HEALTH, SAFETY and ENVIRONMENTAL PROGRAM

Revised February 2022

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COVID-19: Policies and Procedures

This section reviews some key information taken from the John Aarts Group **"Pandemic Planning and Procedures"** document.
To access the most up to date, current and detailed information, please reference the **Pandemic Plan** on the John Aarts Group website in the employee health and safety section.

We must ensure that as a responsible corporate entity, we follow all the mandated restrictions from government agencies as well as the recommendations from the health experts during pandemics. As it relates to the workplace we will continue to:

- communicate frequently with our employees for the maximum clarity and direction on what we all can do as a corporation and as a community to ensure that we all succeed in the fight against any health threat;
- provide instruction for proper hygiene;
- provide instruction for screening, masking, physical distancing, self-isolation, and medical care;
- distribute adequate PPE, disinfectant supplies as well as their proper use to our employees;
- create and modify specialized work procedures and policies as required

Both employers and employees have a role to play in reducing the spread of infection.

Coronavirus: COVID-19

How coronavirus spreads

Human coronaviruses cause infections of the nose, throat, and lungs. The key risk factors for transmission include:

- prolonged exposure: spending more time with potentially infected people
- close proximity: working close to others
- crowded places: having more people in a space
- closed spaces: indoor spaces with less fresh air exchange (working indoors is riskier than working outdoors)
- forceful exhalation: activities that cause people to breath more deeply, such as speaking loudly
- respiratory droplets generated when you cough or sneeze
- touching something with the virus on it, then touching your mouth, nose, or eyes before washing your hands

Current evidence suggests person-to-person spread is efficient when there is close contact.

Daily Health Screening and Log

If required, all workers and visitors at a workplace must complete a daily health screening before they enter the workplace or start their shift to ensure they do not pose a risk to themselves or others. Legislation will determine whether screening must be active or passive. Currently the active screening is done at workplaces using one of the following procedures:

- An online app is completed by workers, visitors prior to entering the workplace. The results are submitted and logged by email. QR codes are posted on exterior doors for a link to the app. There is an employee designated to review the submissions each day.
- Workers, visitors self-assess and screen themselves. The results are logged on hard copies. An employee must be designated to check the logs each day.
- Supervisors use a digital safety meeting (HCSS app) to screen and log workers prior to shift start.

Screening questions regarding symptoms, travel, and close contact with a confirmed or probable COVID-19 case will be assessed. Depending on the answers, action may be required including staying at home, quarantining and/or contacting a local health unit for further instructions.

For passive screening, health questions will be posted/available for employees/visitors to review before entering or starting work. There is no requirement to sign or complete a form.

Hygiene

It is extremely important to practice good hygiene. This helps to control the spread of the virus and helps protect yourself. Remember to:

- wash your hands often with soap and water for at least 20 seconds;
- if water is not available, use an alcohol-based hand sanitizer that is between 60% and 90% alcohol;
- avoid touching your eyes, nose, mouth, or face;
- cough or sneeze into the bend of your arm or tissue;
- avoid touching surfaces people touch often;
- use any PPE as directed;
- open doors with gloves, the back of your hand, or other body part;
- wash your clothes as soon as you get home;
- notify your supervisor immediately if you are sick and contact public health.

Hand sanitizer is available to all workers. Please contact your supervisor or office if you need supplies.

Cleaning

Cleaners can play a role in helping limit the transfer of microorganisms. Health Canada recommends cleaning often, using approved cleaners.

Currently, spray bottles of ***hydrogen peroxide*** are available to all workers. Hydrogen peroxide is a Health Canada approved disinfectant for COVID-19. It will not stain surfaces.

Vehicles / Equipment

Please keep the touch surfaces of vehicles and equipment disinfected before and after your shift. Please work with your supervisors to make sure that is achieved. Use supplies provided.

- Wear a mask and gloves while cleaning. If gloves and mask are disposable, properly discard them after each use.
- Hydrogen peroxide disinfectant spray bottles are available to all workers. Hydrogen peroxide will not stain surfaces being cleaned. Disinfectant wipes are also available.
- As a minimum, spray and wipe down all high-touch areas before and after use including:
  - door handles

- grab bars
- steering wheels
- gearshifts
- joysticks, levers
- armrests, consoles

- When performing daily maintenance, a combination of disposable gloves, hydrogen peroxide and hand sanitizer can be used.
- When a vehicle or machine is repaired at the shop, maintenance staff will also perform a disinfection procedure if they need to enter the cab of the vehicle or machine.
- If a worker tests positive, that worker's equipment, vehicle, tools, or work area will be removed from service and have restricted access. A deep cleaning will be conducted.
- If you need more supplies of disinfectant or cleaners, contact your supervisor or the office.

Tools
If sharing tools, disinfect with hydrogen peroxide as well. Spray and wipe down all touch areas before and after use.
On electrical tools, do not use spray near exposed electrical components (i.e. plugs). In this instance disinfectant wipes could be used as an alternative.

Physical Distancing
Distancing has proven to be one of the most effective ways to reduce the spread of illness during an outbreak.
- keep a distance of at least 2 metres / 6 feet (approximately 2 arms lengths) from others.

Physical distancing must be maintained at all times during breaks and lunch.

Masking
Please follow all masking mandates as required.
- Masks can be either surgical or non-medical masks such as cloth masks.
- They must be made of at least 2 layers of tightly woven material.
- Ensure the mask covers the nose, mouth, and chin.
- They must fit securely to the head with ties or ear loops.
- They must be easy to breathe through. Masks are to be changed if dirty, damaged, or difficult to breathe through.
- Masking may lead to more hand-face contact. Frequent hand washing or cleaning with hand sanitizer is critical.
- If the re-usable type, they must maintain their shape after washing and drying.

Personal Hygiene Equipment
Masks, faceshields, disposable gloves, hand soap, paper towels, disinfectant spray/wipes and hand sanitizer are available for use at worksites. See your supervisor for supplies. Follow all manufacturer instructions for purchased products.

The purpose of this **Health, Safety and Environmental (HSE) Program** is to provide guidelines and procedures to implement and maintain the company's policies.

The Environmental and Social Sustainability Policy is included in this Program and reflects our commitment to good environmental stewardship and continued healthy and safe work practices.

The management of AAROC will review these Policies at least once a year and revise them if, and when required.

A copy of the Health and Safety Policy will be posted at conspicuous locations in permanent workplaces and temporary site offices, as required by legislation.

HEALTH AND SAFETY PROGRAM

Health and Safety Policy

AAROC Aggregates, as employer, recognizes it has the ultimate responsibility for the health and safety of its workers and is committed to providing safe work environments. Health and safety awareness must be integrated into all workplace activities and we are committed to taking every reasonable precaution to protect workers from harm. We will endeavor to ensure that employees work in compliance with the Occupational Health and Safety Act, applicable Regulations and the corporate health, safety and environmental program.

Supervisors will make every known effort to provide healthy and safe work environments. They shall be adequately trained to ensure the health and safety of workers under their supervision. They will endeavor to ensure that machinery and equipment is safe and that employees work in compliance with established safe practices and procedures and applicable legislation.

Every worker is expected to protect the health and safety of themselves, their co-workers and the general public by working in compliance with the law and by following safe practices and procedures established by the company. All hazards must be immediately reported to supervisors so they can be corrected. Workers shall receive training for specific work tasks as applicable to protect their health and safety.

To further support this commitment, the employer, supervisors and workers share a joint responsibility to implement and maintain an Internal Responsibility System directed at reducing and preventing incidents, injuries, diseases and illnesses.

It is in the best interest of all parties to consider health and safety in every activity. Commitment to health and safety must form an integral part of this organization, from the owners to the individual workers.

Date: February 1, 2022

Signature:

Ryan Aarts, CEO

SECTION 2- RESPONSIBILITIES

Purpose

This section outlines specific responsibilities for individuals in implementing health and safety functions. This outline of responsibilities is not intended to be all-inclusive, but to help all parties better understand their responsibilities.
All individuals in the company, at all levels and functions, are responsible for understanding and complying with the responsibilities, procedures, and policies in legislation and in this Health, Safety and Environmental (HSE) Program.

RESPONSIBILITIES OF ALL WORKERS

- Responsible to work safely and in compliance with the Occupational Health and Safety Act, applicable Regulations, the AAROC HSE Program and any site-specific regulations that may apply.
- Take every possible precaution to protect themselves, fellow workers and the general public from health and safety hazards.
- Follow all standard operating practices and procedures.
- Report to work in a fit and alert condition. Arrive dressed appropriately for the task(s) or duties given. Continue to practice good personal hygiene while at work.
- Use precautions if wearing finger rings, earrings, neck chains or other loose jewelry near moving machinery or equipment.
- If witnessing unsafe practices of a person, it is the responsibility of the worker, to recommend the termination of the unsafe activity to the person. If the suggestion is ignored, then the situation must be reported immediately to a supervisor.
- Do not disregard safety rules and/or common-sense practices that could jeopardize your health and safety, or that of someone else.
- Attend and complete training programs or courses provided and/or arranged by AAROC.
- All persons entering AAROC pits or temporary worksites must signal their entry and departure to working staff, scaleperson, operator or site supervisor. This rule also applies to all workers leaving the workplace at the end of each workday.
- The following clothing restrictions must be adhered to:
  Loose clothing, open front shirts, scarves, and jacket hoods will not be permitted where there is a chance they might get entangled in machinery or pinch points. Long, loose hair must be tied back.

RESPONSIBILITIES OF EMPLOYERS / SENIOR MANAGEMENT

- Appoint a **"competent person"** as a supervisor as required. A competent person is legally defined in the OHSA as someone who:
    - Is qualified because of knowledge, training and experience to organize the work and its performance;
    - Is familiar with the OHSA and regulations that apply to the work; and
    - Has knowledge of any potential or actual danger to health and safety in the workplace.

- Review, sign, and date all Health, Safety and Environmental Policies at least once a year. Post in the workplace a copy of the current H&S Policy and provide access to the Health, Safety and Environmental (HSE) Program.

- Review the HSE Program on an "as needed" basis.

- Post in the workplace a current copy of the OHSA and any Regulations that apply. Post any required explanatory material from regulatory agencies (i.e. MOL, WSIB) outlining worker rights, responsibilities and duties.

- Provide information, instruction and supervision to a worker to protect the health and safety of the worker.

- Advise the owner of a worksite of any unique hazards that may occur because of the work being done by AAROC.

- Provide the necessary resources to implement, support, and enforce the HSE policy and program.

- Promote the exchange of health and safety information with outside groups.

- Review all health and safety training and ensure that it is adequate for the duties of each worker and that it complies with applicable legislation.

