors may issue orders in the transportation sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review requirement
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Section 45 – material handling and storage
- Section 57 – inadvertent vehicle movement
- Section 73 – portable ladder
- Section 76 – machine lockout

- Section 79 – personal protective equipment instruction
- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection
- Section 85 – fall arrest

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of [Regulation 851](#). Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Roll-Over Protective Structures](#), Regulation 856

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Utilities

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

The utilities sector comprises firms involved in line clearing, telecommunications, utilities, municipal power, private power, and water. Examples include pipelines, telephone firms and cable television firms.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the utilities sector.

- Traffic protection: struck-by vehicles or objects
- Material handling: equipment roll-over
- Noise
- Falls
- Lockout: electrical, machine, and transmission
- Confined space
- Electrical hazards
- Drowning
- Activities that may lead to musculoskeletal disorders (MSDs)
- Occupational exposure limits (OELs)
- Flammables
- Machine guarding
- Designated substances: asbestos

Top six hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Traffic protection: struck by vehicle or object

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances such as vehicle collisions, sustained injuries can lead to permanent disability or death as a result of high velocity/impact trauma.

- Review requirement for working in proximity to vehicular traffic [Regulation 851 section 20].
- Review compliance with requirement to have in place barriers, warning signs, or other safeguards [Regulation 851 section 20 or OHSA clause 25(2)(h)].
- Review compliance with the requirement to prepare a traffic protection plan [OHSA clause 25(2)(h)].
- Review instruction and information provided to a worker on the hazards associated with vehicular traffic and work area protection [OHSA clauses 25(2)(a) and 25(2)(d)].

Material handling: equipment roll-over

The Roll-Over Protective Structure (ROPS) Regulation (Regulation 856) applies to all workplaces (except farming operations) covered by the OHSA.

Machines that fall into the categories of “lawn ride-on tractors” and “lawn and garden ride-on tractors” accept implements and are properly considered “tractors,” a type of machine to which the ROPS regulation can apply. The smaller riding lawn mowers are unable to accommodate implements; they are not “tractors” within the commonly understood meaning of the term, and are not machines to which the ROPS regulation applies.

Injuries can include fractures, loss of consciousness, internal injuries, and lacerations.

Severe incidents can lead to permanent disability (e.g. amputation) or death (e.g. from mechanical compression) when workers are trapped or caught between equipment and the ground, or other object.

Regulation 856 sets out the requirements regarding ROPS.

The ROPS regulation applies to a "lawn tractor" or "lawn and garden tractor" that is designed to accommodate other implements and that is rated at more than 15 kW [20 hp] or weighs more than 700 kg [1500 lb].

- Review exemptions [Regulation 856 section 2]:
 - (a) 15 kW [20 hp] or less OR 700 kg [1500 lb] or less
 - (b) manufactured before 1980.
 - Logging skidder operators are exempt from the use of a seat-belt; however the skidder must be equipped with ROPS.
- Review compliance with requirement for worker to use a seatbelt [Regulation 856 subsection 3(1)].
- Workplace parties should review the OHSA to ensure they are familiar with their legislated duties:
 - Employers must acquaint a worker of any known hazards [OHSA clause 25(2)(d)].
 - Employers must provide information, instruction and supervision to a worker on the machine and the requirement of ROPS [OHSA clause 25(2)(a)].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Falls

Injuries to workers can include fractures, lacerations, and loss of consciousness.

In extreme circumstances injuries sustained from inadvertent contact with an energy source or high elevation fall can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against slips, trips, and falls with respect to walking and working surfaces in sections 11, 13, 14, 73, and 85.

- Review personal protective equipment required when working from heights [section 85].
- Review the training provided to a worker on the use of fall arrest equipment [section 79].
- Review areas requiring ladder access [section 73].
- Review work areas that require manual material handling over uneven working surfaces such as loading docks, platforms, and mezzanines [sections 11, 13, and 14].
- Ensure employer provides instruction and information to a worker on the hazards associated with working from heights [OHSA clauses 25(2)(a) and 25(2)(d)].

