OCCUPATIONAL HEALTH AND SAFETY PROGRAM AND STANDARDS MANUAL

2019

Safe. Accountable. Integrated. Helpful. Excellent.

BUILDING A SAFER CITY
OCCUPATIONAL HEALTH & SAFETY

Edmonton

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DEFINITIONS

3 Decibel Exchange Rate
When the sound energy doubles, the decibel level increases by three

AAO
Alberta Association of Optometrists that provide the Occupational Vision Care Service

ACM
Asbestos Containing Material

Administrative Control
A form of hazard control that reduces worker exposure through management involvement, training of employees, rotation of employees, air sampling, signage, medical monitoring, and preventative maintenance. This is the second most effective form of hazard control.

AED
Automated External Defibrillator

Ceiling Limit
Control of exposure to fast-acting substances by value placing a limit on their concentration. The concentration of these substances cannot at any time in the work cycle exceed the ceiling limit.

CGA
Compressed Gas Association

City Vehicles
Any car, truck, bus or similar self-propelled conveyance, including any motorized unit which may or may not be self-propelled or mounted on a truck or trailer, which is owned or leased by the City of Edmonton

Code of Practice
A written document/set of policies, procedures and precautions specific to a particular subject

Competent
In relation to a person, means adequately qualified, suitably trained and with sufficient experience to safely perform work without supervision or with only a minimal degree of supervision

Confined Space
A restricted space which may become hazardous to a worker entering it because of:

(a) an atmosphere that is, or may be, injurious by reason of oxygen deficiency or enrichment, flammability, explosivity, or toxicity, or;
(b) a condition or changing set of circumstances within the space that presents a potential for injury or illness; or

(c) the potential or inherent characteristics of an activity which can produce adverse or harmful consequences within the space.

Consult
The sharing of relevant information with or seeking information or advice from affected persons, giving affected persons a reasonable opportunity to express their views, and taking those views and that information and advice into account;

Contaminant
A chemical, biological, or radiological material in a concentration that will likely endanger the health and safety of a worker if it is inhaled, ingested, or absorbed

Contractor
Means a person or group of persons, partnership, or corporation who, through a contract or an agreement with the City of Edmonton undertakes to complete a defined scope of work for the City.

CSA
Canadian Standards Association

dBA
A measure of sound level in decibels using a reference sound pressure of 20 micropascals when measured on an A-weighting network of a sound level meter

Electronic Device
Any device capable of accessing, sending, storing or receiving messages or other information, either verbally or in text including, but not limited to, cell phones, personal digital assistants, hands free, speaker phones, laptops, blackberries, pagers, ear pieces, ipods.

Emergency
A sudden unforeseen crisis, usually involving danger, which requires immediate action.

Emergency Vehicles
Emergency vehicles operated by Fire Rescue Services personnel, and vehicles operated by Peace Officers as per the Traffic Safety Act and Vehicle Equipment Regulation.

Employee
Any individual employed by the City on a full time, part-time, temporary or casual basis, including those individuals employed pursuant to a personal services agreement and any person who reports to the City Manager or City Auditor and performs a service for, or otherwise acts on behalf of, the City under contract (including contractors, consultants, and their employees), or in the capacity of agent, student, or volunteer.

Employer
A person who employs or engages one or more workers, including a person who employs or engages workers from a temporary staffing agency. For the purposes of this manual, the Employer is The City of Edmonton unless otherwise specified.

Engineering Control
A form of hazard control that changes the work environment to eliminate or physically control the hazard. This can be achieved through design specifications, the use of

substitution, isolation, enclosure and ventilation. This is the most effective form of hazard control.
Enviso The City's environmental management system that is used to develop and implement environmental policy and manage risk and opportunities associated with the environmental aspects of work.
ER Emergency Response
ERP Emergency Response Plan
Excess Noise Noise that exceeds the limits specified in section 218 of the Alberta Occupational Health and Safety Code
Exposure A state of being exposed to a concentration of a contaminant
Eyesafe The AAO program name for the OVC service they provide to the City
f/cc Fiber per cubic centimeter
Fall Arrest System Fall arrest system means a system that will stop a worker's fall before the worker hits the surface below
Harassment As defined by the Occupational Health and Safety Act, harassment means any single incident or repeated incidents of objectionable or unwelcome conduct, comment, bullying or action by a person that the person knows or ought reasonably to know will or would cause offence or humiliation to a worker, or adversely affects the workers health and safety, and includes (i) conduct, comment, bullying or action because of race, religious beliefs, colour, physical disability, mental disability, age, ancestry, place of origin, marital status, source of income, family status, gender, gender identity, gender expression and sexual orientation, and (ii) a sexual solicitation or advance, but excludes any reasonable conduct of an employer or supervisor in respect of the management of workers or a work site
Hazard A situation, condition, or thing that may be dangerous to health and safety
Hazardous Product A product, mixture, material or substance specified by the regulations made under paragraph 15(1) of the Hazardous Products Act (Canada) as being included in any of the

classes listed in Schedule II to the Hazardous Products Act (Canada). Previously known as "controlled product" under WHMIS 1988

Health and Safety
Includes physical, psychological and social well-being

Hot Work
Work in which a flame is used or sparks or other sources of ignition may be produced, including:

(a) cutting, welding, burning, air gouging, riveting, drilling, grinding, and chipping;
(b) using electrical equipment not classified for use in a hazardous location; and
(c) introducing a combustion engine to a work process

Hydrogen Sulphide (H2S)
A colourless and poisonous flammable gas with an odor of rotten eggs in low concentrations. It can be produced from waste water treatment, decomposition of human waste or any organic material, food processing and asphalt manufacturing

Incident
As defined by the Canadian Center for Occupational Health and Safety, an incident is an occurrence, condition, or situation arising in the course of work that resulted in or could have resulted in injuries, illnesses, damage to health, or fatalities.

Industrial Area
An area where the employees' work activities are primarily involving manual or technical skills for working with or operating machinery, vehicles, mobile equipment, shop equipment, and/or tools

Inspection
Planned event in which the workplace is inspected to identify potential hazards. It is the best way of proactively identifying hazards before they have the ability to cause an injury.

L_{ex}
The level of a worker's total exposure to noise in dBA, averaged over the entire workday and adjusted to an equivalent 8 hour exposure measured in accordance with section 216 of the Alberta Occupational Health and Safety Code and based on a 3 decibel exchange rate

Lone worker
A worker who meets the working alone requirements in Part 1.0 of the Requirements section (i.e. Step 1)
working alone - A worker is considered to be working alone when both clauses (a) and (b) exist:

a. a worker is working alone at a work site, and
b. assistance is not "readily available" if there is an emergency or the worker is injured or ill.

Manufacturer's Specifications
The written specifications, instructions, or recommendations, if any, of the manufacturer of equipment or supplies, that describes how the equipment or supplies are to be used, erected, installed, assembled, started, operated, handled, stored, stopped, calibrated,

adjusted, maintained, repaired, dismantled, or disposed of, including a manufacturer's instructions, operating or maintenance manual or drawings for the equipment or supplies.
mg/m³ Milligram per cubic metre
Musculoskeletal Injuries (MSI) Musculoskeletal injuries (MSIs) affect muscles, tendons, ligaments, bursae, bones, cartilage, nerves and blood vessels. Examples of MSIs include wrist tendonitis, shoulder bursitis, tendon sprain, muscle strain, tennis elbow, golfer's elbow, carpal tunnel syndrome and herniation to vertebral discs.
NFPA National Fire Protection Association
Near Miss As defined by the National Safety Council, a near miss is unplanned event that did not result in injury, illness or damage – but had the potential to do so.
Noise Sound energy at the work site
Non-Industrial Area An area where employees' work activities are primarily involving administrative functions.
Occupational Exposure Limit (OEL) With respect to a substance, means the occupational exposure limit established in Schedule 1, Table 2 of the Alberta Occupational Health and Safety Code for that substance.
OVC City's Occupational Vision Care program to provide prescription safety eyewear when required.
Owner The person who is registered under the Land Titles Act as the owner of the land on which work is being carried out or may be carried out, or the person who enters into an agreement with the owner to be responsible for meeting the owner's obligations under this Act, the regulations and the OHS code, but does not include a person who occupies land or premises used as a private residence unless a business, trade or profession is carried on in that premises
Personal Protective Equipment (PPE) Equipment or clothing worn by a person for protection from health or safety hazards associated with conditions at a work site.
Potentially Serious Incident (PSI) A PSI is any incident where a reasonable and informed person would determine that the injury sustained requires medical attention beyond first aid or the incident could have cause serious injuries and the hazard was not identified in the hazard assessment or the hazard had not been reasonably controlled.
ppm

Parts per million
Prime Contractor The person or group of persons, partnership or corporation who is responsible for meeting the obligations contained in section 10 of the Occupational Health and Safety Act when two or more employers or self-employed persons, or one or more employers and one or more self-employed persons, are involved in work at the same work site and the Occupational Health and Safety Act applies to that work site (construction, oil & gas, or a work site designated by a Director under the Occupational Health and Safety Act). In the absence of an agreement with a contractor to take on prime contractor responsibilities, the City of Edmonton is the prime contractor on work sites owned by the City.
Release: Includes release (spill, discharge, disposal, spray, inject, inoculate, abandon, deposit, leak, seep, pour, emit, empty, throw, dump, place and exhaust) of substance to ground or into the soil, air or water that may cause, is causing or has caused impairment to the environment, human health or property.
Restricted Area An area of a work site where there is a reasonable chance that the airborne concentration of asbestos, silica, coal dust, or lead exceeds or may exceed the occupational exposure limit for one or more of the substances
Restricted Space An enclosed or partially enclosed space, not designed or intended for continuous human occupancy that has a restricted, limited or impeded means of entry or exit because of its construction.
Short-term Exposure Limit (STEL) Referred to as "15 minute exposure limit" in Alberta OHS Legislation. This is the maximum concentration for a continuous 15-minute period. The STEL represents a time-weighted average exposure that should not be exceeded for any 15 minute period.
Supervisor A person who has charge of a work site **or** authority over a worker. A supervisor has personal obligations with respect to the workers under their supervision, which include but are not limited to: ensuring the supervisor is competent to supervise every worker under their supervision and to ensure their own competency; taking all precautions necessary to protect the health and safety of workers; ensuring the workers comply with the Act, regulations and code; ensuring every worker uses or wears necessary personal protective equipment; ensuring workers are not subjected to or participate in harassment or violence at the work site; advising every worker of all known or reasonably foreseeable hazards; and reporting unsafe or harmful work site acts or conditions to the employer.
Serious Incident as determined by the OHS Act, Section 40 is as follows: 40(2)(a) an injury or incident that results in the death of a worker, 40(2)(b) an injury or incident that results in a worker being admitted to a hospital, and for the purposes of this clause, "admitted to a hospital" means when a physician writes admitting

orders to cause a worker to be an inpatient of a hospital, but excludes a worker being assessed in an emergency room or urgent care centre without being admitted,

40(2)(c) an unplanned or uncontrolled explosion, fire or flood that causes a serious injury or that has the potential of causing a serious injury,

40(2)(d) the collapse or upset of a crane, derrick or hoist,

40(2)(e) the collapse or failure of any component of a building or structure necessary for the structural integrity of the building or structure, or

40(2)(f) any injury or incident or a class of injuries or incidents specified in the regulations.

40(2)(5) If an injury or incident referred to in subsection 40(2) occurs at a work site or if any other injury or any other incident that has the potential of causing serious injury to a person occurs at a work site (this includes serious "near misses")

Terms of Reference (TOR)
The scope and limitations of an activity or area of knowledge; a TOR is used as a guiding document outlining the responsibilities and terms of engagement of a committee, project team, task force, etc.

Time-Weighted Average (TWA)
Average exposure for an individual over a given work period, as determined by sampling at given times during the period.

Train (or any similar term or word)
To give information and explanation to a worker with respect to a particular subject-matter and to require a practical demonstration that the worker has acquired knowledge or skill related to the subject-matter.

ug/g
Micrograms per gram

ug/L
Microgram per litre

Work Site
Work site means a location where a worker is, or is likely to be, engaged in any occupation and includes any vehicle or mobile equipment used by a worker in an occupation.

Worker
A person engaged in an occupation, including a person working for no monetary compensation but does not include students carrying out learning activities related to work experiencing programs from an educational institution.

Violence
Whether at a worksite or work related, "violence" means the threatened, attempted or actual conduct of a person that causes or is likely to cause physical or psychological injury or harm, and includes domestic or sexual violence.

OHS ACT ROLES AND RESPONSIBILITIES

Depending on the work that is being completed and the City of Edmonton's role on certain work sites, the City of Edmonton or its employees may have to fulfill these and other obligations under Occupational Health and Safety legislation. Please consult your Safety Engagement Lead if you have questions regarding your Occupational Health and Safety obligations.

The Alberta OHS Act (2017. Chapter O-2.1) identifies Work Site Parties and their obligations under the OHS Act. These include but are not limited to:

Work Site Party	OHS Act Obligations
Employer	3(1) Every employer shall ensure, as far as it is reasonably practicable for the employer to do so, (a) the health and safety and welfare of (i) workers engaged in the work of that employer, (ii) those workers not engaged in the work of that employer but present at the work site at which that work is being carried out, and (iii) other persons at or in the vicinity of the work site who may be affected by hazards originating from the work site, (b) that the employer's workers are aware of their rights and duties under this Act, the regulations and the OHS code and of any health and safety issues arising from the work being conducted at the work site, (c) that none of the employer's workers are subjected to or participate in harassment or violence at the work site, (d) that the employer's workers are supervised by a person who (i) is competent, and (ii) is familiar with this Act, the regulations and the OHS code that apply to the work performed at the work site, (e) that the employer consults and cooperates with the joint work site health and safety committee or the health and safety representative, as applicable, to exchange information on health and safety matters and to resolve health and safety concerns, (f) that health and safety concerns raised by workers, supervisors, self-employed persons and the joint work site health and safety committee or health and safety representative are resolved in a timely manner, and (g) that on a work site where a prime contractor is required, the prime contractor is advised of the names of all of the supervisors of the workers. (2) Every employer shall ensure that workers are adequately trained in all matters necessary to protect their health and safety, including before the worker

	(a) begins performing a work activity, (b) performs a new work activity, uses new equipment or performs new processes, or (c) is moved to another area or work site. (3) Every employer shall cooperate with any person exercising a duty imposed by this Act, the regulations and the OHS code. (4) Every employer shall comply with this Act, the regulations and the OHS code. 14(2) Every employer shall keep readily available all health and safety information and provide that information to (a) the joint work site health and safety committee or health and safety representative at the work site (b) the workers, if there is no joint work site health and safety committee and no health and safety representative, and (c) the prime contractor, if there is one. 14(3) Every employer shall ensure that current paper or downloaded or stored electronic copies of this Act, the regulations and the OHS code are readily available for reference by workers, the joint work site health and safety committee and the health and safety representative, if one exists.
Supervisor	4 Every supervisor shall (a) as far as it is reasonably practicable for the supervisor to do so, (i) ensure that the supervisor is competent to supervise every worker under the supervisor's supervision, (ii) take all precautions necessary to protect the health and safety of every worker under the supervisor's supervision, (iii) ensure that a worker under the supervisor's supervision works in the manner and in accordance with the procedures and measures required by this Act, the regulations and the OHS code, (iv) ensure that every worker under the supervisor's supervision uses all hazard controls, and properly uses or wears personal protective equipment designated or provided by the employer or required to be used or worn by this Act, the regulations or the OHS code, and (v) ensure that none of the workers under the supervisor's supervision are subjected to or participate in harassment or violence at the work site, (b) advise every worker under the supervisor's supervision of all known or reasonably foreseeable hazards to health and safety in the area where the worker is performing work, (c) report to the employer a concern about an unsafe or harmful work site act that occurs or has occurred or an unsafe or harmful work site condition that exists or has existed, (d) cooperate with any person exercising a duty imposed by this Act, the regulations and the OHS code, and (e) comply with this Act, the regulations and the OHS code.
Owner	8 Every owner shall (a) ensure, as far as it is reasonably practicable to do so, that the land, infrastructure and any building or premises on the land that is under the owner's control is

	provided and maintained in a manner that does not endanger the health and safety of workers or any other person, (b) cooperate with any person exercising a duty imposed by this Act, the regulations and the OHS code, and (c) comply with this Act, the regulations and the OHS code. 14(5) Every owner shall ensure that any hazard identified by the owner is communicated to all workers, employers, self-employed persons, contractors, prime contractors, suppliers and service providers that are conducting work activities, or may be reasonably anticipated to conduct work activities, in relation to the land, infrastructure and any building or premises on the land.
Worker	5 Every worker shall, while engaged in an occupation, (a) take reasonable care to protect the health and safety of the worker and of other persons at or in the vicinity of the work site while the worker is working, (b) cooperate with the worker's supervisor or employer or any other person for the purposes of protecting the health and safety of (i) the worker, (ii) other workers engaged in the work of the employer, and (iii) other workers not engaged in the work of that employer but present at the work site at which that work is being carried out, (c) at all times, when the nature of the work requires, use all devices and wear all personal protective equipment designated and provided for the worker's protection by the worker's employer or required to be used when worn by the worker by this Act, the regulations or the OHS code, (d) refrain from causing or participating in harassment or violence, (e) report to the employer or supervisor a concern about an unsafe or harmful work site act that occurs or has occurred or an unsafe or harmful work site condition that exists or has existed, (f) cooperate with any person exercising a duty imposed by this Act, the regulations and the OHS code, and (g) comply with this Act, the regulations and the OHS code.
Contractor	9(1) Every contractor shall ensure, as far as it is reasonably practicable to do so, that (a) every work site where an employer, employer's worker or self-employed person works pursuant to a contract with the contractor, and (b) every work process or procedure performed at a work site by an employer, employer's worker or self-employed person pursuant to a contract with the contractor that is under the control of the contractor does not create a risk to the health and safety of any person. (2) Every contractor shall (a) if the contractor is on a work site that has a prime contractor, advise the prime contractor of the name of every employer or self-employed person with whom the contractor directs the work activities, (b) cooperate with a person exercising a duty imposed by this Act, the regulations and

	the OHS code, and (c) comply with this Act, the regulations and the OHS code. 14(4) Every… contractor shall ensure that the owner and any employer, supplier, service provider or self-employed person on a work site is informed of any existing or potential work site hazards that may affect workers, self-employed persons or other persons at the work site.
Prime Contractor	10 (1) Every construction and oil and gas work site or a work site or class of work sites designated by a Director must have a prime contractor if there are 2 or more employers or self-employed persons, or one or more employers and one or more self-employed persons involved in work at the work site. (2) The person in control of the work site shall designate in writing a person as the prime contractor of the work site. (3) The name of the prime contractor must be posted in a conspicuous place at the work site. (4) If the person in control of the work site fails to designate a person as the prime contractor as required in subsection (2), the person in control of the work site is deemed to be the prime contractor. (5) The prime contractor shall (a) establish, as far as it is reasonably practicable to do so, a system or process that will ensure compliance with this Act, the regulations and the OHS code in respect of the work site (b) coordinate, organize and oversee the performance of all work at the work site to ensure, as far as it is reasonably practicable to do so, that no person is exposed to hazards arising out of, or in connection with, activities at the work site, (c) conduct the prime contractor's own activities in such a way as to ensure, as far as it is reasonably practicable to do so, that no person is exposed to hazards arising out of, or in connection with, activities at the work site, (d) consult and cooperate with the joint work site health and safety committee or health and safety representative, as applicable, to attempt to resolve any health and safety issues, (e) coordinate the health and safety programs of employers and self-employed persons on the work site, if 2 or more employers or self-employed persons or one or more employers and one or more self-employed persons on the work site have a health and safety program, (f) cooperate with any other person exercising a duty imposed by this Act, the regulations and the OHS code, and (g) comply with this Act, the regulations and the OHS code. (6) If a requirement in this Act, the regulations or the OHS code imposes a duty on an employer or a self-employed person with respect to equipment, work site infrastructure or an excavation and the equipment or infrastructure is designed, constructed, erected or installed, or the excavation is conducted by or on behalf of a prime contractor, the prime contractor shall comply with the requirement as if the requirement were directly imposed on the prime contractor.

	(7) Subsection (6) does not relieve the employer, self-employed person or prime contractor from fulfilling other responsibilities under this Act, the regulations and the OHS code. 14(4) Every prime contractor… shall ensure that the owner and any employer, supplier, service provider or self-employed person on a work site is informed of any existing or potential work site hazards that may affect workers, self-employed persons or other persons at the work site.

1. ORGANIZATIONAL COMMITMENT

Introduction

The success of any health and safety program depends on the level of commitment and the support that all employees have towards the program. It is critical that all employees are committed and constantly promoting a safe work environment. Management must demonstrate its commitment by displaying visible leadership, establishing policies and procedures, defining responsibilities, and establishing clear goals for health and safety related activities.

This element discusses the various ways that the City of Edmonton has established oversight and safety and health leadership across the organization. Implementing these requirements will assist each level of the line organization to provide a safe and healthy work environment for all employees.

Responsibilities

The City's Occupational Health and Safety Administrative Directive outlines responsibilities for all levels within the organization.

City Manager

1. Provide the City of Edmonton with leadership to ensure all employees meet their Occupational Health & Safety ("OH&S") obligations and responsibilities under Alberta's OH&S Act, Regulation, and Code, applicable Federal OH&S laws and other jurisdictional agencies.

2. Be responsible and accountable for the overall integration of programs to manage OH&S in accordance with the standards and expectations outlined in the OH&S City Administrative Directives, Administrative Procedures, policies, procedures , standards, ("OH&S City Policies & Procedures") and applicable legislation.

3. Update and sign the City of Edmonton's OH&S Commitment Statement within 6 months of entering the position of City Manager and every three years thereafter.

4. Participate in activities that demonstrate an OH&S commitment and promote a safe, healthy, and injury-free workplace for all employees and other in the workplace (ie. contractors, public, visitors).

5. Provide the financial and human resources to support the City's OH&S program

Deputy City Manager

1. Provide the department with leadership that will ensure employees meet or exceed OH&S obligations and responsibilities under Alberta's OH&S Act, Regulation, and Code, applicable Federal OH&S laws and other jurisdictional agencies.

2. Be responsible and accountable for the department's integration of programs to manage OH&S in accordance with the standards and expectations outlined in the OH&S City Policies & Procedures and applicable legislation.

3. Ensure systems are implemented to monitor the effectiveness of the department's health & safety program.

4. Ensure processes are implemented to measure and hold Managers, Directors, Supervisors and employees accountable for OH&S responsibilities and performance.

5. Provide the financial and human resources support to the department's health & safety program.

6. Participate in activities that demonstrate an OH&S commitment and promote a safe, healthy, and injury-free workplace for all employees and other in the workplace (ie. contractors, public, visitors).

Manager / Director

1. Provide leadership and program development that will ensure employees meet or exceed OH&S obligations and responsibilities under Alberta's OH&S Act, Regulation, and Code, applicable federal laws and other jurisdictional agencies.

2. Provide leadership in the effective development, implementation and management for each of the OH&S program elements.

3. Be responsible and accountable for integration of programs to manage OH&S in accordance with the standards and expectations outlined in the OH&S City Policies & Procedures.

4. Be responsible and accountable to ensure work activities comply with the department's safety standards and provincial regulations.

5. Ensure systems are implemented to monitor health & safety program compliance.

6. Participate in activities that demonstrate an OH&S commitment and promote a safe, healthy, and injury-free workplace for all employees and other in the workplace (ie. contractors, public, visitors).

7. Establish occupational health & safety committee(s) meeting the requirements in the corporate safety committee standards.

Supervisor / Foreman

1. Provide leadership that will ensure employees meet or exceed the OH&S obligations and responsibilities under Alberta's OH&S Act, Regulation, and Code, applicable federal laws, other jurisdictional agencies and OH&S City Policies & Procedures.

2. Provide leadership to ensure that all elements of the OH&S program are implemented.

3. Inform employees of their OH&S responsibilities, and ensure employees perform safe work procedures.

4. Be responsible and accountable to ensure work activities comply with the department's safety standards and provincial regulations.

5. Monitor and review the safety program's effectiveness.

6. Participate in activities that demonstrate an OH&S commitment and promote a safe, healthy, and injury-free workplace for all employees and other in the workplace (ie. contractors, public, visitors).

Employee

1. Be responsible and accountable to ensure work activities adhere to the department's safety standards, procedures and practices, and legislated OH&S obligations.

2. Participate in establishing an effective safety program.

3. Demonstrate an occupational health & safety commitment and promote a healthy, safe and productive work environment.

4. Provide feedback on how to improve the safety program.

2. HAZARD IDENTIFICATION & ASSESSMENT

Introduction

Identifying and assessing the hazards at a work site provides us with a proactive approach to ensuring our employees have a safe and healthy work environment. Hazard identification and assessment is one of the most important elements of our health and safety program. Information from hazard assessments is the foundation for the "Hazard Control", "Planned Safety Inspections", "Orientation and Training", and "Emergency Response Planning" elements of our program.

A hazard is a situation, condition or thing that may be dangerous to health and safety, where health and safety includes the physical, psychological and social well-being of workers or those engaged in the work of an employer and includes the need to prevent and control workplace violence as part of the hazard identification, assessment and control process. Hazard identification, assessment and control is a formal process, often referred to as a 'hazard assessment', for identifying all existing and potential hazards at a work site and then determining the degree of danger (the risk) the hazards pose to workers. Hazard assessments should be performed at intervals that prevent the development of unsafe working conditions or practices. In this element, hazard assessment means the same as hazard identification and ranking.

The frequency of a work site hazard assessment is determined by such activities as the introduction of new equipment or work process, changes to existing work methods or equipment, new construction, design or new installation/retrofit. All work sites must have a formal hazard assessment done. As a minimum, an annual review of each work site hazard assessment is to be done to evaluate its effectiveness and to identify areas of improvement.

Responsibilities

The City's Occupational Health and Safety Administrative Directive outlines responsibilities for all levels within the organization.

Deputy City Managers

1. Ensure department hazard identification & assessment programs are implemented which meet or exceed corporate standards, and the standards contained in Alberta's OH&S Act, Regulation, and Code, as well as those contained in applicable Federal Occupational Laws and the standards imposed by other jurisdictional agencies in consultation with OH&S Section.
2. Be aware of the serious hazards within their area of responsibility.

Manager/Director

1. Develop a hazard assessment process meeting or exceeding the corporate standards and obligations under Alberta's OH&S Act, Regulation, and Code, applicable Federal Occupational Laws and other jurisdictional agencies in consultation with the OH&S Section.
2. Ensure the documentation is maintained for hazard identification and ranking as part of the department hazard assessment process.
3. Ensure hazard identification and ranking is integrated into the planning of facilities, products, equipment or material as required.
4. Ensure hazard identification and ranking are reviewed at least annually.
5. Ensure hazard identification and ranking are conducted when new processes, equipment, products etc. are introduced.
6. Develop a process to immediately and effectively address workers reporting unsafe / unhealthy conditions or practices from employees.
7. Develop a system to administer the hazard identification and assessment process that includes an inventory of jobs/positions and tasks performed, the scope and the frequency of assessments and any documentation requirements.
8. Be aware of the serious hazards within their area of responsibility.

Supervisor

1. Implement the hazard identification and assessment process and perform hazard assessments as required.
2. Integrate hazard identification and ranking into the planning of facilities, products, equipment or material as required.
3. Review hazard identification and ranking as required and at least annually.
4. Ensure workers are informed of all work hazards before commencing work.
5. Communicate hazards to applicable workers as soon as identified.
6. Implement the immediate and effective response to reports of unsafe/unhealthy work site conditions or practices from workers.
7. Administer the system for maintaining hazard assessment records.
8. Stop work immediately when there is a condition at the work site that is or is likely to be dangerous to the health and safety of a worker and not permit any worker to do that work until the dangerous condition is remedied.

Employee

1. Participate in the hazard identification and ranking program as required.
2. Report unsafe / unhealthy conditions or practices to supervisor.
3. Exercise their right to refuse dangerous work and stop work immediately if the worker believes on reasonable grounds that there is a dangerous condition at the work site or that the work endangers the health and safety of the employee or another person. In these circumstances the employee must immediately report their refusal and reasons for it to their supervisor.
4. If part of a JWSHSC, participate in the hazard identification and assessment process.

3. HAZARD CONTROL

Introduction

Once workplace hazards have been identified and rated, hazard controls must be put in place to reduce the risk workers face from exposures to the hazards. This element discusses the process to be followed by our department to address the hazards that have been identified.

Responsibilities

Deputy City Managers

Within their areas of responsibility, Deputy City Managers will:

1. Ensure department hazard control programs are implemented which meet or exceed corporate standards, the standards contained in Alberta's OH&S Act, Regulation, and Code, applicable Federal Occupational Laws and those imposed by other jurisdictional agencies in consultation with the OH&S Section.

Manager/Director

1. Ensure the implementation of the hazard control component of the hazard management process will meet or exceed corporate standards, and the standards contained in Alberta's OH&S Act, Regulation, and Code, applicable Federal Occupational Laws and other jurisdictional agencies in consultation with those imposed by the City's OH&S Section.

2. Approve controls and assign target dates and responsibilities as required.
   Ensure hazard control is integrated into the planning of facilities, products, equipment or material.

3. Develop a documentation process for retaining hazard assessments.

4. Ensure hazard controls are reviewed at least annually.

5. Ensure hazard controls are reviewed when new processes, equipment, products, etc. are introduced.

6. Ensure written preventative maintenance programs are implemented for applicable equipment, materials or vehicles.

7. Ensure exposed employees under the Chemical Hazard and Noise Regulation receive medical monitoring from the City of Edmonton's Medical Services Section as per

Alberta's OH&S legislation

Supervisor

1. Document recommendations for hazard control measures.
2. Approve and implement hazard controls as required.
3. Ensure control measures have been implemented and are effective.
4. Ensure employees using hazard control measures are properly trained.
5. Ensure written preventative maintenance programs are followed with applicable equipment, materials or vehicles.
6. Identify employees requiring medical monitoring under the OH&S legislation.
7. Review and update control measures as required.

Employee

1. Follow and adhere to implemented hazard control measures.
2. Participate in the hazard control program as required.
3. Report the failure of any hazard control to their immediate supervisor.
4. Report inadequate controls to their immediate supervisor.
5. Follow preventative maintenance schedules for applicable equipment, materials or vehicles.
6. If part of a JWSHSC, participate in the hazard assessment and control process.

HAZARD IDENTIFICATION, ASSESSMENT, & CONTROL STANDARD

Introduction

A hazard identification and assessment is the process of identifying hazards, evaluating the degree of danger (the risk) the hazards pose to workers, and then determining controls to effectively manage that risk. Therefore, a hazard assessment provides a proactive opportunity to deal with health and safety problems before they result in injury, illness, or damage.

The hazard identification, assessment and control process starts with inventorying all jobs/positions in a work area, next identifying all tasks related to the inventoried jobs, and then the identification and evaluation of the hazards associated with each task. A formal hazard assessment is the written document that outlines the hazards associated with the tasks identified for each job/position, then documents the controls and hazard rating for each hazard. In some situations it may be beneficial to group jobs that are similar in nature into disciplines and then indicate the tasks that the discipline carries out.

Information contained in the formal hazard assessment documents related to all tasks and work activities must be shared with workers and any other work site parties carrying out that task or activity before they begin.

A Field Level Hazard Assessment (FLHA) is an assessment method used at a site to identify any hazards that are present due to site or equipment conditions. It is a compilation of information from all available sources about the conditions at the actual time and site. Field Level Hazard Assessments are not intended to replace the formal hazard assessment process however they should be used in conjunction with the formal hazard assessments**.**

This standard outlines the minimum requirements necessary to identify and assess and the hazards as well as define how the hazards will be controlled.

Requirements

1. In accordance with Part 2 of the Alberta Occupational Health and Safety Code, hazard assessments to identify existing or potential hazards before work begins are conducted in all City of Edmonton work sites and documented on the City of Edmonton Hazard Assessment and Control Form.

2. The Hazard Identification, Assessment and Control process must include all types of workplace hazards including harassment, violence, physical, biological, chemical, or radiological hazards in order to ensure the health, safety and welfare of workers.

3. Hazard rating is conducted by using the matrix that is included with the City of Edmonton Hazard Assessment and Control Form.

4. Line-level supervisors are to lead the hazard assessment process with the involvement of workers.

Hazard Identification, Assessment & Control Process

The process for completing a hazard identification, assessment and control process is conducted as follows;

1. Identify all hazards relevant to the job/position and task being performed and assessed as well as in relation to the workplace as a whole, taking into consideration the culture, operational demands and environmental conditions.
2. Worksite supervisors must ensure harassment, violence, physical, biological, chemical, or radiological hazards are considered in the formal hazard assessment. Hazards must be identified that may impact both employee health and employee safety.
3. Where possible, eliminate the individual hazard(s).
4. If hazard elimination is not possible, rate each individual hazard as if there were no controls in place using the matrix that is included with the City of Edmonton Hazard Assessment and Control Form.
5. Outline the existing controls that are in place for controlling each hazard.
6. Re-rate each hazard, this time taking into consideration the existing controls that have been put in place. If the existing controls identified have been implemented and are effective, the second hazard rating should be lower than the first rating.
7. If the second hazard rating does not produce a lower risk rating than the without-control rating, further controls should be identified and implemented to reduce the rating and control the hazard. These should be identified within the "Further Controls" column.
8. Assign responsibility and a time frame for the completion of each of the "Further Controls" that have been identified.
9. Re-rate each hazard, taking into account the additional controls that have been implemented. The final rating should indicate that the controls are adequate to control the specific hazard.
10. The Hazard Assessment and Control Form can be used as a working document when creating/reviewing the Hazard Assessment. The information can then be transferred to the Safety Data Management System (SDMS) which becomes the Source of Truth for all Hazard Assessments.
11. At a minimum, formal hazard assessments must be reviewed annually. It is recommended that the JWSHSC, front line supervisors and workers participate in this annual review.
12. Hazard assessments are also to be performed at intervals that reasonably and practicably prevent the development of unsafe working conditions. Frequency is determined by such activities as when a work process or operation changes, when a new work process is introduced or operation changes, or before the construction of significant additions or alterations to a work site. Additionally, if through an incident

investigation or workplace inspection, previously unidentified hazards are determined, they should be added to the formal hazard assessment document.

Field Level Hazard Assessments (FLHA)

The use of Field Level Hazard Assessments (FLHA) will be determined by each operating area and is not mandatory. The FLHA is recommended for work areas and operations where the work generate a high level of risk to the employees. The decision to use or not use the FLHA should be made in conjunction with the business area Safety Engagement Lead.

1. All areas choosing to use FLHA's will develop a form that identifies the common hazards in their work area. The common hazards will be taken from the City of Edmonton Hazard Assessment and Control Form completed for this area or task.

2. Field Level Hazard Assessments will be conducted prior to the start of each work shift and/or task and shall involve all workers that will be performing the tasks. This process will be led by the most experienced individual at the work site.

3. All workers at the site are to participate and/or review the Field Level Hazard Assessment prior to beginning work. They are to sign or initial the Field Level Hazard Assessment form at this point. Signing the FLHA will indicate their involvement and understanding of the hazards and how they will be controlled.

4. Controls utilized for each hazard that is identified are to be taken from the formal Hazard Assessment and Control Form. The Supervisor or Foreman shall inform the workers of the controls necessary to address the hazards as outlined in the formal hazard assessment.

5. If the worksite is vacated by the entire work crew for a period of more than one hour or the work site conditions significantly change, then the area must be reassessed and the existing FLHA be modified or a new FLHA must be completed.

6. At the completion of the task, field level hazard assessments must be submitted to the Supervisor or designate. The Supervisor or designate will review and sign-off all FLHA's. During the review if the Supervisor notices hazards which are not identified on the formal hazard assessment and control form then action must be taken to update and include the new information on the associated Hazard Assessment and Control Form.

