Ontario

Specialized Professional Services work plan 2017-2018

The plan describes the ergonomics, occupational hygiene and radiation protection enforcement initiatives conducted by the ministry's Specialized Professional Services Unit, and explains how the unit provides technical support and expertise to inspectors.

Safe At Work Ontario is a Ministry of Labour (MOL) initiative to raise awareness of and 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 Specialized Professional Services Work Plan outlines the ministry's enforcement initiatives to protect Ontario's workers from occupational injury and illness.

Note that employers have the prime responsibility for ensuring compliance with the OHSA and its regulations.

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
- identify areas for improvement.

The Specialized Professional Services Work Plan for 2017-2018 describes hazards and compliance issues, and the MOL's enforcement focus for inspections 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
- the ministry's enforcement practices.

As of September 8, 2016, employers have additional duties with respect to workplace harassment, including a requirement to appropriately investigate workplace harassment incidents and complaints. The MOL has a Dedicated Harassment Enforcement Team (DHET) of inspectors enforcing this new amended legislation.

New resources are available on the MOL site to assist employers and workers with the workplace harassment requirements under OHSA. A Code of Practice under OHSA has been developed to help employers in developing their own workplace–specific harassment policies and programs to comply with the law.

Effective July 1, 2016, *O. Reg. 381/15 – Noise Regulation* under the OHSA replaced the noise protection requirements set out in the regulations for *Industrial Establishments*, *Mines and Mining Plants*, and *Oil and Gas-Offshore* and extends noise protection requirements to all provincially regulated workplaces.

This work plan contains a brief description of some of the main issues that an ergonomist, occupational hygienist, engineer or radiation protection officer may address in the workplace. It provides a general overview of the ministry's focus even though each workplace is unique and the circumstances may result in a different inspection focus.

Additionally, there is an overview of the number of critical injuries and fatalities reported to the ministry for each sector in Ontario. Also included are the number of work refusals and complaints reported to the Ministry of Labour's Health and Safety Contact Centre and the number of field visits and orders issued by Ministry of Labour inspectors for each sector.

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.
- Contact the ministry from 8:30 a.m. to 5 p.m., Monday to Friday, for general inquiries about workplace health and safety.
- In an emergency, always call 911 immediately.

The Specialized Professional Services Unit

The Specialized Professional Services (SPS) Unit provides technical support and expertise to Ministry of Labour regional staff in the industrial, construction, mining and health care programs.

The SPS provides services in five key areas:

1. ergonomics
2. occupational hygiene
3. engineering
4. radiation protection
5. emergency management.

The SPS's key responsibilities include:

- enforcing occupational hygiene, safety and ergonomics in workplaces
- providing expert professional advice on engineering, occupational hygiene, radiation protection and ergonomics for the ministry's enforcement activities
- developing guidelines and best-practices documents in partnership with health and safety associations (HSAs) and other professional organizations pertaining to risks associated with musculoskeletal disorders (MSDs), occupational disease and exposure to complex machinery and equipment, chemicals and radiation
- contributing to the development of standards, guidelines, regulations, codes of practice and operating policies.

Ergonomics services

Description

Ministry of Labour ergonomists provide technical support to ministry inspectors and conduct inspections focusing on ergonomics to protect workers from ergonomics-related hazards.

Occupational ergonomics focuses on interactions between workers and elements in their workplaces. These elements can include equipment, work stations, work processes and environmental influences.

Effective ergonomics enhance worker well-being and overall performance. Inattention to ergonomics can lead to musculoskeletal disorders (MSDs) and cause acute injuries (for example falls, burns and vehicular accidents).

Challenges are posed by Ontario's changing workforce demographics and ongoing evolution of workplaces, equipment and technology. This makes it even more crucial for workplaces to address ergonomics and MSD prevention.

Workplace parties can refer to the following documents when addressing MSD issues:

- *MSD Prevention Guideline for Ontario*
- the guideline's accompanying resource manual and toolbox and
- sector-specific resources available through Ontario's health and safety associations.

For more information, see the ministry's Musculoskeletal disorders / ergonomics webpage.