Lockout: electrical, machine, and transmission

Injuries to workers can include fractures, lacerations, amputations, and loss of consciousness.

In extreme circumstances such as high voltage electrical contact or inadvertent machine start-up, sustained injuries can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against electrical and machine start-up in sections 42, 75 and 76.

- Review requirement and/or compliance with electrical lockout [subsection 42(1)].
- Review worker training when voltages are above 300 volts [subsection 42.1(3)].
- Review repair/maintenance of machinery [section 75]

- Review compliance with requirements for lockout procedures [sections 75 and 76].
Review instruction and information provided to workers on the hazard and the requirements to isolate and lockout [OHSA clauses 25(2)(a) and 25(2)(d)].

Confined space

A “confined space” means a fully or partially enclosed space that is not both designed and constructed for continuous human occupancy, and in which atmospheric hazards may occur because of its construction, location or contents or because of work that is done in it.

Injuries to workers can include loss of consciousness and collateral injuries sustained as a result of loss of consciousness.

In extreme circumstances such as oxygen depletion, toxic substance inhalation, or explosive atmosphere sustained injuries can lead to permanent disability or death.

Regulation 632 sets out workplace requirements regarding confined spaces.

- Review work locations that satisfy the definition of “confined space.”
- Review compliance with requirement to have a program in place for confined spaces [section 5].
- Review compliance with requirement to have adequate assessments of confined spaces carried out [section 6].
- Review compliance with requirement to have an adequate plan developed and implemented for confined space entry [section 7].
- Review compliance with requirement for worker training [section 9].

Trends

Table 1: Fatalities and critical injuries in utilities by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	0	0	0	0
Critical injuries	8	7	16	12	8

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry’s data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors’ updates to the database.

Table 2: Events and activities in utilities by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	351	325	433	327	306
Orders	310	339	483	288	297
Complaints	77	53	60	60	37
Work refusals	5	8	2	5	2

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].
- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An inspector may, for the purposes of carrying out his or her duties and powers under this Act and the regulations, require the production of any drawings, specifications, licence, document, record or report, and inspect, examine and copy the same [OHSA clause 54(1)(c)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- There shall be a guardrail around the perimeter of an uncovered opening in a floor, roof or other surface to which a worker has access and at an open side of a raised floor, mezzanine, balcony, gallery, landing, platform, walkway, stile, ramp or other surface [clauses 13(a) and 13(b)].
- Where a machine or prime mover or transmission equipment has an exposed moving part that may endanger the safety of any worker, the machine or prime mover or transmission equipment shall be equipped with and guarded by a guard or other device that prevents access to the moving part [section 24].

Industrial Regulations identified by section

Inspectors may issue orders in the utilities sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 57 – inadvertent vehicle movement
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection
- Section 84 – protection from noxious gas, liquid fume or dust
- Section 85 – fall arrest

Applicable regulations

- Occupational Health and Safety Awareness and Training Regulation, O. Reg. 297/13
- Workplace Hazardous Materials Information System, Regulation 860
- Control of Exposure to Biological or Chemical Agents, Regulation 833
- Noise Regulation, O. Reg. 381/15
- Regulation for Industrial Establishments, Regulation 851
- Roll-Over Protective Structures, Regulation 856
- Designated Substances, O. Reg. 490/09
- Confined Spaces Regulation, O. Reg. 632/05

Construction regulation

Employers should be aware that in situations where construction work is undertaken, O. Reg. 213/91 may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines "construction" as including "erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine."

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Vehicle Sales and Service

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

This sector comprises establishments engaged primarily in the retailing of motor vehicles (new and used), providing complementary services, and retailing motor vehicle parts and accessories. Examples are auto body repair shops, tow truck operators, general garage repairs, and gas stations.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the vehicle sales and service sector.