7. All completed field level hazard assessments should be kept for a period of one (1) year.

8. If an incident occurs during a job or task for which a FLHA has been completed, a copy of the FLHA should be attached to the Incident Data Collection (IDC) form and retained for the period the IDC forms are maintained.

Participation and Communication Requirements

1. Upon completion of the Hazard Identification, Assessment and Control process, the hazards and controls must be communicated, and the associated documentation should be readily available to all affected workers. Depending on the number of formal hazard assessments in a given work area this could be achieved by creating a separate Formal Hazard Assessment and Control Binder, posting them on the OHS Bulletin Board or having them available online.
2. Workers shall be given the opportunity to meaningfully participate in the hazard identification, assessment and control process; this participation may include site visits or observations to visually identify tasks and/or hazards related to the job position or work environment, or the formal exercise of assessing the hazards previously identified and identifying controls.
3. Contractors at City of Edmonton worksites must ensure that all workers are made aware of existing or potential hazards and their controls.

Hazard Identification, Assessment & Control Training

Hazard Identification, Ranking and Control Training is established in the core training modules within "Leadership for Safety Excellence". It provides employees with a basic understanding and skill to recognize, evaluate and control hazards. Training is mandatory for all employees in a supervisory role (Contact Financial and Corporate Services, Human Resources Branch School of Business or Training Coordinator, if applicable).

Performance Standards

1. Hazard control measures are in compliance with applicable corporate standards, Alberta's OH&S Act, Regulation, and Code, applicable Federal Occupational Laws and standards contained in other jurisdictional agencies.
2. Hazard control measures are documented and accompany the hazard assessments.
3. Hazard control measures follow the hierarchy outlined in the introduction.
4. Implementation plans for required control measures are documented and include target and completion dates and assigned responsibilities.
5. Safe work practices and procedures are reviewed at a minimum on a three year cycle and updated as required.
6. Employees are trained in applicable control methods.

7. Written preventative maintenance programs are implemented for applicable equipment, materials or vehicles.
8. Medical monitoring programs meet or exceed legislative requirements.
9. All levels of staff receive the appropriate training to enable them to fulfill respective roles.

Resources

- Hazard Assessment and Control Form
- Hazard Rating Matrix
- Example Field Level Form

ASBESTOS STANDARD

This Standard operates in conjunction with the Alberta Asbestos Abatement Manual and the Alberta Occupational Health and Safety Code. This standard will serve as the minimum requirements governing:

1. Responsibilities;
2. Asbestos Maintenance Program - Asbestos Management Plans;
3. Asbestos Abatement;
4. Training;
5. Health Assessments; and
6. Asbestos Materials Procedure Flow Chart.

Responsibilities

Deputy City Manager:

1. Support asbestos maintenance program as required.

Branch Manager:

1. Support asbestos maintenance program as required.

Director:

1. Work with the Safety Engagement Lead to create a Code of Practice for all tasks involving Asbestos Containing Material (ACM) and ensure this information is communicated to supervisors and workers.
2. Ensure any ACM is not handled by any workers other than FFS. FFS must be informed of all asbestos-related work activities, asbestos surveys, testing, and abatement work.
3. Ensure that the Safety Engagement Lead and Supervisors are properly trained as described in the training section of this standard.

Supervisor/Foreman:

1. Follow the City of Edmonton Asbestos Procedure Flow Chart on page 41 of this manual..
2. Identify any areas that contain ACM and record them in the hazard assessment with the proper controls.
3. Supervisors in buildings that contain ACM, organize site specific asbestos education sessions for all workers on the hazards associated with asbestos at their work site. This can be organized through your Safety Engagement Leads.

4. Participate in the asbestos education sessions as required.

5. In the case of accidental release of ACM, ensure the worker has isolated the area of the accidental release.

6. Contact Facility Maintenance Dispatch at 780-496-4270 to report release of ACM. If after regular working hours contact 24-hour on call Safety Engagement Lead at 780-496-6666 to report release of ACM.

7. Inform other workers in the area where potential asbestos release has been identified.

8. Any information regarding ACM release is required by the Alberta Occupational Health and Safety Code Part 4, Section 21(2)(b), to be communicated and available to all workers at the site.

9. In areas where potential worker exposure can occur, contact a City of Edmonton Occupational Hygiene Consultant to perform a worker exposure assessment.

10. Notify Occupational Health Nurse of new workers starting in areas that have been determined by an Occupational Hygiene Exposure assessment to have potential of exposure to ACM.

11. Allow worker to have their health assessment done, at no cost to the worker, during work hours. This includes the pulmonary function test, chest x-ray or any further follow-up requested from the Occupational Medical Consultant.

Workers:

1. Follow the City of Edmonton Asbestos Procedure Flow Chart on page 41 of this manual..

2. Follow Asbestos Code of Practice where required.

3. Participate in the asbestos education sessions as required.

4. Participate in Health Surveillance Program. A worker has the right to refuse to undergo the assessment by completing the Refusal to Participate Form (Fibrosis Surveillance Program) and contacting the Occupational Health Nurse.

Safety Engagement Leads:

1. Follow the City of Edmonton Asbestos Procedure Flow Chart on page 41 of this manual..

2. Work with area Managers/Directors and FMS to create Codes of Practice for tasks involving ACM.

3. Stay current on Asbestos Worker Training.

4. Respond to After Hours Asbestos Materials Procedure calls.

5. Apply knowledge from Asbestos Worker Training to identify non structural objects that potentially contain asbestos.

6. When responding to potential ACM disturbance, adequately isolate area.

7. Contact FMS dispatch to transfer responsibility of after hours ACM response on next business day after response.

8. If it is determined with a hygiene assessment that workers need to be on the fibrosis surveillance program (health assessments), work with the supervisors and Occupational Health Nurse to ensure appropriate workers are added to the program, and any new hires in area where potential exposure exists are added upon hire.

Corporate Safety and Health Services:

1. Assist departments with development or maintenance of Asbestos Code of Practice.

2. Maintain a list of workers requiring the health assessment and coordinate obtaining these health assessments.

3. Help the supervisor identify the health hazards through the hazard assessment process.

4. Assess worker exposure to Asbestos.

5. Assist with any other ACM management programs.

Fleet and Facility Services' Asbestos Coordinator:

1. Follow the City of Edmonton Asbestos Procedure Flow Chart on page 41 of this manual..

2. Ensure that building related ACM in the City of Edmonton is identified through inspection and an inventory maintained according to its material type, location, asbestos type and percent content. Ensure accurate and up-to-date records are maintained.

3. Confirm isolation of asbestos release is adequate and confirm the presence of asbestos through the asbestos management inventory.

4. Ongoing identification of ACM as required.

5. Assist departments in determining the designation of a restricted areas.

6. Ensure inspections and assessment of the material is completed by a competent individual, to determine the appropriate management technique to be used (encapsulation, enclosure or removal). Maintain asbestos inventory and written asbestos management plan.

7. Train workers on site specific asbestos hazards.

8. Notify Occupational Hygiene Consultants of possible worker exposure to asbestos.

9. Review abatement and environmental reports for quality and accuracy. Forward final reports to area direct supervisors and Workforce Safety and Employee Health Occupational Hygienists.

Fleet and Facility Services Contract Inspectors:

1. Follow the City of Edmonton Asbestos Procedure Flow Chart on page 41 of this manual.
2. Notify building occupants of work activities related to ACM.
3. Ensure isolation of ventilation from the area where asbestos fibers have been released.
4. Contract a reputable Occupational Hygiene Consultant from an Environmental Consulting Firm to manage and oversee all abatement activities including, hiring abatement contractor, abatement inspections, air monitoring, and reporting. **Do not hire the abatement contractor directly.**
5. Avoid work that could potentially disturb ACM where reasonably practicable. Coordinate work activities to reduce the risk of asbestos disturbance.
6. Ensure all necessary documentation is obtained for abatement activities including Notice of Project, DOP Testing Certificates (from negative air units and HEPA Vacuums), disposal certificates, and sampling (air monitoring and bulk sample) results.
7. Stay Current on Asbestos Worker Training Certification (2 day course).
8. Forward any Asbestos remediation reports to FMS Asbestos Coordinator.
9. Coordinate proper disposal of any ACM.

Asbestos Maintenance Program - Asbestos Management Plan/System

The City of Edmonton Asbestos Management Plan is maintained by the City of Edmonton Asbestos Coordinator.

Building materials that contain asbestos within City of Edmonton facilities will be identified through investigation and an inventory will be maintained according to material types, locations, asbestos type, percent content and condition. The City of Edmonton Asbestos Coordinator or competent designate will maintain this inventory.

Any existing ACM at a COE worksite that has been identified, must be clearly and easily identifiable to all workers. Inspections of all existing ACM will be completed annually by the City of Edmonton Asbestos Coordinator or competent designate.

If ACM is identified to be damaged, deteriorated, or delaminated, Fleet and Facility Services will ensure remediation will be completed in accordance with City of Edmonton Standard.

Asbestos Abatement Requirements

A reputable/ certified Occupational/Industrial Hygiene Consultant from an Environmental Consulting Firm will be involved in all abatement projects. Reputable hygiene consultants will have a Certified Industrial Hygienist (CIH) or Registered Occupational Hygienist (ROH) on staff.

Air monitoring will be completed at all abatement projects, including at least one (1) background sample prior to abatement, unless being performed under emergent circumstances.

Level of abatement (Low, Medium, or High Risk) will be confirmed or determined by the environmental consulting firm contracted for the abatement and a competent City of Edmonton Representative.

Any ACM found to be in any part of an air handling unit will be abated.

Training

All workers on sites that contain ACM will be made aware through training on the location of the ACM, hazards associated with asbestos, and emergency release procedure (flow chart at the end of this standard). This training can be organized by your Safety Engagement Lead. Further training may be requested from the City of Edmonton Asbestos Coordinator. Training needs should be documented on the hazard assessment of the area.

All workers who may encounter ACM as part of their city job will be trained on the hazards associated with asbestos. Safety Engagement Lead and/or Asbestos Coordinator will provide the necessary awareness training.

All workers required to respond to an emergency release situation (Safety Engagement Lead, OHS Coordinators, Asbestos Coordinators), will receive the 1-day (8-hour) Asbestos Awareness Training from a Provincially Accredited Agency. Current certification is required for the duration of your employment at the City.

All workers that direct/ manage Asbestos Abatements will be trained as Asbestos Workers 2-day (16-hour) course by a Provincially Accredited Agency. Current certification is required for the duration of your employment at the City.

Health Assessments

Any worker, who is required to work in a restricted area for 30 work days or more in a 12-month period, is required to have a health assessment conducted. A restricted area is considered an area in which asbestos is actively being disturbed. Pertaining to this requirement:

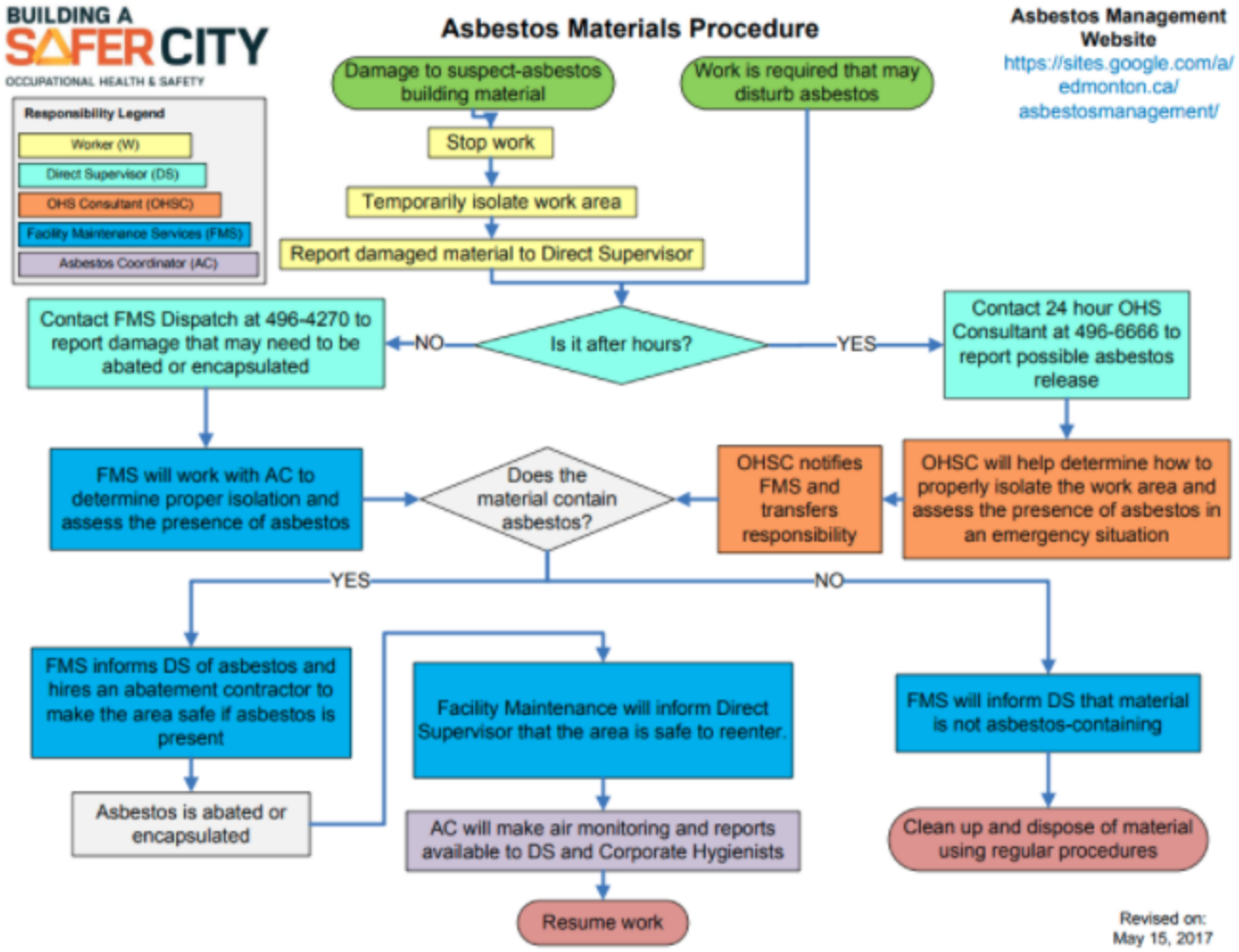
- Health assessment must be conducted within 30 days and then every two years thereafter. This includes a health history, chest x-ray, pulmonary function test, and a physician's interpretation and explanation of the results

- Supervisors are responsible to contact the Occupational Health Nurse of workers requiring a health assessment. They should also update the Occupational Health Nurse when new workers need to be added to the fibrosis surveillance program
- A worker has the right to refuse to undergo the assessment by completing the Refusal to Participate Form (Fibrosis Surveillance Program) and contacting the Occupational Health Nurse
- If a worker was exposed to asbestos at a previous employment and received a health assessment within the immediately preceding two years, the worker must inform the Occupational Health Nurse of the date of that health assessment as soon as possible
- Health assessment results are confidential medical information and will not be shared with anyone besides the Occupational Health Nurse and Occupational Medical Consultant, unless the worker's written consent is provided
- If an worker no longer works in a restricted area, they still require health assessments every two years as ongoing monitoring

Resources

- Alberta Occupational Health and Safety, Act, Regulation and Code
- Alberta Workplace Health and Safety Asbestos Project Notification Form
- Alberta Asbestos Abatement Manual
- Sample Asbestos Label
- Enviso Procedures (https://onecity.edmonton.ca/safety_operating/enviso.aspx)

Flowchart


BUILDING A SAFER CITY
OCCUPATIONAL HEALTH & SAFETY
Asbestos Materials Procedure
Asbestos Management Website
https://sites.google.com/a/edmonton.ca/asbestosmanagement/
Responsibility Legend
Worker (W)
Direct Supervisor (DS)
OHS Consultant (OHSC)
Facility Maintenance Services (FMS)
Asbestos Coordinator (AC)
Damage to suspect-asbestos building material
Work is required that may disturb asbestos
Stop work
Temporarily isolate work area
Report damaged material to Direct Supervisor
Is it after hours?
NO
YES
Contact FMS Dispatch at 496-4270 to report damage that may need to be abated or encapsulated
Contact 24 hour OHS Consultant at 496-6666 to report possible asbestos release
FMS will work with AC to determine proper isolation and assess the presence of asbestos
Does the material contain asbestos?
OHSC notifies FMS and transfers responsibility
OHSC will help determine how to properly isolate the work area and assess the presence of asbestos in an emergency situation
YES
NO
FMS informs DS of asbestos and hires an abatement contractor to make the area safe if asbestos is present
Asbestos is abated or encapsulated
Facility Maintenance will inform Direct Supervisor that the area is safe to reenter.
AC will make air monitoring and reports available to DS and Corporate Hygienists
Resume work
FMS will inform DS that material is not asbestos-containing
Clean up and dispose of material using regular procedures
Revised on:
May 15, 2017

COMPRESSED BREATHING AIR QUALITY STANDARD

Introduction

The purpose of this procedure is to define the parameters, guidelines, and plans for managing compressed breathing air quality within the City of Edmonton.

This Compressed Breathing Air Quality Standard provides the minimum requirements for the purity of compressed breathing air supplied to the service outlet and for breathing air systems used to produce, store and distribute such air. This standard also details the requirements for design, construction, testing, commissioning, operation and maintenance of the components for compressed breathing air systems. This standard is compliant with current Alberta Occupational Health and Safety Legislation.

Applications

This standard is limited to compressed breathing air and compressed breathing air systems used in:

- Supplied air respirators
- Supplied air suits
- Self contained breathing apparatus (SCBA)
- Ambient air systems
- Other applications where deemed appropriate to reference the purity requirements of breathing air as described in this standard

Requirements

System Requirements

1. Systems used must be designed, constructed, installed, commissioned, operated and maintained according to the manufacturer's instructions
2. The system must be capable of delivering breathing air to every user in the quantity, quality and rated pressure required during normal and emergency procedure
3. A sign must be posted near the air intake of the compressor identifying it as a source for breathing air
4. The system must be tested to make sure the requirement of this standard are met for the operation and commissioning of the system
5. Oil lubricated air compressors require: carbon monoxide and high temperature alarms, fail safe switches, a high pressure shutdown switch, check valves and instruction manual/operating logbook

6. Carbon monoxide detectors must be set to alarm at 5 ppm and the level of detection of the monitor must be 1 ppm with resolution of 1 ppm
7. Carbon monoxide detectors should be calibrated as per the manufacturer's specifications
8. Sampling should be conducted after normal maintenance and replacement of the purification media, breathing air. When changing the breathing air systems purification components, two air samples are required, one before component change and one after
9. Cylinders must be designed, constructed, tested and maintained in accordance with CSA Standards CAN/CSA-B339 and B340 or NFPA 1989 (Fire Services)
10. Ensure Internal and external visual inspections and hydrostatic testing of cylinders must be in accordance with the requirements of CGA publications C-1 (Methods of Hydrostatic Testing), C-6 (Visual Inspections of Steel Compressed Gas Cylinders), C-6.1 (Visual Inspection of High Pressure Aluminum Cylinders), and C-6.2 (Visual Inspection of Fiber Reinforced Cylinders)
11. Carbon monoxide monitors shall be located in such a way that they monitor the quality of the breathing air prior to its delivery to the compressed breathing air pipeline (down line of any potential source)
12. Alarms should be located such that they provide adequate notification to ensure the user is not exposed to increased carbon monoxide in the breathing air

Sampling / Analysis of Breathing Air

13. Samples must be collected by a competent person with training in proper sampling methods, following the procedures outlined in this standard
14. Air samples must be taken downstream from purification components and prior to or bypassing any air storage DOT cylinders or ASME receivers if mechanically possible
15. Compressed breathing air must be allowed to flow through the fill hose for at least one minute prior to collecting the sample, only when the fill whip connection fitting is visibly free from foreign material
16. For Fire and Rescue Services, the test methods must follow section 6 of the NFPA 1989 Standard on Breathing Air Quality for Emergency Services Respiratory Protection
17. Samples require analysis using method that have been validated by an accredited lab
18. Accredited labs must not be owned or controlled by manufacturers or vendors of equipment related to the laboratory being accredited
19. Accreditation body must ensure the lab has a written program for calibrating all instruments and devices used for measurement

20. 4.2.8 More information on accredited labs can be requested from the City Occupational Hygienists

21. A sample of breathing air produced and delivered by a compressed breathing system must be collected and analyzed every 6 months

22. The analysis of the breathing air must provide a quality of breathing air similar to good quality outdoor air

23. When testing shows unacceptable levels of contaminants, the compressed air breathing systems must be taken out of service and inspected. In order to get system back in service, it must meet all the criteria for the breathing air requirements

24. Samples shall be submitted following repairs or modifications of the compressed air breathing system

25. When compressed breathing air pipeline has not been used for a period exceeding 6 months then an air sample shall be collected and analyzed prior to use

Breathing Air Requirements

1. oxygen level: 20-22% by volume
2. nitrogen and rare gases levels: 78-80% by volume
3. carbon monoxide level: no more than 5 ppm
4. carbon dioxide level: no more than 600 ppm
5. methane level: no more than 10 ppm
6. volatile non-methane hydrocarbons: not more than 5 ppm (as methane equivalent)
7. volatile halogenated hydrocarbons: no more than 5 ppm
8. oil, particulates and condensates: no more than 1 mg/m^3
9. pressure <15.3 MPa: at dew point no more than -53^oC or water vapour level no more than 27 ppm (by volume)
10. odour: any noticeable odor must be analyzed

Responsibilities

Manager/ Director will be responsible to:

11. ensure the development of site specific work procedures for breathing air being used
12. ensure that the breathing air is produced and delivered by compressed breathing air system or by an automated controlled proportioning system

13. ensure that the breathing air meets Breathing Air Requirements
14. ensure where elevated levels of carbon monoxide are possible, that the carbon monoxide levels need to be monitored at regular intervals to ensure that levels do not exceed 5 ppm

Supervisor/ Foreman will be responsible to:

15. ensure that the breathing air is sampled every 6 months (quarterly for Fire and Rescue Services). Test results must be kept for 10 years. The test results need to be forwarded to City of Edmonton Occupational Hygienist
16. ensure system requirements (listed on the following page) are met
17. ensure that the compressed breathing air system is located away from idling vehicles, running equipment or roadways
18. ensure that employees follow the site specific work procedures for breathing air
19. ensure that the workers using respirators are fit tested in accordance with the City of Edmonton's Respiratory Protective Equipment Standard. Workers that are fit tested will require clearance to wear a respirator from the City's Occupational Health Nurse
20. if using a hood, ensure it is supplied with air that is positive pressure not exceeding 140 kPa
21. ensure that employees have been adequately trained and provided with personal protective equipment
22. ensure that a Code of Practice is drafted and used for the work being conducted with silica or isocyanates. See respective Standard.
23. ensure records are kept for installation, inspection, operation, repair and maintenance of the breathing air systems. Commissioning records should be kept for life of the system and all other records for a minimum of 5 years.

Employees will be responsible to:

1. follow the specific work procedures
2. have fit testing conducted on the respirator if using SCBA or full face respirator

Workforce Safety and Employee Health will be responsible to:

1. ensure that the Standard is reviewed annually
2. assist with results of the tested breathing air
3. keep copies of the breathing air test results for all the areas

Hazard Assessment

Hazard assessment for use of breathing air systems will be conducted according to the Hazard Assessment and Control Standard, as well as the City OH&S Administrative Directive on Hazard Assessment. If there is a possibility of respirable crystalline quartz silica or isocyanate exposure, it must be identified on the hazard assessment, along with required controls.

Resources

For further information see the CSA Standard Z180.1-13 for Compressed Breathing Air and Systems.

- Hazard Assessment and Control Standard
- Respiratory Protective Equipment Standard
- Respiratory Protective Equipment: An Employer's Guide (Worksafe Alberta Bulletin)

DISTRACTED DRIVING STANDARD

Introduction

The City of Edmonton recognizes that the use of electronic devices when operating mobile equipment is a distraction and poses a significant risk to employees and the public. The employee's first responsibility is the safe operation of the mobile equipment they are using.

The purpose of this Standard is to provide direction to employees on the safe use of electronic devices while operating mobile equipment.

This Standard will apply to all City of Edmonton employees, volunteers, and those working on behalf of the City of Edmonton who may drive or operate equipment, including private vehicles while on City of Edmonton business. In this procedure, an Electronic Device does not include two-way radios provided by the City of Edmonton when the use is necessary to perform an employment related duty and the use is made with due care and attention. Sworn members of the Edmonton Police Service are exempt from this Directive.

Requirements

1. Employees are prohibited from initiating, checking or responding to any type of communication transmitted by electronic devices while operating City of Edmonton mobile equipment or while operating personal mobile equipment for City of Edmonton business purposes. Employees responding to electronic devices can only do so after the mobile equipment has been brought to a complete stop and is parked legally and in compliance with the legislation. The use of hands-free technology is also prohibited as directed in section 2.72.2 of the City of Edmonton Driver Safety Program - Driver's Manual.

2. Employees operating emergency vehicles (Fire Rescue Services and Peace Officers) are permitted to use electronic devices during an emergency.

3. Employees operating mobile equipment are permitted to use electronic devices during an emergency when the availability of other employees are restricted or when the operator is the only person able to make the communication.

4. Community Standards Peace Officers are permitted to use a hands-free device when responding to an emergency where communication is required (i.e. dispatch, colleague, or another work unit).

5. Any employee that observes a violation of this procedure must report it to their direct supervisor.

6. Violations of this procedure may result in disciplinary action, up to and including termination.

Resources

- Alberta Traffic Safety Act

- Alberta Workplace Health and Safety Act, Regulations, Code
- Admin Directive - Acceptable Use of Communication Technology A1429
- Administrative Procedure - Acceptable Use of Communication Technology A1429D
- Code of Conduct Manual
- Discipline of City Employees A1102
- Admin Directive - Operating City Vehicles & Equipment A1416A
- City of Edmonton's Driver's Manual

FALL PROTECTION STANDARD

Introduction

This Standard defines minimum requirements for fall protection equipment and systems used for the protection of all employees working for the City of Edmonton.

Requirements

1. Hazard Assessments shall be completed for all work areas where employees are required to work in conditions requiring fall protection. It is recommended the fall protection hazard assessment template be used for these assessments.

2. A fall protection system shall be used when work is being done on a temporary or permanent work area, where a worker may fall 3 metres or more, or there is an unusual possibility of injury if a worker falls less than 3 meters.

3. A personal fall arrest system is required when a worker is working from a portable ladder from which the worker may fall 3 metres or more, unless the work is of short duration (15 minutes or less) and the nature of the work is of light duty, the worker's center of balance is at the centre of the ladder at all times even with an arm extended beyond the rails of the ladder, and the worker maintains three point contact whenever the worker extends an arm beyond a side rail.

4. Where it is possible for a worker to fall a vertical distance greater than 1.2 m and less than 3 meters from a permanent work area, the worker shall be protected from falling by a guardrail, which meets the requirement of the Occupational Health and Safety Regulation and Code. If the use of a guardrail is not practicable, a travel restraint system shall be used. If the use of a travel restraint system is not practicable, an employer shall ensure that a worker uses an equally effective means that protects the worker from falling.

5. Supervisory personnel responsible for work where fall protection systems are required, are responsible for ensuring the system complies with this Standard and applicable Occupational Health and Safety Regulation and Code.

6. Supervisory personnel are responsible for ensuring that all employees required to use fall protection are trained in the safe use of the system and its components and the procedures to follow.

7. Only Fall Protection training which complies with "Part 9 Fall Protection" of the OH&S Code, is acceptable for City of Edmonton employees. For a list of approved trainers, please contact your Safety Engagement Lead.

8. Supervisors are responsible for ensuring that all defective fall protection equipment is promptly removed from service and returned to the manufacturer or destroyed.

9. Supervisors are to ensure that instructions for use of the fall protection system are set out in writing, in a fall protection plan, and cover the:
    1. fall hazards specific at the work site;
    2. the fall protection systems to be used;
    3. anchors to be used during the work;
    4. clearance distances confirmed as sufficient to prevent a worker from striking the ground or an object or level below the work area:
    5. the procedures for installation, maintenance and inspection;
    6. use and removal of the fall protection system; and
    7. the rescue procedures to be used

These instructions shall be readily available at the site where the equipment is being used.

10. Employees exposed to the risk of injury due to falling from heights shall be required to wear the prescribed fall protection equipment, as well as be responsible for the care, use and maintenance of the equipment. Employees shall also ensure they follow specific procedures for the use of fall protection equipment.
11. Fall protection equipment shall be visually inspected before and after each use by the employee using the equipment. If the equipment is defective, the employee shall inform the supervisor and remove the equipment from service. Additionally, all fall protection equipment must be recertified as specified by the manufacturer.
12. Prior to beginning work at heights, a job briefing, conducted by the supervisor with the affected employees, shall be held, during which time the appropriate fall protection plan shall be reviewed.
13. All permanent horizontal fall protection systems shall be designed, installed and used – in accordance with manufacturer's specifications, or in accordance with specifications certified by a professional engineer.

Resources

- Fall Protection Plan (Template)

HYDROGEN SULPHIDE STANDARD

Introduction

This hydrogen sulphide (H_2S) Standard provides the minimum requirements for protection of employees, who are involved in operations where H_2S exposure exists. This Standard operates in conjunction with legislated H_2S requirements set forth in the Alberta Occupational Health and Safety Code. This Standard is not a Code of Practice, although can be used as a guideline to create a Code of Practice specific to the area.

Applications

Commonly workers could be exposed to H_2S at the work site when conducting tasks underground tunneling when pockets of the gas is encountered, in sewers, sewage treatment plants or asphalt plants. Some examples of City of Edmonton work activities that may encounter H_2S include but are not limited to:

- Production, use, and testing of Asphalt
- Treatment of waste leachate

Responsibilities

Safety Engagement Lead:

1. Be aware of how and where H_2S could be encountered in the workplace and the health hazards associated with exposure
2. Receive Certification in H_2S training
3. Determine if workers in their areas have potential be exposed to H2S.
4. Ensure the hazard assessment reflects potential for H2S exposure. Make sure it reflects the controls and exposure control plan that is required
5. Assist director in developing task based exposure control plan and operating procedures where potential for H_2S exposure exists. See #4 under Requirements for possible exposure.

Manager/Director will be responsible to ensure:

1. The identification of the health hazards associated with exposure and assess the workers' exposure as per the Hazard Assessment Standard.
2. The work area in consultation with the Safety Engagement Lead create operating procedures for the tasks that might expose workers to H_2S. See Work Safe Alberta's guideline for Developing Code of Practice for Chemical Hazards.
3. Identification of areas that may encounter H_2S.

4. Implementation of any appropriate engineering controls (ie. ventilation).

5. The necessary Personal Protective Equipment (PPE) to address the identified hazard is provided.

6. Implementation of emergency response procedures that provide clear instructions on actions to take in the event of an emergency.

Supervisor/Foreman will be responsible to:

1. Ensure that employees are trained and follow the operating procedures for H_2S and that the levels of the chemical is kept as low as reasonably practicable.

2. Ensure that employees have been adequately provided with properly selected personal protective equipment (PPE) and trained in the use.

3. Ensure any required ventilation is designed, installed and maintained in accordance with established engineering principles. and that workers are properly trained in these systems.

4. Ensure competency of the workers with respect to use and care of respirators, gas detection monitors and PPE.

5. Ensure competency of workers with respect to the operating procedure.

6. Ensure any exposure incidents are reported

7. Portable gas detectors are provided, calibrated and maintained to manufacturer's specifications. Ensure daily bump testing of gas detection devices is conducted and recorded

8. To maintain records of all training provided.

9. That workers who may be exposed to H_2S are trained in the health hazards, use and care of PPE, emergency response, operating procedures and informed of the measurements of airborne concentrations before entering. Certified H_2S alive and Standard First Aid training is recommended.

Employees will be responsible to:

1. Follow the Operating Procedures

2. Demonstrate competency with respect to use and care of respirators, gas detection monitors, PPE and the operating procedures.

3. Attend education and training sessions provided by employer and apply the training in work activities.

4. Use any controls required by the operating procedure.

5. Use the proper PPE and personal monitors, as required.
6. Know how to report an exposure incident.
7. Report any incident to immediate supervisor

Workforce Safety and Employee Health will be responsible to:

1. Assist departments with Operating Procedures or best practices
2. Help the supervisor identify the health hazards associated with H_2S exposure and assess the worker's exposure.
3. Assist with implementation of controls to reduce worker exposure (elimination, engineering, admin, PPE).

Hazard Assessment

Hazard assessment and control for H_2S will be conducted according to the Hazard Assessment and Control Standard, as well as the City OH&S Administrative Directive on Hazard Assessment. If there is a possibility of H_2S exposure, it must be identified on the hazard assessment, along with required controls.

Training

Any employee exposed to H_2S must be trained/educated in the following:

1. Understanding the hazards, health effects and symptoms associated with an H_2S exposure
2. Proper use and maintenance of control options (including ventilation, chemical removal, PPE)
3. Site Operating Procedures
4. Emergency response procedures to follow in the event of an exposure
5. Use and maintenance of personal H_2S detectors
6. Certified H_2S Alive and Standard First Aid training are recommended

Control measures

The best way to protect from H_2S exposure is eliminate the hazard. If this is not possible other options are (in order of preference):

1. Engineering controls – ie. Ventilation, closed systems that vent to flares, treatment methods to remove H_2S.

2. Administrative control – ie. Educate workers, develop safe work procedures in areas that could contain H_2S and training the workers in these procedures, maintenance and training of engineering controls, use of personal and area monitors.

3. PPE – ie. Airtight goggles or face shield, full face positive pressure supplied air respirator.

Requirements

1. The use of H_2S will be eliminated where practicable.

2. Where the H_2S cannot be eliminated, supervisor should look at implementing engineering controls, work practices or procedures and or PPE use.

3. Update hazard assessments to reflect the potential for H_2S exposure.

4. Where the use of H_2S cannot be eliminated, an Operating Procedure shall be developed specific to the work activity. See Work Safe Alberta's guideline for Developing Code of Practice for Chemical Hazards.

5. Operating Procedures shall address as a minimum:

    - Statement of purpose and responsibilities
    - safe handling requirements
    - preventative measures (procedures of proper equipment use and details for performing tasks in order to reduce risk of H_2S exposure)
    - documentation and record keeping of gas monitoring equipment (bump testing and daily exposure).
    - PPE requirements
    - emergency procedures and contacts

6. Occupational Hygiene Assessments shall be conducted as required to ensure adequate controls are utilized. Any air monitoring shall be conducted as per the Occupational Hygiene Program.

7. If the air monitoring results at a work site are at or above the Occupational Exposure Limit, this work site should have proper signage to indicate possible high levels of H_2S and PPE that is required in the area.

8. To minimize the risk of exposure to employees not directly involved in H_2S operations, supervisors/foremen will appropriately isolate operations where levels of H_2S are at or above 5 ppm.

9. If workers have had exposure over the Ceiling limit of 15 ppm, the worker shall be removed from the environment and cannot return into the space for 24 hours.

Respirators

Air purifying respirators for H_2S can be used only for escape purposes at concentrations below the 8 hour Occupational Exposure Limit (OEL) of 10 ppm and Ceiling limit of 15 ppm. If work shifts are longer than 8 hours then the exposure limit must be reduced.

Where an area exceeds the OEL or concentration is not known workers must wear one of the following breathing protections:

- Positive-pressure, self-contained breathing apparatus (SCBA) with full face mask to protect eyes and face.
- Positive-pressure, supplied air (airline) respirator with full face mask to protect eyes and face.

Refer to the Compressed Breathing Air Quality Standard.

Any employees using respirators must be fit tested in accordance with the City of Edmonton's Respiratory Protective Equipment Standard.