The ergonomics work plan for 2017-2018 includes an inspection component that supports the Safe At Work Ontario initiative as well as investigative support to inspectors in response to events. Ergonomists:

- initiate Safe At Work Ontario visits to workplaces with MSD and ergonomics-related hazards and/or have a history of MSDs
- support inspectors who are conducting Safe At Work Ontario inspections
- support relevant Safe At Work Ontario blitzes with ergonomics and MSD hazard information
- participate in regional inspection initiatives and
- investigate work refusals and complaints, and support investigations of fatalities and critical injuries.

Injury and illness trends

Musculoskeletal disorders continue to be one of the most common lost time injuries at work in Ontario. In 2015, MSD claims represented:

- 34% of all lost time injury (LTI) claims
- 2% of all days lost
- 25% of all LTI claim costs for Schedule 1 workplaces and
- 30% of all LTI claim costs for Schedule 2 workplaces.

The more than 17,400 MSD claims in 2015 equated to:

- more than 345,000 days lost and
- more than $57 million in WSIB costs.

The decline of the MSD lost time injury rate for Schedule 1 from 2003 to 2015 was 64%.

Attention to MSDs is essential to assist in the ongoing decline of the overall LTI rate in Ontario.

By program in 2015, MSD claims represented:

- 33% of all lost-time injury claims in the industrial sector
- 38% of all lost-time injury claims in the health care sector
- 30% of all lost-time injury claims in the construction sector
- 36% of the total lost-time injury claims in the mining sector.

Ergonomics inspection focus

In addition to supporting the ministry's general inspectorate, ergonomists also conduct proactive ergonomics-focused inspections.

Priority is given to workplaces identified as having a history of MSDs and that are known to have MSD or ergonomics-related hazards.

For 2017-2018, ergonomists will focus on:

- Workplaces that have a history of MSDs
- Food processing/manufacturing

  A number of MSD hazards are known to exist in the food processing and manufacturing industry. This was a proactive initiative for the regional ergonomists in 2011/12, but field intelligence identifies that MSD hazards are still an issue in this industry.

- Tire handling and storage

  Workers performing tire handling and storage activities are exposed to MSD hazards including high forces lifting tires and rims and awkward postures when having to obtain tires from stacks or racking. Field intelligence has identified this work task as a concern. This has not been a specific focus in past initiatives.

- Ladder use and access for manual materials handling

  Fall hazards due to the unsafe use of ladders that result in a worker not maintaining their balance are common throughout all sectors. In 2011, the ergonomics program developed four documents on guidelines for the use of ladders in industrial workplaces. Construction has a similar document on safe ladder use.

  Musculoskeletal disorder and fall hazards can also be present when other access systems (e.g. stairs, platforms, walkways) are not appropriate for the manual materials handling activities performed. These can be related to overreaching, and awkward or unbalanced postures/movements. This has not been a proactive initiative for ergonomists in the past.

Ministry inspectors are encouraged to include an MSD component in workplace inspections when appropriate.

Inspectors can request the assistance of ergonomists for any proactive or reactive workplace visit. Ergonomists are based at regional offices across the province.

Inspectors in all program areas conduct workplace inspections to check compliance with the *Occupational Health and Safety Act* and its regulations, including requirements to prevent ergonomics-related hazards.

The ergonomics-related issues that inspectors may address during workplace visits are listed as follows.

Industrial

- manual materials handling (e.g., lifting, lowering, pushing, pulling and carrying)
- manual materials handling while working on ladders
- unnecessary manual materials handling due to obstructions
- team lifting of heavy objects
- use and maintenance of work carts
- visibility hazards with vehicles and mobile equipment
- fall hazards due to the unsafe use of ladders
- policies, procedures, training and supervision

Resources:

- Video: manual materials handling in industrial workplaces
- Ladder ergonomics
- Manual materials handling at industrial workplaces
- Back belts in manual materials handling
- Manual handling of beer kegs
- Manual transfer of mobile industrial waste containers
- Vehicle/mobile equipment and visibility hazards at industrial workplaces