- Flammable liquids
- Noise
- Activities that may lead to musculoskeletal disorders (MSDs)
- Tire explosion: over-inflation and pyrolysis
- Lifting devices
- Lockout and blocking
- Falls
- Designated substances: isocyanates
- Traffic control: road-side assistance service providers

Top five hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Flammable liquids

Flammable liquids are defined in Regulation 851 as: “a liquid having a flash point below 37.8°C [100°F] and vapour pressure below 275 kilopascals absolute [40 psi] at 37.8°C”. While this definition covers flammable liquids in general, those that have a “flash point below 22.8°C [73°F] and a boiling point below 37.8°C” are highly volatile and, therefore, require greater control.

Injuries from fire and/or explosion can include burns, lacerations, fractures, and loss of consciousness. In extreme circumstances, sustained injuries can lead to permanent disability or death.

Regulation 851 sets out requirements for storage and dispensing of flammable liquids in sections 22, 23, 61, and 63.

- Review the use of solvents in the parts washing process and associated devices [sections 23,63 and subsection 22(4)].
- Review the transfer or dispensing of gasoline (tank repair/replacement) [sections 61,63 and subsection 22(4)].
- Review compliance with requirement for ventilation and work area protection [clause 22(4)(a) and section 63].
- Review compliance with requirement for grounding and bonding [clause 22(4)(b)].
- Review storage [subsections 22(1) to (3)].
- Review the requirements outlined in the Workplace Hazardous Materials Information System (WHMIS) Regulation 860 and the requirements to monitor and control exposure limits as identified in Regulation 833.

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Musculoskeletal disorder (MSDs)

Workplace pains and strains can be serious and disabling for workers, causing pain and suffering ranging from discomfort to severe disability.

MSD is not a medical diagnosis; it is an umbrella term for a group of injuries. Some of these injuries include: back pain (low back strain, etc.), muscle strain, tendonitis, carpal tunnel syndrome, rotator cuff syndrome, tennis elbow, and shoulder pain.

- Review operations/processes involving manual material handling.
- Review work areas requiring use of ladders and material handling.
- Review operations/processes requiring stationary repetitive movements.
- Review training on job-specific MSD risk factors.
- Review controls to reduce worker exposure to MSDs.
- Identify and assess job related MSD risk factors.
- Contact your health and safety association for guidance in assessments and prevention of MSDs.

Tire explosion: over-inflation and pyrolysis

Injuries from contact with wheel, rim, and tire parts can include cuts, bruises, lacerations, fractures, and severe impact trauma to the body. In extreme circumstances, sustained injuries can lead to permanent disability or death.

Large rubber tires for trucks and heavy equipment have the potential to explode with devastating force as the result of a decomposition process, which can occur when the tire overheats or is exposed to a heat source. This is known as pyrolysis. This can occur after the vehicle comes near or touches a high voltage power line, after a brake has been overheated, after the wheel has been heated with a torch, after a stud has been cut off a wheel or by welding on the wheel. Workers and others may sustain critical or fatal injuries as a result.

- Review controls to prevent worker injury during tire/rim replacement.
- Review worker protection from blow-off [Regulation 851 section 77].
- Employer must acquaint a worker with any known hazards, such as the risk of pyrolysis [OHSA clause 25(2)(d)].
- Review training provided to a worker on the hazards of pyrolysis [OHSA clauses 25(2)(a) and 25(2)(d)].

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51 of Regulation 851:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)].
- Review employer training policy and program [Regulation 851 clause 51(2)(a) and OHSA clause 25(2)(a)].

Trends

Table 1: Fatalities and critical injuries in vehicle sales and service by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	2	2	1	0	1
Critical injuries	12	13	13	21	7

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.

- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in vehicle sales and service by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	1,979	1,631	1,572	1,382	1,711
Orders	4,479	3,976	3,469	3,380	4,352
Complaints	296	246	241	263	353
Work refusals	1	0	2	2	2

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].
- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy [OHSA clause 25(2)(j)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice, and not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- Where a worker is exposed to a potential hazard of injury to the eye due to contact with a biological or chemical substance, an eyewash fountain shall be provided [section 124].
- Material, articles or things shall be transported, placed or stored so that the material, articles or things, will not tip, collapse or fall, and can be removed or withdrawn without endangering the safety of any worker [clause 45 (b)].