Exposure monitoring

When using a direct reading instrument to measure H_2S, it must be used, calibrated and maintained according to manufacturer's specifications. Things to note with direct reading devices:

- Shall be "bump tested" before each use. This is done to verify the accuracy of the unit. This bump test should be documented.
- Have restrictive temperatures and humidity. Anything beyond these working temperatures, the device will no longer give reliable concentration read outs. If these levels are in question the areas should be monitored to ensure the levels are not exceeded.
- They could have wear and tear on the monitor, which can affect reliability of the instrument. If this is the case ensure equipment is serviced and/or replaced immediately.
- The instrument should have warning properties (alarms) if the H_2S concentration exceeds the OEL (10 ppm). If the device has 2 warning alarms the first alarm should be set at 5 ppm and the second at the OEL. For workers working shifts longer than 8 hours, warning alarms must be adjusted to reflect this. Workforce Safety and Employee Health can assist with determining these levels.

The personal monitor should have:

- Sensor with a response time of 15 seconds or less

- Lower detection limit of 0.5ppm
- Accuracy of +-5% over the calibrated range of 0-100 ppm is ideal
- Data logging function
- Intrinsically safe

First Aid and Rescue

If worker exposure has occurred:

1. Remove worker from further exposure.
2. Rescuers use properly fitting Self-Contained Breathing Apparatus (SCBA) and other required PPE. Follow rescue protocol Move worker to fresh air and give oxygen, if available. Be aware that the worker may have other injuries. Follow Standard First Aid protocols.
3. If worker is not breathing call 911 and apply cardiopulmonary resuscitation (CPR) in the nearest safe area until EMS arrives.
4. If worker's eyes sting, itch or burn, flush eyes with lukewarm water immediately for 15-30 minutes. If eyes continue to itch, see doctor immediately.
5. Ensure worker receives medical care as soon as possible.
6. Close medical attention is required for at least 48 hours after an exposure.
7. Report incident to supervisor and assist supervisor with completion of appropriate incident documentation.

Resources

- Hydrogen Sulphide at the Work Site Bulletin
- Hazard Assessment and Control Standard
- Respiratory Protective Equipment Standard
- Occupational Health and Safety Code
- Guideline for Developing a Code of Practice for Chemical Hazards

ISOCYANATE STANDARD

Introduction

This Isocyanate Standard provides the minimum requirements for protection of employees who are involved in operations where isocyanate exposure exists. This standard adheres to Alberta Occupational Health and Safety Code (Part 4). This document is not a Code of Practice, although can be used as a guideline to create an Isocyanate Code of Practice.

It is important that isocyanate exposure is controlled to prevent respiratory sensitization that result in asthma-like symptoms such as wheezing, coughing, chest tightness, shortness of breath, skin irritation that results in inflammation and dermatitis (skin rash, itching, hives, and swelling), and eye irritation. Isocyanates can be found in a variety of products including adhesives, rubbers, paints, lacquers, varnishes, and resins. Most isocyanates are in a liquid state at room temperature, but many are volatile and readily evaporate, creating an inhalation exposure risk. Examples of isocyanates include toluene diisocyanate (TDI), methylene diphenyl diisocyanate (MDI), and hexamethylene diisocyanate (HDI).

Areas of the City that use products containing Isocyanates:

- Fleet Maintenance - Painting and adhesives
- LRT Maintenance - Paints, additives and adhesives
- Urethanes, outdoor paints and primers

Responsibilities

Safety Engagement Lead:

1. Be aware of how and where chemicals containing isocyanates are used in the workplace and the health hazards associated with exposure.
2. Assist area supervisors in determining potential for isocyanate exposure.
3. Ensure the hazard assessment reflects isocyanate exposure if there is a potential for worker exposure. Make sure it reflects the controls and isocyanate exposure control plan that is required when working with those products.
4. Assist director in developing task based exposure control plan where potential for isocyanates exposure exists. Notify an Occupational Health nurse of workers with possible isocyanate exposures (by skin contact or inhalation) as soon as possible.
5. Contact an Occupational Hygiene Consultant to assist in the determination of risk of exposure to isocyanates.

Manager/Director will be responsible to:

1. Ensure the development of site specific work procedures for activities that require the use of products containing isocyanates.
2. Ensure that air monitoring is conducted, where required, as per the Occupational Hygiene Exposure Assessment Plan, to ensure compliance with the occupational exposure limit (OEL) and to ensure the effectiveness of the isocyanate controls.
3. Work with the Safety Engagement Leads or area safety to create an Isocyanate Code of Practice for the tasks that might expose workers to isocyanates.
4. Provide the necessary personal protective equipment (PPE) to address the identified hazard.
5. Ensure the area where products containing isocyanates are used is isolated from other work areas.

Supervisor/Foreman will be responsible to:

1. Look at options for eliminating products that contain isocyanates by researching similar products.
2. Ensure that employees follow any site specific work procedures for activities that require the use of products that contain isocyanates.
3. Ensure that employees have been adequately trained and provided with adequate PPE.
4. Ensure all workplace incidents are reported.
5. Determine workers competency with respect to PPE and operating procedures.
6. Coordinate work activities to mitigate exposure by reducing task or shift length.
7. Inform the Occupational Health nurse of workers with exposure to chemicals containing isocyanates.

Employees will be responsible to:

1. Demonstrate competency with respect to PPE and the operating procedures.
2. Follow the site specific work procedures.
3. Wear appropriate PPE.
4. Report any work incidents to the immediate supervisor
5. Fill out Employee Health questionnaire after working with isocyanate containing products.
6. Participate in health assessments.

Workforce Safety and Employee Health will be responsible to:

1. Ensure that this standard is reviewed annually.
2. Perform occupational hygiene assessments in areas where a potential for isocyanate exposure exists.
3. Assist areas in determining if workers are conducting work with products that contain isocyanates.
4. Assist with solutions to reduce worker exposure (elimination, engineering, admin, PPE).
5. Provide information sessions for isocyanates that provide information on the hazard, health effects and how to protect the workers.
6. Maintain a list of employees requiring health assessments.
7. Conduct ventilation assessments when required.
8. Distribute Isocyanate questionnaire to areas that work with isocyanate containing products.
9. Provide health assessments as required.

Hazard Assessment

Hazard assessment and control for activities that require the use of products that contain isocyanates will be conducted according to the Hazard Assessment and Control Standard, as well as the Safety Management Framework on Hazard Assessment. If there is a possibility of an isocyanate exposure, it must be identified on the hazard assessment, along with required controls.

Training

Any employee exposed to isocyanates must be trained/educated in the following:

- health effects associated with isocyanate exposure;
- control options (including ventilation and PPE);
- safe use and handling of products containing isocyanates;
- any site specific work procedures.

Requirements for Use and Handling

1. The use of products containing isocyanates will be eliminated or substituted with less harmful products where practicable.

2. Steps must be taken to keep isocyanates as low as reasonably practicable, since some workers may become sensitized and will be affected by levels well below the current OEL
3. Products containing isocyanates must not be heated. If heating is required for product application, then a substitute product should be found and used.
4. Where the use of an isocyanate-containing product cannot be eliminated, an Isocyanate Code of Practice will be developed specific to the work activity. The Isocyanate Code of Practice shall address as a minimum:
    - safe handling requirements
    - preventive measures
    - spill response
    - PPE requirements
    - emergency procedures and contacts
    - decontamination requirements
5. Air monitoring shall be conducted as required to ensure that the controls used are providing adequate protection. This monitoring shall be conducted as per an appropriate NIOSH method and in accordance with the Occupational Hygiene Exposure Assessment Plan.
6. Where there is risk of skin contact, the employee is required to wear appropriate chemical protective clothing, and decontaminate upon leaving a contaminated area.
7. To minimize the risk of exposure to employees handling isocyanate products, supervisors/foremen will appropriately coordinate tasks and shifts to minimize exposure time.

Respirators

Where airborne concentrations of isocyanates are at or above 50% (action limit*) of the Alberta Occupational Health and Safety Code OEL, employees are required to, at a minimum, wear a half mask respirator with organic vapour cartridges. Use of this respirator requires that the cartridges have an end-of-service-life indicator or a change out schedule created by a competent person. A higher level of protection may be required, depending on the concentration of isocyanate in the air or if the employee has developed a sensitization to isocyanate. Air-supplying respirators are most effective for protection against isocyanate vapors or mists.

Respirator use and the required fit testing will be completed in accordance with the City of Edmonton Respiratory Protective Equipment Standard.

Measures for Uncontrolled Release Prevention and Response

To prevent the uncontrolled release of isocyanates or in the event of an uncontrolled release, the following procedures are recommended as a supplement to site specific work and emergency procedures, Emergency Response Plan and Enviso Procedures:

- Isolate the work area;
- Protect the workers;
- Minimize the release of isocyanate;
- Ensure adequate clean-up and decontamination; and
- Proper incident reporting.

*Action limit: the concentration or level of an agent or chemical at which it is deemed that a specific action should be taken to decrease the exposure to workers. Actions can range from more closely monitoring the exposure to introducing administrative controls to introducing engineering controls to the use of PPE .The action level is usually set to one half (50%) of the OEL

Resources

- Isocyanate Information Bulletin
- Hazard Assessment and Control Standard
- Respiratory Protective Equipment Standard
- Enviso Procedures (https://onecity.edmonton.ca/safety_operating/enviso.aspx)

LEAD STANDARD

Introduction

This Lead Standard provides the minimum requirements for protection of employees, who are involved in operations where lead exposure exists. This Standard operates in conjunction with legislated lead requirements set forth in the Alberta Occupational Health and Safety Code. This Standard is not a Code of Practice, although can be used as a guideline to create a Code of Practice specific to the area.

Lead is a metal that has used since ancient times. It is corrosion resistant, pliable and has a low melting point making it a desirable substance. Since it is easily re-melted and refined, it has the highest recycling rate in the world. Lead naturally occurs in the earth's crust usually found with other elements such as copper, silver and zinc. Common uses for Lead are in lead-acid batteries, as protective sheathing for underground and underwater cables and stabilizers in plastic (PVC) piping.

Everyone is exposed to trace amounts of lead through air, soil, dust, food and drinking water. These trace amounts do not pose a health risk. Commonly workers could be exposed to lead at the work site when conducting tasks that produce airborne lead dust, fume or vapors. They can be exposed through inhalation, ingestion or skin absorption. Some examples of work activities that may increase the exposure to workers are:

- Battery, electronic or metal recycling
- Demolition and renovation
- Bridgework
- Application of industrial coatings
- Grinding of painted surfaces
- Plumbing and pipefitting
- Decontamination work
- Welding
- Spraying pesticides

Responsibilities

Safety Engagement Lead:

1. Be aware of how and where lead is used in the workplace and the health hazards associated with lead exposure

2. Determine if workers in their worksites could be exposed to lead and how many days in a year they may be exposed

3. Ensure the hazard assessment reflects lead exposure if there is a potential for worker exposure. Make sure it reflects the controls and exposure control plan that is required when working with lead

4. Assist director in developing task based exposure control plan where potential for lead exposure exists. See #4 under Requirements for Use and Handling

5. Notify Occupational Health nurse of workers with possible lead exposures (by skin contact, inhalation and/or ingestion) as soon as possible

Manager/Director:

1. Work with Safety Engagement Lead or area safety assistants to create a Lead exposure control plan if workers may be exposed to lead. (OHS Code Explanation Guide. Part 4 – Section 41 Lead exposure control plan)

2. Ensure work sites that have a potential of lead exposures have required personal protective equipment for all workers

3. Support the implementation of engineering, administrative, and personal protective equipment controls to reduce potential lead exposure

4. Must have a code of practice for the storage, handling, use and/or disposal of lead in amounts of 10kg or more. The storage, handling, and or disposal shall be done in accordance with regulatory requirements as identified in Enviso Procedures

5. Identify the health hazards associated with exposure and assess the worker's' exposure

6. Ensure that regular surface testing and air monitoring is conducted, where required, as per the Occupational Hygiene Program, to ensure compliance with Occupational Exposure Limit and to ensure the effectiveness of the lead controls

7. Depending on exposures, suitable showers, change rooms must be provided to allow workers to remove contamination before leaving the work site. Laundering or proper disposal of workers contaminated clothing must also be provided

Supervisor/Foreman will be responsible to:

1. Ensure that employees are trained and follow the site specific work procedures for lead and that the levels of airborne lead dust is kept as low as reasonably practicable.

2. Ensure that employees have been adequately provided with properly selected personal protective equipment and trained in the use and care of the equipment including protective clothing that protects other clothing worn by the worker from contamination.

3. Any contaminated clothing must be properly disposed of or laundered by the employer. Clothing contaminated with lead that is to be laundered before being reused is stored

and transported in sealed containers that are clearly labeled to identify contents, indicate hazard and inform that contents should not be inhaled.

4. Notify Occupational Health nurse of employees with possible lead exposures. Medical monitoring (blood lead testing) must be made available to workers exposed to lead.

5. Designate and maintain a restricted area.

6. Coordinate work activities to reduce the risk of lead exposure.

Employees will be responsible to:

1. Follow the Code of Practice and specific work procedures.

2. Demonstrate competency with respect to use and care of PPE and the operating procedures.

3. Get medical monitoring. Worker may refuse to undergo part or all of the monitoring by giving the supervisor a written statement refusing it. This statement must be passed on to the Occupational Health Nurse.

4. No worker may eat, drink or smoke in an area of the workplace that has been contaminated with lead.

Workforce Safety and Employee Health will be responsible to:

1. Assist departments with Code of Practice or best practices. Assist departments in determining the designation of a restricted area.

2. Maintain a list of employees requiring the medical monitoring.

3. Ensure elevated blood level in a worker over 0.5umol/L must be reported to the Director of Medical Services.

4. Help the supervisor identify the health hazards associated with exposure and assess the worker's exposure.

Hazard Assessment

Hazard assessment and control for lead will be conducted according to the Hazard Assessment and Control Standard, as well as the City OH&S Administrative Directive on Hazard Assessment. If there is a possibility of lead exposure, it must be identified on the hazard assessment, along with required controls.

Training

Any employee exposed to lead must be trained/educated in the following:

- Health effects associated with lead exposure
- Control options (including ventilation, chemical removal, personal protective equipment)

- Safe use and handling
- All site specific work procedures
- Workforce Safety and Employee Health can assist with this process

Requirements for lead Use and Handling

1. The use of lead will be eliminated where practicable.
2. Remove paint from surfaces prior to soldering or welding activities.
3. Where the lead cannot be eliminated, supervisor should look at changing engineering controls, work practices and or PPE use.
4. Where the use of lead can not be eliminated and workers have a potential for exposure of 30 days or more in a year, a lead exposure control plan will be developed specific to the work activity. See Work Safe Alberta. This Lead Exposure Control Plan shall address as a minimum:
    - Statement of purpose and responsibilities
    - Methods of hazard identification, assessment and control
    - Worker education and training
    - Safe work practices (procedures of proper equipment use and details for performing tasks in order to reduce risk of lead exposure)
    - Descriptions of personal and work site hygiene practices and decontamination practices
    - Process of health monitoring, including biological testing
    - Methods of documentation and record keeping
    - procedures for maintenance plan, including annual reviews and updating
    - spill response
    - PPE requirements
    - emergency procedures and contacts
5. Air monitoring and surface wipe samples shall be conducted as required to ensure adequate controls are utilized. This monitoring shall be conducted as per the NIOSH and OSHA methods and in accordance with the Occupational Hygiene Program.
6. If the air monitoring results at a work site are at or above the Occupational Exposure Limit, this work site is considered a restricted area.

7. For surface dust, the US Department of Housing and Urban Development Standard should be used.

8. To minimize the risk of exposure to employees not directly involved in lead operations, supervisors/foremen will appropriately isolate lead operations.

Requirements for a Restricted Area

1. All entrances to the restricted area will be signed as follows:
    - Authorized personnel only
    - Lead exposure hazard
    - Eating – Drinking – Smoking Prohibited

This signage shall remain posted until the area no longer meets the requirements of a restricted area.

2. Facilities must be provided for employees to remove the contamination upon leaving the work site. This includes showers for the workers.

3. Employees in a restricted area are required to wear the provided protective clothing, and must ensure that street clothing is not contaminated by lead. Supervisor is responsible for ensuring protective clothing is disposed of or laundered.

4. All employees must decontaminate upon leaving a restricted area.

5. Any employee, who is required to work in a restricted area for 30 work days or more in a 12-month period, is required to have a medical assessment conducted. Pertaining to this requirement:
    - New workers have medical assessment prior to lead exposure
    - Supervisors are responsible to contact Occupational Health Nurse of employees requiring a medical assessment
    - An employee has the right to refuse to undergo the assessment by giving his/her supervisor a written statement. This statement must be forwarded to the Nurse.
    - if an employee was exposed to lead at a previous employment and received a medical assessment within the immediately preceding two years, the employee must inform the present supervisor of the date of that medical assessment as soon as possible.

6. The medical assessment may include:
    - Health history

- Physical examination
- Blood count
- Test of kidney function
- Blood lead level testing

Respirators

Use of respirators will depend on measured airborne concentrations of lead. Any employees using respirators must be fit tested in accordance with the City of Edmonton's Respiratory Protective Equipment Standard.

Waste

Every work site will be kept free of unnecessary accumulations of lead.

Contaminated materials will be stored and transported in accordance with regulatory requirements as identified in Enviso Procedures which includes sealed containers that are clearly labeled to identify contents, indicate hazard and inform that contents should not be inhaled.

Where storage is required:

- It must be clearly identified
- Used/stored in such a way that the use/storage is not a hazard to the worker, or the environment

All waste will be disposed of in accordance with the regulatory requirements as identified in Enviso Procedures.

Measures for Uncontrolled Release Prevention and Response

To prevent the uncontrolled release of lead or in the event of an uncontrolled release, the following procedures are recommended as a supplement to site specific work and emergency procedures, Emergency Response Plan and Enviso Procedures:

- Isolate the work area
- Protect the workers
- Minimize the release of lead
- Ensure adequate clean-up and decontamination
- Proper incident reporting and environmental release reporting, if applicable

Resources

- Lead at the Work Site Bulletin

- Hazard Assessment and Control Standard
- Respiratory Protective Equipment Standard
- Occupational Health and Safety Code
- Enviso Procedures (https://onecity.edmonton.ca/safety_operating/enviso.aspx,)

MANAGING HAZARDOUS ENERGY STANDARD

Introduction

If machinery, equipment, powered mobile equipment, piping and process systems are to be serviced, repaired, tested, adjusted or inspected, an employer must ensure that it is completely stopped, de-energized, have secured energy-isolating device/s and is rendered inoperative to prevent accidental activation. Managing the control of hazardous energy is required under Part 15 of the OHS Code.

Types of hazardous energy include: electrical, hydraulic and pneumatic pressure, mechanical, thermal, gravitational and chemical energies. The term lockout refers to methods, devices and procedures for preventing the sudden and uncontrolled release of energy from a system, machine or piece of equipment.

Requirements

1. No City of Edmonton employee or contractor will work on any equipment or process without protecting themselves from the inadvertent startup of the equipment or process.
2. All workers performing any task requiring lockout must be properly trained in the use of and follow proper lockout procedures.
3. Before an isolation device is applied, all parts, attachments and extensions of machinery and equipment must be secured or blocked against any movement, and all stored energy must be isolated prior to maintenance.
4. Equipment must be inspected to ensure that it does not contain stored energy. All equipment which contains stored energy shall only be installed, operated or maintained after proper written procedures have been developed to protect the worker against the stored energy or in accordance to manufacturer's' recommendations and procedures.
5. Where work must be performed on energized equipment, written procedures must be developed to ensure the safety of the worker(s) and the worker(s) performing the task must be competent.

Personal Locks

1. Personal locks must be applied to lock out points before workers work on any equipment requiring isolation. Every worker shall work under his/her own personal lock. If more locks are required, please refer to the Group Lock section.

2. All personal locks must be tagged with the name of the person owning the lock and a contact number.

3. No person shall place or remove another person's lock(s) or direct someone to remove another person's lock. This will be considered a severe violation of the Standard.

4. Personal locks must be removed when work is completed and the task is about to start up. If work is not completed, then the system will continue to be locked and tagged out at all times. If a second worker needs to complete the work, then the lock of the first worker shall not be removed until the second worker has reviewed the procedure, documentation, and has their lock appropriately in place.

5. If a personal lock or key is damaged or lost, that lock, along with the other locks in the set, must be returned to your supervisor for replacement.

6. A list of issued personal locks will be maintained and administered by the section issuing the lock.

Section Locks

1. Business sections within the City, that are required to participate in lock out activities, are to ensure section locks are available for lock out situations.

2. Section locks must be applied on all de-energized equipment if:

    a. the number of lockout points exceed the number of personal locks that were issued to the employee,

    b. if group lock box procedures are being initiated.

    c. or after an employee's personal lock is removed.

3. Section locks must remain on the equipment until the equipment is returned to service.

Group Lock Box Procedures

1. Group lock box procedures may be used whenever multiple lock out points and or multiple workers will be working and are required to be locked out.

2. Group lock boxes are to be supplied by the owners of the equipment being worked on.

3. All group lock boxes must be labeled to correspond to the equipment they represent.

4. When in use, group lock boxes must have all keys to the section lock(s) which lock out the equipment secured within the lock box. Each employee required to work under lock out

must apply their personal lock to the outside of the lock box before starting work on the de-energized equipment.

5. All personal lock Standards apply when utilizing group lock box procedures.

Basic De-energizing/Isolation Procedure

1. identify the need for a de-energization/isolation. Conduct a hazard assessment for the task.
2. Notify the operations staff of the need to lock out and outline the details and nature of the work to be performed.
3. Review the lock out procedure for specific equipment.
4. Fill out the proper lock out documentation if necessary.
5. Shut down the system or equipment.
6. Verify that all moving parts have stopped.
7. Lock and tag each energy-isolating device in the proper sequence and with appropriate lockout devices. (Be sure to use durable tags and your own personal locks with only one existing key for each lock, which you hold.)
8. Isolate all stored energy. Verify that the *system* has been neutralized/ isolated/ de-energized.
9. Verify that each *lockout* has accomplished its purpose and that equipment is completely isolated from all energy sources.

Lock out Check Sheets

1. Lockout Check Sheets are required whenever multiple lock out points are required to safely secure the equipment from start up.
2. Lock out check sheets will be available at the work site and will list all de-energizing points which require locks for the equipment or process the sheet applies to.
3. Temporary changes to the lockout check sheets may occur if the nature of the work to be performed deems it impossible to follow the approved lock out check sheet. Changes must be approved by the supervisor or designate and a qualified worker(s), and be documented on the check sheet.

Site in Control Procedures

1. The term 'site in control' refers to the disconnecting of equipment from its power source where the plug or power attachment (electrical plug, hydraulic quick connects, air line couplers, etc.) remains within the immediate control of the worker.

2. Site in control lock out procedures are to be followed by workers doing minor adjustments to power tools. This includes changing discs on grinders, changing blades on power saws or any other type of power tool adjustment that can cause injury if the tool was accidentally turned on.

3. Steps of a site in control lock out procedure include:

    (a) turn off the equipment;

    (b) disconnect the power source (either unplug equipment or disconnect the air or hydraulic line and keep within the worker's sight);

    (c) try to start the equipment twice;

    (d) complete maintenance work (blade change, etc.), replace all guards; and

    (e) reconnect the power source.

Lock Removal – Returning to Operation

1. Personal locks are to be removed by the person the lock is issued to, when the worker has completed his/her task or at the end of the workers shift, whichever comes first.

2. Section locks are to be removed by an authorized employee from the originating section when all work is complete on the equipment.

3. When all locks have been removed from the system, operations are to be informed that the work is completed and the system is safe to operate.

4. When a personal lock is left on a piece of equipment and the equipment is required to be started, the following procedure for removal of the lock shall apply:

    (a) A committee of two shall be formed, with one member being from the section completing the maintenance work, and one being from the facility the work is being done in, or a supervisor from outside the area.

    (b) The committee shall identify the personal lock and check the immediate area, and make all reasonable efforts to find the employee who owns the lock.

    (c) If the employee is contacted:

        i. the committee must receive permission to remove the personal lock; or

        ii. the employee must return to the jobsite and remove the lock himself/herself at no cost to the City.

    (d) If the worker cannot be found on the jobsite, the committee of two will:

        i. check and confirm the personal lock number; and

ii. phone the contact number on the lock,

(e) If the owner of the lock is not contacted, the committee will again check the immediate area for the worker, and if the worker is not found, the committee will cut the lock off.

5. The committee of two will then complete a lock removal form detailing:

    a) the name of the employee the lock belongs to

    b) how it was removed

    c) when it was removed

    d) why it was removed

6. The completed lock removal form should then be forwarded to the director of the employee that left the lock on.

Equipment Identification

1. All breakers in the switch rooms are to be labeled with the breaker number and equipment they supply.

2. Hard wired electrical equipment must be labeled with the equipment name and breaker number which supplies it.

Resources

- General Lockout Guidelines
- Lock Out Check Sheets
- Lock Out Removal Sheet
- Incident Investigation Data Collection Form (IIDC)

MERCURY STANDARD

This Standard operates in conjunction with legislation set forth in the Alberta Occupational Health and Safety Act, Regulations and Code. This Standard is not a Code of Practice, although can be used as a guideline to create a Code of Practice specific to work areas.

Mercury is found in the earth mainly from sulphide ores it comes from a range of natural sources such as volcanoes, soils, and undersea vents. It is the only metal that is liquid at room temperature. It is considered a global contaminant because it is toxic, does not breakdown in the environment and can build up in living things. It can easily transform into vapour at room temperature and when heated becomes an odorless and colorless gas. Inorganic mercury compounds are formed when elemental mercury combines with other elements (chlorine, sulphur or oxygen) to create mercury salts. Organic mercury is formed when elemental mercury combines with carbon (methyl mercury).

- Metallic mercury can be found in mercury thermometers and switches and fluorescent lights.
- Mercury salts can be found in fungicides, insecticides, paint pigments, and old latex paints.
- Organic mercury can be found in paints as a preservative, waxes, insecticides, cork, rubber and wood.

Mercury can be toxic to a fetus particularly in organic forms, since these forms can easily pass through the placenta. An unborn baby is very sensitive to mercury. Women who work with mercury and are breastfeeding can pass mercury to the baby through breast milk.

Responsibilities

Safety Engagement Lead:

1. Identify the health hazards associated with exposure and assess worker exposure;
2. Assist in developing task based Code of Practice where potential for mercury exposure exists;
3. Ensure Mercury Spill Kits are available at all work sites that could potentially have a mercury spill. Ensure workers are trained on cleaning up mercury spills using the kit;
4. Create Mercury Storage Safe work practice and communicate to workers involved in work that involves storing mercury;
5. Create decontamination procedure for exposed workers;
6. Ensure laundering process of contaminated clothing is followed;

7. Notify Occupational Health nurse of workers with possible mercury exposures (by skin contact, inhalation and/or ingestion) as soon as possible.

Director:

1. Work with Safety Engagement Lead or area safety assistants to create a task based Code of Practice where potential for mercury exposure exists. See Work Safe Alberta's Guideline for Developing Code of Practice for Chemical Hazards;

2. Ensure work sites that have a potential of mercury release have required personal protective equipment for all workers;

3. Support the implementation of engineering, administrative, and personal protective equipment controls to reduce potential mercury exposure.

Supervisor/ Foreman:

1. Ensure training is provided to workers as detailed in this standard. Keep records of completed training;

2. Ensure engineering controls implemented to reduce mercury exposure, such as local exhaust ventilation units, are serviced annually and working optimally;

3. Ensure signage is posted in areas where there is a potential for mercury exposure;

4. Ensure that workers have been adequately provided with properly selected personal protective equipment and trained in its use (including protective clothing that protects other clothing worn by the worker from contamination);

5. Ensure contaminated clothing is properly disposed of or laundered. Clothing contaminated with mercury that is to be laundered before being reused must be stored and transported in sealed containers that are clearly labeled to identify contents, indicate hazard and inform that contents should not be handled or inhaled;

6. Notify Safety Engagement Lead of workers with possible mercury exposures (by skin contact, inhalation and/or ingestion) as soon as possible;

7. Ensure workers are aware of upcoming Occupational Hygiene Assessments being conducted.

Worker:

1. Participate in training;

2. Follow Enviso Release Requirements when responding to cleaning mercury spills;

3. Follow the Mercury Storage Safe work practice when storing mercury;

4. Follow decontamination procedure when exposed to mercury;

5. Do not wear mercury contaminated clothing. Once clothing is contaminated, dispose of it (if not able to be laundered) or make request to your supervisor or foreman to have it laundered;

6. Wash hands and face before eating, drinking, or using tobacco products;

7. Use engineering, administrative, and personal protective equipment controls in place to reduce exposure to mercury;

8. Participate in medical monitoring. Worker may refuse to undergo part or all of the monitoring by giving the supervisor a written statement. This statement must be signed and passed on to the Occupational Health Nurse.

Workforce Safety and Employee Health:

1. Air monitoring and/or surface wipe samples shall be conducted as required to ensure controls are effective in reducing potential for exposure to mercury. This monitoring shall be collected and analyzed using a method specified in Part 4, Section 20 of the Alberta Occupational Health and Safety Code.;

2. Educate the workers and supervisors on the hazards of mercury;

3. Notify Occupational Health Nurse and Safety Engagement Lead of workers with possible mercury exposures (by skin contact, inhalation and/or ingestion) as soon as possible;

4. Assist areas with Code of Practice and safe work procedures;

5. Maintain a list of workers that have potential to be exposed to mercury and requiring medical monitoring;

6. Document any elevated blood levels in workers (over 35ug/g creatinine for total inorganic mercury in urine or 15ug/L in blood);

7. Assist in identification the health hazards associated with exposure and assess the worker exposure;

8. Ensure this standard is reviewed annually.

Hazard Assessment

Hazard assessment and control for mercury will be conducted according to the Hazard Assessment and Control Standard, as well as the City OH&S Administrative Directive on Hazard Assessment. If there is a potential of mercury exposure, it must be identified on the hazard assessment, along with required controls.

A separate hazard assessment must be conducted for mercury spill clean-up activities.

Training

Any worker that has a potential to be exposed to mercury must be trained/educated in the following:

- Health effects associated with mercury exposure;
- Control options (including ventilation, chemical removal, personal protective equipment);
- Safe use and handling;
- All site specific work procedures.

Codes of Practice

The use of mercury will be eliminated where practicable. Where the use of mercury cannot be eliminated, a Code of Practice will be developed specific to the work activity. See Work Safe Alberta's Guideline for Developing Code of Practice for Chemical Hazards. This Code of Practice shall address as a minimum:

- Statement of purpose and responsibilities;
- Safe handling requirements;
- Preventative measures (procedures of proper equipment use and details for performing tasks in order to reduce risk of mercury exposure);
- Documentation and record keeping;
- Spill response;
- Personal protective equipment requirements;
- Emergency procedures and contacts;
- Decontamination requirements of workers and equipment.

Personal Protective Equipment (PPE)

Since mercury and mercury vapours can be absorbed through the skin, solvent resistant gloves and other protective clothing are needed for workers who handle mercury or are conducting activities in an area where airborne mercury is present.

Use of respirators will depend on measured airborne concentrations of mercury. If mercury levels are at or above the action limit (Concentration or level of agent that some safety measures should be taken. Value is 50% of the OEL) then respirator protection will be required. Any workers using respirators must be fit tested in accordance with the City of Edmonton's Respiratory Protective Equipment Standard.

Ensure mercury cartridges are being replaced when the “end of life” indicator has indicated the cartridge is spent. Always follow the manufacturer's specifications.

Waste

Every work site will be kept free of unnecessary accumulations of mercury. Contaminated materials will be stored and transported in accordance with Enviso Procedures, which includes sealed containers that are clearly labeled to identify contents, indicate hazard and inform that contents should not be handled or inhaled without appropriate personal protective equipment.

Where storage is required:

- It shall meet requirements in Enviso Procedures
- It must be clearly identified;
- Used/stored in such a way that the use/storage is not a hazard to the worker.

All waste will be disposed of in accordance with Enviso Procedures which reflect the requirements of Alberta Environment and Parks.

Measures for Uncontrolled Release and Response

In the event of an uncontrolled release, the following procedures are recommended as a supplement to site specific work and emergency procedures, Emergency Response Plan and Enviso Procedures:

- Protect the workers;
- Isolate the work area;
- Minimize the release of mercury;
- Ensure adequate clean-up and decontamination; and
- Proper incident reporting.

An appropriate spill kit must be accessible in facilities that have potential of an uncontrolled mercury release.

Resources

- Alberta OHS Bulletin - Mercury at the Work Site
- Hazard Assessment and Control Standard
- Occupational Health and Safety Act, Regulations and Code
- Guideline for Developing a Code of Practice for Chemical Hazards
- Employer’s Guide to Occupational Health and Safety
- Worker’s Guide to Occupational Health and Safety

- Occupational Health and Safety Code - Part 4 Explanation Guide
- Enviso Procedures (https://onecity.edmonton.ca/safety_operating/enviso.aspx)

MOULD STANDARD

Introduction

This Mould Standard will serve as the minimum requirements governing the safe procedure when dealing with mould. It operates in conjunction with the Government of Alberta Best Practices Mould at the Worksite document and Occupational Health and Safety Code..

Mould (fungi) is found everywhere. Mould gets nutrients by absorbing them from surrounding materials. They thrive where nutrients are readily available. Conditions required for mould growth is:

- Moisture – rain, snow/ice, water leaks, relative humidity above 60%
- Source – airborne spores
- Food – any organic material. Wood, carpet, paper, cardboard, drywall, dust , plaster

Moulds also tend to grow at a temperature range that is most comfortable to humans.

There is increasing concern about the health effects of indoor mould growth because of a probable link to a wide range of symptoms and illnesses. North American and European studies show a relationship between mould and damp conditions, and an increase in the following symptoms:

- Eye, nose and throat irritation;
- Coughing and phlegm build-up;
- Wheezing and shortness of breath; and
- Allergic reactions.

Responsibilities

Manager/Director will be responsible to:

- Ensure that building materials are kept dry to prevent mould growth.
- Work with Facility Maintenance to eliminate the source of moisture.
- Contact Facility Maintenance Services and /or Safety Engagement Lead if mould is discovered and can't easily be disposed of.
- Ensure any area with identified mould has the ventilation isolated from the rest of the building.

- Ensure any building related mould containing material is not handled by any workers other than Facility Maintenance Services.
- Work with Facility Maintenance to ensure that any surface containing mould is properly cleaned or removed.
- Identify health hazards associated with the exposure and assess the worker exposure.

Supervisor/Foreman will be responsible to:

- Identify and communicate to Manager/Director any area with continuous water damage or area that contains mould. Restrict all access to the area and isolate ventilation. Contact Safety Engagement Lead and Facility Maintenance Services.
- Inform workers in the area where there is a potential mould issue.
- Ensure building material with potential mould is not handled by any workers other than Facility Maintenance Services.
- Ensure the source of moisture has been eliminated. Any additional sources of moisture should be reported to the Manager/Director.
- Ensure that any surface containing mould is properly cleaned or removed.

Corporate Safety and Health Services will be responsible to:

- assist departments with Code of Practice or best practices.
- assist departments in restricting access to the area.
- help the Manager/Director identify and communicate the health hazards associated with exposure and assess the worker's exposure.

Building and Landscape Services, Facility Maintenance Services will be responsible to:

- Ensure good building maintenance
- Keep background building information including:
  - Previous space uses
  - Maintenance and repairs in building
  - Hazardous materials inventory
  - Previous reports of mould and water damage
- Conduct inspections and assess the material, to determine the appropriate management technique to be used. This may include cleaning or removal of the material.