Health care

- client handling (lifting, transferring and repositioning clients)
- engagement of the joint health and safety committee (JHSC) on MSD hazards
- manual materials handling (e.g., lifting, lowering, pushing, pulling and carrying of objects)
- providing and maintaining equipment
- written measures and procedures, training and supervision
- laboratory work stations
- visibility hazards with vehicles and mobile equipment
- fall hazards due to the unsafe use of ladders

Resources:

- Video: client handling in health care
- Client handling and MSDs in the health care sector
- Manual materials handling in health care workplaces
- Back belts in manual materials handling
- Manual transfer of mobile industrial waste containers

Construction

- emphasizing safe material handling, particularly during access/egress above/below ground level and while climbing ladders
- proper storage and movement of material and equipment
- maintaining unobstructed work routes
- equipment maintenance
- boxes not being used as work platforms

- training on MSD prevention
- visibility hazards with vehicles and mobile equipment
- fall hazards due to the unsafe use of ladders

Resources:

- Video: Manual materials handling in construction
- Manual materials handling at construction projects
- Back belts in manual materials handling

Mining

- access to work areas and equipment (including vehicles)
- interior of vehicle cabs
- roadway conditions
- stationary operator work stations
- how items are stored and manually transported
- how items such as supplies and equipment are handled
- whether devices are used to assist in handling objects
- visibility hazards with vehicles and mobile equipment
- fall hazards due to the unsafe use of ladders

Resources:

- Manual materials handling in mines
- Back belts in manual materials handling
- Vehicle/mobile equipment and visibility hazards in mining workplaces

Occupational hygiene services

Description

Workers may be exposed to chemical, biological and physical agents, which may cause sickness and impaired health. The occupational hygiene 2017-2018 work plan for occupational hygiene inspectors will continue enforcement of WHMIS 1988 and 2015 labels and M/SDS (Safety Data Sheets and Material Safety Data Sheets).

Occupational hygiene activities will include a noise initiative. Noise is a serious hazard in many workplaces. Allowed Noise Induced Hearing Loss (NIHL) claims registered between 2006 and 2015 accounted for about 23% of all allowed occupational disease claims.

Ministry of Labour occupational hygienists will continue to conduct inspections, investigations and industry-wide air quality surveys to identify and assess the risk factors which contribute to occupational diseases and illnesses among workers. They also provide professional and technical support to sector program inspectors.

Assessment of occupational health hazards and control of associated risks are achieved through enforcement of:

- *Occupational Health and Safety Act*
- Relevant sections of sector regulations such as confined spaces and personal protective equipment

- *O. Reg. 381/15 – Noise*
- *O. Reg. 490/09 – Designated Substance Regulation*
- *O. Reg. 833 – Control of Exposure to Biological or Chemical Agents*
- *O. Reg. 860 – Workplace Hazardous Materials Information System* (WHMIS)

Occupational hygienists will also participate in blitzes and regional initiatives under the Safe At Work Ontario enforcement strategy.

Occupational hygiene inspection focus

Occupational hygienists provide professional and technical support to the construction, health care, industrial and mining sector programs in proactive and reactive field enforcement and compliance activities. Also, as part of the Safe at Work Ontario enforcement strategy, occupational hygienists participate in proactive initiatives that prevent occupational diseases. Occupational hygienists also take part in sector program workplace inspection blitzes and regional initiatives that have significant occupational hygiene components.

WHMIS compliance initiative for 2017-2018

Ten per cent of occupational hygienists' workplace visits are targeted for proactive inspections of various workplaces with emphasis on compliance to labels, M/SDS and worker education. This initiative will also include communication of components of WHMIS 2015 (GHS/Globally Harmonized System of Classification and Labelling of Chemicals).

Occupational hygienists continue to promote the control of exposure to toxic agents in workplaces through enforcement of the Designated Substances, Control of Exposure to Biological or Chemical Agents and WHMIS regulations. Occupational hygiene workplace interventions will also emphasize the measures to control the use of substances that are considered to be carcinogens, sensitizing agents and/or reproductive hazards. Activities also promote toxic exposure reduction by substituting chemical substances with less toxic versions.