Industrial Regulations identified by section

Inspectors may issue orders in the vehicle sales and service sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review requirement
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 57 – inadvertent vehicle movement

- Section 73 – portable ladder
- Section 84 – protection from noxious gas, liquid fume or dust
- Section 85 – fall arrest
- Section 124 – eyewash
- Section 125 – deluge shower

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of [Regulation 851](#). Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Control of Exposure to Biological or Chemical Agents](#), Regulation 833
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851
- [Designated Substances](#), O. Reg. 490/09

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Wholesale

Safe At Work Ontario

Issued: October 14, 2016

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Sector summary

This sector comprises establishments primarily engaged in the wholesaling process and distribution of goods, such as food wholesalers, paper wholesalers, lumber and building material, “big box” stores, and recyclers.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the wholesalers sector.

- Unguarded equipment
- Material handling: struck by object, caught between objects, and compression
- Lifting devices: struck by object, and operation
- Activities that may lead to musculoskeletal disorders (MSDs)
- Noise
- Falls
- Machine guarding
- Occupational exposure limits (OELs): carbon monoxide
- Heat stress

Top five hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness.

In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Material handling: struck by object, caught between objects, and compression

Injuries associated with material handling can include workers being struck by objects, caught between objects, and/or crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections 45, 46, 47, 48, 49, and 50.

- Review operations/processes involving the movement of raw material and product from receiving area to production line AND from production line to shipping area [section 45].
- Review operations/processes involving assembly line or similar style of raw material or product movement [clause 45(a)].
- Review warehousing/storage operations [clause 45(b)].

- Review material movement by conveyors [clause 45(a), sections 33 and 34].
- Review proximity of work-stations, desks, and rest areas to travel ways and loading dock [clauses 45(a) and 45 (b)].

Lifting devices: struck by object, and operation

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)]
 - operator protection [clause 51(1)(d)]
 - control return to neutral [clause 51(1)(e)].
 - Review employer training policy and program [clause 51(2)(a)].
 - Review material handling operations [clause 51(2)(b)].

Musculoskeletal disorder (MSDs)

Workplace pains and strains can be serious and disabling for workers, causing pain and suffering ranging from discomfort to severe disability.

MSD is not a medical diagnosis; it is an umbrella term for a group of injuries. Some of these injuries include: back pain (low back strain, etc.), muscle strain, tendonitis, carpal tunnel syndrome, rotator cuff syndrome, tennis elbow, and shoulder pain.

- Review operations/processes involving manual material handling.
- Review work areas requiring use of ladders and material handling.
- Review operations/processes requiring stationary repetitive movements.
- Review training on job-specific MSD risk factors.
- Review controls to reduce worker exposure to MSDs.
- Identify and assess job-related MSD risk factors.
- Contact your health and safety association for guidance in assessments and prevention of MSDs.

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Trends

Table 1: Fatalities and critical injuries in wholesale by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	2	4	1	0
Critical injuries	28	30	38	25	25

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.

- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in wholesale by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	2,435	1,930	2,255	1,664	2,131
Orders	5,126	4,169	4,524	3,444	4,459
Complaints	344	288	301	316	369
Work refusals	2	3	3	1	7

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25(1)(b)].
- An employer shall post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities and duties of workers [OHSA clause 25(2)(i)].
- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- Material, articles or things shall be transported, placed or stored so that the material, articles or things, will not tip, collapse or fall, and can be removed or withdrawn without endangering the safety of any worker [clause 45 (b)].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice, and not have any finish or protective material used on it that is likely to make the surface slippery [section 11].
- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].

Industrial Regulations identified by section

Inspectors may issue orders in the wholesale sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 57 – inadvertent vehicle movement
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction

- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection

Applicable regulations

- [Occupational Health and Safety Awareness and Training Regulation](#), O. Reg. 297/13
- [Workplace Hazardous Materials Information System](#), Regulation 860
- [Noise Regulation](#), O. Reg. 381/15
- [Regulation for Industrial Establishments](#), Regulation 851

Construction regulation

Employers should be aware that in situations where construction work is undertaken, [O. Reg. 213/91](#) may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines “construction” as including “erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.”