- Develop site specific work procedures for mould
- Ensure that employees are trained and follow the site specific work procedures for handling mould and that the levels of airborne spores is kept as low as reasonably practicable
- Ensure that employees have been adequately provided with properly selected personal protective equipment and trained in the use (including protective clothing that protects other clothing worn by the worker from contamination)
- Ensure any contaminated clothing is properly cleaned or disposed of by employer.
- Ensure that regular air monitoring is conducted, where required, as per the Occupational Hygiene Program, to ensure compliance with best practices and to ensure the effectiveness of cleaning or removal
- Restrict access to the area where mould is identified and/or is being removed. This includes restriction of airflow from the area to the rest of the facility.
- Coordinate work activities to reduce the risk of mould exposure

Handling

- Regular building inspections should include mould and water damage assessments.
- Water damaged building materials should be dried within 24-48 hours.
- Mould assessments should be conducted using Hazard Algorithm or industry best practice procedure. The algorithm identified in the Best Practices Mould at the Worksite or the U.S. Environmental Protection Agency's exposure assessment algorithm for Mould Remediation in Schools and Commercial Buildings may be used.
- Every person directly or indirectly involved in the handling of mould-containing products will take all precautions necessary to prevent spores from becoming airborne.
- Mould-containing material will be removed or cleaned as quickly as possible. Abatement activities will, as a minimum, meet the abatement requirements, including personal protective equipment, specified in the most recent edition of Best Practices Mould at the Worksite.
- Every person directly involved in the handling of mould-containing products will properly trained and fully understand and practice the safe work procedures.
- Employees working in proximity to mould-containing material will be informed of the location of the material and instructed not to disturb the material. Employees are required to immediately report any water damaged or mouldy material to their supervisor. The supervisor will take appropriate action and isolate the area to prevent

the uncontrolled release of spores. If this is a building material, the supervisor is also required to immediately report the damage to Facility Maintenance Services.

- The personal protective equipment (PPE) required during cleaning or removal is dependent on the Hazard Algorithm (extent of mould and how sensitive population is). It can range from N95 respirator, nitrile gloves, and eye protection to disposable impermeable (Tyvek) suits, boots, nitrile gloves, eye protection and P100 respirator. Contaminated debris and disposable clothing will be discarded in double bagged 6-mil polyethylene bags and cleaned.
- Compressed air must not be used to clean up or remove debris from contaminated surfaces.
- After the removal of mould containing material is complete, surfaces must be cleaned using a HEPA vacuum or wet down and wiped with appropriate biocide or detergent.
- Air clearances may be required to ensure all the mould was removed and properly cleaned. Results to these air monitoring samples should be forwarded to Occupational Hygiene Consultant for the City of Edmonton and kept in building maintenance records.

Disposal

- Mould containing debris should be disposed of by placing in 6-mil polyethylene (poly) bags sealed by twisting the bag and securing with duct tape. Disposable PPE should also be disposed of in this manner. Clothing requiring cleaning must be done by the department.
- Bags of waste should be removed from the area after the removal of visible contamination by wet wiping or High Efficiency Particle absorption (HEPA) vacuuming.
- Sealed poly bags containing contaminated material should be properly disposed of.

Measures for Uncontrolled Release Prevention and Response

To prevent the uncontrolled release of airborne spores or in the event of an uncontrolled spore release, the following procedures are recommended as a supplement to site specific work and emergency procedures:

- Isolate the work area;
- Protect the workers;
- Minimize the release of airborne spores;
- Ensure adequate clean-up and decontamination; and
- Proper timely incident reporting

Training

- All workers working with mould contaminated material will be trained in the hazards associated with mould, proper handling techniques, and disposal requirements. The training may be provided by a training agency or in-house by competent persons who are knowledgeable in the procedures and hazards associated with mould abatement.
- All workers who are cleaning or removing mould containing debris must be completed by a competent worker (adequately qualified, suitably trained and with sufficient experience to safely perform work without supervision or with minimal degree of supervision).

Resources

- Alberta Occupational Health and Safety, Act, Regulation and Code
- Best Practices: mould at the work site

MUSCULOSKELETAL INJURY CONTROL STANDARD

Introduction

This Standard describes the responsibilities, legislative requirements and resources available for musculoskeletal injury prevention. This Standard is applicable to all City of Edmonton employees in both line/field/outdoor and computer office environments.

While instantaneous Musculoskeletal injuries (MSIs) do occur (e.g. sprained ankle or broken wrist due to a slip and fall), many work-related MSIs are the result of a long term, cumulative exposures to the following injury risk factors:

- Awkward body postures or motions
- Manual handling (e.g. lifting, lowering, carrying, pushing, pulling)
- Repetitive motions
- Static postures
- Forceful exertions (e.g. gripping, holding)

Link: Sample questions to identify musculoskeletal risk factors

While exposure to any one risk factor can result in an injury, MSIs typically result from repeated and/or long term exposure to a combination of risk factors. In addition there are several other individual (e.g. age, fitness, stature, gender) and environmental (e.g. cold temperatures, vibration) risk factors. Once an individual has an MSI, both treatment and removal of exposure to MSI risk factors may be required. Some individuals may require a long period of time to recover fully from an MSI and, as a result, may miss work or require modified duties until they return to their pre-injury condition.

Given the delay of MSI symptoms, a better injury prevention approach is to identify and control of risk factors that are known to lead to MSIs. Musculoskeletal injury controls include engineering, administrative, work practice and personal protective equipment controls.

However the most effective method of injury prevention is designing the job (e.g. tasks, workstation, layout, equipment, tools, procedures, systems, products, training and environments, etc.) to the capabilities of workers during the design of work tasks, equipment/tools and the work environment. This is referred to as ergonomics.

Responsibilities

Director

- Support the identification, evaluation and control of musculoskeletal injury hazards.
- Support the implementation of engineering, administrative and personal protective equipment controls to to eliminate and reduce risk for musculoskeletal injury.

- Consider ergonomic design principles and MSI risk factors in the planning, design and renovation of work systems and when purchasing or acquiring new equipment, materials, tools, furniture, and vehicles. For assistance with incorporating ergonomic principles into the design, procurement or selection processes for your department, contact Workforce Safety and Employee Health.

Supervisor/Team Lead/Foreman

- Ensure workers are trained in the identification of musculoskeletal injury hazards and the correct application and use of controls.
- Ensure workers are provided with and wear appropriate personal protective equipment, where required.
- Notify the Safety Engagement Lead of workers with possible exposure to musculoskeletal injury hazards as soon as possible.
- Support the identification, evaluation and control of musculoskeletal injury hazards.
- Support the implementation of engineering, administrative and personal protective equipment controls to to eliminate and reduce risk for musculoskeletal injury.
- Ensure that existing site hazard assessment and worksite inspection processes include identification and control of MSI risk factors.
- Involve affected workers in the assessment, control or elimination of MSI risk factors.
- Ensure workers are informed of MSI risk factors and available resources, tools and measures implemented to control musculoskeletal injury risk.
- Ensure the Incident Investigation Standard is followed when a worker reports symptoms of an MSI that may be work related. The Supervisor must promptly review the work-site hazard assessment and the activities of that worker and of others doing similar tasks. The Supervisor must identify work-related causes of the symptoms and take corrective measures to avoid further injuries. The Incident Data Collection Form (IDC) must be completed.
- Where applicable, consult the Workforce Safety and Employee Health (via Disability Management) when determining a potential work accommodation for an employee returning to work after a MSI.
- Consider ergonomic design principles and MSI risk factors in the planning, design and renovation of work systems and when purchasing or acquiring new equipment, materials, tools, furniture, and vehicles. For assistance with incorporating ergonomic principles into the design, procurement or selection processes for your department, contact Workforce Safety and Employee Health.

- Monitor and investigate incident trends relating to musculoskeletal injuries, such as sprains/strains, overexertion and bodily reaction.

Workers

- Participate in the identification, assessment and control of musculoskeletal injury hazards.
- Report near miss incidents and incidents that could contribute to, or actually lead to, musculoskeletal injury.
- Where provided, appropriately and safely use equipment for manual handling tasks.
- Report musculoskeletal injury hazards to the immediate supervisor or Safety Engagement Lead as soon as they are identified.

Safety Engagement Lead

- Assist business areas to identify and assess musculoskeletal injury hazards and risks.
- Assist areas with implementing engineering, administrative, and personal protective equipment controls;
- Notify Workforce Safety and Employee Health of workers with possible exposure to musculoskeletal injury hazards as soon as possible. If required, assist to organize an ergonomic assessment.
- Ensure that existing site hazard assessment and worksite inspection processes include identification and control of MSI risk factors.
- Monitor and investigate incident trends relating to musculoskeletal injuries, such as sprains/strains, overexertion and bodily reaction.

Workforce Safety and Employee Health Services Branch

- Assist departments in the identification, control or elimination of musculoskeletal injury .
- Support departments in the identification, control, and training related to manual handling hazards.
- Assist to incorporate ergonomic principles in the selection, purchase and acquisition of materials, tools, equipment, vehicles and in the design of new or renovated work sites.
- Collaborate with Disability Management and departments in accommodating an employee's return to work following a MSI by identifying potential worksite or tool design modifications and ergonomic improvements.
- Support departments in the development and provision of resources, tools, materials, and training related to MSI prevention.

- Participate in departmental activities and initiatives related to ergonomics and MSI prevention.
- Manage and update the Corporate Ergonomics Program.
- Ensure that this Standard is reviewed and updated annually.
- Provide information, resources and support to departments to meet this Standard.

Hazard Assessment

Hazard assessments and musculoskeletal injury control will be conducted according to the Hazard Assessment and Control Standard, as well as the City Administrative Directive on Occupational Health and Safety. The hazard assessment will identify MSI risk exposure as a hazard and identify the required controls. Hazard assessments will be updated if a change in equipment, process, or physical alterations in the work environment affects the MSI risk level or the length of time an employee may potentially be exposed to MSI risk factors.

Line/field environments

Lifting and handling loads

1. Before a worker manually lifts, lowers, pushes, pulls, carries, handles or transports a load that could potentially injure the worker, perform a hazard assessment that considers all task variables that influence manual handling-related injury risk:
    a. The weight of the load,
    b. The size of the load,
    c. The shape of the load,
    d. The number of times the load will be moved, and
    e. The manner in which the load will be moved.
2. Before a worker performs manual handling activities, perform a hazard assessment that considers the worker's physical and mental capabilities to perform the work.
3. If the hazard assessment reveals that there is a potential for musculoskeletal injury, ensure that all reasonably practicable measures are used to eliminate or reduce the potential for musculoskeletal injury.

Manual handling equipment

1. Where reasonably practicable, provide appropriate equipment for lifting, lowering, pushing, pulling, carrying, handling or transporting heavy or awkward loads. Heavy or awkward loads include (but are not limited to) equipment, goods, supplies, persons and animals.

2. Ensure that workers use the equipment provided according to #1.
3. Workers must use the equipment provided for lifting, lowering, pushing, pulling, carrying, handling or transporting heavy or awkward loads.

Adapting heavy or awkward loads

1. If manual handling equipment is not reasonably practicable in a particular circumstance or for a particular heavy or awkward load:
    a. Consider practicable means to adapt the load to facilitate lifting, lowering, pushing, pulling, carrying, handling or transporting the load without injuring workers, or
    b. Otherwise minimize the manual handling required to move the load.

Training to prevent musculoskeletal injury

1. If workers are exposed to the possibility of musculoskeletal injury, ensure they are aware of and provided tools, resources and/or measures to eliminate or reduce that possibility.
2. Tools, resources and measures may include awareness and identification of:
    a. Factors that could lead to a musculoskeletal injury,
    b. The early signs and symptoms of musculoskeletal injury and their potential health effects, and
    c. Preventative measures including, where applicable, the use of altered work procedures, mechanical aids and personal protective equipment.

Office/computer workstation environments

Most employees can effectively improve their workstation setup once they learn how to adjust their furniture. New and current employees are strongly encouraged to complete the online self-assessment tool before the onset of MSI symptoms. This tool will guide employees, independently, through improvements to their workstation setup.

If an employee has unanswered questions, unresolved concerns or are experiencing symptoms of an MSI, they should do the following:

1. Discuss their questions and concerns with their Supervisor.
2. Contact the appropriate person in their department to assist with reviewing and assessing their workstation setup. Some departments have a Furniture Coordination Network Representative (FCN) who may assist. Alternatively, the Safety Engagement Lead in some departments may assist with workstation setup. The Workforce Safety and

Employee Health branch may also be consulted to perform an ergonomic assessment if the employee's concerns cannot be resolved by the self-assessment and/or their local site representative (FCN Representative or Safety Engagement Lead).

3. Workforce Safety and Employee Health, FCN Representative or Safety Engagement Lead may make recommendations to improve the workstation for the individual, including:

    a. Coaching and encouragement of safe work practices to employee.

    b. Addition of workstation accessories (e.g. document holder, telephone headset).

    c. Modification of current furniture and/or the addition of new furniture, such as chairs, to meet ergonomic workstation design principles. If departments are acquiring new furniture, they should consult their FCN Rep who can help to facilitate orders. Also, departments must follow the procurement guidelines for seating products and desk systems.

Early Intervention Program

The main goal of the Early Intervention Program is to address, as early as possible, the symptoms that precede a musculoskeletal injury. This program aims to prevent injuries and to reduce the impact of injuries (e.g. lost time, absenteeism, modified duties). More importantly, the program aims to improve the quality of life for employees.

Several branches throughout the City have partnered with Workforce Safety and Employee Health to offer employees no-cost access to this program. Services provided under the program include physiotherapy, chiropractic services, acupuncture, and massage therapy. A recommended course of treatment is prescribed at initial consultation with the healthcare provider. The treatment is customized for each individual and a set of exercises and treatment techniques put together in order to address the issue. For additional information, contact Workforce Safety and Employee Health or Safety Engagement Lead.

NOISE CONTROL STANDARD

This standard defines minimum requirements for hearing conservation and noise control for City of Edmonton workers. It includes specifications for noise control, audiometric testing and worker training. This standard will serve as the Noise Management Program for the City of Edmonton and works in conjunction with the Personal Protective Equipment Standard. This standard complies with Alberta Occupational Health and Safety legislation.

Responsibilities

Safety Engagement Lead:

- Identify the health hazards associated with noise exposure and assess worker exposure;
- Assist in developing task based Noise Management Program where potential for noise exposure exists;
- Assist areas with implementing engineering, administrative, and personal protective equipment (PPE) controls;
- Notify Occupational Hygiene Consultants of workers with possible noise exposure as soon as possible. Arrange for Occupational Hygiene Exposure Assessment if required.

Director:

- Ensure work sites that have a potential of noise exposure have appropriate hearing protection for all workers;
- Support the implementation of engineering, administrative, and PPE controls to reduce noise exposure.

Supervisor/Foreman:

- Ensure workers are trained in the hazards associated with noise exposure and the correct use of noise control methods;
- Ensure workers are provided with and wear hearing protection, where required;
- Post suitable hazard signage in areas where noise levels may exceed 85 dBA;
- Notify Safety Engagement Lead of workers with possible noise exposure as soon as possible.
- Work with Occupational Hygiene Consultant to determine which workers have the potential exposure to noise and ensure all appropriate workers are added to the Noise Management Program.
- Allow employees to have audiometric testing done (at no cost to the employees) during work hours.

Workers will be responsible to:

- Participate in training;
- Wear and use provided hearing protection in accordance with received training and manufacturer's specifications;
- Forward concerns of noise exposure to supervisor or foreman;
- Use engineering, administrative, and PPE controls in place to reduce noise exposure;
- Participate, as required, in the Noise Management Program.

Workforce Safety and Employee Health will be responsible to:

- Ensure that this standard is reviewed annually;
- Assist areas in determining occupational noise levels;
- Assist in the selection of hearing protection devices;
- Maintain a list of the noise exposure groups in order to provide surveillance of these groups and initiate audiometric testing as required;
- Ensure noise monitoring is conducted to identify potential noise exposed workers in accordance with the requirements of the Alberta Occupational Health and Safety Code, CSA Standard Z107.56-06(2011) *Procedures for the Measurement of Occupational Noise Exposure*, and this Standard;
- Investigate effectiveness of implemented noise controls when notified of a pattern of workers with hearing loss in the area.

Hazard Assessment

Hazard assessment and noise control will be conducted according to the Hazard Assessment and Control Standard. The hazard assessment will identify noise exposure as a hazard and identify the required controls. Hazard assessments will be updated if a change in equipment, process, or physical alterations in the work environment affects the noise level or the length of time a worker may potentially be exposed to noise.

Training

The Alberta Occupational Health and Safety Code considers occupational noise exposure based on the average total exposure adjusted to an 8-hour equivalent (L_{ex}). Any worker exposed to noise levels above 85 decibels (dBA) L_{ex} must be trained/educated in the following:

- proper use of engineering and/or administrative control options

- notification via warning signs of where noise levels exceed 85 dBA
- health effects associated with noise exposure
- selection, use, and maintenance of hearing protection devices to be used
- requirements for audiometric testing and confidentiality of records

Requirements for Noise Management

1. Where noise exposure can or may exceed the occupational exposure limit appropriate engineering and/or administrative controls will be implemented, where practicable.
2. As part of the assessment process, monitoring may be conducted to help evaluate noise levels. All monitoring will be completed in accordance with CSA Standard Z107.56-06(R2011), *Procedures for the Measurement of Occupational Noise Exposure.*
3. Where engineering and/or administrative controls are not practicable or do not decrease noise exposure below the OEL , only Class "A" hearing protection that meets CSA Standard Z94.2-02, *Hearing Protection Devices – Performance, Selection, Care, and Use*, is to be used. Where levels are >105 to 110 dBA L_{ex}, Class A earplug and Class A or B earmuff is required; and > 110 dBA L_{ex}, exposure time must also be limited.
4. Where noise levels can, or may, exceed the OEL , a noise exposure assessment must be completed and documented. Supervisors are responsible for contacting a City of Edmonton Occupational Hygiene Consultant to request the assessment.
5. The supervisor must implement recommended noise control measures when the noise exposure assessment results indicate workers are exposed to noise above the occupational exposure limits (OELs for Noise, Table 1 of Schedule 3, OH&S Code).
6. Results of any noise exposure assessment will be made available to affected workers by their supervisor. Where the assessment is not performed by a City of Edmonton Occupational Hygiene Consultant, a copy of the report must be submitted to Workforce Safety and Employee Health Services to ensure proper record retention. The record of the noise exposure assessment is to be retained for as long as the employer operates in Alberta, as per legislation.
7. Where noise levels exceed 85 dBA, supervisors must ensure signage, that clearly indicate the hazard and that protective equipment is required. Signage will be posted at the entrance or on the periphery of each area.
8. When a worker is no longer exposed to excess noise above 85 dBA L_{ex}, they will be removed from the Noise Management Program.
9. New or renovated work sites must be designed to not generate continuous excess noise levels above 85 dBA, or as low as reasonably practicable.

10. Where practicable, preference will be given to purchasing new equipment that emits noise below 85 dBA.

11. Equipment will be installed and maintained in a manner to achieve the lowest practicable level of noise.

Audiometric Testing

Workforce Safety and Employee Health Services will maintain a list of workers on the audiometric program so they can be recalled, as required, for hearing tests. In addition, WorkforceSafety and Employee Health Services will maintain worker audiometric records and statistics to aid in the overall assessment of the Noise Management Program (Hearing Conservation Program). As per Alberta Occupational Health and Safety Code (Part 16), workers are to have an audiometric test within six months of noise exposure, one year later and every two years thereafter.

Employee Health Services will ensure audiometric testing is conducted in accordance with the Alberta Occupational Health and Safety Code. The workers will be provided with a copy of their test results. These results are confidential medical information and will not be shared with anyone unless worker's written consent is provided.

Employees with abnormal audiograms will have test results referred to an audiologist, and once reviewed by the audiologist, a letter will be sent to the employee.

If a pattern of hearing loss is identified within a group of workers within a specific work area, the supervisor of the area will be advised so that the effectiveness of implemented noise controls can be assessed. This would also include compliance of workers wearing their hearing protection.

If a worker is identified as no longer exposed to excess noise (noise above 85 dBA Lex), they will be removed from the City's Noise Management Program.

Worker's audiometric test results will be kept within Workforce Safety and Employee Health Services for a minimum of ten years.

Resources

- Alberta OHS Bulletin - Noise at the Work Site
- Noise Management (Hearing Conservation) Program
- How to Insert Foam Earplugs
- What is an audiometric test?
- Occupational Exposure Limits for Noise, Table 1 of Schedule 3, Alberta OH&S Code
- Occupational Health and Safety Code - Part 16 Explanation Guide
- Employer's Guide to Occupational Health and Safety
- Worker's Guide to Occupational Health and Safety

PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD

Introduction

This standard defines minimum requirements for the application of Personal Protective Equipment (PPE) within the City of Edmonton (COE). Critical areas within an effective PPE program include selection, fitting, use of, inspection, and maintenance of clothing and equipment. Additional standards are available through hyperlinks regarding Respiratory Protective Equipment, Fall Protection, and Noise Protection.

Requirements

Where the hazard control process has identified the need for PPE as the control option, workers shall utilize PPE as indicated in Part 18 of the Alberta OH&S Code.

1. A formal written hazard assessment, including control measures for the identified hazards, shall be completed and communicated to workers according to Administrative Directive A1117C section 2. Hazard Identification and Ranking. This process shall be done according to the Hazard Assessment and Control Standard.

2. Branches shall ensure that PPE is utilized only after all other practical means of controlling the hazard are reviewed and evaluated with the intent eliminating or controlling the work site hazard through engineering or administrative controls.

3. Branches shall ensure a procedure covering purchase, replacement, maintenance, inspection, use and storage of personal protective equipment is developed and communicated to employees.

4. Employees required to wear PPE shall be trained in the correct use including selection, fit, testing and maintenance. Workers shall also be knowledgeable of PPE they are issued and understand the limitations for which products are designed.

5. Prior to use, employees shall visually inspect PPE for damage and to ensure good working condition. Damaged equipment shall be removed from service and reported to their supervisor.

6. The employee shall wear and maintain their PPE in accordance with the training and instruction they receive.

7. Supervisors shall ensure that damaged equipment is removed from service until it can be repaired or disposed of according to manufacturer's recommendations.

8. Supervisors shall ensure that PPE used by employees is appropriate for the specific hazards that may be encountered during the work.

9. Only ANSI type 2 hardhats (i.e. protects against top and side impacts) that meet CSA Standard Z94.1-05, Industrial Protective Headwear shall be worn by City of Edmonton employees.

10. Fixed side shields will be mandatory in all areas in accordance with CSA Z94.3-07 Eye and face protectors Standard.

11. All herbicide / Pesticide applications shall wear at a minimum a half face respirator with the appropriate approved cartridges.

12. For assistance in determining PPE requirements refer to Appendix 1

PPE - CHAINSAW LEG PROTECTIVE DEVICE (PANTS/CHAPS) STANDARD

Introduction

The City of Edmonton recognizes that the use of a chainsaw poses a significant risk to its employees. The employee's first responsibility is the safe operation of the equipment they are using.

The purpose of this Standard is to provide specifications and performance criteria for leg protection (chainsaw pants or chaps) for City employees using a chainsaw. Leg protection is to be worn in conjunction with eye, hearing, foot and hand protection. "Leg protection" or "leg protective device" means personal protective equipment worn for protection from leg injury due to contact with a moving saw chain.

Types

Leg protection must be of one of the following types:

a) pant type: the protective pad is secured to and held in position by the trousers;

b) chap type: the protective pad is secured to a chap style garment normally worn outside the trousers and secured around the worker's legs.

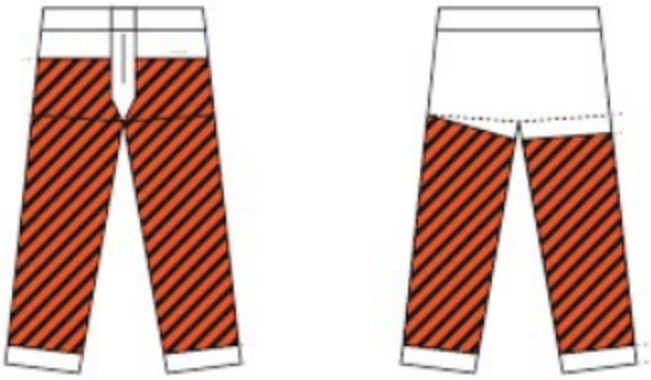
Requirements

Where the hazard control process has identified the need for leg protection as the control option, workers shall utilize PPE as indicated in the Alberta OH&S Code.

1. Leg protection must be constructed of materials suitable for the intended application.
2. Leg protection
    a. must not unduly restrict the maneuverability of the operator, and
    b. must not shrink more than 10% when cleaned in accordance with the manufacturer's instructions during its service life.
3. North American styles of leg protection must bear a legible label that provides for a minimum "threshold chain speed" test of 3,600 ft/min.
4. European styles of leg protection must bear a legible label that provides for a minimum "threshold chain speed" test of 20 m/sec (BS EN 381-5 Class 1). The European classification for City approved saw pants or chaps is detailed as follows:
    a. BS EN 381-5 (requirements for leg protection) Type C (360 protection) Class 1 (20 m./sec. TCS).
    b. Threshold Chain Speed (TCS) Test: the protective pad must be able to consistently resist being cut-through by a running saw chain operating at a speed of 1 098

m/min (3 600 ft./min – North American or 18.29 m/sec – European) or more for at least 1.01 seconds.

5. The protective pad of leg protection must provide protection to the front and back of both legs (360º).



6. When leg protection is worn by an operator, the protective pad (cut resistant material must extend at minimum from the crotch to within 3" of the ankle, and
7. must be effectively secured in this position (pant style, chaps with buckles or zipper).
8. Instructions on the proper care, maintenance and repair of leg protection must be provided by the manufacturer. General guidelines include:
    a. Dirt and Grease - Substances such as resin, chainsaw oil, gasoline, might potentially soil the protective inlay and cause the independent protective layers to stick together.
    b. Heat - Direct contact with a heat source (e.g. hot exhaust) can cause a crusting, melting or burning damaging the protective inlay and shortening the independent fibers. Even if the outer fabric is not visibly damaged by a heat source, the fibers that lie beneath may have suffered from the heat resulting in a reduced level of protection.
9. Shrinkage - Shrinkage decreases the level of protection because it might significantly deform the original shape of the protective layer. Do not tumble dry chainsaw protective clothing as it might disturb the shape of the protective inlay lowering efficiency.
10. Repairs – Small repairs of the outer fabric on leg protection is acceptable however, never stitch through the protective inlay (only the outer fabric may be repaired) as this will decrease the immobilization process in case of an accident.
11. Leg protection showing damage that will affect its performance must be removed from service.

Resources

- ASTM F1897 for leg protection for chainsaw users (US)

- EN 381-5: Requirements for leg protectors (Europe)
- BNQ standard CAN/BNQ 1923-450-M91 Leg Protective Devices for Chainsaw Users
- (Canada)
- WorkSafe BC Guidelines Part 8 – Limb and Body Protection

PPE - OCCUPATIONAL VISION CARE STANDARD AND PROGRAM

Prescription Protection Eyeglasses and Dispensing Services

Introduction

The City of Edmonton (the "City") is committed to the health, safety and wellness of its employees, contractors, and the public. The City recognizes that the health and safety of employees and contractors performing services on behalf of the City of Edmonton is of primary importance in all aspects of our operations.

The Occupational Vision Care (OVC) Manuel Insert (ie, Criteria Sheet) was developed with the Alberta Association of Optometrists as part of the City's OVC program for prescription safety eyewear.

This helps ensure that the City of Edmonton maintains an OVC program with consistent safety management practices across all departments to create a safe work environment and comply with the Alberta Occupational Health and Safety legislation and the City of Edmonton's Personal Protective Equipment OH&S (corporate) Standard.

This standard applies to all City departments reporting to the City Manager, and all City employees, including full-time, part-time, temporary and provisional employees and persons acting on behalf of the City such as volunteers, contractors, and consultants.

Program Description

The City's Occupational Vision Care (OVC) program, also known as the Alberta Association of Optometrists EyeSafe program, can provide prescription safety eyewear to City workers that takes into consideration the safety eyewear specifications, the visual demands, and the hazards of the workplace.

The OVC program can also provide occupational vision examinations, as required.

The OVC program ensures that prescription safety eyewear for participating workers meet or exceeds the Canadian Standards Association (CSA) Eye Protection Standard as outlined in the Alberta OHS legislation.

Features

The City OVC Program has the following advantages:

1. The optometrists who are geographically located throughout the province are solely responsible for the total services including the ordering, verifying, and the dispensing of the prescription safety eyewear.

2. The City of Edmonton is guaranteed that safety eyewear meets or exceeds CSA Standards and conforms to any relevant City of Edmonton criteria provided they do not conflict with CSA standards.

3. The Alberta Association of Optometrists and the Alberta Opticians Association are responsible for program administration. The administration requirements of the City of Edmonton are minimal.

4. The cost of the OVC program is similar to alternative safety eyeglass programs which do not include the professional services of optometrists. The OVC Program is also much less expensive than non-program costs normally experienced when employees seek the services of retail dispensaries for their safety glasses.

5. Employees are not restricted to one manufacturer or style of safety frame. Approved frames are chosen from a number of manufacturers to best meet style and fitting considerations.

6. Optometric offices are established throughout the City of Edmonton and outlying areas.

7. There are only two visits required for employees to obtain their prescription safety eyewear. One visit for the counseling, lens prescription and frame selection, and a second visit for the final fitting and dispensing. There is no need to take the lens prescription to a separate optical outlet which necessitates an extra visit.

OVC Invoicing

The Alberta Association of Optometrists and the Alberta Opticians Association collect the billing from Optometric offices, fabricating laboratories, material suppliers, etc., ensures accuracy in charges and sends the City of Edmonton a billing once per month for all those employees who have utilized the program.

The City of Edmonton pays one monthly billing directly to the Alberta Association of Optometrists or the Alberta Opticians Association.

At the present time the City has requested that billing be directed to individual departments. The Alberta Association of Optometrists and the Alberta Opticians Association has accommodated this request. The Alberta Association of Optometrists and Alberta Opticians Association pay all suppliers, laboratories, optometric etc.

For more information, please refer to the Occupational Vision Care Manual Insert (ie. Criteria Sheet).

The following typical program costs are based on the average priced frame and include professional optometric services; CSA approved safety frames with scratch resistant coated plastic lenses and program administration charges, but does not include charges that *may* be billed to the employee for a vision examination. It should also be noted that it does not reflect extras that may be ordered (special tints or coatings) which would increase the total cost.

All frames meet the CSA standard and come in various sizes and colours.

All prescription safety eyewear require **fixed side shields**.

Availability and design may be limited in some cases due to the manufacturer.

All copies of the OVC fee schedules are available.

The OVC program charges a 10% administration fee to the invoices.

If you have any other inquiries or concerns, please contact your Safety Engagement Lead.

Resources - Occupational Vision Care Program

- OVC Manual Insert- Criteria Sheet
- OVC Administrators

Resources - Legislation

- Alberta Occupational Health and Safety Legislation

Resources - City

- Occupational Health and Safety Administrative Directive A1117C
- Procurement of Goods, Services, and Construction Administrative Directive A1439C
- City of Edmonton's Personal Protective Equipment OH&S (corporate) Standard

PPE - OVC PROGRAM

OVC Prescription Safety Glasses Procedure

Employees who wear corrective glasses and work at jobs requiring eye protection are required to wear either prescription CSA approved safety glasses (with side shields), safety cover goggles or full face shield over regular glasses.

Eligibility

Any full time employee whose duties involve hazardous work as prescribed by their hazard assessments are qualified to participate in the Occupational Vision Care Program. Safety glasses which are professionally measured and fitted to the individual are recommended for permanent employees whose job duties require frequent eye protection.

Provisional and temporary employees who are required to wear eye protection may qualify for this program if approved by their Director.

Note: These specially fitted glasses, with fixed side shields are available through the Alberta Association of Optometrists and the Alberta Opticians Association.

Process

This procedure is to help guide those managers, supervisors and employees through the process of providing prescription safety glasses.

1. All prescriptions safety glasses are to be provided under the Alberta Association of Optometrists or the Alberta Opticians Association.
2. All prescription safety glasses are to be CSA certified under the Occupational Vision Care Program.
3. Cost of the eye examination will be paid by either the employer or the employee depending upon the specific union contract of the employee making the request.
4. The City will cover the cost of the prescription safety eyewear as outlined in the OVC Manual Insert document and will be charged to the Branch's budget.
5. Employees who are required to wear prescription safety glasses as part of their job and wish to participate in the program are required to provide a hazard assessment of their hazards and jobs duties.
6. If a hazard assessment is completed, reviewed and signed off by the supervisor, the information is to be given to the OVC Program Administrators for each area.

7. Information and forms can be obtained from the OVC Program Administrator in each area

8. OVC Program Administrators, upon receiving the request from the employee's supervisor, will complete the authorization form and return it to the employee making the request.

9. The employee, upon receiving the authorization form, can visit an Optometrist of their choice from a list of optometrists that participate in the program.

10. The Optometrist will do the examination, assist the worker in frame selection and send the prescription to the lab to make the glasses.

11. In the event of changing eye conditions or damages due to job related activities, replacement prescription glasses or lenses will be provided by authorization of the supervisor

12. Photochromatic lenses are not allowed under the program.

13. Replacement glasses or lenses are available every two years if needed.

14. Employees electing not to participate in the plan must continue to wear goggles, safety glasses or face shields over their dress glasses while engaged in those work activities requiring eye protection.

15. Goggles, face shields, or other safety equipment and/or controls are still required overtop of prescription safety glasses for the work activities that dictate the needs as outlined in the Occupational Health and Safety Act, Code and Regulations, e.g. grinding, cutting, welding.

PPE - RESPIRATORY PROTECTIVE EQUIPMENT STANDARD

This Respiratory Protective Equipment Standard applies to the use of all respiratory protective equipment in the City of Edmonton, including, but not limited to, filtering facepiece respirators (disposable masks with a minimum NIOSH rating of N95), half-mask air purifying respirators, full-face air purifying respirators, powered air-purifying respirators, air-line respirators and self-contained breathing apparatus (SCBA). This standard works in conjunction with legislated respirator requirements set forth in the Alberta Occupational Health and Safety Code (Part 18).

Respiratory protection shall be used where an airborne inhalation hazard cannot be eliminated or controlled through engineering or administrative controls. Respiratory protection may also be used while long-term controls are being implemented and during emergencies.

Responsibilities

Safety Engagement Lead:

- Create a Code of Practice for the tasks that will involve respirator use;
- Recommend the appropriate respirator for identified hazards;
- Ensure appropriate respiratory protective equipment is approved by NIOSH and available;
- Ensure workers are trained in the correct use, care, limitations and maintenance of their respirator;
- Ensure workers use respirators in accordance with this standard, training received and manufacturer specifications;
- Ensure emergency escape respirators, if required, are inspected on a monthly basis;
- Ensure change-out, inspection, and cleaning schedules are being adhered to.

Manager/Director:

- Work with Safety Engagement Lead and/or area safety assistants to create a task based codes of practice;
- Ensure appropriate respiratory protective equipment is available;
- Support the supervisors and/or foremen in ensure workers are clean shaven when wearing a respirator is required .

Supervisor/Foreman:

- Ensure workers are made aware of airborne hazards and know which respirators are required;

- Ensure workers that require the use of respirators, are fit tested and have received clearance to wear a respirator from an Occupational Health Nurse (OHN) with Corporate Safety and Health Services;
- Ensure appropriate respiratory protective equipment is approved by NIOSH and available;
- Ensure workers under their supervision are trained in the correct use, care, limitations and maintenance of their respirator;
- Ensure workers under their supervision use their respirators in accordance with this Standard, training received and manufacturer specifications;
- Ensure emergency escape respirators, if required, are inspected on a monthly basis;
- Ensure change-out, inspection, and cleaning schedules are being adhered to;
- Notify the City's Occupational Health Nurse of workers requiring further follow up, as per the instructions on the Respirator User Health Screening Form;
- Ensure that workers are clean shaven if the work activities they are involved in require a respirator.