Noise initiative for 2017-2018

Ten per cent of the workplace visits will target manufacturing sectors and others where noise is present. The noise workplace visits will focus on the following:

- Ensuring compliance with L_{ex8} of 85 dBA as stated in *Regulation 381/15*
- Enforcement of engineering and administrative noise control measures
- Enforcement of hearing protection devices, selection and training

Ongoing program support

Occupational hygienists will continue to conduct air quality surveys to support proposed Occupational Exposure Limits (OELs) and enforcement of adopted OELs.

Occupational hygienists are designated by *Health Canada as Hazardous Products Act* inspectors and have a mandate to investigate with respect to supplier labels and M/SDS in Ontario. This includes handling requests from other provinces using the Inter-Jurisdictional Referral (IJR) process.

Construction, health care, mining and industrial sector inspectors conduct proactive and reactive workplace inspections to check compliance with the *Occupational Health and Safety Act* and relevant regulations,

including those related to occupational hygiene issues. Occupational hygienists provide professional and technical support to inspectors during program and regional enforcement and compliance initiatives.

Engineering services

Description

Ministry of Labour (MOL) engineers provide engineering support to ministry inspectors during inspections and investigations involving complex engineering issues. The key health and safety focus for engineering services is workplace safety hazards.

Employers continue to face demands to introduce new and advanced technologies owed in part to the competitive global economy and constant technological advancement in manufacturing, mining, health care and construction.

Ministry enforcement staff will continue to encounter new and changing technologies with complex engineering principles. The expertise of SPS engineers is used to address any associated health and safety risks.

MOL engineers are also involved in updating regulatory requirements to account for changes in technology and methodology so that workers are adequately protected from new hazards introduced into the workplace.

Engineering-related health and safety hazards

Field engineers take part in the Safe At Work Ontario initiative by responding to inspectors' requests for professional support that arise from proactive inspections.

In 2017-2018 this support may involve:

- electrical hazards on construction sites
- mobile cranes and material hoisting
- concrete forming
- materials handling in industry
- industrial machinery
- racking and mezzanine structure
- chemical exposure
- mobile equipment
- material tramming in underground and surface mines
- safe work practices in mine plants
- remote mucking in underground mines.

The work plan outlines the key issues and initiatives for the enforcement of the engineering sections in the regulations for Industrial Establishments, Construction Projects, Health Care and Residential Facilities and Mines and Mining Plants. It provides guidance regarding visits by field engineers for specific sectors and priority safety hazards as well as their participation in special projects related to the enforcement of regulations or for completing investigations.

Engineering inspection focus

MOL inspectors enforce the *Occupational Health and Safety Act* and its regulations at workplaces across the province.

As part of the Safe At Work Ontario strategy, inspectors also focus on specific sectors with:

- high injury rates
- a history of non-compliance and
- specific workplace hazards.

Engineers take part in Safe At Work Ontario activities by responding to inspectors' requests for professional support that arise from proactive inspections. In 2017-2018, SPS engineers may:

- participate in proactive inspections
- participate in regional inspection initiatives
- review engineering reports
- conduct workplace inspections to determine compliance with Pre-Start Health and Safety Review (PSR) requirements
- scope work, review reports, interpret results and prepare engineering reports
- participate in investigating fatalities, critical injuries, work refusals and complaints
- assist in developing inspector guidance material for blitzes
- assist in developing hazard alerts
- develop training material for the structural assessment of buildings and infrastructure.

In 2017-2018, mining engineers with the assistance of mining inspectors will be conducting engineering reviews of ground control, water management and ventilation programs in underground mines in Northern Region. These reviews will serve a three-fold purpose:

1. to enable the MOL to determine industry status at this point in time (a baseline);
2. to educate the industry on best practices and MOL expectations;
3. to provide specific guidance/direction to mines where inadequate controls are in place.

Engineers support Safe At Work Ontario blitzes by providing guidance materials and checklists to help ministry inspectors accurately identify hazards.

The engineering work resulting from the inspection focus of the general inspectorate during 2017-2018 Safe At Work Ontario inspections is outlined as follows.