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Wood and Metal Fabrication

Safe At Work Ontario

Issued: October 14, 2016

Content last reviewed: October 2016

Sector summary

The wood and metal fabrication sector is large and diverse. It includes the production of wood and metal furniture and fixtures, primary metal and metal fabricating, containers, building products, hardware and tools, sporting goods, machinery and equipment, transportation parts and equipment and other heavy equipment manufacturing.

Key hazards

The following list represents hazards to which workers are most commonly exposed in the wood and metal fabrication sector.

- Material handling: struck by object, caught between objects, and compression
- Unguarded equipment
- Lifting devices
- Fire and explosion: dust collectors
- Lockout: machine or transmission start-up
- Noise
- Confined space
- Activities that may lead to musculoskeletal disorders (MSDs)
- Heat
- Chemicals
- Falls

Top seven hazards described

In general, hazards not prescribed by Regulation, or workplaces not covered by a sector-specific Regulation, are addressed through the application of clause 25(2)(h) of the Occupational Health and Safety Act (OHSA).

Workplace parties are to refer to the narrative portion of the field visit report, if they have received one, for further information or contact their health and safety association for guidance.

Material handling: struck by object, caught between objects, and compression

Injuries associated with material handling can include workers being struck by objects, caught between objects, and/or crushed by mechanical compression.

Regulation 851 sets out requirements for material handling in sections 45 46, 47, 48, 49, and 50.

- Review operations / processes involving the movement of raw material and product from the receiving area to the production line and from the production line to the shipping area [section 45].
- Review operations/processes involving assembly line or similar style of raw material or product movement [clause 45(a)].
- Review warehousing/storage operations [clause 45(b)].

Unguarded equipment

Injuries to workers can include lacerations, amputations, crushing by entanglement, and loss of consciousness. In extreme circumstances sustained injuries can lead to permanent disability or death.

Hazards due to unguarded equipment include worker exposure to pinch points, moving (rotating) equipment, and in-running nip hazards. Equipment that have exposed moving parts such as equipment used in cutting operations, conveyors, augers, equipment using power take-off (PTO), and exposed drive-motor assemblies used to power compressors and/or ventilation fans will endanger a worker.

Regulation 851 sets out requirements for guarding of equipment in sections 24, 25, 26, 28, 31 and 32.

- Review requirements for the guarding of prime movers or transmission equipment [section 24].
- Review requirements for the guarding of pinch points [section 25].

Lifting devices

Lifting devices include forklift trucks (or similar), overhead cranes, gantry cranes, jib cranes, and roof-mounted affixed hydraulic and/or chain operated hoists. The hazards associated with lifting devices continue to be a significant cause of worker injury and deaths.

Regulation 851 sets out requirements for lifting devices in sections 51, 52, 53, 54, 56, 58, 59, and 60.

- Review compliance with requirements of section 51:
 - annual safety inspection [clause 51(1)(b)]
 - capacity plate/lifting information [clause 51(1)(c)]
 - operator protection [clause 51(1)(d)]
 - control return to neutral [clause 51(1)(e)].
 - Review employer training policy and program [clause 51(2)(a)].
 - Review material handling operations [clause 51(2)(b)].

Fire and explosion: dust collectors

Industrial dust collectors, hoppers, and bins can contain combustible dusts, including sawdust, metal shavings and other materials such as paper and plastic.

Injuries from fire and/or explosion can include burns, lacerations, fractures, and loss of consciousness. In extreme circumstances, sustained injuries can lead to permanent disability or death.

Regulation 851 sets out requirements for dust collectors in sections 63, 64, and 65.

- Review industrial processes that use dust collectors.
- Review requirements to control explosive mixtures [section 63].
- Review requirements to control dust access into equipment [section 64].
- Review requirements for dust collector location [section 65].

Contact your health and safety association for guidance in reviewing dust collector safety and worker protection.

Lockout: machine or transmission start-up

Injuries experienced by accidental machine start-up can include lacerations, crushing, and amputations. In severe circumstances these injuries can lead to permanent disability or death.