Respirator Fit Tester:

- Ensure respiratory protective equipment is approved by NIOSH;
- Ensure workers that are required to be fit tested complete the Respirator Health Screening Form prior to being fit tested and are cleared to wear a respirator prior to fit testing. Please see the Health Screening Fit Testing Flow Chart
- Trained workers in the correct use, care, limitations and maintenance of their respirator during the fit test;
- Ensure workers use their respirators in accordance with this Standard, training received and manufacturer specifications;
- Train workers on specific change-out, inspection, and cleaning schedules as related to the work area;
- Train workers on the importance and requirement of being clean shaven while wearing a respirator.

Worker:

- Complete the Respirator User Health Screening form and provide a signed copy to supervisor / foreman. If Part 4 (Respirator User's Health Conditions) of the form is checked **Yes**, submit the form to the corporate Occupational Health Nurse according to the instructions on the form;

- Participate in fit testing for the appropriate respirator prior to use;
- Inspect respirator before and after each use and perform user seal checks;
- Immediately report defects or damage of respiratory protective equipment to their supervisor/foremen and remove from service any respirator they find defective;
- Follow use and care for respiratory protective equipment in accordance with received training and manufacturer specifications;
- Be clean-shaven where a tight fitting facepiece respirator would seal to the skin of the face.

Corporate Safety & Employee Health:

- Ensure this standard is reviewed annually;
- Recommend the appropriate respirator for identified hazards;
- Create filter change-out schedules for areas with known contaminant concentrations;
- Maintain quantitative and qualitative fit testing equipment owned by Corporate Services;
- Ensure written instructions and training tools are available to the departments;
- Facilitate "Respirator Fit Testing Train-the-Trainer" course;
- OHN will review all Respirator User Health Screening forms that workers have checked "Yes", indicating they have a medical/health condition that might affect their ability to use a respirator;
- If applicable, advise supervisor/foreman and worker of any restrictions and refer employee to Disability Management Consultant for further follow-up.

Health Surveillance

1. All workers who are required to wear a respirator must complete a Respirator User Health Screening Form. This form is **confidential** between the Occupational Nurse, Occupational Medical Consultant and the worker. Following the review of the form, the worker may be referred to their Disability Management Consultant and may be required to follow-up with their family physician. The health screening form is to be completed every two years in conjunction with bi-annual fit testing.
2. For workers exposed to silica and asbestos please refer to Respirable Crystalline Silica Standard for health assessment requirements.

Hazard Assessment

Hazard identification, and assessment will be conducted according to the Hazard Assessment and Control Standard. If there is a potential of an inhalable hazard, it must be identified on the hazard assessment, along with required controls.

Respirator Selection

Information collected during the hazard assessment will be used to select an appropriate respirator. The hazard assessment, when used for respirator selection, will take into consideration the following items:

- airborne contaminants that may be present
- physical state of the contaminants
- measured or expected concentration of contaminant in the air
- occupational exposure limits for the contaminants
- health effects of the contaminants and routes of exposure
- warning properties of the contaminants (i.e. odor, taste and irritation)
- whether an oxygen deficiency or Immediately Dangerous to Life and Health (IDLH) atmosphere exists or may occur
- length of time the respirator use is required
- need for emergency escape

Respiratory protective equipment used at a worksite must be selected in accordance with CSA Standard Z94.4-02, *Selection, Use and Care of Respirators*, and documented using the City's Hazard Assessment and Control Form. The selection process must be carried out for both routine-use and emergency-use respirators. The respirator decision flow chart from CSA Standard Z94.4-02 may be used to aid in the selection process.

Respirator Fit Testing

1. Any user of a tight fitting facepiece respirator must pass an appropriate fit test on every make and model of respirator they are required to use, before using that equipment in the workplace. Fit testing is not required for respirators with helmet or hood type head assemblies. Supervisors must ensure that workers using hoods are supplied with air that is positive pressure not exceeding 140kPa, and air meets the Compressed Breathing Air Quality Standard.
2. Ensure the worker has received clearance to use a respirator from the Occupational Health Nurses with the Corporate Safety and Health Services prior to using a respirator.

3. Respirator fit testing will be conducted in accordance with the most current applicable edition of the Canadian Standards Association (CSA) Standard (Alberta OHS Code 2009 references CSA Standard Z94.4-02), *Selection, Use and Care of Respirators*, including Appendix B and C. Appendix B refers to qualitative fit test procedures while Appendix C refers to quantitative fit test procedures.

4. Due to the high protection factor required for Self Contained Breathing Apparatus (SCBA), only quantitative fit testing methods will be used for these tight fitting types of respirators.

5. Fit testing must be conducted before the worker is given the respirator for use in the workplace and repeated at least every two years, which would include the respirator user health screening.

6. Fit testing must be repeated when there is a change in the respirator face-piece (brand, model, type, etc.) or there has been a change in the user's facial structure that could potentially affect the fit of the respirator (significant weight loss/gain, facial/dental surgery, etc.).

7. Respirator fit tests must be documented and kept on file by each department for a minimum of two years. At a minimum, the fit test record must contain the following information:

    - name of the person tested
    - date of tests
    - specific make, model, and size of respirator
    - type of fit test and, if applicable, test agent used
    - pass/fail criteria and results of the fit test
    - list of additional personal protective equipment worn during the fit test
    - comments on unusual facial features, dentures, corrective eyewear, facial jewelry, facial hair, cosmetics, or any particular fitting difficulties
    - name of the person conducting the fit test

8. External Fit Test Providers may be used to fit test City of Edmonton Employees however, they must adhere to this standard.

Training

All respirator users must be trained on how to use and care for their respiratory protective equipment. At a minimum, the training must include:

- cartridge and filter selection

- restrictions on interchanging manufacturer's parts
- how to don (put on) and doff (take off) a respirator
- conduct a user seal check
- inspect the respirator for damage
- store the respirator properly
- limitations of the respirator
- indications of respiratory protective equipment failure

The responsibilities and other requirements for training are outlined in the Administrative Directive and its accompanying Standard on Orientation and Training.

Workers trained as Fit Testers within the City of Edmonton, must recertified through the internal Respiratory Fit Test Train-the-Trainer Course every 5 years.

General Care and Use

1. Only NIOSH approved respirators will be used. If a workgroup would like to use a respirator that has not been approved by NIOSH, they must first obtain written approval from Alberta's Director of Occupational Hygiene. Prescription eye inserts are to be made available for workers requiring full face respirators.
2. Nothing shall be allowed to interfere with the facial seal of a tight fitting facepiece respirator, including hair and corrective eyewear.
3. Users will perform a positive pressure and negative pressure seal check each time they don a tight fitting facepiece respirator to ensure they have obtained an effective facial seal. A user seal check does not replace the requirement for a respirator fit test.
4. Respirator users shall not remove their facepiece or break the seal of their respirator while in a contaminated atmosphere.
5. If the contaminant present is capable of causing eye irritation or damage, the eyes must be protected by wearing a full-face mask, helmet, or hood or by providing another means of acceptable eye protection.
6. Air-supplied respirators, including SCBA and airline respirators, must use breathing air that meets the requirements of Table 1 of the CSA Standard Z180.1-00, *Compressed Breathing Air and Systems* and does not contain a substance in a concentration exceeding 10% of the applicable OEL. This does not apply to substances listed in table 1 of the CSA Standard.
7. Air supplied respirators must maintain a positive pressure in the facepiece.

8. SCBA cylinders will have a minimum rated capacity of 30 minutes and will have a rated service time in excess of the time needed to escape from a contaminated area.

9. SCBA must be fitted with low air pressure alarms.

10. Airline respirators must be fitted with an auxiliary supply of air.

11. SCBA users must work in teams of two or more with a means of communicating with each other. One of the team members must remain outside of the contaminated area to summon emergency assistance, if required. This requirement does not apply to SCBA used for emergency escape purposes.

12. Respirator parts from different manufacturers may not be interchanged.

13. The respirator user shall adhere to the respirator manufacturer's instructions to ensure the equipment is used in a manner for which it was designed.

14. During an emergency, an escape respirator is designed to protect the worker from specific airborne contaminants present and provide an oxygen content of 19.5% or greater by volume.

15. Filtering facepiece respirators (disposable masks with a minimum NIOSH rating of N95) must be discarded after use. N rated respirators can not be used in environments where oil has the potential of becoming airborne.

Change-out Schedules

1. Where sufficient data on the concentration of the contaminant and exposure times exist, change-out schedules for chemical cartridges will be calculated. Where a change-out schedule can not be calculated, the user group will establish a reasonable replacement schedule. In addition, chemical cartridges must be replaced immediately when contaminant can be detected inside the respirator, when the respirator has been used for emergency escape, or the chemical cartridge appears damaged.

2. Respirator and the associated cartridges or filters must be changed when they become soiled, damaged, or breathing resistance becomes too great,

3. A system to identify and track compressed air cylinders will be established by each department to ensure that all cylinders are used on a regular basis. Cylinders intended for use in a hazardous area, that haven't been used in any three month period, will be slowly depressurized and recharged with breathing air that meets the requirements of the most current edition of CSA Standard Z180.1-00 (R2005), *Compressed Breathing Air and Systems.*

Inspection Schedules

1. Respirator users shall inspect their respirator before and after each use for cleanliness and proper working condition.

2. Respirators designated for emergency use will have a documented inspection conducted at a minimum frequency of once per month.

3. Airline respirators, equipped with gas sensors (for example, carbon monoxide sensors), will have their sensors calibrated and replaced in accordance with the manufacturer's specifications. See the Compressed Breathing Air Quality Standard.

4. All SCBA cylinders must be inspected and tested by a qualified person in accordance with CSA Standard Z180.1-00, *Compressed Breathing Air and Systems*.

5. A regular inspection and maintenance schedule must be established and maintained by all departments using SCBA.

Defective respirators shall be immediately removed and tagged as out of service and either repaired or destroyed.

Cleaning Schedule

1. The respirator user must wipe off their respirator to remove any deposited contaminant after exiting a contaminated area and before storing their respirator. A respirator cleaner or a mild soap and water solution may be used. Products containing lanolin, alcohol, and abrasive cleaners must not be used to clean respirators as they can cause damage to the respirator.

2. All respirators must be thoroughly cleaned and disinfected **at least twice a year**. Cleaning procedures outlined in Appendix F of CSA Standard Z94.4-02 will be used.

Storage

1. The respirator and the associated cartridges or filters must be stored in a manner that prevents contamination, deformity or damage during storage. This includes protecting the respirator from direct sunlight, ozone, extreme temperatures, vermin and damaging chemicals during storage (e.g. in a resealable plastic bag stored in a locker).

2. Breathing air cylinders will be stored and secured from movement to ensure the protection of the valve assembly.

Resources

- Alberta Occupational Act, Regulation and Code
- Alberta Occupational Health and Safety Code - Part 18 Explanation Guide
- RPE – An Employer's Guide from Alberta Workplace Health and Safety
- Respirator Selection Flow Chart
- Respirator Filter Classifications
- Color Coding of Respirator Cartridges
- Respirator Qualitative Fit Test Procedure using Bitrex
- Respirator Quantitative Fit Test Procedure using a Portacount
- Respirator Health Screening Form

- Cleaning Procedure from CSA Z94.4-93
- Respirator User Health Screening and Fit Testing Flow Chart

RESPIRABLE CRYSTALLINE SILICA STANDARD

Introduction

This standard provides the minimum requirements for protection of employees, who are involved in operations where respirable crystalline (quartz) silica exposure exists. This standard does not apply to the use of amorphous silica that contains less than 0.1% by weight crystalline quartz silica. This standard operates in conjunction with legislated silica requirements set forth in the Alberta Occupational Health and Safety Code. This standard is not a Code of Practice, although can be used as a guideline to create a Respirable Crystalline Quartz Silica Code of Practice specific to the area. For the purposes of readability, respirable crystalline quartz silica will be referred to as 'silica' for the remainder of this standard.

Responsibilities

Safety Engagement Lead:

- Be aware of how and where silica can be found in the workplace and the health hazards associated with silica exposure
- Determine if workers in their areas could be exposed to silica and how many days in a year they may be exposed
- Ensure the hazard assessment reflects silica exposure if there is a potential for worker exposure. Make sure it reflects the controls and silica exposure control plan that is required when working with silica
- Assist director in developing task based silica exposure control plan where potential for silica exposure exists
- Notify an Occupational Health Nurse of workers with possible silica exposures as soon as possible
- If it is determined from an occupational hygiene assessment that employees need to be on the silica surveillance program (health assessments), work with the supervisors and an Occupational Health Nurse to ensure appropriate people are added and continue with the program.

Manager/Director will be responsible to:

- Ensure the development of site specific work procedures for silica
- Ensure occupational hygiene assessments are conducted, where required, as per the Occupational Hygiene Exposure Assessment Plan, to ensure compliance with the Alberta Occupational Health and Safety Legislation and to ensure the effectiveness of the silica controls
- Work with the Safety Engagement Leads and Occupational Hygiene Consultants to create a Silica Code of Practice for the tasks that might expose workers to silica.
- Provide workers with proper personal protective equipment (PPE) required to conduct the work safely.

Supervisor/Foreman will be responsible to:

- Ensure that employees follow the work site Silica Code of Practice and specific work procedures for silica
- Ensure that employees have been adequately trained and provided with PPE (including protective clothing that protects other clothing worn by the worker from contamination)
- Notify an Occupational Health Nurse of employees requiring health assessments (workers conducting activities that have potential silica exposure) based on the occupational hygiene report and when there are new hires. When new hires start in a position that require a health assessment, the new hire names need to be sent to an Occupational Health Nurse
- Designate and maintain a restricted area where needed
- Coordinate work activities to reduce the risk of silica exposure
- Ensure workers are competent in the use and care of PPE and following the code of practice
- If possible, isolate activities that produce airborne silica dust that could affect other workers
- Allow employee to have their health assessment done, at no cost to the employee, during work hours. This includes the pulmonary function test, chest x-ray or any further follow-up requested from the Occupational Medical Consultant

Employees will be responsible to:

- Follow the Silica Code of Practice and specific work procedures.
- Demonstrate competency with respect to use and care of respirators and the operating procedures.
- Complete a health assessment. An employee has the right to refuse to undergo the assessment by completing the Refusal to Participate Form (Fibrosis Surveillance Program) and contacting the Occupational Health Nurse

Workforce Safety and Employee Health will be responsible for:

- Ensure that this standard is reviewed annually.
- Assist departments in determining the designation of a restricted area.
- Assist departments in creating a Silica Code of Practice.
- Maintain a list of employees requiring the health assessment and coordinate obtaining these health assessments
- Perform occupational hygiene assessments in areas where a potential for silica exposure exists.
- Assist areas in determining if workers are conducting work with products that contain silica.
- Assist with control implementation to reduce worker exposure to silica (elimination, engineering, admin, PPE).

- Provide information sessions for silica that provide information on the hazard, health effects and how to protect the workers.

Hazard Assessment

Hazard assessment and control for silica will be conducted according to the Hazard Assessment and Control Standard, as well as the City Administrative Directive on Hazard Assessment. If there is a possibility of silica exposure, it must be identified on the hazard assessment, along with required controls.

Training

Any employee exposed to silica must be trained/educated in the following:

- Health effects associated with silica exposure
- Control options (ie. ventilation, wet handling methods, personal protective equipment).
- Safe use and handling
- All site specific work procedures

Workforce Safety and Employee Health can assist with this process

Requirements for Silica Use and Handling

1. The use of silica will be eliminated where practicable.
2. silica will NOT be used in abrasive blasting operations.
3. Where the silica hazard cannot be eliminated, the supervisor should look at changing engineering controls, work practices and/or PPE use.
4. Where the use of silica can not be eliminated, a Silica Code of Practice will be developed specific to the work activity. The Silica Code of Practice shall address as a minimum:
    - Safe handling requirements
    - preventative measures (procedures of proper equipment use and details for performing tasks in order to reduce risk of silica exposure)
    - spill response
    - PPE requirements
    - emergency procedures and contacts
    - decontamination requirements of workers and equipment
5. Occupational hygiene assessments shall be conducted as required to ensure adequate controls are utilized. Any air monitoring shall be conducted as per the NIOSH method and in accordance with the Occupational Hygiene Program.

6. If the air monitoring results at a work site are at or above the OEL, this work site is considered a restricted area (see additional considerations listed below).

Requirements for a Restricted Area

If the airborne concentration of silica at the work site is at or above the OEL, this work area will be classified as a restricted area.

1. All entrances to the restricted area will be signed as follows:

    - Authorized personnel only
    - Silica exposure hazard
    - Eating – Drinking – Smoking Prohibited

    This signage shall remain posted until the area no longer meets the requirements of a restricted area.

2. Facilities must be provided for employees to decontaminate upon leaving the work site.

3. Employees in a restricted area are required to wear the provided protective clothing and must ensure that street clothing is not contaminated by silica. The supervisor is responsible for ensuring protective clothing is disposed of or laundered.

4. All employees must decontaminate upon leaving a restricted area.

5. Any employee who is required to work in a restricted area for 30 work days or more in a 12-month period is required to have a health assessment conducted.

    - Health assessment must be conducted within the 30 day time frame and then every 2 years thereafter. This includes a health history, chest x-ray, pulmonary function test, a physician's interpretation and explanation of the results, and a letter from the physician sent to the employee.
    - Supervisors are responsible to contact an Occupational Health Nurse of employees requiring a health assessment. They should also update the Occupational Health Nurse when new employees need to be added to the silica surveillance program
    - An employee has the right to refuse to undergo the health assessment by completing a Refusal to Participate Form (Fibrosis Surveillance Program) and contacting an Occupational Health Nurse
    - If an employee was exposed to silica at a previous employment and received a health assessment within the immediately preceding two years, the employee must inform an Occupational Health Nurse of the date of that health assessment as soon as possible
    - Health assessment results are confidential medical information and will not be shared with anyone besides the Occupational Health Nurse and Occupational Medical Consultant, unless the employee's written consent is provided

- If an employee no longer works in a restricted area, they still require health assessments every two years as ongoing monitoring

Respirators

Where airborne concentrations of silica are at or above the action limit (concentration or level of a substance at which it is deemed that safety actions should take place. The value is 50% of the OEL), employees are required to wear, at a minimum, an N95 air purifying respirator and be fit tested in accordance with the City of Edmonton's Respiratory Protective Equipment Standard.

Greater levels of protection may be required depending on air monitoring and/or hazard assessment results.

For workers carrying out abrasive blasting operations, the supervisor will ensure that the worker is provided with a hood supplied with air that is positive pressure not exceeding 140 kPa.

Waste

Every work site will be kept free of unnecessary accumulations of silica.

All waste will be disposed of in accordance with the requirements of Alberta Environment and Parks and in accordance with Enviso Procedures.

Measures for Uncontrolled Release Prevention and Response

To prevent the uncontrolled release of silica or in the event of an uncontrolled release, the following procedures are recommended as a supplement to site specific work and emergency procedures:

- Isolate the work area
- Protect the workers
- Minimize the release of silica
- Ensure adequate clean-up and decontamination
- Proper incident reporting

Resources

- Crystalline Silica Hazard Information Bulletin
- Hazard Assessment and Control Standard
- Respiratory Protective Equipment Standard
- Health Surveillance

RESTRICTED & CONFINED SPACES STANDARD

Introduction

The entry of restricted and confined spaces is a necessary part of the ongoing operation and maintenance activities in the City of Edmonton (CoE). These spaces can be extremely hazardous to the health of workers who are not aware of the hazards and the safe work practices and procedures to perform their work safely. This Standard covers the minimum requirements and must be used in conjunction with Alberta (AB) Occupational Health and Safety (OH&S) Act, Regulation and Code, the OH&S Code Explanation Guide and the AB OH&S Bulletin "Guideline for Developing a Code of Practice for Confined Space Entry".

Please contact your area Safety Engagement Lead for operational specific permits.

Code of Practice - Confined Spaces

1. A Code of Practice is a written document that describes the procedures to be followed to ensure workers safely perform work in a confined space.
2. A code of practice must be developed based on the requirements outlined in the AB Code, Part 5 Confined Spaces and Part 10, Section 169 Hot Work.
3. An inventory identifying all existing confined space work locations must be developed and updated on a regular basis so that workers can be made aware of the hazards and reminded that special requirements apply. Refer to the Decision Flowchart to determine the type of space.
4. When practical to do so confined spaces must be labeled with a sign that is posted at each entrance which states: "Danger Confined Space - Enter by Permit Only"
5. All workers, to whom the code of practice applies must receive appropriate training with respect to the code of practice so that they are able to comply with its requirements.
6. Every worker involved in any aspect of a confined space entry must comply with the requirements and procedures in the code of practice.
7. The code of practice must be available to the workers at the work site.
8. A code of practice is generally specific to a particular confined space. However, if the hazards for the confined spaces are similar and require similar procedures, a single code of practice may be developed for multiple confined spaces.

Hazard Assessment

1. A written hazard assessment must be completed by a competent person prior to entering a restricted or confined space to identify and assess the hazards to which the worker is likely to be exposed to while in the restricted or confined space. Refer to the Classification and Control Table to assist in determining the required controls.

2. When the hazard assessment is completed, hazard controls shall be put in place that specify:
    - the type and frequency of inspections and tests necessary to determine the likelihood of worker exposure to any of the identified hazards;
    - the safety and personal protective equipment required to perform the work; and
    - the identification of the personal protective equipment and emergency equipment to be used by a worker who undertakes rescue operations in the event an emergency.
3. The hazard assessment must be signed and dated by the competent person who completed the hazard assessment, and by the workers affected by the hazards to verify that they have been informed of the hazards and the methods used to control or eliminate the hazards.
4. Hazard assessments completed for restricted and confined spaces must be reviewed at regular intervals to prevent the development of unsafe working conditions.

Training

1. All workers assigned duties associated with restricted or confined space entry must be trained in hazard recognition, the safe performance of the assigned duties, rescue procedures and the use of the safety equipment.
2. Records of training must be retained for as long as the worker in question is expected to perform work within restricted or confined spaces.
3. The rescue and evacuation workers required to respond to a restricted or confined space emergency must be trained in:
    - emergency response appropriate to the worksite and potential emergencies;
    - the use of appropriate emergency response equipment; and
    - procedures appropriate to the restricted or confined space in order to carry-out an effective rescue in accordance with the AB OH&S Code, Part 7 Emergency Preparedness and Response.

Entry Permit System - Confined Space

1. A Confined Space Entry Permit is a document that certifies that a competent person has evaluated all potentially hazardous conditions, and the necessary protective measures have been implemented to ensure the safety of all workers.
2. A worker must not enter a confined space without a valid entry permit.
3. A confined space entry permit must be prepared and signed by a competent worker, and conspicuously posted at the entrance to a confined space or where reasonably practicable.

4. A single entry permit can be used for a number of identical confined spaces.
5. An entry permit is valid for a specified period of time unless the work is completed sooner, continuity of responsible supervision is broken, or the work is interrupted for a significant time.
6. The competent person responsible for completing the permit must ensure that the:
    - confined space has been properly isolated and prepared according to the applicable code of practice and hazard assessment;
    - permit covers all aspects of the entry; and
    - workers involved understand the hazards and controls associated with the confined space.

Protection - Hazardous Substances and Energy

1. Workers within a restricted or confined space must be protected against the release of hazardous substances or energy that could harm them in accordance with the Alberta OH&S Code, Part 15, Managing the Control of Hazardous Energy.
2. No worker shall enter a restricted or confined space unless adequate precautions are taken against drowning, engulfment, entrapment, or other hazards presented by free flowing material.
3. Workers must be protected from hazards created by traffic in the vicinity of the restricted or confined space.

Atmospheric Testing

1. If the hazard assessment identifies a potential atmospheric hazard, a person competent in atmospheric testing must perform a pre-entry atmospheric test of the confined space. Pre-entry test results must be documented in writing.
2. Continuous monitoring or periodic testing may be required, as determined by the hazards. Periodic test results must be documented.
3. Re-testing must be completed as often as necessary to ensure the environment remains safe for entry.
4. Testing must be performed using calibrated test instruments appropriate for the atmosphere being tested and used in accordance with the manufacturer's specifications.
5. Calibrating and maintaining atmospheric testing equipment shall be the responsibility of the Supervisor.
6. Oxygen content must be between 19.5% and 23% by volume. If this cannot be maintained, then control measures must be put in place.

7. Explosive or flammable gases and vapors must be maintained below 10% of the Lower Explosive Limit (LEL). If the atmosphere can not be guaranteed to stay below 10% LEL, continuous monitoring and effective ventilation is required to maintain the LEL.

8. If the concentration of explosive gas can not be maintained below 10% of its LEL, work shall be discontinued.

9. Test requirements will be dependent on the substances potentially present in the confined space as identified in the hazard assessment. To help in applying this requirement, refer to the Alberta OH&S Code Parts 1 & 4 and Schedule 1.

Ventilation and Purging

1. Where atmospheric testing identifies that a hazardous atmosphere exists, or is likely to exist, the confined space must be ventilated or purged, or both, prior to entry by any worker.

2. Where ventilation or purging is impractical or ineffective in eliminating the hazardous atmosphere, the worker entering the confined space shall use respiratory protective equipment appropriate for the conditions within the confined space.

3. When mechanical ventilation is required to maintain a safe atmosphere in the confined space, the ventilation system must incorporate a method of alerting workers if the ventilation system fails. All workers within the confined space shall receive training in evacuation procedures in the event of a ventilation system failure.

4. Prior to re-entry, after purging or ventilating the space, atmospheric testing shall be conducted to ensure its effectiveness.

Hot Work

1. Hot Work shall not be performed in a restricted or confined space that contains, or is likely to contain, an explosive or flammable gas or vapor.

2. Hot Work inside a restricted or confined space will require continuous atmospheric monitoring and effective ventilation. If the work process does not allow for ventilation, then control measures appropriate to the hazards shall be identified in the code of practice.

Emergency Response

1. A written rescue plan must be in place, readily available and reviewed on site prior to conducting any work in a confined space.

2. A worker must not enter or stay in a restricted or confined space unless an effective rescue can be carried out.

3. Before work in a restricted or confined space is allowed an emergency response plan must be in place and include procedures to be followed if there is an incident or other emergency, including procedures to evacuate the restricted or confined space immediately.

4. Rescue equipment must be stationed within easy access of the confined space.

Tending Worker (Watch Person)

1. A tending worker shall be positioned outside the entrance of a restricted or confined space and must:

    - be in communication with the worker(s) in the restricted or confined space;
    - know the emergency response plan specific to the restricted or confined space;
    - be aware of the hazards associated with the restricted or confined space;
    - alert workers in the restricted or confined space when hazards exist that could cause harm to the workers;
    - keep track of the number of persons inside the restricted or confined space;
    - prevent entry of unauthorized persons into the restricted or confined space; and
    - have a suitable system for summoning assistance.

2. A tending worker must not leave the area until all workers have left the restricted or confined space or another tending worker is in place.

Entry and Exit

1. A safe means of entry and exit must be provided for all workers required to work in a restricted or confined space and to all rescue personnel attending to the workers.

2. A communication system must be established that is readily available to workers in the restricted or confined space that is appropriate to the hazards identified in the hazard assessment.

3. A sign or other effective means that prohibits entry must identify restricted or confined space entry by authorized personnel only.

4. Entering a confined space is defined as breaking the plane (crossing over the opening) of the confined space with any body part or breathing zone (1 foot from mouth or nose).

Retaining Records

Departments are responsible to maintain all written records of the confined space entry and must be retained for a minimum period of:

- one year, if no incident or unplanned event occurred during the entry, or

- two years, if an incident or unplanned event did occur during the entry.

Resources

- Confined Space - Decision Flowchart
- Confined Space - Entry Permit
- Confined Space - Safe Entry Tag
- Guideline for Developing a Code of Practice for Confined Space Entry

WHMIS 2015 (GHS) STANDARD

Introduction

Hazardous Products, as classified in the Workplace Hazardous Material Information System, (WHMIS 2015) may cause a wide range of potential adverse health effects and employees may be exposed through inhalation, contact/absorption, ingestion and/or injection. This standard is written to comply with Alberta Occupational Health and Safety Code Part 29 – Workplace Hazardous Materials Information System (WHMIS).

The purpose of this standard is to govern the purchasing, storage, handling, disposal and training related to potential hazardous product exposure. Enviso Procedures shall supplement this Standard to ensure environmental protection when storing, handling, transporting and disposing of hazardous products and responding to releases.

Requirements

General

The responsibilities for controlling the hazards related to hazardous products are defined in the Administrative Directive (A1117C) Safety Management Framework.

Each hazard assessment report should include hazardous products where the potential for exposure and/or adverse health effects exists. The hazard assessment will be used to determine appropriate storage, handling and disposal procedures required, including the use of personal protective equipment (PPE), spill containment, first aid and facilities needed for employees to remove contaminants. The hazard assessments will be conducted in accordance with the City of Edmonton's Hazard Assessment and Control Standard, Hazard Identification and Ranking Procedure.

Effective engineering, administrative, or PPE controls must be in place before a hazardous product may be used. Alberta OHS Code: Section 9 Hazard elimination and control Subsection 9(1) Eliminate or control.

All City of Edmonton employees are responsible for ensuring exposure to Occupational Exposure Limits (OELs) are kept as low as reasonably possible and do not exceed the OELs set forth in Schedule 1, Table 2 of the Alberta Occupational Health and Safety Code. An Occupational Hygienist with Workforce Safety and Employee Health Services can assist in determining exposure.

When an OEL has been exceeded as determined by an Occupational Hygiene Consultant with Workforce Safety and Employee Health Services, the cause of the exposure will be immediately controlled to protect workers from further overexposure. The incident must be investigated in accordance with the Incident Investigation Standard.

No worker is permitted to eat, drink, or smoke in an area contaminated by a hazardous product.

When hazardous product substitutions are made, a product that has more adverse health effects may not be substituted. Workforce Safety and Employee Health Services can be consulted to review the new hazardous product Safety Data Sheet (SDS).

Use of hazardous products in confined or restricted spaces will require a hazard assessment to be conducted by a competent individual prior to entering the space and must follow the Restricted and Confined Spaces Standard.

Departments will ensure compliance with this standard, which will be measured at least annually through audits, work site safety committee inspections, or other effective means.

This standard is to be reviewed annually by Workforce Safety and Employee Health Services and a City of Edmonton Safety Engagement Lead.

Training

All employees using controlled products will receive training in (WHMIS 2015) and instruction on operational procedures established to prevent or minimize exposure to hazardous products, which includes safe storage, use, and handling.

All employees handling hazardous products will be trained in labeling requirements and how to read SDS. Training records will be documented and maintained In the Learning Management System (LMS).

Employees are required to use the training received and follow any procedures established for the safe handling of hazardous products.

Labeling

The hazardous product or its container must be clearly identified with either a supplier or workplace label and stored in a manner that does not present a hazard to workers. Employees must immediately notify their supervisor when a label has become illegible or fallen off, so that the supervisor can ensure a new label is applied. A supplier label may not be removed if any amount of the controlled product remains in the container. Empty containers are to be disposed of as per the SDS requirements and are not to be reused for other purposes.

Labeling requirements will meet the Alberta Occupational Health and Safety Code, (Part 29). If a controlled product is being transferred via piping, vessels, conveyor belt, etc., labeling is not required if the transfer system has another means of product identification (ex. colour coding) and employees are trained in the identification method used.

Safety Data Sheet (SDS)

Corporate Procurement and Supply Services will maintain a database of Data Sheets . It is the responsibility of the supervisor of each section to maintain an ongoing inventory of the hazardous products used in their area and forward a copy of the inventory to Corporate Procurement and Supply Services for the maintenance of the SDS database. All City of Edmonton approved data sheets must be assigned an identification number that begins with an 'S'.

All employees using a hazardous product shall be given access to the SDS for the product(s) being handled. It is their supervisor's responsibility to ensure current data sheets are placed in a location where they are readily available and accessible.

Corporate Procurement and Supply Services (CPSS) will be responsible for notifying users when updated data sheets are available. A copy of outdated data sheets will be archived by CPSS for a period of 75 years.

It is the responsibility of the business area supervisor to forward data sheets for incidental or one-time-use products to CPSS for inclusion in the data sheet database.

Hazardous products that do not have an available SDS may be temporarily received for up to 120 days, while the receiver is actively seeking a data sheet. During that time, the product cannot be distributed and must remain in quarantine. If an SDS has not been obtained in 120 days, the product must be sent back to the supplier.

Transportation

All hazardous products will be transported in accordance with the Transportation of Dangerous Goods (TDG) Regulation and Alberta Environment and Parks as outlined in Enviso Procedures. Those involved in the transportation of hazardous products and/or hazardous waste must be trained in TDG regulation requirements, and any supplemental Enviso training on hazardous waste management.

Disposal

Hazardous product waste generated at the work site must be labeled or identified by some means and the workers trained in the safe storage and handling of the waste. All hazardous product waste will be disposed of in accordance with Alberta Environment and Parks, and Enviso Procedures.

Resources

- Alberta Act, Regulation and Code
- Canadian Center for Occupational Health and Safety WHMIS
- Hazardous Products Act
- Hazardous Products Regulations

- OH&S City Standards & Guidelines
- WHMIS 2015 - Hazard Classes and Categories
- WHMIS 2015 Pictograms
- WHMIS 2015 Fact Sheets
- Enviso Procedures (https://onecity.edmonton.ca/safety_operating/enviso.aspx)

WORKING ALONE (CITY) STANDARD

Introduction

The City of Edmonton (the "City") is committed to the health, safety and wellness of its employees, contractors, and the public. The City recognizes that the health and safety of employees and contractors performing services on behalf of the City of Edmonton is of primary importance in all aspects of our operations. This standard was developed to help ensure that the City of Edmonton recognizes the working alone hazard and develops and maintains safety management practices in all departments to create a safe work environment and comply with the Alberta Occupational Health and Safety (OH&S) Act, Regulation and Code.

This standard establishes a corporate management system and common standards for determining when workers are working alone and for the types of controls that departments and business units provide for workers across the City.

The aim of this standard is to ensure that all workers are working under an effective corporate standard designed to ensure compliance with OH&S laws.

The intent of the OH&S legislation for the working alone hazard is to ensure lone workers have the opportunity to get assistance if they are in distress and / or injured.

This standard applies to all City departments reporting to the City manager, and all City employees, including full-time, part-time, temporary and provisional employees and persons acting on behalf of the City such as volunteers, contractors, and consultants.

Requirements

If the working alone hazard cannot be eliminated, then it must be controlled.

Determine when a worker is "working alone" (Step 1)

A worker is considered to be working alone when both clauses (a) and (b) exist:

(a) *a worker is working alone at a work site, and*

(b) *assistance is not "readily available" if there is an emergency or the worker is injured or ill.*

Situations where workers are not typically considered to be working alone and the working alone requirements would not apply include:

1. if two or more workers of the same employer are working together, or

2. if two or more workers of different employers are working together, when it is reasonable to expect that the workers can provide assistance to one another.

Is assistance "*readily available*"?

It is also important to understand what is meant by assistance being "*readily available*" when determining if a worker is considered to be working alone. The standard uses three provincial-recommended factors to assess and determine if assistance is *"readily available"*:

1. **Awareness:** Will other persons capable of providing assistance be aware of the worker's needs?
2. **Willingness:** Is it reasonable to expect that those other persons will provide helpful assistance?
3. **Timeliness:** Will assistance be provided within a reasonable period of time?

Examples to assist in determining if a worker is working alone are provided in the Standard's Appendix table #2 and table #3.

Determine "*Contact Frequency*" (Step 2)

The "*contact frequency*" must be based on a current, completed hazard assessment.

The City's hazard assessment process assigns a different score for each hazard a worker is exposed to. Each hazard's rating is grouped as high, moderate or low.