- Provide compensation and time to employees who are selected as Joint Health and Safety Committee Members.

- Review all incidents and report any cases to appropriate authorities as required.

- Report all cases of occupational disease to appropriate authorities as required.

- Appoint and designate management Joint Health & Safety Committee (J.H.S.C.) members. Workers must select worker representatives for the J.H.S.C. Elect a member representing management and cause the workers to select a worker to become certified.

- Provide pertinent information to the Joint Health & Safety Committee (J.H.S.C.) including information about workplace hazards, testing and training. Management must respond in writing to recommendations from the J.H.S.C. within 21 days.
- Establish and maintain a Surface Miner Common Core and Specialty Modules training program.
- Ensure that all supervisors are competent and familiar with their responsibilities under the OHSA and applicable Regulations.
- Ensure that all equipment, tools, and protective devices are provided and maintained in good condition and are used as prescribed.
- All managers must carry out the Enforcement Policy requirements.
- Only employ persons the age of 16 years or older to work in surface mines and persons 18 years or older to work at the pit face.
- Provide and maintain First Aid kits at all workplaces and provide Standard First Aid/CPR or Emergency First Aid/CPR training to applicable workers.
- Provide all sub-contractors with a copy of AAROC's HSE Program and ensure they agree to abide by it.
- Determine if any designated substances are present in the workplace and take necessary steps to protect the workers, subcontractors and general public.
- Coordinate monthly site inspections with the certified worker member of the J.H.S.C.
- Appoint a Safety Team member to administer all the health and safety matters for the company.
- Additional responsibilities of Employers as outlined in the Occupational Health and Safety Act (Sections 23 to 26).

Responsibilities of the Safety Team are as follows:

- Relay health and safety concerns from workers to management.
- Conduct incident investigations.
- Assist in resolving work refusals and reports of dangerous circumstances
- Maintain and revise all safety records.
- Conduct "spot inspections" of the workplace on an ongoing manner.
- Act as a resource person in regards to health and safety issues, questions or concerns for both employer and employees.
- Regularly attend the Joint Health and Safety Committee meetings.
- Review all Ministry of Labour inspections.
- Manage supplies of personal protective equipment and safety equipment.

- Assist in all aspects of safety training for both new and current employees.
- Review Ministry of Labour Orders with affected employees.
- Assist and coordinate with supervisors in giving workers proper training and instructions prior to commencement of work and that new workers receive the company's orientation session prior to commencing regular duties.

RESPONSIBILITIES OF SUPERVISORS

- Be familiar with the applicable requirements of the OHSA and Regulations to ensure compliance.
- Ensure workers receive proper instruction and training prior to the commencement of work.
- Document, record and report all incidents, near-misses, injuries, medical aid cases, first aid occurrences, property damage, traffic accidents, spills, hazardous conditions and any other health and safety issues immediately to management. Take pictures and/or video if able.
- Inspect the workplace weekly. Report or repair any defects found. Inspect tools, vehicles and equipment regularly to ensure that they are properly maintained.
- Ensure housekeeping is done at least daily.
- Discuss safety experiences with other supervisors and inspectors (networking) and provide suggestions to management for safety talk subjects and policy revisions.
- Ensure all necessary documents, paperwork, certificates, inspections and checklists are submitted to the office as required for filing and/or review.
- Ensure that workers work in a proper manner and with the protective devices, equipment and clothing as established by AAROC Aggregates and as required by the Occupational Health and Safety Act and Regulations.
- Take every precaution reasonable in the circumstances for the protection of workers.
- Take all reasonable steps to ensure that all employees are aware of the location of all site safety information and safety tools.
- Review Safety Data Sheets (SDS) with workers as needed.
- Identify and inform management of occupational health and safety concerns
- Advise workers of actual or potential health and safety hazards and operating procedures for specific equipment and machinery.
- Provide orientation for new workers and ensure that the Employee Orientation Record form is completed and filed.
- Ensure workplace inspections are completed at least monthly by the JHSC.
- Review Ministry of Labour orders and safety directives with workers. Post orders on site.

- Additional responsibilities of Supervisors as outlined in the Occupational Health and Safety Act (Section 27).

RESPONSIBILITIES OF WORKERS

- Wear all personal protective equipment and clothing in a proper manner following the procedures established by AAROC, and as required by the Occupational Health and Safety Act and the Regulations.
- Inspect personal protective equipment before use and report defects or damage to supervisor.
- Use tools, machinery, vehicles and equipment according to operating instructions and/or established rules and procedures.
- Report tool and equipment malfunctions and hazardous site conditions immediately to the supervisor.
- Do not drive or operate any machine, vehicle or equipment unless authorized by the supervisor.
- If driving or operating a vehicle or machine, observe all safety practices and regulations. Follow procedures from the manufacturer and those listed in this HSE program.
- Discuss previous health and safety experiences with your supervisor or with management and provide suggestions to improve the company HSE program. Network with workers from other companies and discuss safety issues and concerns.
- Keep the work area clean. Pick up garbage and debris on an ongoing basis and at least daily.
- Report all incidents, near-misses, injuries, medical aid cases, first aid occurrences, property damage, traffic accidents, spills, hazardous conditions and any other health and safety issues regardless of severity immediately to the supervisor.
- Always call your supervisor before driving to the worksite if adverse weather is present or predicted. This includes snow / ice storms, blizzards, rain, fog, etc.
- Perform work and operate vehicles and equipment in a manner that will not endanger yourself, co-workers or the general public.
- Inspect your equipment and/or vehicle daily and report immediately any malfunction, hazard, or scheduled service to the appropriate person.
- Consider the health and safety of co-workers and general public when working.
- Immediately report unsafe action or hazardous conditions (including someone under the influence of drugs or alcohol) to the attention of the appropriate site supervisor/manager.
- Assist new employees in recognizing job hazards and following required procedures.

- Elect a worker member of the J.H.S.C. to become certified and participate in the nomination or election of new worker members to the J.H.S.C.
- Ensure that visitors and the general public are not allowed to wander unannounced or unescorted through areas that are normally restricted to employees.
- At the end of regular hours of each working day, before locking up, the service loader operator in conjunction with the scaleperson (unless someone else is designated) must check/count that no one is still present on the property. Crushing crews will finish at the same time and leave at the same time of the day so no one is left alone.
- Please use common sense and follow safe instructions from your supervisor. All employees have the right to refuse unsafe work but must also follow safe directions from their supervisors or management.
- Additional responsibilities of Workers as outlined in the Occupational Health and Safety Act (Section 28)

SUBCONTRACTORS

Subcontractors working for AAROC shall be selected and managed in a manner consistent with the safety objectives, policies, and procedures embodied in this HSE Program and complying with the appropriate regulations.

Subcontractors must meet the following requirements:

- Appoint a "competent person" as a supervisor for each site.
- Prepare a Health and Safety Policy and develop and maintain a Program to implement it.
- Ensure that workers are properly trained, licensed and qualified as required by legislation, to adequately perform their duties.
- Conduct regular health and safety meetings.
- If requested, provide AAROC with a copy of a current SDS for any materials, chemicals used at the workplace.
- Conduct clean-up of work areas daily.
- Ensure that all workers work in accordance with AAROC's Health, Safety and Environmental Policy and Program, the OHSA and applicable Regulations.
- Notify the AAROC supervisor immediately of any near-miss, incident, spill, lost time injuries, medical aid case, first aid cases, property damage, traffic incident, or hazardous condition occurring on site.
- Provide compensation and time to workers who are selected as Health and Safety Representatives or as Joint Health and Safety Committee Members.
- Provide a W.S.I.B. Certificate of Clearance to AAROC as required.
- Provide adequate proof of insurance to AAROC as required.
- Provide the M.O.L. with a "Notice of Mining Activities" form if portable screening, crushing or washing activities are conducted at AAROC pit locations.

- Provide to AAROC a copy of your Health and Safety Policy and Program.
- Fully comply with W.S.I.B. Reg.1101 –First Aid Requirements.
- Return the AAROC form entitled "***Subcontractor Safety Acknowledgment and Declaration***"
- Additional responsibilities as outlined in the Occupational Health and Safety Act.

Subcontractor reviews will be conducted by management after job completion to discuss:

- Compliance with health and safety requirements
- Job performance
- Incidents / issues

Only those subcontractors that meet or exceed the AAROC requirements will be allowed to continue working.

Legislation

- Occupational Health and Safety Act, Sections 23-32

SUBCONTRACTOR / EMPLOYER SAFETY ACKNOWLEDGEMENT AND DECLARATION

I/We _____of_____
(print name) (company name)

declare that:

- We are now and will continue to comply with all statutes including the Occupational Health and Safety Act and all applicable Regulations thereunder.
- We have received and reviewed the **AAROC** "Health, Safety and Environmental (HSE) Program" and will adhere to all of the following requirements:

  Statutory and Legislated Requirements
  AAROC Aggregates Health, Safety and Environmental Program
  Client/Owner Health and Safety Program

- I/We agree to indemnify and hold harmless **AAROC Aggregates Ltd.** and its officers, directors, agents and workers from and against all claims, actions, legal proceedings, demands, obligations, statutory demands, costs, legal costs for a solicitor and his own client basis and damages made or claimed against **AAROC Aggregates Ltd.** arising out of or attributable to a breach by_____
  (company name)
  of its obligations under the Occupational Health and Safety Act and any Regulations made thereunder.

Title/Position: _____
Signature: _____
Date: _____

RESPONSIBILITIES OF WORKER MEMBERS OF THE J.H.S.C.

- Inspect the workplace regularly.
- Identify situations that may be a source of danger and report them immediately to your supervisor or the certified worker J.H.S.C. member.
- Relay concerns from workers and make recommendations to the JHSC.
- Be available to accompany a Ministry of Labour Officer during his/her inspection of the facility.
- Assist with incident investigations.
- Assist the certified member in resolving work refusals and reports of dangerous circumstances.
- Assist in required monthly Workplace Inspections.
- Regularly attend the Joint Health and Safety Committee meetings.

Training Requirements

- All employees will receive training as part of the new employee orientation and subsequent annual reviews. Supervisors may also attend a formal supervisory competency course.

Legislation

- Occupational Health and Safety Act, Sections 23-32

PERSONAL DEVICES / CELL PHONE POLICY AT WORKSITES

Inappropriate use of personal cell phones or devices at work can cause serious injuries because they interfere with the proper and safe duties workers must follow. Phone calls, texting, listening to music with headphones are all distractions that may compromise your safety and that of your co-workers.
Additionally, personal calls or texts reduce the work time that you are being paid to do.