Engineering work in the **industrial sector**:

- fall protection
- guarding
- use and failure of lifting devices
- lockout
- design and construction of mezzanine structures

Engineering work in the **construction sector**:

- fall protection
- scaffolding
- roofing
- forming
- mobile equipment

Engineering work in the **mining sector**:

- ground control stability
- hoisting plants
- electronic controls
- control systems
- water management

Engineering work in the **health care sector**:

- power plant hazards including in-running nip, crushing and entanglement hazards
- storage and racking
- loading docks

Radiation protection services

Description

Radiation Protection Field Services (RPFS) staff administer and enforce:

- occupational X-ray safety under *Regulation 861 – X-ray Safety*
- safety requirements for the protection from ionizing radiation (in the form of naturally occurring radioactive materials, or NORM) under the *Occupational Health and Safety Act* (OHSA) and
- Safety requirements for the protection from non-ionizing radiation (electromagnetic extremely low and very low frequency, radio-frequency, microwave, magnetic resonance imaging, ultra-violet, laser) under the OHSA.

RPFS staff includes radiation protection officers (RPOs) who are appointed as:

- inspectors under the OHSA, and
- provincial offences officers under the *Provincial Offences Act*.

Radiation Protection Officers (RPOs) have the power to lay charges for violations of the OHSA and its regulations.

RPOs specialize in:

- dealing with ionizing and non-ionizing radiation to protect workers' safety at Ontario workplaces
- conducting proactive inspections and reactive investigations to address workers' concerns and work refusals
- registering employers who have an X-ray source
- reviewing/accepting installation plans of X-ray sources used in veterinary, industrial, analytical and training applications.

X-ray, non-ionizing radiation and NORM sources can be found in virtually every sector of the economy.

The number of employers with X-ray machines continues to increase every year. Installation approval of X-ray machines is also increasing, most notably in veterinary (addition of dental services), and security screening applications.

X-ray sources in key sectors are outlined as follows.

X-ray sources in the **health care sector**:

- hospitals
- radiological clinics (human medical and dental)
- veterinary facilities.

X-ray sources in the **industrial sector**:

- thickness gauges in steel/coating
- fill-height detection in bottling/canning
- contaminant detection in food processing, etc.

X-ray sources in the **educational sector**:

- training of X-ray operators in medical, dental, forensic, chiropractic fields
- non-destructive testing and security.

X-ray sources in the **construction sector**:

- industrial radiography of buildings
- pipelines, etc.

X-ray sources in the **analytical services sector**:

- quality assurance/control
- investigation in major manufacturing
- testing and research.

X-ray sources in the **policing sector**:

- courthouse security screening
- public buildings security screening
- correctional centres security screening including whole body scanners
- bomb detection.

Injury and illness causes

- Exposure to a hazardous physical agent (X-rays) may induce cancer, cause genetic damage, tissue damage or — in unborn children — developmental defects. The same can be said of external gamma radiation exposure and/or internal alpha/beta particle radiation exposure from the inhalation/ingestion of NORM).
- High-powered lasers in industrial, medical, cosmetic and research applications may injure skin and eyes.
- Safety issues related to a magnetic field of a magnetic resonance imaging (MRI) system may result in an injury from a projectile or severe frostbite/freeze burns from exposure to cryogenic gas.
- Radio frequency/microwave exposure can heat tissue.
- Ultraviolet radiation can induce cancer and damage skin and eyes.

Radiation protection inspection focus

RPOs conduct joint workplace visits with Ministry of Labour inspectors who enforce the OHSA and its regulations at workplaces across the province. RPOs are involved when workplaces under blitzes have X-ray

sources or other known radiation hazards. RPOs also conduct proactive inspections on their own initiative based on:

- potential risk of radiation exposure
- results of last visit to a workplace
- history of non-compliance
- X-ray application status and
- elapsed time since the last visit.

As part of the Safe At Work Ontario strategy, RPOs, along with ministry inspectors, also devote special attention to certain sector-specific workplace hazards.

They take enforcement action, as appropriate, to any violations of the OHSA and its regulations.