The recommended contact frequency is based on the most hazardous task the worker will be doing.

Table 1 provides the level of hazard to the working alone risk and contact frequency. The number of contacts must increase with the level of hazard. If action is taken to eliminate the hazard, or control it, the contact frequency while working alone may be reduced.

Table 1: Working Alone Contact Frequency Based on Hazard Assessment

Total Hazard Score*	Hazard Ranking	Contact Frequency
8-9	High	At least every 2 hours or when worker changes location.
5-7	Moderate	At least every 4 hours or when worker changes location.
3-4	Low	At least once per shift or when worker changes location.

*** for most hazardous task**

A work site involving minimal hazards may only require a conversation between workers at the time of shift change or reporting to work the next day. A more hazardous work situation may require regular check-ins, visits by a supervisor or some type of automated worker monitoring equipment.

Determine Appropriate Controls for the Working Alone Hazard

Reducing risks with controls

Features of hazard controls for working alone include:

- communication system / devices;
- lone workers communicating their location and condition; and
- tracking and monitoring support for lone workers and
- responding to lone workers when required.

Formal work procedures are also an effective administrative control to address the working alone hazard.

***"Effective Communication System"* (Step 3)**

OH&S Code 394(1) requires that workers have an "*effective electronic communication system" to* communicate with someone who is willing and able to provide assistance.

The communication system must ensure an injured lone worker gets timely assistance**.**

Common devices that can be used to meet the intent of this provision include:

- portable two-way radios
- telephones
- cellular telephones
- satellite telephones
- personal alarms
- computer-based systems
- global positioning systems
- automated person-down detectors

If an **"***effective electronic communication*" is not practicable (e.g. no cell phone service), OH&S legislation allows for a system of regular contacts. This can include:

- visiting the worker

- scheduling check-ins with others workers or designated persons
- reporting to an office or particular person upon completion of a task
- other visual or audible contact with other persons who are able and willing to offer assistance when needed

1.1 Check-ins and Tracking Worker Location Requirements (Step 4)

For a lone worker to summon assistance themselves, they must have a means of communication (e.g. phone, radio or panic button) and the contact information of someone that is willing and able to respond.

For an incapacitated lone worker to get assistance, someone needs to be able to determine if the lone worker is injured and where the lone worker is located so help can be delivered.

There are two alternatives that can be used to determine a lone worker's location throughout the day:

- have the lone worker report their location each time it changes and / or
- use an electronic monitoring device to continuously monitor location (e.g. a GPS locator).

Similarly there are two alternatives that can be used to monitor a lone workers condition:

- have the lone worker confirm their condition at intervals through a contact protocol, or
- use an electronic monitoring device to continuously monitor worker condition (e.g. a person down detector).

There are manual and automated monitoring control options for City lone workers.

Resources

- Alberta Occupational Health and Safety Legislation
- City OH&S Administrative Directive, Administrative Procedure, and Safety Framework (A1117C)
- City Hazard Assessment and Control Standard
- City's Corporate Solutions for Working Alone
- Monitoring Options for Employees Working Alone

Determining Who Meets the "Working Alone" Criteria: Examples

Table 2 has examples provided by the province to assist in determining if a worker is working alone.

Table 3 has a number of common situations of City workers to assist in determining if a worker is working alone.

Table 2: Provincial OH&S-Provided Examples of Working Alone

Example	Interpretation
1. A staff person working by themselves in a food court or in a separate restaurant.	• They **are not** working alone in the food court because other workers in nearby food establishments would be willing and able to give assistance. • They **are** working alone in a low volume separate restaurant because a worker that is injured in a confrontation with a customer(s) would not be able to summon assistance.
2. A worker with a cell phone in an area that can't be seen or heard by other workers	• They **are** working alone because they are alone and assistance is not readily available. The cell phone helps them comply with working alone requirements but is not a factor in deciding if the requirements apply.
3. A worker driving on a busy highway versus one driving down a logging road.	• Working alone provisions **do not apply** while driving down a major highway during the day because there is a large volume of public traffic so chances are someone will be willing and able to render assistance. However they **may apply at night** if traffic volume is low. • Working alone provisions **do apply** while down the logging road because there is not enough traffic flow to ensure that assistance will be readily available.

4. A nurse on day shift in a busy children's ward vs one on night shift in a psychiatric ward	• Working alone provisions **may apply** to both cases depending on the staffing ratios in the hospital. • Because of the extra risk of working at night in a psychiatric ward the hazard controls should be greater.
5. A tradesperson working with a helper.	• Tradesperson and helper work together continually – **are not** working alone • Helper passes behind loading bins and is momentarily out of sight or cannot be heard – **are not** working alone • Helper goes to the next room to get supplies or Helper goes to another floor to get supplies or Helper goes to outside loading area to get supplies – **may be** working alone depending on how long they are gone, the hazards of the work and the proximity of other staff • Helper gets into vehicle to go to warehouse to get more supplies – **are** working alone.

Table 3: Working Alone Situations in City of Edmonton

Position or Type of Work	Interpretation	Rationale
1. An enforcement officer that works by themselves to enforce municipal bylaws	• **Are not** working alone while driving or working on major roads – e.g. pulling over a vehicle on Main Street in the middle of the day for poorly securing a load	• Similar to example 3 in Table 2 for workers driving on a major highway
	• **Are** working alone while in or out of vehicle to investigate complaints in isolated or remote areas – e.g. fire pits in backyards, Park Rangers patrolling river valley trails, inspecting garbage pick up in back alleys, pulling over	• Similar to example 3 in Table 2 for workers driving on logging road

	vehicles on low volume streets or alleys	
	• **<u>Are</u>** working alone when they enter a small business, residence or back yard to meet a member of public – e.g. drainage inspector, animal control officer	• Similar to example 1 in Table 2 for worker that works alone in a separate restaurant
2. A Bus driver	• **<u>Are not</u>** working alone when they are working during the day on a high volume route.	• Similar to example 3 in Table 2 for workers driving on a major highway
	• **<u>Are</u>** working alone when on a low volume route, late at night or on a portion of the route that's far from major thoroughfare	• Similar to example 3 in Table 2 for workers driving on logging road • Similar to example 1 in Table 2 for worker that works alone in a separate restaurant
3. A Recreation Officer working alone in a park or in a community league building to run a drop in program.	• **<u>Are not</u>** working alone when they are working during the day in a park or within full view of many adult members of the public	• Similar to example 3 in Table 2 for workers driving on a major highway
	• **<u>Are</u>** working alone when in a park when there are few adult members of public present	• Similar to example 3 in Table 2 for workers driving on logging road • Similar to example 1 in Table 2 for worker that works alone in a separate restaurant
4. A Tradesperson working in an isolated part of an occupied building (e.g. roof, isolated shop or storage area)	• **<u>Are</u>** working alone if they spend more that a few minutes away from the sight or hearing of other workers	• Similar to example 5 in Table 2 for tradesperson separated from his helper for a lengthy period of time
	• **<u>Are not</u>** working alone when they momentarily go to an isolated are part of an occupied building and others in the building know to expect them back soon	• Similar to example 5 in Table 2 for tradesperson separated from his helper for a short period of time

5. A worker cutting grass, planting trees or doing landscape work.	• **Are** working alone if they spend more that a few minutes away from the sight or hearing of other workers and when there are few adult members of the public present	• Similar to example 5 in Table 2 for tradesperson separated from his helper for a lengthy period of time • Similar to example 3 in Table 2 for workers driving on logging road • Similar to example 1 in Table 2 for worker that works alone in a separate restaurant
	• **Are not** working alone when they momentarily go to an isolated part of an occupied park and other workers in the park know to expect them back soon	• Similar to example 5 in Table 2 for tradesperson separated from his helper for a short period of time
	• **Are not** working alone when they are working during the day in a park or within full view of many adult members of the public	• Similar to example 3 in Table 2 for workers driving on a major highway
6. A Social Worker that meets a client outside of the office	• **Are** working alone when they enter a residence or small business, or yard to meet a client	• Similar to example 1 in Table 2 for worker that works alone in a separate restaurant
	• **Are not** working alone when they meet clients in a public place within full view of many adult members of the public	• Similar to example 3 in Table 2 for workers driving on a major highway
7. A Contract Manager going alone to visit a construction site	• **Are not** working alone while driving or working on major roads to get to the site	• Similar to example 3 in Table 2 for workers driving on a major highway
	• **Are not** working alone when they meet contractors at the construction site	• Similar to example 1 in Table 2 for a worker in a food court working within sight of other workers
	• **Are** working alone when they enter a construction or development site when no other workers are present	• Similar to example 2 in Table 2

	even though they have a cell phone.	

WORKPLACE VIOLENCE and HARASSMENT PREVENTION STANDARD

Introduction

The City of Edmonton is committed to meeting its obligations under the Alberta Occupational Health & Safety Act, Regulation, and Code, and the Alberta Human Rights Act and will achieve this in providing respectful workplaces free of discrimination, harassment, and violence.

The City of Edmonton is committed to eliminating or, if that is not reasonably practicable, controlling the hazards of violence and harassment. The City of Edmonton will investigate any incidents of violence and/or harassment and take corrective action to address the incidents.

This standard applies to and must be followed by City employees and those under its purview (as defined in the definitions section of this manual). This standard does not apply where an employee is required to use “reasonable force” in the performance of their normal duties.

Workplace violence, harassment and discrimination are not acceptable and will not be tolerated at the City of Edmonton.

Reporting Incidents of Violence and Harassment

Sections 40(5)(b)-(d), 40(7), 40(8), and 53 of the OH&S Act apply to investigating and reporting incidents of violence and harassment. The City (or the Prime Contractor, if there is one) must:

1. Carry out an investigation into the circumstances of the incident;
2. Prepare a report outlining the incident and any corrective action taken to prevent recurrence;
3. Ensure that a copy of the report is readily available and provided to a Provincial officer on demand; and
4. Retain a copy of the report for at least 2 years after the incident.

Given the sensitive nature of incidents involving violence and harassment, they are reported, investigated and resolved in the following ways:

1. Incidents of violence and harassment involving an employee whereby the alleged aggressor is internal to the City, must be reported through the Safe Disclosure Office to ensure the privacy and confidentiality of all members involved and to ensure the incident is investigated by those with appropriate expertise. Detailed information about this reporting process is available on OneCity.

2. Incidents of violence and harassment involving an employee whereby the alleged aggressor is external to the City must be reported as per the Incident Reporting and Investigation Standard.

CAUTION: ALL CITY EMPLOYEES INVOLVED IN THE INVESTIGATION AND REPORTING OF INCIDENTS MUST NOT DISCLOSE THE CIRCUMSTANCES OR PERSONAL INFORMATION OF PERSONS INVOLVED IN INCIDENTS OF WORKPLACE VIOLENCE AND HARASSMENT EXCEPT AS EXPRESSLY PERMITTED IN THIS STANDARD.

Workplace Violence Prevention and Response

"Violence" can occur at a work site or be work-related, and is the threatened, attempted, or actual conduct of a person that causes or is likely to cause physical or psychological injury or harm, and includes domestic or sexual violence.

Any violence committed by or against any employee or member of the public is unacceptable conduct and will not be tolerated. This standard helps ensure that the City of Edmonton develops and maintains violence prevention practices in all departments to create a respectful and safe work environment that complies with the Alberta Occupational Health and Safety Act Act, Regulation and Code. This standard is not intended in any way to discourage a worker from exercising the worker's rights pursuant to any other law.

Prevention

The following prevention steps are to be taken to eliminate or control the workplace hazard of violence:

1. Every employee must work in compliance with this standard.
2. All employees are required to understand the workplace hazard of violence. This can be accomplished in a number of ways such as through the participation in and/or review of the Hazard Identification, Recognition and Control Process where workplace violence is identified, the review of this standard and Violence in the Workplace Prevention Guide, and/or appropriate Workplace Violence E-Learning. This 'training' must include:
    a. a definition and guidelines on recognizing workplace violence;
    b. the policies, procedures and workplace arrangements that the City of Edmonton has developed and implemented to eliminate or control the hazard of violence;
    c. the appropriate response to violence and procedures for obtaining assistance; and
    d. the procedures for reporting, investigating, and documenting incidents of violence.

3. Supervisors must consider workplace violence as a hazard when conducting hazard assessments and employees must participate in the process to identify, assess, and control the workplace violence hazard. This includes identifying sources of potential violence in the workplace.
    a. Refer to the Hazard Identification, Assessment and Control Standard for more information.
    b. Further information regarding the nature and extent of the hazard of violence, including information related to specific or general threats of violence or potential violence, is provided in the City of Edmonton Violence in the Workplace Prevention Guide.
4. Supervisors must ensure that workplace violence hazard controls such as prevention, detection, and response measures are integrated into their Department and/or Branch Occupational Health and Safety (OH&S) Programs, utilizing the guidelines provided in the City of Edmonton Violence in the Workplace Prevention Guide.
5. Supervisors must ensure that the City's workplace violence prevention measures and procedures are followed by employees and that employees/workers have the information they need to protect themselves.

Response Steps

Where it appears that the situation might be unsafe, but the employee is unsure whether the police should be involved, the employee must contact Corporate Security to provide assistance. If Corporate Security determines that the incident requires emergency assistance, the employee or Supervisor directly involved with the incident should, wherever possible, contact 911 to provide the most accurate details.

In the case of physical violence at the worksite or where the worker otherwise requires immediate assistance for an incident of violence:

1. Employees should call 911 when it is safe to do, followed by
2. Corporate Security at 780-496-8888 (24 hour on-call number).

Employees who have been subjected to workplace violence, or who believe they or anyone else are at risk of being subjected to workplace violence, must report the incident to their Supervisor as soon as possible after any emergency response considerations are addressed. In cases where the supervisor is the aggressor, the employee should immediately contact the Safe Disclosure Office, when it is safe to do so.

Supervisors must report workplace violence to the Director of Labour Relations, Employee Services when a City of Edmonton employee is the alleged aggressor. Where the supervisor is the aggressor, the employee will report the incident through the Safe Disclosure Office. For further information consult Workplace Harassment Prevention and Response.

After any required emergency response steps, the following is required:

1. The City of Edmonton and workers must cooperate with any person exercising a duty under the Occupational Health and Safety Act.

2. Supervisors are to advise employees to consult with a healthcare professional of the employee's choice for treatment or referral if the employee has experienced adverse physical or mental symptoms resulting from a workplace violence or harassment incident. Employees may also contact Employee and Family Assistance Services (EFAS) at 1-800-663-1142. When an employee is treated or referred by a physician relating to an incident of workplace violence or harassment and if the treatment session occurs during regular work hours, the employee's pay or benefits must not be deducted for the time during which the employee attends the treatment session.

3. Workers with occupational injuries have expedited access to medical services through Occupational Injury Service. It is a voluntary program that is focused on providing treatment quickly, improving chance of recovery and with the least amount of disruption to their quality of life.

4. No action will be taken against an employee for reporting an incident, unless the report is determined to be wholly unsubstantiated, in bad faith, and/or made with malicious or vexatious intent.

5. The City will not disclose the circumstances related to an incident of violence or the names of the complainant(s), the person(s) alleged to have committed the violence, and any witness(es), except:

    a. where necessary to investigate the incident or take corrective action, or to inform the parties involved in the incident of the results of the investigation and any corrective action to be taken to address the incident;

    b. where necessary to inform workers of a specific or general threat of violence or potential violence (the City will only disclose the minimum amount of personal information that is necessary to inform workers of a specific or general threat of violence or potential violence); or

    c. as required by law.

6. Given the sensitive nature of incidents involving violence and harassment, they are reported, investigated and resolved in the following ways:

    a. Incidents of violence and harassment involving an employee whereby the alleged aggressor is internal to the City, must be reported through the Safe Disclosure Office to ensure the privacy and confidentiality of all members involved and to ensure the incident is investigated by those with appropriate expertise. Detailed information about this reporting process is available on OneCity.

b. Incidents of violence and harassment involving an employee whereby the alleged aggressor is external to the City must be reported as per the Incident Reporting and Investigation Standard.

Protecting Other Worksite Parties

The City of Edmonton values and promotes the physical and psychological safety of all visitors, contractors and employees engaged in or present at City property and facilities and using City provided services. City employees, corporate security and the Edmonton Police Service work together to prevent, monitor and react to any potential risks to the physical and psychological safety of visitors, contractors and employees. Patrons, contractors and members of the public visiting and using City facilities or services and property are expected to show respect to the other members of the public, patrons, contractors and City employees. The means through which the City enforces these objectives, is through the Public Places Bylaw (14614) and other related bylaws.

Domestic Violence Prevention and Response

Domestic violence can be a workplace issue and has the potential to become a workplace hazard. It can impact a person's physical and psychological well-being, safety, attendance and performance at work. It takes a lot of courage for individuals impacted by domestic violence to reach out for support. When the City is aware that a worker is or is likely to be exposed to domestic violence at a work site, the City must take reasonable precautions to protect the worker and any other persons at the work site likely to be affected.

To create a safer, more responsive workplace for all, Supervisors are responsible for being aware of the Domestic Violence and Wellness initiatives and resources available to employees.

Supervisors must assess and recognize potential impacts on the safety in the workplace and the individual when issues are brought forward.

Resources for support include, but not limited to, OneCity, City Chaplain and Employee and Family Assistance Program.

Workplace Harassment Prevention and Response

As defined by the Occupational Health and Safety Act, harassment means any single incident or repeated incidents of objectionable or unwelcome conduct, comment, bullying or action by a person that the person knows or ought reasonably to know will or would cause offence or humiliation to a worker, or adversely affects the workers health and safety, and includes:

(i) Conduct, comment, bullying or action because of race, religious beliefs, colour, physical disability, mental disability, age, ancestry, place of origin, marital status, source of income, family status, gender, gender identity, gender expression and sexual orientation, and

(ii) A sexual solicitation or advance,

but excludes any reasonable conduct of an employer or supervisor in respect of the management of workers or a work site.

The City of Edmonton has a safe and confidential means for reporting incidents of Workplace Harassment and Discrimination and employees are encouraged to use this process. The use of this Workplace Harassment and Discrimination process and this standard are not intended to discourage anyone from exercising rights pursuant to any other law, including the *Alberta Human Rights Act*.

Detailed reporting, investigation and response processes can be found on OneCity.

The reporting processes and procedures set out in this standard and the Workplace Harassment and Discrimination reporting, investigation and response processes also fulfill the following legal requirements:

1. As per s. 390.5(c) of the OHS Code, the City will not disclose the circumstances related to an incident of harassment or the names of the complainant(s), the person(s) alleged to have committed the harassment, and any witness(es), except:

    a. where necessary to investigate the incident or to take corrective action, or to inform the parties involved in the incident of the results of the investigation and, any corrective action to be taken to address the incident, or

    b. as required by law.

2. As per s. 390.6 of the OHS Code:

    a. the procedure to be followed by a worker when reporting harassment;

    b. the procedure to be followed by the employer when documenting, investigating and preventing harassment; and

    c. the procedure to be followed by the employer when informing the parties involved in an incident of harassment of

        i. the results of an investigation of the incident, and

        ii. any corrective action to be taken to address the incident.

Supervisors are to advise employees to consult with a healthcare professional of the employee's choice for treatment or referral if the employee has experienced adverse physical or mental symptoms resulting from a workplace violence or harassment incident. Employees may also contact Employee and Family Assistance Services (EFAS) at 1-800-663-1142. When an employee is treated or referred by a physician relating to an incident of workplace violence or harassment and if the treatment session occurs during regular work hours, the employee's pay or benefits must not be deducted for the time during which the employee attends the treatment session.

Resources for support include, but not limited to, OneCity, City Chaplain and Employee and Family Assistance Program.

Prevention

The following prevention steps are to be taken to eliminate or control the workplace hazard of harassment:

1. Every employee must work in compliance with this standard.
2. All employees are required to understand the workplace hazard of harassment. This can be accomplished in a number of ways such as through the participation in and/or review of the Hazard Identification, Recognition and Control Process where workplace harassment is identified, or the completion of other learning opportunities such as online or in class training. Regardless of the 'type' of training used, it must include:
    a. a definition and guidelines on recognizing workplace harassment;
    b. the policies, procedures and workplace arrangements that the City of Edmonton has developed and implemented to eliminate or control the hazard of harassment;
    c. the appropriate response to harassment and procedures for obtaining assistance; and
    d. the procedures for reporting, investigating, and documenting incidents of harassment.
3. Supervisors must consider workplace harassment as a hazard when conducting hazard assessments and employees must participate in the process to identify, assess, and control the workplace harassment hazard. This includes identifying sources of potential in the workplace.
    a. Refer to the Hazard Identification, Assessment and Control Standard for more information.
    b. Further information regarding the hazard of harassment, refer to the City of Edmonton Violence in the Workplace Prevention Guide and OneCity.

Resources

Relevant authorities include:

- Alberta Occupational Health and Safety Act, Regulation and Code
- Occupational Health and Safety Directive A1117C
- Employee Code of Conduct Directive A1100C
- Discipline of City Employees Directive A1102
- Incident Data Collection Form
- Corporate Services Risk Management Incident Report Form
- Risk Management & Corporate Security Manual
- City of Edmonton Public Places Bylaw #14614
- City Chaplain Contact Information
- Employee and Family Assistance Program
- City of Edmonton OH&S Hazard Control Standard
- City of Edmonton OH&S Working Alone Standard
- Reporting process for Harassment and Discrimination
- Violence in the Workplace Prevention Guide
- For more information on resources and support services call 211

4. PLANNED SAFETY INSPECTIONS

Introduction

Inspections are instrumental to monitor how controls are working and to identify potential hazards before incidents occur. A well-managed inspection program can identify potential problems, equipment deficiencies, employee actions; effects of changes, inadequacies in remedial actions, provide program appraisal information and demonstrate leadership commitment.

Responsibilities

Deputy City Managers

Within their areas of responsibility, Deputy City Managers will:

1. Ensure department inspection programs are implemented that meet or exceed corporate standards, the standards contained in Alberta's OH&S Act, Regulation, and Code, applicable Federal Occupational Laws and other jurisdictional agencies in consultation with the OH&S Section.
2. Conduct inspections as per corporate standards for planned inspections.
3. Review and approve inspection reports from immediate subordinates.

Manager/Director

1. Develop an inspection program that meets or exceeds corporate standards, the standards contained in Alberta's OH&S Act, Regulation, and Code, applicable Federal Occupational Laws and other jurisdictional agencies in consultation with the OH&S Section.
2. Conduct planned inspections as per department standards.
   Take immediate corrective action if unsafe practices and/or unsafe conditions present imminent danger.
3. Develop a system to monitor inspection frequency compliance.
4. Review and sign inspection reports from immediate subordinates.
5. Develop a process to ensure items identified in inspection reports have appropriate and timely corrective action.
6. Analyze inspection reports to identify existing or potential trends.
7. Develop a process to ensure to immediately and effectively address workers reporting unsafe/unhealthy conditions or practices.

Supervisor/Foreman/Leader

1. For the purpose of this document, Supervisor/Foreman/Leader includes any Employee who instructs, directs and controls workers in the performance of their assigned duties.
2. Conduct planned inspections as per department standards.
3. Review and sign inspection reports from immediate subordinates.
4. Communicate inspection reports to applicable employees.
5. Ensure items identified in the inspection reports have appropriate and timely corrective action.
6. Implement a process to immediately and effectively address workers reporting unsafe / unhealthy conditions or practices.
7. Take immediate corrective action if there is a practice and/or condition at a work site that is or is likely to be dangerous to the health and safety of a worker.
8. Analyze inspection reports to identify existing or potential trends.

Joint Worksite Health & Safety Committee

1. Analyze inspection reports to identify existing or potential trends.
2. Analyze inspection reports for appropriate and timely corrective action.
3. Review reports of imminent danger situations.
4. Participate in inspections as required.
5. Encouraged to participate in safety inspections.

Employee

1. Conduct informal inspections as required by the Corporate standard, standard operating procedure, or safe work procedure.
2. Participate in inspections as required.
3. Report unsafe conditions or practices at the work-site to immediate supervisor.
4. Correct unsafe conditions or practices at the work-site where practicable.
5. Stop work immediately under imminent danger situations.
6. Exercise their right to refuse dangerous work and stop work immediately if the worker believes on reasonable grounds that there is a dangerous condition at the work site or that the work endangers the health and safety of the employee or another person. In these circumstances the employee must immediately report their refusal and reasons for it to their supervisor.

Safety Engagement Lead

1. Assist departments in developing inspection programs that meet or exceed corporate standards.
2. Assist in determining adequate corrective action and appropriate timelines.
3. Analyze inspection summary reports to identify improvement opportunities.
4. Assist and possibly lead the investigation of reported imminent danger situations.
5. Accompany the deputy city manager and managers during inspections.
6. Inspect work areas to verify safety management systems as required.
7. Audit inspection reports as required.

8. Ensure statistical information is provided to the Corporate OH&S Section so statistical reports can be compiled for the Steering Committee.

INSPECTION STANDARD

Introduction

Inspections are instrumental to monitor how controls are working and to identify potential hazards before incidents occur. A well-managed inspection system can identify potential problems, equipment deficiencies, employee actions; effects of changes, inadequacies in remedial actions, provide program appraisal information and demonstrate leadership commitment.

This standard defines the expectations and the frequency of inspections for high and low risk work areas as well as participation requirements for each level of management within the corporation for the purpose of demonstrating visible safety leadership and accountability. This standard does not preclude the necessity of conducting inspections required by provincial regulations (i.e. crane inspections, mobile equipment, vehicle inspections, etc.).

This standard identifies the minimum number of inspections that each level of management within the organization must participate in annually. In recognition of the complex nature of civic operations, departments or branches may make the decision to vary the minimum requirements. All changes should be made in consultation with the Safety Engagement Leads assigned to the area, Section Management and with the approval of the Supervisor of Corporate Safety and Health Services.

Requirements

a) Work site requirement:

All work sites are to be inspected regularly. The Safety inspection frequency will be determined by the area of responsibility. It is recommended that low risk areas be inspected at least bi-annually and operational areas monthly or as otherwise determined by the hazard assessment process and documented through hazard assessment and control documentation.

b) Supervisory staff inspection requirement

1. All supervisory staff, such as supervisors, directors, and managers, shall participate in safety inspections. (**Note**: a supervisor is deemed as anyone who directs the work of other employees, i.e. foreman). This requirement may be met by participating in a facility or area specific safety inspection.

2. The task of conducting inspections shall not be delegated to other staff to meet the requirement for leadership participation under this standard; however other staff should be encouraged to participate in the inspection process.

3. For the purposes of giving credit to those leaders participating in a completed inspection , each member participating shall be considered to have conducted that inspection and given credit for participation as outlined in this standard.

4. Safety Committee members and front line employees are encouraged to participate in the safety inspection program.

Supervisor staff inspection frequency

Position and Area Type	Minimum Number of Inspections per year
City Manager	3
Deputy City Manager	2
Branch Manager (or equivalent of an industrial or operating area with medium or high hazard activities	4
Branch Manager (or equivalent) of an area with only low hazard activities or an area that is administrative in nature	2
Director (or equivalent) of an industrial or operating area with medium or high hazard activities	6
Director (or equivalent) of an area with only low hazard activities or an area that is administrative in nature	1*
Supervisor (or equivalent) of an industrial or operating area with medium or high hazard activities	12
Supervisor (or equivalent) of an area with only low hazard activities or an area that is administrative in nature	1*

- For those administrative areas having a high volume of management staff, at low risk, and which don't have any field workers outside of their current location, a lower frequency of inspections are acceptable.

  * If there is a limited value in participating in a safety inspection due to the the high volume of management or supervisory staff, it is at the discretion of management or supervision to rotate and take turns in conducting safety inspection in the office.

- Other forms of inspections such field inspections are encouraged and accepted.

Inspection process

1. Safety inspections shall be conducted with at least one supervisor or manager and at least one front line employee working in that area.

2. All deficiencies/hazards listed in inspection reports must be assigned corrective action(s), and include timelines and the person responsible for completing the corrective action.
3. Timelines for corrective action must be reasonable, and based on the identified deficiency/hazard.
4. Safety inspection findings and status of actions identified shall be communicated and made available to all staff working in that area.
5. Approval of inspections should be one level higher than the highest level of management participating in the inspection through Safety Data Management System (SDM).
6. Inspections need to documented and entered into Safety Data Management System (SDM).

Training

Individuals responsible for performing formal inspections need to complete the Leadership for Safety Excellence training (4 modules).

Resources

- Hazard Assessment & Control Standard
- Non Operational Area - Inspection template
- Worksite Inspection template

5. ORIENTATION AND TRAINING

Introduction

Employee safety training focuses on providing all employees with skill competency and proficiency training to perform work safely and meet the standards of quality and production. To meet these needs, the program must ensure the safety training requirements for each occupation and employee are identified, the training addresses the safety knowledge and skills required, and that quality training is conducted in a timely and effective manner. Alberta's OH&S legislation requires workers to be competent before carrying out work duties that may endanger the worker or others, or otherwise be under the direct supervision of a worker who is competent to perform the work. Employers must ensure that workers are adequately trained in all matters necessary to protect their health and safety, including before the worker: begins a work activity; performs a new work activity/ uses new equipment/ performs a new process; or moves to another area or work site.

Responsibilities

Deputy City Managers

1. Ensure department orientation and training programs are implemented that meet or exceed corporate training standards, the standards contained in Alberta's OH&S Act, Regulation, and Code, applicable Federal Occupational Laws and other jurisdictional agencies in consultation with the OH&S Section.

Manager/Director

1. Ensure that OH&S orientation and training is provided that meets or exceed corporate standards, Alberta OH&S legislation, and other jurisdictional agencies. The orientation and training will be provided to employees at all levels before the work commences, and will include new employees, seasonal, part-time, temporary, volunteer and transferred employees.
2. Ensure those who begin performing new work activity, use new equipment or are introduced to hazards not previously identified on the hazard assessment are adequately trained and oriented before the work commences.

Supervisor

1. Identify OH&S training needs for employees

2. Ensure employees are trained and competent in work activities before commencing work, performing a new work activity / using new equipment / performing new processes, or moving to another area or work site.
3. Investigate and resolve reports of workers not having adequate knowledge to work safely
4. Ensure their personal competency as a supervisor
5. Ensure workers are aware of their rights, duties, and of health and safety issues arising from the work being conducted
6. Ensure that vehicles, equipment, or machinery on their worksite is able to be operated by workers through demonstration

Employee

1. Participate in the OH&S training program
2. Assist in identifying OH&S training needs with immediate supervisors
3. Report to immediate supervisors when competency training to perform the work safely is not adequate
4. Be competent in the work activities before commencing work performing a new work activity / using new equipment / performing new processes, or moving to another area or work site

ORIENTATION AND TRAINING STANDARD

Introduction

The Occupational Health and Safety Act requires that, where any work is done which may endanger any worker, the work shall be done by a competent worker, or a worker working under the direct supervision of a competent worker. In addition to this requirement, the Alberta OH&S Regulation and Code identifies specific training requirements for several areas including Confined Spaces, Emergency Response, Fall Protection, Lifting Equipment, Lifting and Handling Loads, Musculoskeletal Injury, Personal Protective Equipment, Powered Mobile Equipment, etc.

The City of Edmonton has identified specific health and safety training requirements for various levels of employees across the corporation. These requirements are outlined in this standard. Departments are also required to identify and provide safety training based on specific employee needs.

Requirements

Departments shall establish and maintain systems for ensuring workers are adequately trained in all matters necessary to protect their health and safety including the following:

- begins performing a work activity,
- performs a new work activity, uses new equipment or
- performs new processes, or
- is moved to another area or work site.
- Every employer shall cooperate with any person exercising a
- duty imposed by this Act, the regulations and the OHS code.
- Every employer shall comply with this Act, the regulations and the OHS code.

The system shall include but is not limited to:

- a method to determine the level of competence (qualification, training and experience) required by workers performing hazardous task;
- a method to determine the competence of employees performing hazardous tasks;
- training plans for all new hires and transfers based on hazard assessments and job tasks;
- a method to ensure that gaps in competency between what is required and what workers have is corrected; and
- a method to ensure that training requirements are reviewed in response to changes in equipment, processes and legislation.
- A method to ensure the physical, psychological and social well-being of workers
- Educate, train and reinforce all workers in the principles of a harassment and discrimination free workplace.

Departments shall establish and maintain systems to ensure that employees complete the following occupational health and safety training courses.

Directors, Managers, Front Line Supervisors and Managers Supervising Employees:

- Leadership for Safety Excellence
- The Leader's Role in Health and Safety
- Hazard Assessment and Control
- Workplace Inspections
- Incident Investigation

Leadership for Safety Excellence:

LSE must be provided through in class instruction only for all supervisory positions in operational areas. It is recommended City of Edmonton employees requiring LSE complete the course developed in consultation with and offered through the City's COR certifying partner, the Alberta Municipal Health and Safety Association (AMHSA).

A City of Edmonton employee may complete another certifying partners LSE course and have this applied as credit to meet the City of Edmonton's LSE training requirement, provided all of the following conditions are met:

- The LSE course was taken within 2 years from the start of employment with the City of Edmonton;
- The LSE course was taken through in class instruction only;
- The LSE course was obtained through an accredited Alberta COR certifying partner (ie. Alberta Construction Safety Association);
- The employee's immediate supervisor reviews with the employee, the relevant City of Edmonton OHS context for the LSE course elements;
- The employee's supervisor obtains department OHS&E Director approval, for LSE course completion equivalency; and,
- The LSE course covers the minimum training content identified below, in the 4 main core supervisor leadership competencies:

Minimum LSE Training Topics:

The minimum LSE training requirements must meet the province's Certificate of Recognition external safety program standards and requirements.

1. Leadership Role in Health and Safety
    a. Importance of an OHS program;
    b. Role of a supervisor for a successful OHS program;
    c. Health and safety responsibilities of managers, supervisors and workers under Alberta OHS legislation; and,
    d. Role and impact of health and safety on organizational culture.
2. Workplace Health and Safety Inspection
    a. Planning and conducting inspections; and,

    b. Identifying recommendations and performing follow-up.
3. Hazard Identification, Assessment and Control
    a. Recognizing hazards and evaluating risk; and,
    b. Identifying methods and hierarchy for controlling hazards.
4. Incident investigation
    a. Identifying immediate and underlying causes of incidents;
    b. Implementing measures to prevent incident recurrence; and,
    c. Identifying when to conduct investigations and the common steps involved in the process.

All Employees:

- Employee Occupational Health and Safety Orientation

Departments shall establish and maintain a system for identifying and assessing employees' needs with respect to legislative health and safety training requirements. Some examples of needs based occupational health and safety training are:

- First Aid
- Contractor Safety Management
- Workplace Hazardous Materials Information System (WHMIS)
- Field Level Risk Assessment
- Musculoskeletal Injury Prevention

OHS Orientation Program:

Departments shall have in place an OH&S orientation program that at a minimum meets the following corporate orientation requirements. These OHS rights and critical health and safety information must be reviewed with the employee prior to beginning regular duties.

- Occupational Health and Safety Commitment Statement
- Department's Occupational Health and Safety Program
- Occupational Health and Safety Administrative Directive 1117C
- Occupational Health and Safety Act, Regulation and Code for the Province of Alberta
- If You Are Injured At Work
- Workplace Hazardous Materials Information System (WHMIS)
- Identification and reporting of Workplace Hazards
- Personal Protective Equipment
- Emergency Response Procedures
- First Aid Services
- Training
- Incident Reporting
- Communicates the workers' right to know, right to participate, and right to refuse dangerous work.

The OH&S overview orientation is conducted for new employees, seasonal, part-time, temporary, volunteers and transferred employees. Visitors receive site safety orientation as appropriate to the work-site.