Company Policy: During work hours, employees may carry their cell phones, but must receive approval from their *site* supervisor before using the phone, in every instance. Cell phones are to be used for emergency, or work purposes only to promote safety and communication. Cell phones are not permitted to be used for personal reasons during the paid shift.

- The law makes it illegal for drivers to talk, text, type, dial or email using hand-held cell phones and other hand-held communications and entertainment devices. The law also prohibits drivers from viewing display screens unrelated to the driving task, such as laptops or DVD players, while driving. This applies while driving a vehicle or operating equipment.
- Individuals who need to reach you at work for urgent matters may also contact the main office or supervisors. Cell numbers for all supervisors are available to all employees.
- If you have special needs that in your opinion warrant the use of a cell phone for personal issues while working, you must first discuss with your foremen or supervisor.

SMOKING POLICY

The *Smoke-Free Ontario Act* prohibits smoking in enclosed workplaces and public places to protect workers and the public from the hazards of second-hand smoke.

AAROC has a legal responsibility to comply with the *Act* and to ensure all employees are compliant. This policy will ensure employees are protected from exposure to second-hand smoke and have a safe, healthy and productive work environment.
All visitors, contractors, clients and customers must also comply with the ban on smoking.

As required, smoking is prohibited in all areas that fall under the definition of **"enclosed workplaces"**. No person shall smoke or vape in any enclosed workplace. This includes:

- **tobacco products (cigarettes, cigars etc.)**
- **e-cigarettes (i.e. vaping)**
- **cannabis products, whether medicinal or recreational**

Ashtrays or equipment serving as an ashtray are prohibited. This ban also applies after-hours when people are not working. No smoking signs will be placed appropriately at all entrances.
An **enclosed workplace** means the inside of a building, structure, or vehicle that an employee works in or frequents during the course of their employment. Typical examples at AAROC include:

- **Inside office buildings;**
- **Scalehouses, trailers, control towers, seacans;**
- **Maintenance shops, storage facilities;**
- **Heavy equipment cabs;**
- **Work vehicles**

Enforcement

Local public health units carry out inspections in workplaces in order to enforce the *Act.*
For additional information on the Act, call your local public health unit.
If any employee is in violation of the AAROC smoking policy, the employee may be disciplined as follows:

- 1st offence- verbal warning
- 2nd offence - written warning
- 3rd offence- possible suspension
- 4th offence- possible dismissal

Any employee who violates this policy and smokes in any enclosed workplace will be responsible to pay all fines imposed by the local public health units or other enforcement agency. AAROC will NOT pay any fines given to any employee.

Please note: Outdoor workplaces may also have restrictions on smoking depending on specific jobsite regulations or conditions placed by the owner. This includes smoking in the vicinity of flammable or hazardous materials like gasoline, propane, natural gas lines or other materials. Always check with your supervisor.

SUBSTANCE ABUSE POLICY

AAROC recognizes that employees who use or are impaired by drugs or alcohol while performing work endanger not only themselves, but their co-workers and others affected by the work.
While AAROC also recognizes that addiction to drugs or alcohol is a serious health problem that must be addressed for employees to get help for their substance abuse issues, a violation of this policy will result in an investigation and possible enforcement up to and including termination.

The objective of this substance abuse policy is to ensure that all employees report to work fit for duty. This policy applies to all employees of AAROC Aggregates.
Client sites may also have their own Drug/Alcohol/Substance Abuse policies that must be followed in conjunction with AAROC's policy. In that case, the client policy will be reviewed with all AAROC workers, employees and subcontractors.

Safety Sensitive Positions

All employees listed below are considered to be in a safety sensitive position:

- Heavy equipment operators
- Drivers

- Field staff
- Supervisors and foremen

Definitions for the purposes of this policy

Drugs include:

- narcotics and illegal drugs
- cannabis
- legal prescription, over-the-counter medications and drugs that cause or have the potential to cause impairment and render an employee not fit for duty.

Fit for duty means:

- a physical and mental state that allows an individual to perform his or her job duties safely and effectively without impairment due to the use of or after-effects of alcohol, cannabis, drugs, legal medications or other health conditions.

Substance abuse is:

- the use of alcohol, cannabis, drugs, legal medications and other substances that can impair a person's judgement, clarity and functioning and render him/her not fit for duty.

Fit for Duty - Requirements for Employees

All workers must come to work fit for duty:

- Workers must not be impaired by alcohol, cannabis, drugs or other while they are on duty.
- Possession use or distribution of illicit drugs on company premises, at company worksites, or in company vehicles is prohibited.
- Employees must strictly follow all legislation regarding the use of both medicinal and recreational cannabis. Being impaired at work by either is prohibited.
- Employees are expected to responsibly use prescribed and over-the-counter medications.
- Where the use of a prescribed or over-the-counter medication, including cannabis, could inhibit an employee's ability to carry out the duties of his or her position safely or competently, the employee must advise their supervisor immediately. The supervisor will discuss the issue with management to determine whether the employee will be permitted to work or whether work restrictions will be applied.
- Workers must notify their supervisor if they suspect that a co-worker is unfit for duty.

Cannabis in the Workplace

According to Ontario law, consuming **recreational cannabis in the workplace is illegal. Medical cannabis** is subject to different rules than recreational cannabis. Employees must notify their supervisor if they are using legally prescribed medical cannabis, so a work assessment can be completed.

Legal cannabis use is not a justification for being unfit for duty.

Drivers

You will not be allowed to have **any cannabis** (as well as other drugs that can be detected by an oral fluid screening device) **or alcohol** in your system if you are driving a motor vehicle and:

- You are 21 or under;
- Have a G1, G2, M1 or M2 licence;
- The vehicle you are driving requires an A-F driver's licence or Commercial Vehicle Operator's Registration (CVOR) or;
- You are driving a road-building machine. The following classes of vehicles are prescribed as road-building machines:
  1. pavement spreaders, pavers, profilers and finishing machines
  2. graders
  3. rollers and compactors
  4. bulldozers
  5. scrapers
  6. loaders
  7. tracked and wheeled tractors, other than truck tractors, equipped with any of the following attachments: mowers, augers or drills, compactors, spraying, equipment, snow blowers or snow plows, buckets or shovels.
  8. rock trucks
  9. off-road mobile cranes
  10. off-road excavators
  11. low-speed street sweepers

Disciplinary Measures

AAROC will investigate whether an employee has substance abuse issues or is in violation of his/her fitness for duty obligations under this policy in response to:

- Complaints or concerns by co-workers, supervisors, etc.
- Declining performance
- Erratic behavior
- Involvement in safety incidents including near misses
- Arrests for impaired driving, drug offences and similar violations
- Other indications that the employee has substance abuse issues or is not fit for duty.

1. Where there are grounds to believe that an employee may not be fit for duty or capable of safely performing their job duties, they will not be permitted to work and will be required to leave the company premises or job site.
2. When an employee, considered to be in an unfit condition, is requested to leave company premises, transportation to their residence will be arranged by the supervisor. If the employee's condition or well-being appears to be in distress or may require attention, then the supervisor shall:
   - Call 911/EMS in a medical emergency or;
   - Ensure the employee is left in the care of someone capable when brought to their residence.
3. The company reserves the right to temporarily remove, reassign or suspend an employee pending a determination of the employee's fitness for duty, assessment of

substance abuse issues or completion of an investigation into a possible violation of this policy.

4. Employees who violate this policy are subject to disciplinary action up to and including termination of employment.

Post-Incident Drug and Alcohol Testing

AAROC may require, at its discretion, that employees undergo drug and/or alcohol testing, with the employee's consent, where an incident or near miss has occurred and there is reasonable cause to suspect that substance abuse may have been a contributing factor in the incident.

1. Testing following an incident or near miss shall be conducted as soon as possible from the time the incident took place.
2. All testing will be in accordance with legislation and industry standards. A professional third-party consultant will be used by the company throughout the testing process.
3. Management will discuss the results of all testing with the employee and discuss return to duty if applicable.
4. Where an employee refuses to undergo drug/and or alcohol testing, the company may take such refusal into consideration in determining the appropriate course of action with respect to such employee, which could include discipline, termination or other measures.
5. In the absence of legislated thresholds, the drug levels that will be reported as a positive result will be based on industry norms as recommended by the consultant engaged by the company. An employee who tests positive for drugs/alcohol will be advised of the positive test result and will be suspended immediately without pay pending a determination by the company. Return to duty testing may be required at the discretion of management.
6. Tampering or attempting to tamper with a test sample is prohibited.

Assistance Available

- Employees who suspect they have a substance abuse issue are encouraged to seek medical and/or professional advice and follow recommended treatment promptly before job performance is affected or violations of this policy occur.
- Employees are encouraged to consult with their supervisors or management in the event they have concerns about their own substance abuse or if they suspect another co-worker has a problem with abuse. Return to duty during or after treatment will be discussed with management.
- AAROC recognizes that the Ontario Human Rights Code protects people with disabilities who use substances for a medical purpose or have an addiction based on the grounds of disability. Accordingly, in administering the disciplinary measures of this policy, employees will be assessed and accommodated based on their individual circumstances and capabilities to the point of undue hardship.

Training

The Safety Team is responsible to train new employees on this policy annually at the safety meetings or at new hire orientations. Supervisors can also train during new hire orientations.

SECTION 3- WORKPLACE VIOLENCE AND HARASSMENT

WORKPLACE VIOLENCE AND HARASSMENT POLICY

The management of AAROC AGGREGATES LTD. is committed to working with its employees to provide a safe work environment and ensure that all individuals are protected from workplace violence and harassment and treated with respect and dignity.

Violent behavior in the workplace will not be tolerated from any person. Workplace harassment will not be tolerated from any person. Everyone is expected to uphold and follow this policy.

There is a workplace violence and harassment program that implements this policy. It includes measures and procedures to protect workers from workplace violence and harassment, a means of summoning immediate assistance and a process for workers to report incidents or raise concerns.

AAROC, as the employer, will ensure this policy and the supporting program are implemented and maintained and that all workers and supervisors have the appropriate information and instruction to protect them from violence and harassment in the workplace.

Supervisors will adhere to this policy and the supporting program. Supervisors are responsible for ensuring that the procedures are followed by workers and that all workers have the information they need to protect themselves.

Workers must comply with this policy and the supporting program. All workers are encouraged to raise any concerns surrounding violence and/or harassment in the workplace.

Management will investigate and respond to all incidents, complaints and reports of workplace violence and harassment in a fair and timely manner, respecting the privacy of all those involved as much as possible.

With everyone's cooperation, AAROC will continue to be a safe and healthy workplace.

Date: February 1, 2022

Signature:

Ryan Aarts, CEO

Purpose

This section outlines AAROC's workplace violence and harassment policy and program. It details the responsibilities of the employer and gives information and instructions to workers who may be exposed to violence and/or harassment.