Regulation 851 sets out the requirements for worker protection against machine start-up in sections 75 and 76.

- Review repair/maintenance of machinery [section 75].
- Review compliance with requirements for lockout procedures [sections 75 and 76].
- Review instruction and information provided to workers on the hazard and the requirements to isolate and lockout [OHS clauses 25(2)(a) and 25(2)(d)].

Noise

Injuries to workers can include varying degrees of noise induced hearing loss.

O. Reg. 381/15 sets out workplace requirements regarding noise.

- Review the engineering controls and work practices in place to reduce noise levels and exposures (mufflers on air exhausts, mechanical dampening treatment, vibration isolators, enclosures, limiting worker's exposure time) [subsection 2(2)].
- Review the availability and use of hearing protection [subsection 2(6)].
- Review the type of hearing protection provided [subsection 4(1)].
- Review placement of warning signs at approaches to noisy areas [subsection 2(7)].
- Review the training provided to workers [section 3].
- Personal protective equipment is to be used only as a last resort. Engineering controls and work practices must be used where practicable [subsection 2(5)].

Confined space

A “confined space” means a fully or partially enclosed space that is not both designed and constructed for continuous human occupancy, and in which atmospheric hazards may occur because of its construction, location or contents or because of work that is done in it.

Injuries to workers can include loss of consciousness and collateral injuries sustained as a result of loss of consciousness.

In extreme circumstances such as oxygen depletion, toxic substance inhalation, or explosive atmosphere sustained injuries can lead to permanent disability or death.

O. Reg. 632/05 sets out workplace requirements regarding confined spaces.

- Review work locations that satisfy the definition of "confined space."
- Review compliance with requirement to have a program in place for confined spaces [section 5].
- Review compliance with requirement to have adequate assessments of confined spaces carried out [section 6].
- Review compliance with requirement to have an adequate plan developed and implemented for confined space entry [section 7].
- Review compliance with requirement for worker training [section 9].

Trends

Table 1: Fatalities and critical injuries in wood and metal fabrication by fiscal year

Events	2011-12	2012-13	2013-14	2014-15	2015-16
Fatalities	0	1	4	3	4
Critical injuries	44	55	58	55	55

- Only critical injury events reported to the ministry are included here.
- This represents data that was reported to the ministry and may not represent what actually occurred at the workplace.
- The critical injury numbers represent critical injuries reported to the ministry and not necessarily critical injuries as defined by the OHSA.
- Non-workers who are critically injured may also be included in the ministry's data.
- The Ministry of Labour tracks and reports fatalities at workplaces covered by the OHSA. This excludes death from natural causes, death of non-workers at a workplace, suicides, death as a result of a criminal act or traffic accident (unless the OHSA is also implicated) and death from occupational exposures that occurred many years ago.
- Data are subject to change because of inspectors' updates to the database.

Table 2: Events and activities in wood and metal fabrication by fiscal year

Events and activities	2011-12	2012-13	2013-14	2014-15	2015-16
Field visits	4,155	3,737	3,627	3,591	3,795
Orders	8,412	7,893	6,705	8,178	8,383
Complaints	589	560	630	597	691
Work refusals	3	5	8	10	8

Most common orders issued under the OHSA

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under the OHSA were:

- An employer shall ensure that the equipment, materials and protective devices provided by the employer are maintained in good condition [OHSA clause 25 (1)(b)].
- An employer shall take every precaution reasonable in the circumstances for the protection of a worker [OHSA clause 25(2)(h)].
- An employer shall provide information, instruction and supervision to a worker to protect the health or safety of the worker [OHSA clause 25(2)(a)].
- Where an inspector makes an order and finds that the contravention of this Act or the regulations is a danger or hazard to the health or safety of a worker, the inspector may order that the work at the workplace as indicated in the order shall stop until the order to stop work is withdrawn or cancelled by an inspector after an inspection [OHSA clause 57(6)(b)].