Resources

- Sample Training Inventory
- Sample Personal Competency Record
- Employee Orientation Checklist
- New Employee Onboarding
- List of Alberta COR Certifying Partners

6. EMERGENCY RESPONSE PLANNING

Introduction

Emergency response planning is a process for identifying the response to potential emergency situations at the work site. The scope of emergencies covered in this standard are fire, hazardous product release, vessel rupture, contact with corrosive chemicals, injuries, working alone, medical conditions, etc. The plan establishes evacuation procedures, assigns responsibilities to specific individuals, provides for notification of outside agencies, provides for a means of communication and provides for in house emergency response.

Responsibilities

Deputy City Managers

1. Ensure department emergency response planning is implemented that meets or exceeds corporate standards, Alberta's OH&S Act, Regulation, and Code, applicable Federal Occupational Laws and other jurisdictional agencies in consultation with the OH&S Section.

2. Review outcome summaries of emergency mock drills and actual emergencies.

Manager/Director

1. Develop an emergency response plan that meets or exceeds the corporate standards, Alberta's OH&S Act, Regulation, and Code, applicable Federal Occupational Laws and other jurisdictional agencies in consultation with the OH&S Section.
2. Review outcome summaries of emergency mock drills and actual emergencies.
3. Ensure emergency response plans are reviewed on an annual basis or when sufficient changes occur to ensure all components of the plan are current.
4. Ensure emergency mock drills are conducted to test efficiency and effectiveness of emergency response plans.
5. Review corrective actions in the outcome summaries to ensure completion.

Supervisor

1. Assign specific responsibilities for emergency responses.
2. Ensure the applicable personnel have been trained in and are aware of emergency response plans.
3. Ensure applicable employees have been trained in and are aware of emergency response plans, including operation of emergency response equipment such as fire extinguishers, confined space rescue equipment, emergency eye wash/shower facilities, spill containment equipment etc.

4. Ensure current response plans are posted in appropriate areas and on OneCity.
5. Ensure sufficient first aid supplies are available and maintained at each work-site.
6. Generate outcome summaries from mock or actual emergencies based on observations and employee debriefing.
7. Ensure corrective actions are completed in a timely manner.

Employee

1. Conduct themselves in an orderly and cooperative manner during any emergency situation, mock or real.

2. Follow procedures during emergency situations.

3. Provide feedback on actual emergencies or mock drills.

EMERGENCY PREPAREDNESS AND RESPONSE STANDARD

Introduction

Responding to an emergency in an appropriate manner helps to minimize the impact of the unplanned event. Primarily, this involves ensuring people are not injured or the consequences of any injuries are minimized, and secondly protecting the assets of the City and the environment. In this standard the focus is on City employees, City workplaces, City property and the environment and is not intended to apply in any general way to the public at large. This standard outlines minimum requirements for an Emergency Response Plan (ERP). To read the accompanying legislative OH&S code Explanation click on the following link and refer to part 7.

Requirements

Drills

1. A minimum of two (2) emergency response drills shall be conducted annually. One of those drills needs to be a fire drill. Drills can be fire, bomb scare, gas leak, chemical or hazardous product release, severe weather, medical emergency, or any other type of emergency documented in the ERP. If a real emergency occurs in a facility, then this would meet the requirements of this standard for one drill.
2. The person in charge of the building or site, shall maintain a written record of all fire drills or emergency drills, showing the date of the drill, evacuation time, and any comments or recommendations.
3. In buildings where schools are housed and attended by children, total evacuation fire drills shall be held at least 3 times in each of the fall and spring school terms.
4. High rise buildings need to conduct a fire drill at least every 6 months, as per Subsection 3.2.6 of Division B of the Alberta Building Code 2006.
5. Upon completion of a drill, a debrief of the procedures used must be conducted to ensure lessons learned are identified and actioned as required. The Emergency Response Procedure Debrief Template must be completed to document the debrief.
6. Upon completion of the drill and the debrief form, all emergency response drills are to be recorded in the Safety Data Management System to ensure all identified actions are tracked, assigned to appropriate personnel for resolution and closed in a timely manner. The completed debrief form must be attached to the SDMS record for future reference.

Emergency Response Plan

1. There will be an ERP developed for all City of Edmonton work sites.
2. At a minimum the ERP will address:

- identification of potential emergency situations
- procedures for dealing with identified emergencies including rescue
- identification of and roles of on-site emergency responders
- training requirements for on-site emergency responders
- general fire protection requirements
- ensuring provision of first aid meets legislated requirements
- emergency communication and alarms
- transportation of injured workers to medical care
- assessment of staff with limited mobility and if required, include a plan for addressing anyone with limited mobility
- control of work-site so situation does not escalate
- emergency equipment requirements (includes location of and operational procedures for)

a. ER Maps must include the location of the following equipment:

i. Fire Extinguishers
ii. First Aid Kits
iii. Automatic External Defibrillators (AED's)
iv. Eye Wash Stations
v. Hazardous Product Storage Areas

b. Provision and use of PPE by workers responding to an emergency i.e.nitrile gloves, safety glasses, respiratory protection, high visibility vests, flashlights, etc.

c. the location and use of emergency facilities

3. At permanent work sites, where there are normally city workers, the ERP will include an evacuation plan. At a minimum the evacuation plan will address:

- alarms
- evacuation routes
- procedure to ensure facility is vacant
- muster locations or marshalling areas
- identification and communication of Hazardous Materials to Emergency Responders

4. At worksites with storage of hazardous products (referencing Alberta Fire Code 2014, Section 2.8.1.1. and 3.2.2.5), the ERP must include instructions for controlling and reporting hazardous product release. These procedures shall be consistent with requirements in Enviso Procedures (Link) (e.g., COE-OP-003 Environmental Release Requirements).

5. Where a worker may need to be rescued, the ERP will include provisions for rescuing workers in a timely manner (e.g. confined spaces, working at heights, etc.).

6. An ERP may be developed for a class of work sites where the types of emergency situations are similar and does not have to be specific to each site (e.g. entry into manholes, working on roadways without engineered traffic separation, etc.).

7. The ERP will be communicated to affected workers using appropriate mechanisms.

8. At least one copy of the fire emergency procedures shall be prominently posted on each floor/worksite.

Evacuation Plans

In all city owned properties or leased properties where a civic department is the sole tenant, the respective Manager will be responsible for ensuring the development, communication and testing of evacuation plans. In facilities that house multiple civic operations, the predominant City of Edmonton occupant will be responsible for facilitating the evacuation plans.

Where the city leases space in a building where there are multiple tenants, the owner of the building, through the lease arrangements, will be responsible for developing, communicating and testing the evacuation plan. In the absence of the building owner having an adequate plan, the department will be responsible for ensuring their staff has an evacuation plan. A debrief must be conducted and documented after all drills.

At city locations where there are multiple buildings where workers normally work, there shall be a site wide evacuation plan in addition to individual building evacuation plans based on the nature of the potential emergency situations.

Developing ERPs

Where there are multiple City departments/branches/sections/work units working on the same site, the group that is primarily responsible for the acting as the employer representative regarding the operation of the facility will be responsible for developing the ERP. The development of this ERP must be done in consultation with the area Joint Worksite Health and Safety Committee, Enviso and other affected worksite parties or stakeholders.

Resources

- Emergency Response /Procedure Debrief Form
- Alberta OH&S Code
- Alberta Fire Code (Section 2.8.3 Fire Drills, 2.8.1.1. and 3.2.2.5 Hazardous Product Storage, 3.3.2.9 Fire Safety Plan)
- Alberta Building Code 2006
- Sample Emergency Response Plan
- Enviso Procedures (https://onecity.edmonton.ca/safety_operating/enviso.aspx)

AUTOMATIC EXTERNAL DEFIBRILLATOR (AED) STANDARD

Introduction

Sudden cardiac arrest (SCA) can occur anytime and anywhere without much warning. Usually if a SCA occurs, the survival rate of the individual depends on the immediacy of trained individuals to begin CPR until Emergency Medical Services (EMS) arrives on site. The Heart and Stroke Foundation of Canada states "Combined with CPR, the use of an Automated External Defibrillator (AED) may increase the likelihood of saving a person's life by 75% or more over CPR alone."

AEDs are becoming more visible in public places such as shopping malls, arenas, airports, etc., and more recently, in Alberta workplaces. Alberta Human Services, Workplace Health and Safety, in May 2011, released a bulletin titled *"Automatic External Defibrillators in the Workplace".*

In order to comply with these recommendations, this standard has been developed.

Responding to a sudden cardiac arrest in an appropriate manner with the appropriate training and equipment is critical to minimize such an event. This standard outlines minimum requirements for purchase and use of AEDs across the City of Edmonton (CoE). Workforce Safety and Employee Health, in collaboration with Alberta Health Services (AHS) Heart-Safe Program, have developed a process to support use of AEDs in CoE workplaces.

This Standard specifies requirements for:

- Needs assessment
- Procurement of AEDs
- Identifying target responders
- Training
- Registering AEDs with AHS Heart-Safe Program
- Maintenance program
- Record keeping
- Immediate access to critical incident stress debrief post incident
- Reporting of incidents

The standard applies to all areas that currently have AEDs and those areas that are contemplating the purchase of AEDs.

The use of AEDs should be integrated into the existing emergency response and first aid procedures.

Requirements

Needs Assessment

To determine the need for an AED in an area, CoE facilities should ensure assessment of specific needs include:

- Distance/availability of Emergency Medical Services
- Existing emergency response procedures
- Type of activity in the area. Identify work-related hazards that may potentially increase the risk of SCA e.g. vigorous, strenuous activity
- The population at risk, including average age (employees, patrons or visitors)

Procurement

AEDs are to be kept to one manufacturer to avoid training duplication and potential confusion regarding use of the device.

Remove or replace older or other models to ensure there is only one make/model in each area. The AED purchase order has to also include the corresponding AED Trainer.

AEDs should be licensed for use as an external defibrillator in Canada by Health Canada, Medical Devices Bureau and be approved by the Canadian Standards association (CSA).

Vendors for AEDs at CoE should be able to provide pre-implementation consulting, site assessments, training, service and continued support. The vendor should also have the capability to receive a deployed device, download event information and provide the information to the Occupational Health Nurses, in a timely manner.

Identifying Target Responders

As per Occupational Health and Safety Code 2009, Part 11, *First Aid* all areas are required to have a certain number of currently trained staff in First Aid/CPR/AED, depending on numbers of employees in the area. These individuals would respond to injury/illness incidents in their area and would then be the target responders to a Sudden Cardiac Event (SCA).

Vendors that provide training in First Aid/CPR, now include AED training as part of that course. The names of employees currently certified in CPR/AED should be posted near the AED and on the AHS Heart Safe database.

Training

Individuals using an AED in the workplace must be competent. Therefore, the employer shall ensure appropriate training in AED use for the equipment that is present at the worksite.

There must also be a system to ensure update of skills and recertification. All training records shall be entered into the Learning Management System (LMS).

CPR/AED training is required to be repeated once every 2 years.

External agencies providing training shall provide training specific to the AED(s) currently in the area. Therefore, the agency should bring an AED Trainer that is identical to the AEDs in the area.

These Training Agencies have been approved by Alberta Workplace Health and Safety.

All identified responders will be required to be trained in the specific emergency response procedures in the area, maintaining documentation of an event (written and/or electronic), post event procedures, storage, inspection and maintenance of AED equipment.

Registering AEDs with Alberta Health Services Heart-Safe Program

All AEDs at the COE are to be registered with the AHS Heart-Safe program This is with the exception of Fire Rescue Services as they utilize an internal equipment inspection process.

A Sudden Cardiac Arrest Report Form (SCARF), that is available on the site once the coordinator is logged in, shall be submitted when an AED has been used.

The Heart-Safe Program has the following benefits:

- Email notification to site coordinators of pending battery or pad expiry dates and monthly AED checklist completion
- Information for AED owners about where to place an AED device and how to develop or refine an emergency response plan
- Ongoing support and communication for sites
- Self-registration of AED devices and equipment in a provincial database to monitor and track the location of the AED as well as the site and site coordinator information
- Option to create groups of sites and devices to assist with managing AEDs
- On site AED location and site contact information listed with 911 dispatch

When registering an AED with Heart-Safe, use **City of Edmonton-Department-Location** as the identifier.

For assistance, call 1-866-786-1440 or email pad@albertahealthservices.ca

Maintenance Program

There must be a system in place that includes regular maintenance, inspection of equipment and program evaluation.

Once a device is registered with Heart-Safe, there will be automatic reminders sent to the Site Coordinator for monthly inspections and expiry dates for batteries and pads.

Regular maintenance involves:

- Daily checking that the device is “on”
- Monthly check of battery and pad expiry dates that is to be entered into the Heart-Safe database.

The program should be evaluated annually to ensure that it is meeting the needs in the area(s) the device(s) is/are located.

Record Keeping

Record keeping shall include:

- Names of individuals trained and dates for recertification (LMS);
- Training documents for the make and model of the AED;
- Who the trainer was; and,
- Maintenance logs.

These records must be stored where they are easily accessible by the coordinators and supervisors.

Reporting of Incidents

After the event, the incident should be reported to:

1. Safety Engagement Lead for the Branch
2. Alberta Health Services Heart-Safe (SCARF)
3. CoE Occupational Health Nurses

Chain of Custody form shall be completed before the AED is removed from the area.

Critical Incident Stress Debrief Post Incident

Critical incidents produce stress that can seriously affect an individual’s personal and job-related well-being. Sometimes the stress reactions appear immediately after an incident or a few hours or a few days later. Stress debriefing allows for confidential, non-evaluative discussion of the incident, individual thoughts and feelings and possible reactions resulting from the experience.

Any employee involved in the use of an AED as a response to a medical emergency is **strongly encouraged** to participate in critical incident stress management services.

Protocols that are already in place for critical incidents in the workplace should be followed. These may consist of contacting the peer support team in the area, contacting the City Chaplain or the Employee and Family Assistance provider Homewood Health.

Resources

- Alberta Health Services Heart-Safe
- Alberta Human Services "Automatic External Defibrillators in the Workplace"
- Emergency Medical Aid Act

7. INCIDENT REPORTING AND INVESTIGATION

Introduction

Incident investigation is the process to examine an undesired event that resulted, or could have resulted in an injury or occupational illness. Investigations should determine the immediate and underlying causes and develop appropriate remedial actions or additional controls needed to eliminate and prevent a recurrence of the incident. The incident investigation process is not to place blame.

If the incident is associated with a hazardous product release, there are additional legislated responsibilities to those outlined below. Refer to Enviso procedures (Link) for additional requirements.

Responsibilities

Deputy City Managers

1. Ensure department incident investigation programs are implemented that meet or exceed corporate standards, Alberta's OH&S Act, Regulation, and Code, applicable Federal Occupational Laws and other jurisdictional agencies in consultation with the OH&S Section.
2. Notify the City Manager of appropriate serious incidents.
3. Review and sign investigation reports of all incidents requiring notification under Section 40 of the Alberta OH&S Act.

Manager/Director

1. Ensure the implementation of programs that meet or exceed the corporate standards, Alberta OH&S Act Regulation and Code, and other applicable laws and regulations.
2. Develop programs that monitor the completion of corrective and preventative actions resulting from incident investigations.
3. Develop communication procedures to ensure the timely notification of all incidents to applicable business unit manager(s) and director(s).
4. Participate in the investigation of serious incidents.
5. Review and sign all investigation reports.

Supervisor

1. Investigate and document all incidents and refusals of work to determine the immediate and underlying causes.
2. In the case of a worker refusing perceived dangerous work:

i. The City must:
   a. Immediately remedy the dangerous condition; or
   b. If it is safe to do so, immediately inspect the dangerous condition in the presence of the worker refusing the work and one of the following persons: the worker co-chair of the Joint Work Site Health and Safety Committee, the Health and Safety Representative, or, if there is no such Committee or Representative at the work site, another worker selected by the worker refusing the work. The City must take any action necessary to ensure that any dangerous condition is remedied.

ii. Ensure that no other worker is assigned to the same work or equipment that is the subject of the work refusal, unless:
   a. Any danger has been eliminated;
   b. The worker assigned is not exposed to the danger;
   c. The worker assigned is informed in writing of the refusal, the reasons for the refusal, the reasons why the City does not believe that the work is dangerous, and their right to refuse dangerous work.

iii. The worker refusing to do the work must not lose wages or benefits during the work refusal and may be assigned to alternate work that is safe and can be reasonably completed by that worker; and

iv. Upon completing the inspection of the alleged dangerous condition, the City must prepare a written report of the refusal to work, the inspection, and any action taken. The City must ensure that this report does not contain any personal information related to the worker who refused the work. The City must give a copy of this report to the worker who refused the work and any Joint Work Site Health and Safety Committee and Health and Safety Representative at the work site.

3. Complete formal investigation training as identified by the Orientation and training standard.
4. Provide information on corrective actions for all incidents, and communicate the results of investigations to all affected employees.
5. Implement corrective and preventative measures and monitor effectiveness.
6. Ensure employees are aware of the requirements to report all occupational incidents, including near misses.
7. Ensure medical treatment is provided to injured employee(s).
8. Communicate the results of investigations as required.
9. Ensure employees report all occupational incidents including near misses.

Employee

1. Have the right to refuse dangerous work if the worker believes on reasonable grounds that there is a dangerous condition at the work site or that the work endangers the health and safety of the employee or another person. In these circumstances the employee must immediately report their refusal and reasons for it to their supervisor. The employee must do other work that the City assigns if it is safe and the employee can reasonably complete that work.

2. Report all incidents, including near misses, as soon as practical and no longer than 24 hours after the incident to immediate supervisor.

3. Participate in the incident investigation process by reporting and providing relevant information to help determine incident causes and prevention measures.

Joint Worksite Health and Safety Committees (JWSHSC) / Health and Safety Representatives (HSR)

1. Participate with the investigation of incidents and work refusals as required, except for investigations of harassment or violence.

2. Assist in program development.

3. Review investigation reports.

INCIDENT REPORTING AND INVESTIGATION STANDARD

Introduction

The investigation of incidents is critical to determine the causes of the incident, both in terms of personal and job factors and to make corrective and preventative recommendations to prevent a similar incident from occurring in the future. This standard addresses the investigation and communication of incidents that result in personal injury to City employees or has the potential of causing injury. To read the accompanying Government of Alberta legislation click here.

Requirements

1. All incidents and Unsafe work observations that occur during the course of work must be reported immediately by the worker(s) involved to the immediate supervisor. This requirement includes unsafe work observations and incidents resulting in injury as well as property damage and near miss incidents. If the incident is associated with a hazardous product release, there are additional legislated responsibilities to those outlined below. Refer to Enviso procedures (Link) for additional requirements.

2. All incidents and unsafe work observations are to be investigated by the supervisor of the employee(s) involved in the incident using the systematic cause analysis technique (DNV-SCAT) incident investigation process and reported using the Incident Data Collection (IDC) form within 24 hours of the occurrence of the incident.

3. Incidents are reviewed by the Safety Engagement Leads, WCB reporting, and OHSE directors. Serious incidents are also escalated to senior management.

4. Minor and moderate investigations of incidents near misses and unsafe work observations are completed by the supervisor. These investigations are reviewed by the Safety Engagement Lead and upper management accordingly as per the process workflow.

5. Serious incidents are investigations led by the Safety Engagement Lead.

6. The incident investigation may include, at a minimum, the worker(s) involved in the incident, the immediate supervisor of the work area and a Joint Worksite Health and Safety Committee member or a Health and Safety Representative. Additional resources may be added to the investigation team on a case by case basis to ensure appropriate expertise and understanding of the circumstances of the incident.

    1. OHS legislation does not require Joint Worksite Health and Safety Committee or Health and Safety Representative participation in employer investigations of incidents of harassment or violence. In order to ensure confidentiality and protect the personal information/ privacy of the individuals involved in these circumstances, the City of Edmonton will not involve Joint Worksite Health and

Safety Committee members or Health and Safety Representatives in these investigations.

7. All incident investigations, including root causes and assignment of corrective actions shall be documented using the Safety Data Management System (SDMS).

8. Incidents resulting in serious injury or potentially serious injury as determined by Section 40 of the Occupational Health and Safety Act are to be formally investigated using the DNV-SCAT root cause analysis incident investigation process.

9. Serious Incidents or Potentially Serious Incidents are to be investigated and documented using the Safety Data Management System. A template for formal presentations formally to the corporate OH&S Steering Committee is used to review lessons learned and oversight of actions taken.

   A ***Serious Incident*** as determined by the OHS Act, Section 40 is as follows:

   2(a) an injury or incident that results in the death of a worker,

   2(b) an injury or incident that results in a worker being admitted to a hospital, and for the purposes of this clause, "admitted to a hospital" means when a physician writes admitting orders to cause a worker to be an inpatient of a hospital, but excludes a worker being assessed in an emergency room or urgent care centre without being admitted,

   2(c) an unplanned or uncontrolled explosion, fire or flood that causes a serious injury or that has the potential of causing a serious injury,

   2(d) the collapse or upset of a crane, derrick or hoist,

   2(e) the collapse or failure of any component of a building or structure necessary for the structural integrity of the building or structure, or

   2(f) any injury or incident or a class of injuries or incidents specified in the regulations.

   (5) If an injury or incident referred to in subsection (2) occurs at a work site or if any other injury or any other incident that has the potential of causing serious injury to a person occurs at a work site

   A ***Potentially Serious Incident*** is any incident where a reasonable and informed person would determine that

   (1) the injury sustained requires medical attention beyond first aid;

   (2) an incident could have caused serious injury and

      (a) the hazard was not identified in the hazard assessment; or

(b) the identified hazard had not been reasonably controlled;

(3) Any incident that has the potential of causing serious physical or psychological injury to a person (Example: Serious Near Miss)

10. Incidents that fall within the provisions of the Alberta Occupational Health & Safety Act, Section 40 are considered 'serious' or 'potentially serious' and must notify a City of Edmonton Safety Engagement Lead immediately. The Safety Engagement Lead will then notify provincial authorities. During regular business hours, the first point of contact for supervisor is the work area Safety Engagement Lead; should they be unavailable, the next point of contact is the emergency on-call Safety Engagement Lead at 780-496-6666.

11. Safety Engagement Leads are responsible for reporting 'potentially serious' incidents to Provincial OHS using the PSI Online Reporting Tool.

12. Those leading an investigation and completing an incident investigation shall be formally trained in occupational incident investigation theory, procedure and report completion relevant to the type of investigation they will be expected to complete. The required training includes:

    1. Leadership for Safety Excellence (modules 1 - 4)
    2. Canadian Centre for Occupational Health and Safety (CCOHS) Joint Worksite Health & Safety Committees and Representatives e-COURSEOR a provincially approved JWHSC course provider
    3. School of Business Root Cause Analysis training.

13. The work area is responsible to review and communicate formal incident findings with both internal and external stakeholders of the incident. The work area is not permitted to disclose any personal or health information without prior written approval from Law Branch. The work area must obtain approval from a supervisor and Law Branch prior to communicating incident findings to external stakeholders.

Resources

- Incident Data Collection Form (IDC)
- OH&S Emergency Call Services Information
- Leadership for Safety Excellence Training
- How to Guide for UNSAFE OBSERVATIONS
- How to Guide for INCIDENT INVESTIGATIONS
- Incident Rating Matrix
- Enviso Procedures (https://onecity.edmonton.ca/safety_operating/enviso.aspx, Procedure COE-OP-003 Release Response Requirements)

8. PROGRAM ADMINISTRATION

Introduction

Program administration refers to the department processes that are in place to monitor the effectiveness of our health and safety program, as well as the activities involved in reporting and analyzing the various information reports associated with the various program elements. This element also discusses monitoring and improving the program through safety audits or evaluations, analyzing injury information, contractor management processes, effective communication, and meaningful employee participation.

Responsibilities

Deputy City Managers

1. Ensure department program administration programs are implemented that meet or exceed corporate standards, Alberta's OH&S Act, Regulation, and Code, applicable Federal Occupational Laws and other jurisdictional agencies in consultation with the OH&S Section.
2. Review performance and analysis reports from the OH&S section to determine areas of strength and opportunities for improvement.
3. Ensure action plans are developed to address the finding(s) in reports and a mechanism is implemented to assign responsibility and ensure action is completed in a timely manner.

Manager/Director

1. Review performance and analysis reports from the OH&S section to determine areas of strength and opportunities for improvement.Develop action plans with responsibilities and timelines to address opportunities identified in the analysis reports.
2. Develop a process to address and monitor action plans from periodic OH&S audits.
3. Develop a record system to ensure the documentation requirements of each program element are satisfied.
4. Ensure the implementation of a program that meets or exceeds the Corporate OH&S Contractor Management standards, Alberta's OH&S Act, Regulation, and Code, applicable Federal Occupational Laws and other jurisdictional agencies in consultation with the OH&S Section.

Supervisor

1. Implement recommendations arising from analysis or program evaluations.

2. Communicate critical health & safety related information through safety talks, bulletin boards, safety alerts, posters, and individual counselling.
3. Manage contractors in accordance with the departmental contractor management program.
4. Effectively resolve health & safety issues from employees.

Employee

1. Participate as requested and as outlined in this OHS Program Manual.

2. Communicate health & safety issues or concerns to their immediate supervisor.

Joint Worksite Health & Safety Committees

1. Review performance and analysis reports to determine areas of strength and opportunities for improvement.

2. Review action plans to address recommendations from safety program audits or evaluations.

3. Participate in the review of performance and analysis reports as required.

4. Be a resource for employees expressing safety issues or concerns.

5. Provide assistance in addressing health and safety issues or concerns.

CONTRACTOR SAFETY MANAGEMENT STANDARD

Preface

The City of Edmonton (the "City") is committed to the health, safety and wellness of its employees, contractors, and the public. The City recognizes that the health and safety of employees and contractors performing services on behalf of the City is of primary importance in all aspects of our operations. This Standard was developed to help ensure that the City develops and maintains contractor safety management practices in all departments to create a safe work environment and comply with the Alberta Occupational Health and Safety ("OH&S") Act, Regulation, and Code.

Introduction

This Standard was first developed in 2012 as result of a review of City contractor safety management practices, and was reviewed and updated in 2018 in response to anticipated significant amendments to the OH&S Act. It addresses gaps in management systems identified during the review process and sets common standards for managing contractor safety across the City. The City's aim in establishing this standard is to ensure that all employees and contractors are working under an effective management system that is designed to ensure compliance with OH&S laws. This may mean working directly under the City's supervision and its OH&S management system or under a contractor's certified OH&S management system.

Scope

This Standard applies to all City departments reporting to the City Manager and all City employees, including full-time, part-time, temporary and provisional employees and persons acting on behalf of the City such as contractors and consultants.

Definitions

Contractor – Means a person or group of persons, partnership, or corporation who, through a contract or an agreement with the City of Edmonton undertakes to complete a defined scope of work for the City.

Caution

The manner in which the word "Contractor" is used in this Standard and related documents is the manner in which it is commonly used and not the way it is defined in the OHS Act. Be aware that whenever the City hires other employers/entities to work on our behalf and directs their activities we have a legal responsibility under the OHS Act to ensure that the every work site and work process under the control of the City as the contractor does not create a risk to the health and safety of any person. Although not part of the current Prime Contractor Standard, those obligations exist. If you have questions check with your assigned Safety Engagement Lead.

Prime Contractor – Means the person or group of persons, partnership or corporation who is responsible for meeting the obligations contained in section 10 of the OH&S Act when two or more employers or self-employed persons, or one or more employers and one or more self-employed persons, are working on the same work site and the OH&S Act Prime Contractor Obligations applies to that work site (that is, it is a construction or oil and gas work site, or a work site designated by a Director under the OH&S Act). In the absence of an agreement with a contractor to take on prime contractor responsibilities, the City is the prime contractor on work sites owned by the City.

Procedures And Guidelines

The City's health and safety practices are guided by the legal requirements in the Alberta OH&S Act, Regulation, and Code.

OH&S laws place legal obligations on certain work site parties, depending on the nature of the work site and the contractual arrangements governing that work site, to do everything reasonably practicable to ensure the safety of employees and contractors. In some circumstances, those obligations will accrue to the City. The Prime Contractor Safety Management Program Guide provides a more detailed explanation on this issue.

In the case of multiple employers involved in work on work sites where the City bears those obligations, the legislation places an additional obligation on the City to ensure that there are systems in place to ensure all employers at the work site comply with OH&S legislation – these legal duties are called "prime contractor" obligations.

Ultimately, it is a legal question as to whether or not the City assumes prime contractor responsibilities on any given work site, and direction from project management or legal counsel should be sought on this question.

Whenever possible the City will ensure that employees and contractors are working under an effective safety management system that is designed to ensure compliance with OH&S laws. This may mean working directly under the City's supervision and its OH&S management system or under a contractor's certified OH&S management system.

Three different contractor management approaches are acceptable:

<u>Contractor Safety Management Approaches</u>

City Retains Prime Contractor Responsibilities:

1. *Contractors Working Under Direct City of Edmonton Supervision.* In these situations the City will provide direct supervision, and work with the contractor to review hazards, and to establish controls for the task at hand. Since these contractors will follow City safety procedures and practices they will not be required to get a Certificate of Recognition (COR) for their OH&S management system as a condition of working for the City. However,

contractors will be expected to provide workers who have the basic skills and training required to perform work safely.

2. *Contractors Expected to Work Independently.* Contractors are expected to supervise themselves and will be required to provide evidence of having an effective safety management system as a condition of working for the City (i.e. a COR or equivalent).

City Delegates Prime Contractor Responsibilities:

3. *Project Prime Contractors.* Contractors are expected to supervise themselves and to also act as prime contractor for the work site. They will also be required to provide evidence of having an effective safety management system as a condition of working for the City (i.e. a COR or equivalent). These contractors, as designated prime contractor, are required to provide a system of orientations and regular compliance checks, and to investigate serious incidents at these worksites involving other contractors or City staff working on their designated worksite. The City will check whether the contractor's management systems remain effective and transfer knowledge about known hazards but overall responsibility for worksite safety will be the responsibility of the prime contractor.

<u>Responsibilities</u>

1. *Deputy City Manager to:*

    a. Ensure systems are in place to manage prime contractor health and safety in the department.
    b. Ensure processes are implemented to hold Managers, Directors, Project Managers, Project Officers and workers accountable for health and safety responsibilities and performance.
    c. Provide the financial and human resources to support the department's prime contractor safety management program.

2. *Manager / Director to:*

    a. Provide leadership and program development that will ensure employees and contractors are working under an effective management system that is designed to ensure compliance with OH&S laws and the safety of workers.
    b. Be responsible and accountable for integration of programs to manage contractor safety in accordance with the standards and expectations outlined in this Standard.
    c. Ensure systems are implemented to monitor contractor safety program compliance and effectiveness.

3. *Project Managers / Project Supervisors / Project Officers to:*

a. Provide leadership that will ensure contractors meet OH&S legislation and contract obligations.
b. Be responsible for selecting the appropriate prime contractor management approach for the project as outlined in the Prime Contractor Safety Program Selection Process.
c. Ensure that pre-qualification / Tender / Request for Proposal documentation and specifications contain the appropriate hazard identification and safety requirements.
d. Be responsible and accountable to ensure that any City contractor safety programs are followed for contractors they manage.
e. Be responsible and accountable to ensure all contractor work activities adhere to the City's Prime Contractor Safety Management Program, OH&S standards and applicable regulations.
f. Monitor and review contractor safety performance by conducting safety inspections or system checks on contractors
g. Participate in training and activities that demonstrate OH&S commitment and promote a healthy, safe, and productive work environment.
h. Ensure that sole source contracts contain safety responsibilities and accountabilities for contractors that work for the City.
i. Complete contractor performance evaluations.

4. *Safety Engagement Lead to:*

a. Provide support to their work areas in the development of programs to manage contractor safety in accordance with the standard and expectations outlined in this Standard.
b. Assist Project Managers, Project Supervisors and Project Officers in the resolution of contractor safety issues.
c. Facilitate serious incident investigations in cases when the City is designated prime contractor.
d. Coordinate the tracking and measurement of contractor safety performance.
e. Help Project Managers, Project Supervisors and Project Officers identify and resolve contractor safety performance issues.
f. Evaluate new requests for "equivalency to Certificate of Recognition" for addition to the approved list of equivalencies.
g. Assist Project Managers / Supervisors / Officers in the evaluation of Prequalification / Tenders /Request for Proposal in relation to health and safety matters.

5. *Corporate Procurement and Supply Services Procurement Managers / Buying Staff to:*

a. Provide support to all departments in the implementation of contractor safety management programs through ensuring the inclusion of contractor safety

requirements in tender documents as outlined by the Prime Contractor Safety Management Program.
b. Ensure contractors that are selected for work with the City meet minimum bid requirements with respect to health and safety as defined in the Tender / Request for Proposal documentation.
c. Ensure tendered contracts contain defined safety responsibilities and accountabilities for contractors that work for the City.
d. Coordinate the tracking and measurement of contractor safety performance.

6. *Contractors Working Under Direct City of Edmonton Supervision to:*

a. Provide evidence of contract worker competency and ability to work safely in the form of training certificates, licenses, or other qualifications required to complete the project.
b. Become knowledgeable in the applicable City safe work procedures or practices required for the project.
c. Participate in safety orientations, pre-job meetings, incident investigations and hazard assessments as directed by City Project Managers, Project Supervisors or Project Officers.
d. Comply with safety rules and safe work practices prescribed by the City.

7. *Contractors Expected to Work Independently to:*

a. Provide evidence of, and maintain, a valid Certificate of Recognition issued in accordance with the Alberta Partners in Injury Reduction Program or equivalent.
b. Provide evidence of hazard assessment and control procedures, safe work procedures, and other systems to ensure workers have the skills, training, and experience to complete work safely when asked by City staff.
c. Provide evidence of good safety performance in accordance with the standards and expectations outlined in the Prime Contractor Safety Program and City policies, procedures, and agreements.
d. Participate in safety orientations, pre-job meetings, and serious incident investigations as directed by City Project Managers, Project Supervisors or Project Officers.
e. Supervise own staff to ensure compliance with OH&S legislation.
f. Conduct investigations of incidents involving their own staff; make changes to safe work procedures or equipment to correct issues identified.
g. Report incidents to City Project Managers, Project Supervisors or Project Officers and provide copies of incident investigations upon request.

8. *Project Prime Contractors to:*

a. Provide evidence of, and maintain, a valid Certificate of Recognition issued in accordance with the Alberta Partners in Injury Reduction Program or equivalent.
b. Provide evidence of hazard assessment and control procedures, safe work procedures, and other systems to ensure workers have the skills, training, and experience to complete work safely when asked by City staff.
c. Provide evidence of good safety performance in accordance with the standards and expectations outlined in the Prime Contractor Safety Program and City policies, procedures, and agreements.
d. Participate in safety orientations and pre-job meetings as directed by City Project Managers, Project Supervisors or Project Officers.
e. Organize safety orientations and pre-job meetings for other contractors and City employees working at their designated work site.
f. Supervise own staff to ensure compliance with OH&S legislation.
g. Conduct safety inspections and serious incident investigations for all contractors working at their designated worksite; make corrections in safe work procedures or equipment to correct issues identified.
h. Report incidents to City Project Managers, Project Supervisors or Project Officers and provide copies of incident investigations upon request.

Performance Standards

1. Contract work is done by workers that have the skills, knowledge and training to perform work safely.
2. City employees and contractors are working under an effective management system that is designed to ensure compliance with OH&S legislation.
3. Information about known hazards, emergency procedures and coordination of work is transferred to contractors and City employees.
4. OH&S inspections and incident investigations are done to ensure compliance with laws and safe work practices.
5. Contractor safety performance is monitored and contractors are held accountable for poor performance.
6. City staff required to implement the prime contractor safety management program receive required training as outlined by the Prime Contractor Safety Program.