Definitions

Workplace Violence

"Workplace Violence" means:

a) The exercise of physical force by a person against a worker, in a workplace, that causes or could cause physical injury to the worker,
b) An attempt to exercise physical force against a worker, in a workplace, that could cause physical injury to the worker.
c) A statement or behavior that it is reasonable for a worker to interpret as a threat to exercise physical force against the worker, in a workplace, that could cause physical injury to the worker.

Examples of workplace violence include:

- verbally threatening to attack a worker;
- leaving threatening notes at or sending threatening e-mails to a workplace;
- shaking a fist in a worker's face;
- hitting or trying to hit a worker;
- wielding a weapon at work;
- throwing an object at a worker;
- sexual violence against a worker;
- kicking an object the worker is standing on such as a ladder or
- trying to run down a worker using a vehicle or equipment.

Domestic Violence

A person who has a personal relationship with a worker- such as a spouse or former spouse, current or former intimate partner or a family member- may physically harm, or attempt or threaten to physically harm, that worker at work. In these situations, domestic violence is considered workplace violence.

Workplace Harassment

Workplace harassment means:

a) engaging in a course of vexatious comment or conduct against a worker in a workplace that is known or ought reasonably to be known to be unwelcome or;

b) workplace sexual harassment

Workplace sexual harassment means:

a) engaging in a course of vexatious comment or conduct against a worker in a workplace because of sex, sexual orientation, gender identity or gender expression, where the course of comment or conduct is known or ought reasonably to be known to be unwelcome, or;

b) making a sexual solicitation or advance where the person making the solicitation or advance is in a position to confer, grant or deny a benefit or advancement to the worker and the person knows or ought reasonably to know that the solicitation or advance is unwelcome

Workplace harassment can involve unwelcome words or actions that are known or should be known to be offensive, embarrassing, humiliating or demeaning to a worker or group of workers. It also includes behavior that intimidates isolates or even discriminates against the targeted individual(s).

This may include:

- making remarks, jokes or innuendos that demean, ridicule, slander, intimidate, or offend;
- displaying or circulating offensive pictures or materials in print or electronic form;
- bullying;
- repeated offensive or intimidating phone calls or emails;
- inappropriate sexual touching, advances, suggestions or requests.

<u>What isn't workplace harassment?</u>
Reasonable action or conduct by an employer, manager or supervisor that is part of their normal work functions would not normally be considered workplace harassment. This is the case even if there are unpleasant consequences for a worker. Examples include:

- changes in work assignments;
- scheduling;
- job assessment and evaluation;
- workplace inspections;
- implementation of dress codes or PPE and
- disciplinary action.

Differences of opinion or minor disagreements between co-workers would also not generally be considered workplace harassment.

In addition, any behavior that would meet the definition of workplace violence would not be considered workplace harassment.

<u>Workplace Risk Assessments</u>

- Management will review and assess the risks of workplace violence that may arise from the nature of the workplace, type of work or conditions of work.

- Consider the circumstances of AAROC workplaces and circumstances common to other similar workplaces.
- Develop measures and procedures to control identified risks that are likely to expose a worker to workplace violence and harassment.
- Advise the J.H.S.C. of the risk assessment results.
- Repeat the assessments as often as necessary to ensure the workplace violence/harassment policy and program effectively protects workers.

Management will involve the Joint Health and Safety Committee in developing written programs and procedures, regarding workplace harassment which addresses:

- the reporting of incidents;
- the investigation process;
- how the investigation information will be kept confidential, except for the purposes of taking corrective action or required by law;
- training under the programs and procedures; and
- an annual review of the programs and procedures.

Measures and Procedures to Control Risks

All workers must consider the following safe work procedures:

Mobile Crews (Crushers etc.…)

- Ensure you are able to call for help. Use 2-way radios and/or cell phones in an emergency.
- Keep vehicles well maintained.
- Park all vehicles/equipment in designated safe areas. Inspect as often as necessary.
- Keep trailers locked when not in use. Maintain all lighting if possible.
- Designate a safe meeting area for all workers in case of emergency.
- Work in groups when possible. Work the same operating hours as other workers. If working alone, follow written safety procedures for working alone.
- Perform regular jobsite inspections.
- Review any potential jobsite risks from tender documents and/or client.
- Report all suspicious persons to supervisor.

Pits / Scalehouses

- Maintain outside lighting and keep paths, walkways and parking areas clear of obstructions.
- Park in designated, well-lit areas.
- Keep all doors and gates locked when not in use.
- If possible, communicate and conduct business with visitors through windows/counters.
- Ensure you are able to call for help. Use phones, 2-way / CB radios in an emergency.
- Work in groups if possible. Work the same operating hours as other workers. If working alone, follow written company procedures.

- Keep cash and valuables locked and hidden.
- Check all security alarms are functioning.

Main Office

- Maintain outside lighting and keep paths, walkways and parking areas clear of obstructions.
- Maintain signs for visitor / public entrances.
- Keep all doors locked when not in use.
- Maintain security alarm and security cameras.
- Front reception desk should be staffed at all times during work hours. Keep all windows, doors and sightlines clear.
- All visitors must report to front reception desk and only enter employee areas of the building when escorted/permitted by an employee.
- Keep all cash and other valuable goods locked and hidden.
- Designate a safe meeting room(s) for employees during emergency.
- Keep all lines of communication operating- 2-way radios, phones.
- Work in groups if possible. Maintain regular operating hours with other employees. If working alone, lock all non-essential doors. Follow working alone policy.

Drivers / Transport

- Passengers are restricted to only other company employees or those satisfactory to the driver. The general public are not given access to vehicles.
- All cash should be kept in a locked vehicle and handed in at the end of the shift.
- All prices for delivery will be negotiated by the office before delivery.
- Maintain communication with other employees (i.e. dispatch, foreman, scalehouse…) with 2-way, CB radios or cell phones. If working alone, follow policy.
- Keep vehicles regularly maintained.
- Park in designated, well-lit areas.
- If drivers are to work in high-risk locations, information will be given by office/dispatch prior to job start.
- Never leave your vehicle / machine unlocked at night or on breaks.

Emergency Response Plan- Summoning Assistance

Workers shall:

- Immediately call for assistance if they are a victim of or witness workplace violence. If needed, call for 911 police assistance, followed by a call to your supervisor.
- EMERGENCY PHONE NUMBERS shall be posted at all worksites.

Supervisors shall:

- Call 911 and get assistance from the police in a violent situation. If required, call for ambulance services as well.
- Keep all other employees in a safe area away from the parties involved.

- Do not attempt to physically separate the parties involved if the violent behavior is on-going.
- Safely remove from the area anything that could be used as a weapon.
- Provide all necessary information to police if required.
- Report the incident to senior management as soon as possible.

Reporting Workplace Violence / Harassment

All workers who have been the victim of or witnessed workplace violence or harassment shall report the following information to their supervisor:

- Date, time of the incident;
- Location of the incident;
- Who were the parties involved;
- Description of the altercation/incident. Contributing factors. Physical or verbal issues. Outcome.
- Any information about other witnesses;
- Possible recommendations for prevention.

NOTE: If the Supervisor is the alleged harasser, then the victim can report to a Manager, Owner, the Ministry of Labour or Police.

Investigating Workplace Violence / Harassment

Management will investigate all matters involving violence or harassment in the following manner:

- Supervisors will report the incident to management.
- Parties involved will meet to discuss the incident. Corrective actions and solutions will be recommended. (Police actions may determine outcomes).
- If the parties are satisfied with management's response, no further action will be taken. The written investigation and corrective actions will be filed.
- If the parties are not satisfied with management's actions, the Ministry of Labour may be called upon to investigate and offer recommendations.
- The written investigation and any corrective actions shall be available to both the victim and alleged harasser. Privacy concerns and confidentiality will be respected when writing and reviewing reports.
  NOTE: Third-party agencies specializing in workplace violence and harassment may be called in to investigate.
- All revisions to the program to prevent any future recurrences of the reported incident will be given to the J.H.S.C.

Information about a Person with a History of Domestic Violent Behaviour

The *Occupational Health and Safety Act* clarifies that employers and supervisors must provide workers with information, including personal information, related to a risk of workplace violence from a person with a history of violent behavior.

However, this duty is limited and applies only when the:

- worker can be expected to encounter the violent person in the course of his or her work and;
- risk of workplace violence is likely to expose the worker to physical injury.

Employers and supervisors must also not disclose more information than is reasonably necessary for the protection of a worker from physical injury.

The employer must consider a person's right to privacy under certain laws in addition to a workers' right to be informed of workplace violence risks under the O.H.S.A.

It is the policy of AAROC AGGREGATES LTD. to seek legal advice to comply with this regulation when this type of information is discovered or reported.

Domestic Violence

Under the O.H.S.A. an employer must take every precaution reasonable in the circumstances for the protection or workers when they are aware, or ought reasonably to be aware, that domestic violence may occur in the workplace, and that it would likely expose a worker to physical injury.

Workers can report their concerns to their employer if they fear domestic violence may enter the workplace.

Employers must be prepared to investigate and deal with these concerns on a case by case basis. In developing a plan, employers and workers may be able to work with the police, courts or other organizations who may already be involved.

It is the policy of AAROC AGGREGATES LTD. to seek legal advice to comply with this regulation when this type of information is discovered or reported.

Work Refusals

Under the O.H.S.A. a worker can refuse to work if he/she has reason to believe they may be endangered by workplace violence. A worker may refuse work if he/she reasonably determines that a threat to exercise physical force could cause injury to the worker.

However, work cannot be refused on the grounds of workplace harassment.

The Act sets out a specific procedure that must be followed in a work refusal. It is important for employers, supervisors, workers and the J.H.S.C. to understand and follow this procedure.

All work refusals will follow the procedure detailed in AAROC's HSE Program.

Annual Review

Management and the J.H.S.C. will review the violence and harassment policy and program annually.

Training Requirements

- All employees will undergo a review and understanding of the policy and program during new worker orientations.

Legislation

- Occupational Health and Safety Act, Section 32

SECTION 4- ACCESSIBILITY STANDARDS POLICY

Purpose

To establish policies, practices and procedures governing the provision of goods and services to persons with disabilities under the Accessibility Standards for Customer Service, Ontario Regulation 429/07. This Ontario law came into force on January 1, 2008. It is the first accessibility standard created under the authority of the Accessibility for Ontarians with Disabilities Act, 2005 (AODA).

Policy Statement

The policy is in place to comply with the regulations and so that all employees of AAROC can provide appropriate customer service to disabled individuals.