Most common orders issued under the Industrial Regulations

From April 1, 2015, to March 31, 2016, the most common orders issued by the Ministry of Labour under Regulation 851 were:

- An in-running nip hazard or any part of a machine, device or thing that may endanger the safety of any worker shall be equipped with and guarded by a guard or other device that prevents access to the pinch point [section 25].
- A lifting device shall be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated prior to being used for the first time, and thereafter as often as necessary but not less frequently than recommended by the manufacturer and in any case, at least once a year, and a permanent record shall be kept, signed by the competent person doing the examination [clause 51(1)(b)].
- Where a machine or prime mover or transmission equipment has an exposed moving part that may endanger the safety of any worker, the machine or prime mover or transmission equipment shall be equipped with and guarded by a guard or other device that prevents access to the moving part [section 24].
- A floor or other surface used by any worker shall be kept free of obstructions, hazards, and accumulations of refuse, snow or ice, and not have any finish or protective material used on it that is likely to make the surface slippery [section 11].

Industrial Regulations identified by section

Inspectors may issue orders in the wood and metal fabrication sector under the following sections of the Regulation for Industrial Establishments where appropriate.

- Section 7 – pre-start health and safety review requirement
- Section 11 – safe work surfaces
- Sections 13 and 14 – guardrails
- Sections 22 and 23 – flammable liquids
- Sections 24, 25, 26, 28 and 32 – guarding of equipment
- Section 34 – conveyor guarding
- Section 45 – material handling and storage
- Section 49 – compressed gas cylinders
- Clause 51(1)(a) – examination of lifting device
- Clause 51(1)(c) – maximum rated load plainly marked on lifting device
- Section 57 – inadvertent vehicle movement
- Section 73 – portable ladder
- Section 76 – machine lockout
- Section 79 – personal protective equipment instruction
- Section 80 – head protection
- Section 81 – eye protection
- Section 82 – foot protection
- Section 124 – eyewash
- Section 125 – deluge shower

Pre-start health and safety review

A pre-start review (PSR) may be required by section 7 of Regulation 851. Section 7 applies to a factory as defined by the OHSA and is intended to ensure that hazards are removed or controlled before an apparatus or process is started up. If required, the PSR must be completed before the complete installation (in-service and operating) of any apparatus, structure, or protective element.

Contact your health and safety association or the Professional Engineers of Ontario (PEO) for guidance in conducting a PSR or contact a professional engineer or engineering company that performs PSRs.

Applicable regulations

- Occupational Health and Safety Awareness and Training Regulation, O. Reg. 297/13
- Workplace Hazardous Materials Information System, Regulation 860
- Control of Exposure to Biological or Chemical Agents, Regulation 833
- Noise Regulation, O. Reg. 381/15
- Regulation for Industrial Establishments, Regulation 851
- Roll-Over Protective Structures, Regulation 856
- Designated Substances, O. Reg. 490/09
- Confined Spaces Regulation, O. Reg. 632/05

Construction regulation

Employers should be aware that in situations where construction work is undertaken, O. Reg. 213/91 may apply.

Construction work can be described as new work, additions, alterations, or maintenance and repairs. The OHSA defines "construction" as including "erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine."

General resources

[Publications | Ministry of Labour](#)

For information on Guides, Fact Sheets, Information Bulletins, Guidelines, Alerts, Engineering Data Sheets, Extracts, Reports, Consultations, Codes, and Standards.

[Videos and Photos | Ministry of Labour](#)

To view Ministry of Labour videos and photos

[Health and Safety Partners](#)

To learn about sector-assigned health and safety associations.

[By The Numbers: WSIB Statistical Report](#)

To review Workplace Safety and Insurance Board (WSIB) injury experience data.

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Disclaimer: This web resource has been prepared to assist the workplace parties in understanding some of their obligations under the [Occupational Health and Safety Act](#) (OHSA) and the regulations. It is not intended to replace the OHSA or the regulations and reference should always be made to the official version of the legislation.

It is the responsibility of the workplace parties to ensure compliance with the legislation. This web resource 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.

While this web resource will also be available to Ministry of Labour inspectors, they will apply and enforce the OHSA and its regulations based on the facts as they may find them in the workplace. This web resource does not affect their enforcement discretion in any way.