References - Legislation

Alberta Occupational Health and Safety Act, Regulation, and Code
Criminal Code of Canada – Section 217.1

References - City

Occupational Health and Safety Administrative Directive A1117C
Procurement of Goods, Services, and Construction Administrative Directive A1439C
Prime Contractor and Owner Selection Guide Process
Prime Contractor Safety Management Program Guide

JOINT WORKSITE HEALTH & SAFETY COMMITTEE AND REPRESENTATIVE STANDARD

Introduction

This Standard outlines the expectations for Joint Work Site Health & Safety Committees ("**JWSHSC**") and Health & Safety Representatives ("**HSR**") within The City of Edmonton. Where work sites do not have formal JWSHSCs or HSRs, they shall have health and safety as a regularly scheduled agenda item in staff meetings, and all affected workers shall participate in hazard assessments and control or elimination of hazards in accordance with Occupational Health & Safety ("**OHS**") legislation.

General Requirements

1. All work sites with 20* or more workers and work expected to last 90 days or more, and any work site designated by a Director (Province of Alberta), must have a JWSHSC.
2. All work sites with 5-19* workers and work expected to last 90 days or more, and any work site designated by a Director (Province of Alberta), must have a HSR.
3. If any work site requiring a JWSHSC or HSR has workers from more than one (1) employer and/or self-employed person, the Prime Contractor must coordinate the establishment of the JWSHSC or the HSR for that work site. If the work site does not have a Prime Contractor, all employers and self-employed persons at the work site must coordinate to establish the required JWSHSC or HSR.

* The number of workers at a work site is the average number of full-time and part-time workers employed by the employers and/or self-employed persons at the work site on a daily basis on each working day:

- over the previous 12 months, if operations began at least 12 months ago;
- since operations began, if operations began less than 12 months ago; or
- expected to be present over the duration for a new operation lasting 90 days to 12 months.

City of Edmonton (Employer), Prime Contractor and/or Contractor Responsibilities to the JWSHSC and HSR

The City of Edmonton is committed to (Employer Responsibilities):

1. Consult and cooperate with the JWSHSCs and HSRs to exchange information on health and safety matters and resolve health and safety concerns;

2. Ensure that health and safety concerns raised by JWSHSCs, HSRs, or any other work site party, are resolved in a timely manner;
3. Keep all health and safety information readily available and provide it to the JWSHSCs and HSRs at the work site;
4. Ensure hard or electronic copies of the *OHS Act*, *OHS Regulations*, or *OHS Code*, are readily available for reference by workers, JWSHSCs, and HSRs;
5. Consult with the JWSHSC in the establishment of its health and safety program;
6. Develop, implement, and review its violence and harassment prevention plans in consultation with the JWSHSC and HSR (or affected workers if there is no JWSHSC or HSR);
7. Review its violence and harassment prevention plans when the JWSHSC or HSR recommends it, when an incident occurs, or every three years; and
8. Ensure that the training for a worker who works with or near a hazardous product or performs work involving the manufacture of a hazardous product is developed and implemented in consultation with the JWSHSC or HSR, if there is one.
9. Ensure no discriminatory action is taken against any worker, including any JWSHSC member or HSR, for performing duties or exercising rights under OHS legislation.
10. If a person is required to make a report, a plan, or procedures under the *OHS Code*, *OHS Regulations*, or *OHS Act*, the person must ensure that the report, plan, or procedures are in writing and that a hard or electronic copies are readily available for reference by workers, JWSHSCs, or HSRs at the affected work site(s) and, in certain circumstances are provided.

The City of Edmonton, contractor, or Prime Contractor must:

1. Consult and cooperate with all JWSHSCs and HSRs for their work sites to develop the policies, procedures, and codes of practice required by OHS legislation;
2. Provide all JWSHSCs and HSRs for their work sites with reasonable opportunity to inform workers on matters affecting occupational health and safety;
3. Ensure that all JWSHSC members and HSRs for their work sites are provided and have access to records, policies, plans, procedures, codes of practice, reports, or manufacturer specifications that must be maintained under OHS legislation;
4. Distribute to all JWSHSCs and HSRs for their work sites any information or documents addressed to the JWSHSC or HSR as soon as reasonably possible after it is received;
5. Provide JWSHSCs and HSRs with certain information, notifications, reports, plans, procedures, applications and the like, as required under OHS legislation;

6. In order to protect workers' privacy and personal information:

    a. Discriminatory action reports (a report referred to in section 36 of the *OHS Act*) must not be shared with JWSHSCs or HSRs ; and

    b. JWSHSCs and HSRs will not participate in City of Edmonton investigations of incidents of harassment or violence.

JWSHSC Composition

7. All JWSHSCs must consist of at least four (4) members. All JWSHSCs must be structured as follows:

    a. At least half of the members of all JWSHSCs must be members who are not associated with the management of the work site ("**Worker Member**") that are selected by the workers in accordance with any applicable union agreement(s);

    b. To be eligible to be a Worker Member of a JWSHSC, a person must work at the work site where the JWSHSC is established or, if an employer operates multiple work sites, be a worker directly employed by the employer;

    c. A member of a JWSHSC who is associated with the management of the work site (an "**Employer Member**") must be appointed to the JWSHSC by the employer or Prime Contractor, if applicable; and

    d. To be eligible to be an Employer Member, a person must be employed at the work site where the JWSHSC is established or, if an employer operates multiple work sites, be a person directly employed by the employer.

8. All JWSHSCs must have two (2) co-chairpersons. One (1) co-chairperson must be chosen by the employer members on the JWSHSC ("**Employer Co-chairperson**") and one (1) co-chairperson must be chosen by the worker members on the JWSHSC ("**Worker Co-chairperson**"). The co-chairpersons of each JWSHSC must alternate in serving as chair at meetings of the JWSHSC and must participate in all decisions of the JWSHSC.

9. JWSHSC members and HSRs must hold office for at least one (1) year and may continue to hold office until their successors are selected or appointed, unless a different term of office is prescribed by a union agreement.

10. All Worker Members of a JWSHSC and HSRs must be appointed in accordance with the constitution of the union that is the certified bargaining agent or has acquired bargaining rights on behalf of the workers at the work site. If a work site does not have a union, the JWSHSC Worker Members or HSR must be selected by the workers that the JWSHSC or the HSR represent. If more than one union represents the workers at the work site, the JWSHSC Worker Members or HSR must be appointed with an agreement among all of those unions.

JWSHSC and HSR Responsibilities and Duties

The duties of the JWSHSC and/or HSR must at a minimum include the following:

1. HSRs must meet with the The City of Edmonton or Prime Contractor regularly to discuss health and safety matters on at least a quarterly basis. A HSR may call a special meeting with a supervisor or other designate of The City of Edmonton or Prime Contractor to deal with urgent concerns at the work site.
2. All HSRs must establish procedures and cooperate with a supervisor or other designate of The City of Edmonton to perform the same responsibilities and duties as JWSHSCs, with any necessary modifications, as outlined in this standard.
3. JWSHSCs must ensure that their action items are closed within a reasonable time period and/or are escalated for review and closure, if required.
4. Receive, consider, and dispose of concerns and complaints respecting the health and safety of workers;
5. Participate in identifying hazards to workers, other persons or the environment arising out of or in connection with the activities at the work site;
6. Participate in developing and promoting measures to protect the health and safety of persons at the work site and checking the effectiveness of the measures;
7. Participate in developing and promoting programs for education and information concerning health and safety;
8. Cooperate with an OHS officer exercising duties under the *OHS Act*, the *OHS Regulations*, and/or the *OHS Code*;
9. Make recommendations to a supervisor or other designate of The City of Edmonton, Prime Contractor, or owner respecting the health and safety of workers;
10. Inspect the work site to identify health, safety and environmental hazards that have not been controlled at regular intervals and at least once before each quarterly meeting;
11. Participate in investigations of serious injuries and incidents at the work site in accordance with the *OHS Act* (investigations referred to in subsection 40(5)(b) of the *OHS Act* must be conducted with the participation of the JWSHSC or HSR, if there is one at the work site);
    a. Despite the foregoing, OHS legislation does not require JWSHSC or HSR participation in employer investigations of incidents of harassment or violence. In order to ensure confidentiality and protect the personal information/ privacy of the individuals involved in these circumstances, the City of Edmonton will not involve JWSHSC members or HSRs in these investigations;

12. Maintain records in connection with the receipt and disposition of concerns and complaints and the attendance to other matters relating to the duties of the JWSHSC;

13. Other duties as may be specified by the *OHS Act*, *OHS Regulations*, and/or *OHS Code*.

14. A Provincial OHS Officer must, when feasible, request the Worker Co-chairperson of the JWSHSC (or their designate) or a HSR to be present at an inspection of a work site. A Provincial OHS Officer may also request the Employer Co-chairpersons (or their designate) to be present during a work site inspection. When this request is made, the City of Edmonton will allow that person with time away to attend the inspection.

15. JWSHSC members or HSRs are entitled to take the following time away from their regular duties and be paid their applicable rate of pay for:

    a. The time required to prepare for each meeting;

    b. The time required to attend each meeting;

    c. The time required to attend health and safety training as approved by the employer; and

    d. The time required to carry out the JWSHSC's or HSR's duties.

16. JWSHSCs (including all of its members) and HSRs must not disclose a worker's personal health information or the person information of any identifiable individual unless required by law.

17. A worker may refuse work if the worker believes on reasonable grounds that their health and safety (or the health and safety of another person) is in danger. A worker must promptly report such refusal to their supervisor. If The City of Edmonton does not, or is not able to remedy the dangerous condition immediately, the City of Edmonton must inspect the dangerous condition in the presence of the worker and the Worker Co-chairperson of the JWSHSC, HSR, or another worker if there is no JWSHSC or HSR (when this does not create a danger). The JWSHSC and/or HSR must also receive a copy of the report that is completed after the inspection about the inspection and action taken, if any.

JWSHSC Meetings

1. JWSHSC meetings must meet the following requirements:

    a. Each JWSHSC must meet within 10 days of its establishment and then at least once every 3 months (quarterly);

    b. Each JWSHSC meeting and all JWSHSC duties must be carried out during normal working hours;

c. Either co-chairperson of a JWSHSC may call a special meeting of the JWSHSC to deal with urgent concerns at a work site;

d. A JWSHSC must convene a special meeting if requested by a Provincial OHS Officer;

e. The co-chairpersons of each JWSHSC must ensure that:

   i. The minutes of each JWSHSC meeting are recorded in writing and stored using the Safety Data Management System (SDMS);

   ii. Copies of the minutes approved by the JWSHSC are given to the City of Edmonton within seven (7) days after a meeting; and

   iii. Copies of the minutes approved by the JWSHSC are posted locally in the workplace to ensure access to all workers and may also be provided electronically at the work site within seven (7) days after a meeting;

f. The City of Edmonton or Prime Contractor must maintain a copy of these JWSHSC minutes for at least two (2) years and have them readily available for inspection by a JWSHSC member or a Provincial OHS Officer; and

a. The City of Edmonton or Prime Contractor must maintain a copy of any other relevant health and safety documents produced by the JWSHSC and have them readily available for inspection.

JWSHSC Terms of Reference

Each JWSHSC must establish a Terms of Reference outlining their responsibilities and the members. These Terms of Reference shall be written in the template provided and customized to meet the specifics of that committee.

JWSHSC meeting requirements are as follows and shall be addressed in the Terms of Reference:

1. A quorum of a JWSHSC is one-half of its members if:
   a. Both Worker Members and Employer Members are present; and
   b. At least one-half of those present are Worker Members.

2. Any JWSHSC business or meetings that are conducted when quorum is not present are not valid.

3. All JWSHSCs shall establish rules of procedure for fulfilling its duties. These rules of procedure must be recorded as written Terms of Reference.

   a. These Terms of Reference must include:

      i. Purpose
      ii. Scope

iii. Membership
iv. Meeting schedule
v. Membership term
vi. Established quorum
vii. Process for selecting co-chairs
viii. Members' responsibilities

4. The Terms of Reference shall be signed by the appropriate branch manager(s) or designate. At a minimum, the Terms of Reference shall be reviewed every three years and updated as required based on changes in members or committee requirements as communicated by the employer.

The JWSHSC/HSR Reporting and Resolution of Health and Safety Concerns

A JWSHSC or a HSR may make recommendations to the City of Edmonton respecting the health and safety of workers when the committee is unable to accomplish a reasonable resolution on their own or whereby established standards or policies are thought to be insufficient to protecting the health and safety of workers.

1. When a JWSHSC or HSR makes a recommendation to the City of Edmonton, it must be in writing and delivered via email to Workforce Safety and Employee Health using the secure email address safety@edmonton.ca. All received recommendations will be documented and tracked using the Safety Data Management System (SDMS) to ensure proper action tracking and record keeping.

2. When a JWSHSC or HSR brings a health and safety matter to the attention of the employer, Prime Contractor, or self-employed person and makes recommendations to remedy the matter, the following requirements must be met:

    a. If the matter can be resolved by the employer, Prime Contractor, or self-employed person within 30 days, then the employer, Prime Contractor, or self-employed person must do so and inform the JWSHSC or HSR in writing;

    b. If the matter cannot be resolved by the employer, Prime Contractor, or self-employed person within 30 days, then the employer, Prime Contractor, or self-employed person must respond in writing stating how and when the concern will be addressed, including:

        i. a timetable for implementing changes to address the matter, and

        ii. any interim control measures that the employer, Prime Contractor, or self-employed person will implement to address the matter;

    c. If the employer, Prime Contractor, or self-employed person disagrees with any recommendations or does not accept or believe there are any health and safety concerns, the employer, Prime Contractor, or self-employed person must give

written reasons why it disagrees with any recommendations or does not accept or believe there are any health and safety concerns;

d. If the parties cannot resolve a concern after the provision of written reasons by the employer, Prime Contractor, or self-employed person, any party may refer the matter to a Provincial OHS Officer. This process does not limit the right of a worker to refer a health and safety concern to a Provincial OHS Officer.

JWSHSC and HSR Training

The employer or Prime Contractor must ensure that the all members of JWSHSCs and HSRs receive training:

1. Co-chairpersons of JWSHSCs and HSRs must receive training for their respective duties and functions;
2. Other JWSHSC members must also be provided with sufficient training to be competent to fulfill their roles;
3. If a JWSHSC member or HSR gives reasonable notice, the employer must allow them to take the greater of 16 hours or the number of hours in two (2) normal shifts away from regular work duties per year to attend health and safety training programs, seminars, or courses of instruction; and
4. Employers and Prime Contractors must ensure that training for JWSHSC members and HSRs is provided by an organization designated by the Province. This training must include:
    a. The roles and responsibilities of JWSHSC co-chairpersons and HSRs;
    b. The obligations of work site parties;
    c. The rights of workers;
    d. How the organization will address the responsibilities of workers and employers in the training curriculum; and
    e. Any other criteria established by the Province.
5. The following training is available for JWSHSC members and HSRs:
    a. The Canadian Centre for Occupational Health and Safety has developed a free introductory course to help JWSHSC co-chairpersons and HSRs learn about their roles and responsibilities (See City of Edmonton Safety and Employee Health Google Site for training updates and links);
    b. Leadership in Health and Safety – Modules 1 to 4, OHS Committees Training; and

c. Additional training may be required based on specific JWSHSC or HSR requirements as they become available.

Resources

- TEMPLATE - JWSHSC Terms of Reference

OHS Standards Review Process

OH&S Standards are to be reviewed, at a minimum, on an annual basis to ensure they are up to date with current legislation and work practices. OH&S standards will be reviewed at an earlier opportunity should circumstances warrant, such as in response to changes in OH&S legislation, the occurrence of an incident, or upon request from the a JSWHSC. Each standard has a Process Review Manager (PRM) from within the Workforce Safety and Employee Health as well as the Safety Engagement Lead Teams.

PRM's of the standards are responsible for the initial annual review to be completed by the end of January of each year. If there are recommended changes, each PRM is to distribute their recommended changes to the OH&S Team allowing them at least two weeks to review the changes and provide feedback. If there are issues expressed from any OH&S team member time will be scheduled during an OH&S Team meeting to review and reach consensus on the changes. The recommended changes will be then be presented to the OH&S Steering Committee for endorsement.

Criteria for changes to the standards would include but not be limited to:

1. Legislation linked to the standard has changed warranting a change to the content of the standard;
2. Work practices/procedures have changed;
3. Hazard Assessments, Investigation results etc. have indicated gaps in the standards;
4. Client feedback and recommendations have indicated opportunities for enhancing the standards.

NOTE: If, after the initial review by the PRM, there are no changes required, the PRM must communicate this to the OH&S team and must ensure the electronic version on e-city is updated to show last review date.

The following table shows each of the standards, owners and last review date.

OHS Standard Review Record

Standard	Process Review Manager	Previous Review Date	Most Recent Review Date
Automatic External Defibrillator	JoAnne Seglie/Melissa Frame	January 2018	November 2018
Asbestos	Erin Pierce	January 2018	November 2018
Breathing Air	Erin Pierce	January 2018	November 2018
Confined Space Entry	Ward King	January 2018	November 2018

Controlling Hazardous Energy	Robert Hartley	January 2018	November 2018
Distracted Driving	Danielle Brown	January 2018	November 2018
Emergency Response	David Doyle	May 2018	November 2018
Fall Protection	Scott Cameron	January 2018	November 2018
Hazard Assessment	Crystal Ludwar	May 2018	November 2018
Haz. Materials (WHMIS 2015)	Kim Heron	January 2018	November 2018
Hot Work	Lori Krueger	TBD	N/A
Hydrogen Sulphide	Erin Pierce	January 2018	November 2018
Incident Reporting and Investigation	Danielle Brown	May 2018	November 2018
Inspections	Dina Etbail	May 2018	November 2018
Isocyanates	Kim Heron	January 2018	November 2018
Lead	Erin Pierce	January 2018	November 2018
Mercury	Erin Pierce	January 2018	November 2018
Musculoskeletal	Erin Walkom	January 2018	November 2018
Noise Control	Kim Heron	January 2018	November 2018
Orientation and Training	Crystal Ludwar	May 2018	November 2018
OH&S Committee	Chase Kuziw	May 2018	November 2018
Personal Protective Equipment	Ward King	January 2018	November 2018
PPE: Leg Protective Device	Ward King	January 2018	November 2018
PPE: Occupational Vision Care	John Scarlett	January 2018	November 2018
Prime Contractor	David Doyle	May 2018	November 2018

Respiratory Protective Equipment	JoAnne Seglie/ Erin Pierce	January 2018	November 2018
Silica	Kim Heron	January 2018	November 2018
Working Alone	John Scarlett	January 2018	November 2018
Workplace Violence	Danielle Brown	May 2018	November 2018

Summary of OHS Standard Changes

TOC Item (Element / Standard)	Change Type	Description	Change Date
DEFINITIONS	Content added	Definition of Employer added based on OHS Act definition	May 2018
		Definition of Health and Safety added as defined in the OHS Act under Bill 30.	May 2018
		Definition of owner added to align with Bill 30 definition	May 2018
		Definition of Serious Incident added as defined by the OHS Act - Bill 30, Section 40(2)/(5)	May 2018
		Definitions of incident and near miss added, as defined by CCOHS and NSC respectively	May 2018
		"Distracted Driving" added.	Nov. 2018
		Definition of "Enviso" added as references to Enviso, the City of Edmonton's Environmental Management System, were added.	Sep. 2019
		Definition of release added as section on Emergency Response Planning was updated to include environmental releases.	Sep. 2019
	Content updated	Definition of Manufacturer's Specifications updated	May 2018
		Definition of Prime Contractor updated to align with Bill 30 definition	May 2018
		Definition of Supervisor updated to align with Bill 30 definition	May 2018
		Definition of Worker updated to clarify that workers receiving no monetary compensation are included in definition of a worker, but does not include students enrolled in educational institutions working for the purpose of gaining work experience and learning activity.	May 2018
		Workplace Violence definition updated to align with Bill 30 definition	May 2018
		Definition of Hazardous Product updated to reflect amendments to OHS Code and Regulations to include mixtures and to reference s. 15(1) under the Hazardous Products Act.	May 2018
		Align manual definition of "Employee" with the definition listed in the D&A directive, to include reference to volunteers and contractors.	Nov. 2018

ADMIN-ISTRATION	Content added	OHS Obligations Act Roles & Responsibilities section added to reflect the definitions and roles and responsibilities of the worksite parties including Owner, Employer, Worker, Supervisor	May 2018
		Added reference to the Duty to Provide Information as listed under Section 14 of the OHS Act.	Nov. 2018
		Added Contractor and Prime Contractor obligations as they are listed under Section 9 and 10 of the OHS Act	Nov. 2018
		Disclaimer statement added to the end of this section in reference to City of Edmonton's role on worksites and obligations to the OHS Act.	Nov. 2018
		Clarification contractor and prime contractor roles and responsibilities.	Nov. 2018

ELEMENT: All	Content updated	Reviewed OHS Program and Standards Manual responsibilities against those listed within the OHS Administrative Directive (and OHS Framework) for consistency; changed program manual listings where necessary to align with OHS Administrative Directive.	Nov. 2018

ELEMENT 1 - Organizational Commitment	Content added	Worker responsibilities have been added to to beginning of each element, following the introduction to ensure work participation in all elements of the program are clearly identified in alignment with Bill 30 requirements.	May 2018
		Roles and responsibilities for DCM, Supervisor, Manager, Worker, have been added to align with the OHS Admin Directive Framework and to support the intent of Bill 30 expectations for these worksite parties.	May 2018
		Alignment with OHS framework.	Nov. 2018
		Added requirement to investigate worker unsafe work refusals.	Nov. 2018
	Content updated	Aligned responsibilities listed for each level in the organization (City Manager, Deputy City Manager, Manager/Director, Supervisor/Foreman, and Employee) with the City OHS Administrative Directive and OHS Framework.	Nov. 2018
		Removed OHS performance standards as these allowed for a level of OHS program compliance below what is required under Alberta OHS legislation.	Nov. 2018

ELEMENT 2 - Hazard Identification & Ranking	Content added	Responsibilities of upper management updated to reflect the audit requirement to be aware of serious hazards in their area of responsibility	May 2018
		New definition of health and safety added to include all types of workplace hazards and the requirement for employers to address workplace violence as part of the haz. id. assessment and control process.	May 2018
		Worker Responsibilities #4 added "If part of a JWSHSC, participate in the hazard identification and assessment process."	Nov 2018
		Worker responsibilities added	May 2018
	Content updated	Manager/Directors Responsibilities #3 Edited ".....hazard identification and assessment process that….includes an inventory of jobs/positions and tasks performed…"	Nov 2018

ELEMENT 3 -	Content	Deputy City Manager roles and responsibilities added - responsible to ensure	May 2018

Hazard Control	added	hazard rec. and control systems are in place in their areas of responsibility	
		Worker responsibilities added to reflect new requirements of Bill 30	May 2018
		Worker Responsibilities #7 added “If part of a JWSHSC, participate in the hazard assessment and control process.”	Nov 2018
		References to Enviso procedures that address environmental regulatory requirements for environmental releases and handling of waste were added for alignment of the environment and safety systems.	Sept 2019
STANDARD - Hazard Identification, Assessment, & Control Standard	Content added	New requirement added to reflect the new definition of health and safety in the workplace and the need to include all types of hazards in the Hazard Identification, Assessment and Control Process (Hazard assessments including harassment, violence, physical, biological,chemical, or radiological hazards and controls	May 2018
		New section - hazard identification, assessment and control added to show the step wise procedure for haz. identification, assessment and control.	May 2018
		Added a new section called 'participation and communication requirements' to ensure the need to involve affected workers in the HA process is clearly identified and the role of JWSHC/HSR is included in the standard.	May 2018
		Include that HRAC documents may also be located within SDMS for access and review, to align with changes to SDMS use and expected use across the organization in alignment with future state goal.	Nov. 2018
		Include worker participation in JWSHSC’s as a listed worker responsibility, under responsibilities section for JWSHSC standard.	Nov. 2018
		Added reference to domestic violence as a potential hazard, and the existing City resources available to employees experiencing domestic violence as per recommendations from Legal	Nov. 2018
	Content updated	Opening paragraph updated to reflect the need to share and communicate hazards related to all workplace tasks and work activities with all worksite parties.	May 2018
		Roles and responsibilities removed as they are reflected in the Element content.	May 2018
		List item updated to reflect the need to not only identify tasks that may be related to hazards, but to also consider the working environment as a whole, including culture, operational demands and environmental conditions that may have an impact on health and safety as defined by the OHS Act under Bill 30.	May 2018
		Definition of violence updated and previously included definition of harassment from the human rights act removed as it is no longer needed.	May 2018
		Following gap analysis of the existing standard in consultation with Legal, Labour Relations, Corporate Safety, and Citizen Services, the review panel recommends changes to the standard which will reflect alignment with Bill 30 legislation, AMHSA COR audit element requirements, and the CoE Harassment and Discrimination process currently administered through Deloitte.	May 2018
		Expanded language to include HRAC inventory being based off position and task(s) hazard evaluation, not exclusively position evaluation.	Nov. 2018
		HRAC reviewed every 3 years at minimum, or sooner if required as per 2016 COR Audit recommendation.	Nov. 2018
STANDARD - Fall Protection	Content updated	Removed reference to only ACSA approved Fall Protection being approved for City employees, and replaced with any course being suitable provided it meets the Fall Protection training requirements as listed under Alberta OHS legislation (OHS Code, Part 9)	Nov. 2018

STANDARD - Workplace Violence and Harassment and Bullying Prevention Standard	Content added	Outline responsibilities to prevent disclosure of information.	Nov. 2018
	Content updated	Replace term 'line occupational health and safety committee' with joint worksite health and safety committee	May 2018
		Reference to Human Resources and Labour Relations Investigations into employee conduct related to workplace violence has been removed and identified as out of scope for the Workplace Violence Standard. A reference made to the independent and confidential reporting and resolution process. A link to One City was included in the standard.	May 2018
		Updated title from “Workplace Violence and Harassment Prevention Standard” to “Workplace Violence, Harassment and Bullying Prevention Standard”.	Nov. 2018
		Update mandatory training requirements to include harassment and psychosocial bullying, domestic violence	Nov. 2018

ELEMENT 4 Planned Safety Inspections	N/A	N/A	N/A
STANDARD - Planned Safety Inspections	Content updated	Remove minimum inspection frequencies and replace with frequencies at the discretion of the business area(s), in consideration of hazards and risk calculation (to be justified through business areas HRAC). Also allow for the rotation of supervisors to facilitate the completion of inspections.	Nov. 2018

ELEMENT 5 Orientation and Training	Content added	Added reference to OHS legislation in the Introduction section, as per recommendation from Legal to address the employers obligation to ensure workers are trained and competent in performing their work, as it relates to protecting their health and safety, and the health and safety of others at the worksite	Nov. 2018
STANDARD - Orientation and Training	Content added	The responsibility to educate, train and reinforce all workers in the principles of a harassment and discrimination free workplace.	May 2018
		Added requirement for training and orientation to be complete before work commences as per section 3(2) of Bill 30.	May 2018
		Added manager responsibilities to ensure training and orientation is complete anytime new activity, equipment or hazards are introduced to the work environment as per section 3(3) of Bill 30.	May 2018
		Added to the 'requirements section' that 'Departments' shall ensure systems are in place to ensure workers are competent and that they are equipped to promote and ensure the health and safety of the workers they are responsible for. Also added "this system may include, but is not limited to"...	May 2018
		Added performance measures from OHS Framework, with updated frequency to review safe work practices.	Nov 2018
		Added clarification on LSE requirements for supervisors in operational areas. Added LSE equivalency through alternate COR certifying partners	Nov 2018
		Additional clarification has been added to the “Leadership for Safety Excellence” training requirements for supervisors and managers (who supervise the work of other employees): • Supervisors in operational areas are to complete LSE through in class instruction. • LSE may be completed through any Alberta COR certifying partner, provided the course meets the minimum training objectives subsequently listed within the standard. • LSE equivalency for courses completed with other Alberta COR certifying partners will be granted, provided the course was completed within 2 years from the start of employment with the City.	Nov. 2018
		Added clarification regarding the City’s OHS Orientation Program and placed this information under the new ‘OHS Orientation Program’ heading to make reference to orientation program requirements and separate these from training related requirements.	Nov. 2018
	Content updated	Removed reference to OHS Committee training requirements as this is not needed given the updates to the JWSHSC Standard.	May 2018

ELEMENT 6 Emergency Response Planning	Content updated	Removed reference to the types of emergencies listed as examples, which are not within the scope of the ERP element and standard.	Nov. 2018
STANDARD - Emergency Response Standard	Content added	Emergency Response Procedure Debrief Form referenced in the standard for use after a drill or emergency to document and share lessons learned, template added to Appendices	May 2018
		References to Enviso procedures for environmental releases were added for alignment of the environment and safety systems.	Sept 2019
	Content updated	Content updated to reflect the new requirement to include JWSHSC in the development of ERPs.	May 2018
		Change to employer representative (ie. property management) being responsible for completing/disseminating worksite ERP on behalf of all worksite parties.	Nov. 2018

ELEMENT 7 Incident Investigation	Content added	Under Supervisor responsibilities, added employer (City) obligations when handling work refusals for work that is perceived or suspected to be dangerous by the worker, as per recommendation from Legal to comply with sections 31 and 33 of the OHS Act.	Nov. 2018
		Added reference to Orientation and Training Standard, as it relates to the requirement for Supervisors to complete formal investigation training.	Nov. 2018
STANDARD - Incident Reporting & Investigation	Content added	Added the requirement for JWSHSC and /or HSR to be involved in the investigations of serious incidents	May 2018
		Based on a new definition of 'serious incident' and the addition of the term 'potentially serious incident', released on June 1 2018, reporting requirements to Provincial OH&S have been updated	May 2018
		Clarification that JWSHSC and HSR participation will not be granted in cases of harassment or violence for confidentiality purposes.	Nov. 2018
		Requirement to investigate worker unsafe work refusals.	Nov. 2018
		Employee right to refuse dangerous work.	Nov. 2018
		Supervisor/Employer responsibility to investigate refusal of work.	Nov. 2018
		Under Requirements section: ● Added requirement to also report and investigate unsafe work observations; where as previously there was only this requirement for incidents (near misses and unsafe work observations were assumed to be encompassed in the term incident). ● Added requirement for supervisors to also investigate minor and moderate severity near misses and unsafe work observations, where as previously there was only a requirement to investigate incidents (near misses and unsafe work observations were assumed to be encompassed in the term incident).	Nov. 2018
	Content updated	Serious incident reference updated to reflect Section 40 of the OHS Act as per Bill 30.	May 2018

ELEMENT 8 Program Administration	Content added	Responsibilities for Joint Worksite Health and Safety Committees added to reflect their role in OHS Program administration such as informing the development of new policies and procedures and assessing safety solution recommendations etc.	May 2018
STANDARD - Contractor Safety Management	Content updated	Changed the title of Prime Contractor Selection Process Guide to Prime Contractor and Owner Selection Guide.	May 2018
		Changed responsibility for the tracking and monitoring of contractor performance from Safety Engagement Lead to CPSS.	May 2018
		Moved standard to Element #8; previously located in Element #3. Renamed to “Contractor Management” standard	Nov. 2018
		Following gap analysis of the existing standard in consultation with Legal, Corporate Safety, Integrated Infrastructure Services and City Operations, the review panel recommends retaining the existing standard with minimal changes to reflect alignment with Bill 30 legislation and AMHSA audit requirement changes.	Nov. 2018
	Content added	Added Part 1 to the guide, a description of the owners responsibilities as per the OHS Act under Bill 30.	May 2018
		Added a section to reference protecting other parties at the worksite (City of Edmonton property) from violence, referencing the Public Places Bylaw (#14614).	Nov. 2018
	Content moved	Moved standard under Element #8. Renamed to “Contractor Safety Management” Standard.	Nov 2018
STANDARD - JWSHSC and Reps.	Content added	Terms of Reference for JWHSCs added in accordance with Bill 30.	May 2018
		JWSHSC, HSR duties added	May 2018
		A process for the reporting and resolution of concerns by the HSR and JWSHSC to the employer has been added.	May 2018
		Acknowledgement that while JWSHSC/HSR are intended to participate in incident investigations, this requirement and authority does not extend to investigations related to workplace violence, harassment, discrimination.	May 2018
	Content updated	Moved standard to Element #8; previously located in Element #1.	Nov. 2018
		Content updated to reflect section 22 of the new OHS Act which mandates requirements for JWHSC and HSR's based on # of workers at a worksite, the requirement to do so in accordance with the unions.	May 2018
	Content moved	Moved Standard under element #8	Nov 2018

APPENDIX Violence in the Workplace Prevention Guide	Content updated	Definition of violence updated and reflected in the context of the guide;	May 2018
		Title and content of appendix previously called 'staying safer in stalking or harassing situations' - to read 'staying safer in stalking situations'	May 2018
	Content removed	Remove the “Violence in the Workplace Prevention Guide” from the appendix, and upload to One City as a standalone document. Additional changes made to content, formatting and grammar as per recommendations from Legal.	Nov. 2018

APPENDICES

APPENDIX - Emergency Response Procedure Debrief Form

Objectives of the Debrief:

- ❑ Evaluate the steps taken during the emergency/drill
- ❑ Identify actions which were well handled by staff
- ❑ Identify where action could be taken to improve the outcome of the emergency/drill
- ❑ Review applicability of emergency procedures and update if necessary

Date:		Prepared by:	

Building/Location:	
Type of Alarm:	**Drill ☐ Emergency ☐ Other ☐, What type of Emergency?**
Fire Warden Check In:	**☐ Yes ☐ No**
Timeline:	**Start: Finish:**
Participants:	

Background:

- ❑ Staff working:
- ❑ Public Impacted:
- ❑ Initiator (noticed the Incident):
- ❑ Who lead the response:

Description of Evacuation

Discussion

- ❑ Emergency/drill Evaluation
  - ❑ what went well?
  - ❑ What could be improved?
- ❑ Communications – How were the authorities and the chain of command contacted?
- ❑ Leadership – Who took the lead role?
- ❑ Roles & Responsibilities – Did everyone know what was expected of them?
- ❑ Environmental Factors – Did environmental factors complicate the emergency/drill?
- ❑ Emergency Response Manual – Did the written procedure work well? Any updates needed?
- ❑ Equipment – What emergency equipment was used? Any additional items needed?

Recommendations/Action

Recommendations	**Action By**	**Completion Date**

Documentation

1. Once the debrief is completed, send completed form to all staff in the building
2. Please ensure to document in Safety Data Management System (SDMS).
3. Assign Corrective Actions to appropriate persons using SDMS
4. Attach the completed debrief form to the Emergency Response Drill record in SDMS.
5. Ensure Corrective Actions are closed out accordingly in SMDS.
6. Once all Corrective Action sare closed out, close the Emergency Response Drill in SDMS.

Reviewed by

Reviewed by:		Signature		Date	

APPENDIX - Confined Spaces Classification and Control Table

The classification will be verified at the time of entry with consideration of the conditions and/or the nature of work being done.

Parameters	Confined Space	Restricted Space
Description	A Confined Space that may expose a worker to risk of incapacitation, injury, acute illness or otherwise impair the ability of the worker to escape unaided from a Confined Space in the event of a failure of the ventilation system or respirator.	A Restricted Space which is shown by pre-entry testing or otherwise known to contain clean respirable air immediately prior to entry to a Restricted Space and which is not likely to change during the work activity.
Oxygen	19.5% or less 23% or greater	Between 19.5 – 23%
Flammability Characteristics	1 - 20% or greater of LEL	No LEL present
Permit	Always Required	Not required
Pre-Entry Atmospheric Testing	Always Required	May be required
Continuous Atmospheric Monitoring	Always Required	Not Required
Respiratory Protection Equipment	SCBA or supplied air with escape packs must be worn	No respiratory protection required
Ventilation	Continuous ventilation	Not Required
Tending Worker/Watch Person	Must be in constant communication with the worker in the Confined Space	Must be in constant communication with the worker in the Restricted Space
Isolation/Lockout/Tag-out	Always Required	Always Required
Rescue Equipment	Located at entrance of Confined Space	Located at entrance of Restricted Space