Employees will use this written plan in providing service and treat all individuals in a respectful manner.

This policy is available for review by all customers, as part of AAROC'S HSE Program

Reasonable efforts will be made to ensure these customer service policies, practices and procedures are consistent with the core principles of:

- dignity
- independence
- integration
- equal opportunity

Background

AAROC Aggregates provides aggregate goods and processing services to municipalities, businesses, and the public. Disabled individuals have the right to access our goods and services like any other person. Trained staff will use this accessibility standards policy to help guide them in serving disabled individuals.

Key Elements

The accessibility plan includes the following:

1. considers a person's disability when communicating
2. allows assistive devices in the workplace where permissible
3. allows service animals and support persons where permissible
4. informs customers of any service disruptions
5. invites customers to provide feedback
6. training of staff on accessible customer service
7. document the plan in writing / available to the customer

Communication

There are many types and degrees of disability in communication. Employees are instructed to politely ask a person with a disability how to best communicate with them. This includes communication over the telephone or in person.

Assistive Devices
The device is a tool, technology or mechanism that a disabled person uses for everyday tasks. They can include wheelchairs, hearing aids or white canes. Employees will allow these devices in the workplace where the public has access, subject to all safety regulations.

Service Animals and Support Persons
People with vision loss or deafness may use guide dogs or other service animals. Some disabled individuals may also be accompanied by a support person. The support person might help the customer with communicating, mobility, personal care or medical needs. Employees are trained to recognize that service animals / support persons are welcome on the parts of our premises that are open to the public, subject to all safety regulations.

Temporary Disruptions
AAROC will provide customers with notice if there will be a disruption in the provision of goods and/or services. The notice will include the reason for the disruption, the duration and contact information. The notice will be posted at all public entrances.

Training Requirements

AAROC will provide training to all employees who deal directly with the public and /or provide goods and services. Management and supervisors are included in the training.
Training will include:

- an overview of the *Accessibility for Ontarians with Disabilities Act, 2005* and the AAROC *Accessibility Standards Policy*
- how to interact and communicate with disabled individuals
- how to interact with disabled individuals who use assistive devices, or require service animals or support persons
- what to do if a disabled person is having difficulty accessing our good/services

All employee training will be logged as part of a health and safety meeting. New employees will be trained as part of the new worker orientation.

Feedback
We encourage comments and feedback from customers with disabilities regarding the way we provide our goods and services. Customers can call our main office to leave comments. All calls will be returned within 3 business days.

Practices and Procedures
Gravel Pits
All pits must be accessed by vehicle. Pedestrian or bicycle access don't apply as none of our products are light enough to carry.

- Disabled customers can approach our scale-house windows with their vehicle. If a window is not present the scale-house operator can leave their desk and approach the vehicle's window if safe.

- Scale-house operator should ask the nature of their disability and ask how we may best communicate and assist them.
- Scale-house operator should also communicate the information to the loader operator by radio so that they know how to assist the customer.
- The loader operator should assist in loading the vehicle. Customer is to remain in the cab of the vehicle while being loaded.
- Should the volume be small in nature (i.e. pail) then the loader operator shall provide the goods by shovel and place in their vehicle.
- Loading charge will be waived if disability prevents them from loading themselves and volume is minimum in nature.
- All assistive devices, service animals and support persons are welcome on the parts of our premises that are open to the public.

Crushing and Repair Services

- Requests for these services are often done by phone. Should the customer need to visit the worksite employees shall:
    - Encourage the individual to call first to set up an appointment.
    - Discuss with the individual their communication and/or accessibility needs.
    - Designate an accessible meeting place or provide means to transport the individual around the site.
    - Make any arrangements for accommodating assistive devices, service animals or support persons.

Main Office

- Disabled individuals may contact the office by telephone, email or in person.
- Employees will ask how to best communicate with the customer.
- Communication may involve reading something aloud, using written documents or direction to our website / e-mail.
- If in person, all assistive devices, service animals and support persons are welcome in areas open to the public.

Legislation

- Accessibility for Ontarians with Disabilities Act, 2005 (AODA).
- Ontario Regulation 429/07.

SECTION 5– WORKPLACE RISK ASSESSMENTS

Purpose

Management will work closely with supervisors and the JHSC to recognize, assess, control and evaluate workplace hazards and risks as required.

What is a hazard?

A hazard is any situation, thing or condition that may expose a person to risk of injury or occupational disease.

What is a risk?

Risk is the chance or probability of a person getting harmed or experiencing an adverse health effect if exposed to a hazard.

What is a risk assessment?

Risk assessment is the process where you:

A) Recognize and identify hazards that can expose a worker to a risk of injury or disease
B) Assess the risk of a worker getting harmed if exposed to the hazard
C) Fix the problem by eliminating or controlling the hazard
D) Resume work. Monitor and re-evaluate

A risk assessment must take into consideration the nature of the workplace, the type of work, the conditions of work at that workplace and the conditions of work common at similar workplaces.

AAROC shall, in consultation with the joint health and safety committee or the health and safety representative develop and maintain written measures to eliminate or control the hazards, and potential hazards, identified in a risk assessment.

The Mining Regulations state that:

5.1 (1) An employer shall conduct a risk assessment of the workplace for the purpose of identifying, assessing and managing hazards, and potential hazards, that may expose a worker to injury or illness.

(2) A risk assessment must take into consideration the nature of the workplace, the type of work, the conditions of work at that workplace and the conditions of work common at similar workplaces.

(3) The results of an assessment must be provided, in writing, to the joint health and safety committee or the health and safety representative, if any.

(4) If no joint health and safety committee or health and safety representative is required at the workplace, the results of an assessment must be communicated to workers at the workplace and provided, in writing, to any worker at the workplace who requests them.

(5) The requirement in subsection (1) to conduct a risk assessment is in addition to any specific assessments required by the Act or any Regulation made under it.

5.2 (1) An employer shall, in consultation with the joint health and safety committee or the health and safety representative, if any, develop and maintain measures to eliminate, where practicable, or to control, where the elimination is impracticable, the hazards, and potential hazards, identified in a risk assessment conducted under subsection 5.1 (1).

(2) The measures referred to in subsection (1) shall be put in writing and shall include each of the following, as applicable and reasonable in the circumstances:

1. Substitution or reduction of a material, thing or process.
2. Engineering controls.
3. Work practices.
4. Industrial hygiene practices.
5. Administrative controls.
6. Personal protective equipment.

(3) Personal protective equipment shall only be used as a measure if the measures referred to in paragraphs 1 to 5 of subsection (2) are not obtainable, are impracticable or do not eliminate or fully control hazards and potential hazards.

5.3 (1) The risk assessment required by section 5.1 must be reviewed as often as necessary and at least annually.

(2) When conducting the review, the employer shall ensure that,

(a) new hazards or new potential hazards are assessed;
(b) existing hazards or potential hazards that have changed are re-assessed; and
(c) the measures required by section 5.2 continue to effectively protect the health and safety of workers.

(3) Subsections 5.1 (3) and (4) and section 5.2 apply with necessary modifications in respect of any new hazards and potential hazards and any existing hazards or potential hazards that have changed.

A) HAZARD RECOGNITON AND IDENTIFICATION

How do you recognize a hazard…?

- Make observations onsite
- Look at inspections

- Get worker response / comments
- Know or check legislation
- Client or owner input
- HSE Program
- Experience

There are different types of hazards to think about….

- ***Chemical***- gases, vapours, liquids, solids, plasma, dust, fume or mist.
- ***Biological***- living organisms, such as bacteria, viruses, mould, parasites and fungi.
- ***Physical***- noise, vibration, electricity, heat and cold, pressure and radiation.
- ***Ergonomic***- poorly designed equipment or work process, strain on the body.
- ***Psychosocial***- risks of crime, violence / harassment, production pressures.
- ***Safety***- housekeeping, falls, pinch points, moving machinery, fire, explosion.

There are 5 factors that can contribute to hazards at a workplace….

- People – training, communication, education, hygiene practices
- Equipment – protective equipment, maintenance, condition
- Materials – correct use, adequate supply, storage
- Environment – noise, air quality, lighting, physical layout, housekeeping.
- Process – work design, flow, reporting requirements, policies and procedures.

B) ASSESS AND PRIORITIZE RISKS

Ranking or prioritizing hazards is one way to help determine which hazard is the most serious and thus which hazard to control first.

A risk matrix, similar to the example below, helps determine the risk rating of each hazard.

The 1st step is to identify the consequence that could occur as a result of the hazard and then determine the likelihood of the hazard occurring.

The intersection of the likelihood and consequence in the chart gives you the risk rating level.

The priority in controlling hazards is used with the risks ranked from low to extreme.

The AAROC "*Hazard Identification and Risk Assessment*" form is used for all work sites.

LIKELIHOOD	CONSEQUENCES				
	1- Minor	2- Moderate	3- Serious	4- Major	5- Catastrophic
A- Almost Certain	M	H	E	E	E
B- Likely	M	H	H	E	E
C- Possible	L	M	H	H	E
D- Unlikely	L	L	M	H	H
E- Rare	L	L	M	H	H

Low: Continue with existing controls, monitor for changes.
Moderate: Corrective action required. Implement procedures, regular monitoring.
High: Immediate corrective action required. Review procedures and tasks to lower risk.
Extreme: Stop work. No work can continue until controls are implemented to reduce risk.

C) HAZARD CONTROL

Once you have established your hazards and assessed the risks of each, you can decide on ways to control each specific one. Hazard control methods are often grouped into the following categories:

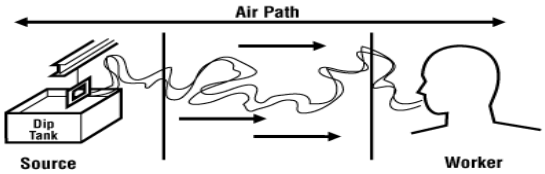
- **Elimination (including substitution)**: remove the hazard from the workplace, or substitute (replace) hazardous materials or machines with less hazardous ones.
- **Engineering Controls**: includes designs or modifications to plants, equipment, ventilation systems, guards and processes that reduce the source of exposure.
- **Administrative Controls:** controls that alter the way the work is done, including timing of work, policies and other rules, and **work practices** such as standards and operating procedures (including training, housekeeping, and equipment maintenance, and personal hygiene practices).
- **Personal Protective Equipment**: equipment worn by individuals to reduce exposure such as contact with chemicals or exposure to noise.

(Personal protective equipment shall only be used as a measure if the other control measures are not obtainable, are impracticable or do not eliminate or fully control hazards and potential hazards).

Where are controls used?