In 2017-2018, the RPFS will proactively:

- focus on inspection of dental X-ray source installations at veterinary facilities
- focus on veterinary facilities with digital imaging systems
- investigate the highest personal X-ray exposures at workplaces, with a particular focus on workers under age 20 (supplied by the National Dose Registry database, the repository for occupational X-ray exposures)
- confirm registration and review X-ray sources and installations. *Regulation 861 – X-Ray Safety* requires employers to register; in addition, an application for review, together with plan location drawings, of the installation must have been reviewed and accepted by a ministry inspector.
- follow up on rejected X-ray applications where no resubmission has been received by the ministry's Radiation Protection Service
- focus on cosmetic use of high power lasers
- support ministry inspectors on any regional initiatives with a radiation protection component
- support ministry inspectors on reactive or proactive visits to nuclear facilities where the ministry has authority to enforce the OHSA.

RPOs will also pay particular attention to enforcement focus topics and issues outlined as follows (the list applies mainly to veterinary facilities and other extended coverage workplaces).

- Exposures to radiological hazards
    - Health hazards in veterinary care settings include:
        - use of radioactive elements in nuclear medicine (I-131 for thyroid treatment of cats)
        - physical agents such as X-rays
        - other radiation hazards such as MRI and lasers.
- Availability of Material Safety Data Sheets (MSDS) and Workplace Hazardous Material Information System (WHMIS)
    - Veterinary care sector uses a wide variety of chemicals in liquid, solid and gaseous states. Endangered workers must have access to current MSDS and WHMIS training.

Emergency management program

The following section addresses the Ministry of Labour's legal obligations under the *Emergency Management and Civil Protection Act*, R.S.O. 1990, c.E.9, and its associated Order in Council (OIC), O.C. 1157/2009.

Description

The Ministry of Labour, along with other Ontario ministries, has adopted comprehensive emergency management programs.

These are based on a risk management approach that includes activities in the five core components of emergency management:

- prevention
- mitigation
- preparedness
- response and
- recovery.

The purpose is to ensure that a proactive, co-ordinated and comprehensive approach to managing emergencies is in place to reduce significant risks faced by Ontario communities.

Implementation of emergency management programs will ultimately:

- save lives and money
- protect property, public health and the environment
- maintain economic stability and
- help assure the continuance of critical infrastructure.

This will be achieved by:

- preventing some emergencies from occurring
- lessening the frequency and severity of others and
- speeding recovery.

The result will be a province comprising safe, secure and disaster-resilient communities.

Provincial ministries and municipalities are required to:

- develop, implement and maintain a comprehensive emergency management program and
- adopt standards for these programs based on the *Emergency Management and Civil Protection Act*.

This requirement ensures a consistent, accountable and robust system of emergency management is established throughout the province.

Ministry of Labour emergency management program

The *Emergency Management and Civil Protection Act*, R.S.O. 1990, c.E.9, and its associated Order in Council (OIC), O.C. 1157/2009:

- provides the authority for the Ontario government to prepare for and respond to emergencies in order to protect public health, safety, welfare and property in Ontario
- requires all ministers to develop an emergency plan for continuity of operations and services and
- requires ministers to develop specific emergency plans for the management of the type of responsibilities assigned by the OIC.

An OIC has been assigned to the Ministry of Labour for responsibilities around “any emergency that affects worker health and safety.” The SPS Unit is responsible for developing an Emergency Response Plan for this additional OIC.

The Ministry of Labour Emergency Response Plan for 2017−18, in addition to policy and legislated requirements noted above, includes these activities:

- Review and update the Ministry of Labour Emergency Response Plan and organize it to improve information access. The plan will be amended to complement any changes in provincial emergency management plans.
- Engagement of ministries by the Office of the Fire Marshal and Emergency Management , which will coordinate a review of emergency management elements of a provincial nature. The goal is to develop a set of community best practices.
- Provide support to the Provincial Emergency Operations Centre to reinforce worker safety requirements during emergency events, such as the James Bay flooding, nuclear emergencies and forest fire response.

Footnotes

- [1] ^ Schedule 1 employers are those for which the Workplace Safety Insurance Board (WSIB) is liable to pay benefit compensation for workers’ claims. Schedule 1 employers are required by legislation to pay premiums to the WSIB. Schedule 2 employers self-insure the provisions of benefits under the *Workplace Safety and Insurance Act, 1997*.