Controls are usually placed:

1. At the source (where the hazard comes from)
2. Along the path (where the hazard travels)
3. At the worker



Controls placed at the source are preferred. The last line of defense is typically controls placed at the worker, like PPE.

Using procedures detailed in this AAROC HSE Program for specific tasks should be one of your first steps to control hazards.

D) EVALUATE AND REVIEW

It is important to monitor both the hazard and the control method to make sure that the control is working effectively and that exposure to the hazard is reduced or eliminated. Some tools include physical inspection, testing, exposure assessment, observations, incident reports, employee feedback/input.

Be sure to answer the following questions:

- Have the controls solved the problem?
- Is the risk posed by the original hazard contained or reduced?
- Have any new hazards been created?
- Are new hazards appropriately controlled?
- Are monitoring processes adequate?
- What else can be done?

The risk assessment must be reviewed as often as necessary and at least annually.

The results of an assessment must be provided, in writing, to the joint health and safety committee or the health and safety representative

If no joint health and safety committee or health and safety representative is required at the workplace, the assessment must be communicated to workers at the workplace

LEGISLATION

- Mining Regulations 854, Section 5.1, 5.2, 5.3

SECTION 6- EMERGENCY RESPONSE PLANNING

Purpose

The OHSA requires that Emergency Response Procedures be developed for workplaces. This section outlines the requirements necessary to develop these procedures.

HOW TO DEVELOP A PLAN

Planning should begin before the work starts at the site by the Safety Team or Supervisor. Development of the plan should include the following elements:

Hazard identification

Involves a review of potential onsite hazards and potential risks of each. It should be followed up with an appropriate emergency response to control the hazard. A thorough review should include the following points:

- transportation, equipment, materials
- environmental concerns
- SDS review
- traffic and public roadways
- site design, features
- processes
- people

All AAROC sites have been reviewed and a subsequent "Hazard and Risk Assessment" has been prepared and posted in the scalehouse or office.

Emergency Resources

Identify which resources are available and have plans in place for any deficiencies.
Important resources include:

- 911 emergency system
- emergency contact list / hospital information
- fire extinguishers
- first aid kits / trained workers in CPR
- spill kits
- eyewash stations

Be prepared and have the resources and the people that will manage them, set up before the job begins.

All AAROC sites will have these resources available in the scalehouse, office and/or attached shop.

Communication Systems

Reliable communication equipment must be used to relay accurate information quickly. It is always a good idea to have a backup system in place.
Equipment includes:

- Telephone landlines
- Cell phones
- 2-way radios

Emergency phone numbers, supervisor numbers, hospital information and the site location will be on the AAROC *Emergency Contact* sheet on site in the scalehouse or office. Communication will be tested to ensure it works at each location.

Administration of the Plan

Administering and organizing the emergency plan is vital to its effectiveness. Normally the person in charge of emergency response has this task (i.e. Supervisor). They must ensure:

- That everyone understands their roles and responsibilities
- That emergency resources are kept at adequate levels during the course of the project.

It is important to review the plan after an emergency in case changes are required.

Monthly site inspections address any deficiencies in resources or supplies. Workers are trained on the emergency plans during new worker orientations.

Communication of the Procedure

To be effective, the Emergency Response procedures must be clearly communicated to all site personnel. The HSE Program and emergency procedures are available to all workers.

Debriefing and Post-Traumatic Stress Procedure

The recovery process after an emergency is a critical step. Many people are unaccustomed to dealing with emergencies and may need assistance or recovery time after an emergency. Debriefing may be necessary to review how well the plan worked and corrections may be needed. Management will address this need accordingly.

Medical Emergency Responsibilities

Medical emergencies include any medical related incident causing physical harm to an employee, visitor, or any other person at the site. These emergencies can range from the use of a first aid kit, requirement for medical aid and up to hospitalization.

Management/Supervisor Procedure for Medical Emergency

1. Take control of the situation
2. Ensure injured employee is in a safe position.
3. Ensure that no further injury or damage can occur.
4. Appoint a competent employee to administer first aid based on the nature of the injury.
5. Immediately notify emergency services if they are required. Follow the procedure for calling 911. (included following this procedure.)
6. If emergency services are not required and the injured person still requires immediate medical attention, transport the injured to the nearest emergency medical facility.
7. Immediately inform the Safety Team of the nature of the incident.

8. Act as a liaison between the injured employee and the emergency medical team.
9. Maintain contact with the Safety Team as to the progress of the emergency.

Offsite:

1. Obtain from the caller the exact location of the emergency, nature of the injury, and severity of the incident.
2. Immediately inform emergency services if required.
3. Encourage the employee to stay calm and give concise and easy to follow directions.
4. Instruct the employee on any steps they may be unclear of regarding the medical emergency.
5. Document every step of the medical emergency.

Once the emergency medical situation is under control and the injured employee has been cared for, the manager/supervisor has the responsibility to follow through with the incident investigation.

Employee Procedure for Medical Emergency

1. Take control of the situation
2. Ensure injured employee is in a safe position.
3. Ensure that no further injury or damage can occur.
4. Administer first aid based on the nature of the injury.
5. Immediately notify emergency services if they are required. Follow the procedure for calling 911. (included following this procedure.)
6. If emergency services are not required and the injured still requires immediate medical attention, transport the injured to the nearest emergency medical facility.
7. Immediately inform your supervisor of the nature of the incident.
8. Act as a liaison between the injured employee and the emergency medical team.
9. Maintain contact with your supervisor as to the progress of the emergency.

Emergency Procedure for Calling 911

1. Dial 911 and wait for dispatch to answer.
2. Tell dispatch the nature of the emergency.

NOTE: DO NOT HANG UP UNTIL EMERGENCY DISPATCH SAYS IT IS OK TO DO SO.

Fire Emergency Responsibilities

Regular inspection of all worksites is done to minimize any unusual fire hazards that may be present. All measures are taken to ensure that these hazards are removed or controlled. Special emphasis is placed on housekeeping and storage practices.

Employee Procedures for Fire Emergencies

1. Exit the fire area immediately
2. If possible, confine the fire by closing the door in the fire area. Close all doors when exiting.
3. Activate the fire alarm (only applicable at office)

4. Call 911
5. Go to the designated muster point

Supervisors:

1. Clear the area of all other personnel and visitors, instruct all employees and visitors to evacuate the area.
2. Delegate a responsible person to call 911 if not done already
3. Ensure that all employees and visitors have evacuated the area and assembled at the predetermined muster point.
4. Take count of all employees and visitors to ensure that everyone is present.
5. Act as a liaison to emergency service personnel.
6. Wait for instruction by emergency authorities before re-entering the work area.
7. Complete any required documentation

Severe Weather Emergency Responsibilities

All employees in all locations will follow these severe weather procedures. Supervisors will monitor weather events in their locations and advise employees if severe weather is expected.

Thunderstorms

- If you hear thunder, then lightning is close enough to be dangerous.
- Move immediately to a place of shelter.
- Go to a well-constructed, enclosed building.
- Small, open structures do not provide protection from lightning.
- If no building is available, stay inside your vehicle or machine cab.
- Avoid water, high ground, isolated trees, and power lines.
- There is not a place outside that is safe during a thunderstorm.
- Make every effort to get into a solid shelter or metal-topped vehicle. If neither is available, find a low-lying area away from tall, pointy, isolated objects, crouch down and put your feet together. Do not lie down. Cover your ears to reduce the threat of hearing damage from thunder.

Severe Winter Weather- Driving

- If driving, pull over somewhere safe
- Call your supervisor and report the weather. Call 911 if needed.
- Do not leave your vehicle unless necessary. Stay in the vehicle and wait for help. Do not leave the vehicle to search for assistance unless help is visible within 100 meters.
- Display a trouble sign to indicate you need help. Hang a brightly colored cloth (preferably red) on the radio antenna and raise the hood after snow stops falling.
- Run the engine occasionally to keep warm. Turn on the engine for about 10 minutes each hour (or five minutes every half hour). Running the engine for only short periods reduces the risk of carbon monoxide poisoning and conserves fuel.
- Use the heater while the engine is running.
- Keep the exhaust pipe clear of snow.
- Leave the overhead light on when the engine is running so that you can be seen.

- Do light exercises to keep up circulation. Clap your hands and move your arms and legs occasionally. Try not to stay in one position for too long.

Severe Winter Weather- Indoors

- Stay indoors and wear warm clothes.
- Listen to a local station for updated emergency information.
- Eat regularly. Food provides the body with energy for producing its own heat.
- Keep the body replenished with fluids to prevent dehydration.
- Charge cell phones
- Prepare for power outages
- Do not leave until safe travel is assured

Evacuation Muster Points

Each worksite should have predetermined muster points, both primary and secondary. These points will be listed on the safety board, traffic plan or in the emergency plan. In the event of an emergency requiring evacuation, all employees are to immediately leave the work area and go to the muster point. Should the primary point be in a hazardous area, employees will then proceed to the secondary point. Upon arrival at the designated muster point, employees are to report to their supervisor for an employee count.

Management

Management is ultimately responsible for the implementation of the Emergency Response Procedures. Management will be trained on all aspects of the procedures and have clear knowledge about notification procedures, first aid, emergency medical facilities, specific duties, actions, and responsibilities, and all related company policies and procedures.

Training Requirements

- Employees will understand that all sites have posted Emergency Procedures and contact information.
- Employees will be trained in the emergency procedures during new worker orientations.

Legislation

- Occupational Health and Safety Act, Section 25(2)(h)

GENERAL EMERGENCY RESPONSE PROCEDURE

In case of an emergency, the supervisor on site shall take control and proceed according to the following guidelines:

1. TAKE COMMAND

- The most senior person on site should take charge
- Assign duties to specific individuals

2. ASSESS THE SITUATION

- Remain calm
- Identify the emergency, problem, hazards, and who is involved.
- Try to identify the cause that must be controlled

3. ADMINISTER FIRST AID

- Ensure that First Aid is provided by a qualified person.
- Get an AED if available
- There should be at least one person at each site who is trained to administer First Aid (Standard or Emergency as required).
- Organize the workforce for a headcount and emergency assignments

4. CALL EMERGENCY SERVICES

- Charge someone with the responsibility to call an ambulance or Fire Department and instruct him/her to report back with the information as to when help will arrive.
- As a rule, sites will have a list of emergency numbers posted. In smaller projects or those of short duration, a site-specific list of emergency numbers may not be available. In this instance, call the office by any means available (cell phone, two-way radio).
- Never leave the victim alone.

5. PROVIDE PROTECTION

- Eliminate further losses and safeguard the area. Control the energy source causing the emergency.
- Protect victims, equipment, materials, environment, and accident scene from continuing damage or further hazards.
- Divert traffic, suppress fire, prevent objects from falling, shut down equipment or utilities, and take other necessary measures. Use spill response if required.
- Protect all persons (workers and members of the public) from dangers arising from the emergency.
- Evacuate area if necessary for protection.

Preserve the accident area; only disturb what is essential to maintain life or relieve human suffering and prevent immediate or further losses.

6. MAINTAIN CONTACT

- Keep emergency services informed of the situation.
- Contact utilities such as gas and hydro where required
- Exercise increasing control over the emergency until hazards are controlled

7. GUIDE EMERGENCY VEHICLES

- Have someone waiting to alert and guide the emergency vehicle to the location of the emergency scene.

8. OBTAIN NAME OF HOSPITAL OR EMERGENCY CENTRE

- Get information (Name, address, Phone Number) about the location where the victim is being taken.

9. ADVISE MANAGEMENT

- Contact Management with details of the accident. The information must be detailed enough for Management to notify relatives of the victim and the authorities if necessary.
- Complete the required Accident Investigation Form. [see Accident Investigation section]

10. PRESERVE ACCIDENT SCENE

- Barricade or rope off the area to avoid disturbing the conditions at the time of the accident as much as practical. The area should remain isolated until authorities have an opportunity to investigate the accident.

11. PRESS RELATIONS

- Refer all questions of the press or news media to a delegated person at head office. Simply state that all actions to relieve suffering are being taken and that all other enquires be referred to head office.

EMERGENCY CONTACT INFORMATION

SITE LOCATION

(Please indicate precisely the 9-1-1 number, street or road name. A detailed description of the site or landmarks should also be included if possible.)

_____

_____

_____

EMERGENCY NUMBERS

Police: _____

Ambulance: _____

Fire: _____

MEDICAL FACILITIES

Please indicate the address and phone number of the following:

Nearest Hospital: _____

_____

Nearest Walk-in Clinic: _____

_____

AAROC CONTACT NUMBERS

In case of emergency during regular work hours contact:

AAROC Dispatch	(519) 659-9110 or Office: (519) 652-2104
AAROC Shop	(519) 659-9109
Jim Aarts- Safety Officer	(519) 521-9597 (cell)
Ethan Moloney-H&S Coordinator	(226) 559-4854 (cell)

After-hours or weekends contact:

Jamie Martelle, Manager	(519) 617-0893 (cell)
Rob Ritchie, Ops Foreman	(519) 521-7680 (cell)
Tom Ritchie, Ops Foreman	(519) 521-2210 (cell)

MINISTRY OF LABOUR HEALTH AND SAFETY CONTACTS:

Health and Safety Centre -24 hrs. 1-877-202-0008

Website: www.labour.gov.on.ca

SECTION 7- EMPLOYEE SAFETY TRAINING

Purpose

The Occupational Health and Safety Act requires that workers receive information, instruction and competent supervision to protect their safety. AAROC believes that effective training is absolutely essential for all workers and their safety.

Worker / Supervisor Training

All workers will have an orientation session prior to beginning work. This will include:

- Review of the New Worker Orientation: in-person and/or digitally

Supervisors will also receive:

- MOL Supervisor Awareness training online
- Competent Supervisor course or Surface Miner- Generic First Line Supervisor course, if required.

Worker Awareness

All workers will receive the mandated "Worker Awareness" training either in-person or digitally.

First Aid

The company follows the WSIB regulations for worker training in Standard First Aid / CPR or Emergency First Aid / CPR for all worksites. Training will be provided by qualified third-party trainers.

WHMIS

All employees will receive WHMIS training as required by current legislation either in-person or digitally.

Fire Prevention

Employees will review the sections of the AAROC program which includes fire prevention and emergency procedures as part of the orientation.

Transportation of Dangerous Goods

Required employees will be trained in the transportation of dangerous goods by a third-party. Training is currently required every 3 years.

Driver Training (MTO regulations where applicable)

Joint Health and Safety Committee- Part 1 and 2 certifications (where applicable)

Surface Miner Training Program - Common Core

The Surface Miner Program is a series of training standards designed to ensure all workers in surface mines are trained to do their job safely. Employees must be trained in and pass the three Common Core Modules – 'Work Safely in the Job Environment', 'Lock and Tag' and 'Operate Hand and Power Tools' before starting the specialty module training.

Surface Miner Training Program - Specialty Modules
The Specialty Module Program is a series of training standards designed to ensure all workers in surface mines are trained to operate individual types of equipment involved in production. They include: Front End Loaders, Excavators, Crushers, Stackers/Conveyors, Haulage Trucks, Bulldozers, Genset etc… Each worker who operates or works in proximity to various types of equipment will be trained for that specific equipment type.

Safety talks
Safety talks will be provided when necessary. Each employee must sign an acknowledgment after reviewing the safety talk.

Job or Site-Specific Training
Training may be required for some employees working in specialized jobs or performing certain tasks. Training may include written procedures or instructions or formalized courses and training sessions.

Annual Health and Safety Meeting
The company organizes an annual Health and Safety meeting. This meeting is designed to be a general review of the company's health and safety policy, program and individual responsibilities of all parties. The meeting will include a review on selected topics. The meeting may be held in-person or in a digital format.

Legislation

- WSIB
- OHSA, Sections 9, 37, various
- Mining Regs. - O. Reg. 854, Sections 11, 28, various

SECTION 8- MUSCULOSKELETAL DISORDERS

Purpose

To educate employees about the causes and health effects of MSD's and the controls they can use for reduction or prevention.

Musculoskeletal disorders (MSD's) are injuries of the muscles, nerves, tendons, ligaments, joints, cartilage or spinal discs.
MSD's do not include injuries that are the direct result of a fall, vehicle collision etc.…

MSD's are the number one lost-time injury reported in Ontario

Some recognized risk factors are:

1. Forceful Exertion- lifting, pushing, pulling and gripping tools exert force or muscle effort.
2. Repetitive Movements- performed over and over again. Tying rebar, nailing a deck, painting a wall are examples.
3. Awkward Postures- postures in which joints are held or moved away from the body's natural position. Examples include stooping, bending, kneeling and reaching.
4. Secondary Risk factors-
    a. Contact Pressure- which is any external pressure applied to soft tissues. Holding tools that press into parts of the hand is an example.
    b. Vibration- can cause damage to nerves and blood vessels and other soft tissues.

Controls

Engineering Controls- are preferred measures to physically modify the forcefulness, repetitiveness, awkwardness or vibration levels of a job.
Administrative Controls- are management directed work practices to reduce or prevent exposures to risk factors. They include changes in job rules like more rest breaks or job rotation.

What can you do to reduce or prevent MSD's?

- Use carts, dollies, chains, ladders or cranes to carry materials.
- Break loads into smaller units.
- Exercise and stretch before starting work.
- Get another person to help
- Work on materials at waist height
- Take mini rest and stretch breaks
- Use handles on tools that are more comfortable
- Use tools that are low torque, low kickback and lightweight
- Don't sit in the same position too long. Take a break and change positions.

BACK Care

Workers may be involved in manual lifting at times. Back, neck and shoulder injuries are common.

Practice these safe lifting techniques:

- Make sure your path is clear. Get as close to the load as possible
- Use a well-balanced stance with one foot slightly ahead of the other
- Tighten your stomach muscles as you start to lift
- Keep your lower back in its normal curved position and use your legs to lift
- Pick up your feet and pivot to turn. Don't twist your back.
- Lower the load slowly, maintaining the curve in your lower back

Whole Body Vibration

Heavy equipment operators are exposed to vibration from all types of heavy equipment. The 3 main sources of WBV are:

- low frequency vibration caused by tires and terrain
- high frequency vibration from the engine and transmission
- shock from running into potholes or obstacles

Sort term exposure to WBV can include abdominal and chest pain, headaches, nausea and loss of balance. Long term exposure can cause serious health problems related to the spine and gastrointestinal system.

Heavy equipment operators should do the following to reduce WBV:

- Report any poorly maintained equipment. A good suspension system and correct tire pressure will help.
- If your seat has hydraulic / air shock absorbers, adjust it to your height and weight.
- Report rough terrain. Other operators may be able to grade or level roads. Drive slower over rock or potholes.
- Get out of the vehicle once in a while for a few minutes to stand, stretch and give your body a break.

Legislation

- Occupational Health and Safety Act, Section 25(2)(h)

SECTION 9 – INCIDENT INVESTIGATIONS

Purpose

To outline to all employees the definition of incidents and the roles and responsibilities of each workplace party in response to them.

Definitions:

Critical injury is defined as an injury of a serious nature that:

a) Places life in jeopardy.
b) Produces unconsciousness.
c) Results in a substantial loss of blood.
d) Involves the fracture of a leg or arm, but not a finger or toe. *
e) Involves the amputation of a leg, arm, hand or foot but not a finger or toe. **
f) Consists of burns to a major portion of the body.
g) Causes the loss of sight in an eye.

* The Ministry of Labour has clarified that it interprets the fracture of a leg or an arm to include the fracture of a wrist, hand, ankle or foot. In addition, while clause d) excludes the fracture of a finger or a toe, the Ministry of Labour takes the position that the fracture of more than one finger or more than one toe does constitute a "critical injury" if it is an injury of a serious nature.

** Clause e) provides that a "critical injury" includes the amputation of a leg, arm, hand or foot but not a finger or toe. The Ministry of Labour interprets the amputation of more than one finger or more than one toe to constitute a "critical injury" if it is an injury of a serious nature.

Lost time injury – unable to return to work the following workday after injury

Occupational illness – a condition that results from exposure in a workplace to a physical, chemical or biological agent to the extent that the normal physiological mechanisms are affected and the health of the worker is impaired thereby and includes an occupational disease for which a worker is entitled to benefits under the *Workplace Safety and Insurance Act, 1997*

Reportable occurrences – as defined in O. Reg. 420

Medical aid injury – sought medical treatment at hospital / clinic

Management Shall:

Ensure an investigation of all:

- fatalities
- critical injuries
- lost-time injuries
- medical aid injuries
- occupational illnesses
- any substantial property or equipment damage
- reportable occurrences

- utility accidents / strikes
- environmental releases/spills
- automotive / equipment accidents

Management will confirm that all necessary authorities / parties have been properly notified as per the instructions on the chart below. All clients/owners will also be notified accordingly.

Review all investigation reports in conjunction with the J.H.S.C. to ensure that all recommended actions to prevent a recurrence have been evaluated and implemented.

Supervisors Shall:

- Document, record and report all incidents, near-misses, injuries, medical aid cases, first aid occurrences, property damage, traffic incidents, spills, hazardous conditions and any other health and safety issues to management.

- Use the appropriate company form:
  Incident Reports- (incidents including traffic, utilities, injuries, property or equipment damage, police issues, investigations etc.)

- Submit all reports to management the same day as the incident if possible or no later than the next day.

Workers Shall:

- Report all incidents, near-misses, injuries, medical aid cases, first aid occurrences, property damage, traffic incidents, spills, hazardous conditions and any other health and safety issues regardless of severity immediately to their supervisor.

Legislation

- Occupational Health and Safety Act, Section 51-53
- O Reg. 420

Description	Notify	Timeline	Report
Fatal or critical Injury	MOL Inspector – verbal	Immediately	By phone
	JHSC certified member	Immediately	Verbal / by phone
	JHSC committee (if applicable)	Immediately	Verbal / by phone
	Trade union (if applicable)	Immediately	Verbal / by phone
	MOL Inspector – written	Within 48 hours of occurrence	OHSA Sec. 51 As per Ont.Reg. 420
	WSIB-written	Within 3 days	WSIB Form 7
Occurrence	MOL	Within 2 working days of occurrence.	OHSA Sec. 53 As per Ont. Reg. 420
	JHSC certified member		
	JHSC Committee (if applicable)		
	Trade union (if applicable)		
Lost time injury – unable to return to work after injury or **Medical aid**	MOL	Within 4 days of the occurrence. Written by Employer only	OHSA Sec. 52 As per Ont. Reg. 420
	JHSC		
	WSIB	Within 3 days of knowledge	WSIB Form 7
Occupational illness	MOL	Within 4 days of being advised	OHSA Sec. 52 As per Ont. Reg. 420
	JHSC certified member or committee (if applicable)		
	Trade union (if applicable)		
	WSIB	Within 3 days of knowledge	WSIB Form 7

SECTION 10 – EARLY and SAFE RETURN TO WORK

Purpose

The purpose of this program is to return our workers to meaningful and productive work as soon as possible following an injury and allow them to continue within our workforce and avoid any interruption in their earnings during recovery. AAROC is committed to developing and maintaining a safe and healthy work environment.

In keeping with this goal, it is the policy of the company to make every reasonable effort to provide suitable employment to any employee unable to perform his/her duties as a result of work-related injuries.

What is early and safe return to work?

When you are injured at work, the Workplace Safety and Insurance Act states that you and your employer must work together to ensure your "early and safe return to work". **The goal is an early return to suitable employment**.

Procedures - In case of injury at work

The injured worker:

1. Report the injury to your supervisor if able;
2. Get first aid immediately if needed;
3. Get medical care from a doctor or health care provider if required;
4. Accurately report the nature and circumstances of the injury to the doctor. A “Form 8” will be provided by the doctor;
5. If **able** to return to normal work duties that day or the next day with no restrictions, give the Form 8 to your supervisor when you return to work.
6. If **unable** to return to normal work duties that day or the next because of restrictions, contact the office right away. The office will review the “Form 8” and develop a modified work plan if possible.

The supervisor:

1. Provide first aid immediately to the injured worker;
2. Transport worker to get medical care if required;
3. Report the injury to the main office;
4. Complete an “Incident Report” describing the nature and circumstances of the injury and submit the same day;
5. If worker returns to normal work duties that day or the next day, review Form 8 from the doctor confirming they are able to perform their regular duties. Forward the Form 8 to the main office.

In the case of injury that prevents the worker from returning to regular work duties:
The employer will:

1. Forward all appropriate documents to the WSIB within the prescribed time;
2. Request and review a “Functional Abilities Form” (FAF) and determine what type of suitable work is available for the injured worker;
3. Create a modified work plan and present it to the injured worker for acceptance.

What are functional abilities and how are they determined?

The term "functional abilities" refers to what the injured worker is physically capable of doing. The doctor or other health care professional initially provides this information on the Form 8 (Health Professional's Report)
After the initial visit:

- The doctor provides updated information about the functional abilities on a WSIB Functional Abilities Form (FAF) when the worker or employer requests it.
- It is extremely important that the Form 8, FAF and any other medical reports, accurately state what the worker is capable of doing. If work is refused that is within the functional abilities set out in these reports, they will be treated as un-cooperative and their benefits may be reduced or taken away.

What is suitable work?
Work is suitable if:

- it is safe (it is not a health or safety risk to the worker, co-workers or anyone else)
- it is available (the job exists at a designated worksite)
- it is productive (it has a benefit)
- it is within the functional abilities and;
- if possible, it restores earnings to what was earned before the accident.

Roles and responsibilities:

The injured worker must co-operate with the employer and the WSIB at all times during the return to work program by:

- helping your employer, if asked, to find appropriate employment
- giving the WSIB any information requested
- attending health examinations as directed by the WSIB
- informing the WSIB about any change in circumstances

If you do not co-operate, your benefits may be reduced or taken away.

The employer must co-operate with the injured worker and the WSIB at all times by:

- contacting the worker as soon as possible after injury
- attempting to identify and arrange appropriate employment
- giving the WSIB any information required
- informing the WSIB about any material change in circumstances.

T**he WSIB** involvement will be as little as possible. However, they may do the following:

- provide information and check on progress with the worker
- decide whether all parties are meeting obligations
- decide on any problems that may arise between worker and employer
- provide early intervention if issues arise

Example of a **"Modified Work Offer"** that may be provided to an injured worker is shown below:

AAROC has an early and safe return to work program. Returning our workers to meaningful and productive work as soon as possible following an injury allows our workers to continue within our workforce and avoid any interruption in his/her earnings during recovery.

Our modified work offers the ability to work at your own pace, take appropriate breaks and work reduced hours if medically required. We can provide transportation if necessary. We would like to offer you modified duties as follows:

_____
_____
_____

This work is available in keeping with the employer's obligations under the *Workplace Safety and Insurance Act,* which requires cooperation between the workplace parties. We trust this return to work plan will enhance recovery and lead to a successful return to your regular work duties. Further duties will be offered once detailed functional abilities have been obtained and as your condition improves. During your return to work you will report to _____ who can be reached at _____

Sincerely

AAROC Aggregates

Acceptance of Modified Duties: Supervisor: Date:

_____ _____ _____

Decline Modified Duties: Supervisor: Date:

_____ _____ _____

SECTION 11– JOINT HEALTH AND SAFETY COMMITTEE

Purpose

To notify employees of the functions and duties of the JHSC and the inspections they conduct at worksites.

Joint Health and Safety Committee Members

- A Joint Health and Safety Committee of at least 2 members is required (1 worker member and 1 management member) for workplaces with 20-49 workers. For 50+ workers, 4 members are required.

- Workers are nominated and elected as J.H.S.C. worker members and help form the company's Joint Health and Safety Committee (JHSC).

- At least one worker representing workers and one worker representing management shall be certified.

- The Certified Representatives have all rights, responsibilities and powers of other Representatives but also have <u>the required duty to:</u>
    1. Investigate Dangerous Circumstances
    2. Initiate a Bilateral Work Stoppage
    3. Physically inspect the workplace monthly

- The company recognizes and supports the powers of the J.H.S.C. members given under the OHSA. The J.H.S.C. members have the power to:
    1. Identify workplace hazards
    2. Obtain information from the company
    3. Be consulted about workplace testing
    4. Make recommendations to the company
    5. Investigate work refusals
    6. Investigate serious incidents – fatalities & critical injuries
    7. Request information from the WSIB

Joint Health and Safety Committee

- The J.H.S.C. will meet at least once every 3 months or more often as needed. Dates may be changed accordingly.
- The J.H.S.C. will maintain written minutes of the meetings. Management will supply a recording secretary.
- The recording secretary will prepare an agenda prior to each meeting.

Currently Aaroc Aggregates has a JHSC with members from other divisions in the same work location.

Functions of the Joint Health and Safety Committee

- Conduct monthly inspections of all work areas to identify hazards (certified worker members preferred).
- Review monthly inspection reports conducted by the worker members and make written recommendations to management. All recommendations must be the result of a "consensus" process. Consensus means all parties may not totally agree, but all parties can live with the decision.
- Ensure that management responds to the written recommendations of the J.H.S.C. within 21 days as per the O.H.S.A.
- Determine the time needed to conduct inspections.
- Support the implementation and proper functioning of the company HSE program.
- Assist management in the annual review of the company health and safety policy and program as needed.
- Review incident investigation reports completed by supervisors or management to ensure validity and implementation of corrective actions.
- Review committee membership to keep it representative of workforce. If a member has not attended 3 consecutive J.H.S.C. meetings their membership must be discussed, or they must be replaced.
- Ensure that a quorum of at least a majority of members is present at each meeting, providing that at least half are worker representatives.
- Post copies of the meeting minutes on the company safety boards.
- Ensure that the employer has posted the names of all members of the J.H.S.C. on the company safety boards.
- All J.H.S.C. members will be paid at the proper or premium rate for time spent doing J.H.S.C. work.
- Designate a worker member to investigate a death or critical injury and report their findings to the J.H.S.C. and the MOL.
- In consultation with management annually review the W.H.M.I.S. training program as per requirements of the W.H.M.I.S. regulation.
- Advise all workers via posting of J.H.S.C. minutes of actions taken to prevent recurrences of injuries.
- As necessary ensure the replacement of certified members.

Training Requirements

- JHSC Certified members will receive training as required (Part 1 and 2 certification).

Legislation

- Occupational Health and Safety Act, Sections 9, 25, 42, 62,65, 70

SECTION 12 – WORKPLACE INSPECTIONS

Purpose

Workplace inspections are vital to identify hazards and maintain safety standards. Inspection reports will be filed and all outstanding action items needing attention will be recorded, circulated, and reviewed.

Methods of Inspection

1. **Pit and Plant Monthly Inspections** – scheduled inspections conducted monthly by certified J.H.S.C. members in all aggregate extraction and crushing sites. The constant changes in equipment, conditions and physical layout of the sites must be examined on a regular basis to promote safety.
2. **Daily Inspections** – of all mobile equipment and commercial vehicles shall always be conducted and logged immediately prior to operation by the operator or driver. This is to ensure that the piece of equipment or vehicle is in safe operating order. Submit all inspections.
3. **Pre-Operational Inspections-** on processing equipment will be completed at time of setup. Pull cords and emergency stop switches will be checked and logged on inspections. Constantly monitor equipment setup and record and report any issues.
4. **Spot Inspections** – unscheduled inspections by the supervisor or management to promote safety.
5. **Main Office**- The office will be inspected monthly by a member of the JHSC.

Remedial Action

It may be necessary to take remedial action if substandard or hazardous conditions are found. Work may be stopped until all members of the inspection team agree with the suggested course of action. The condition(s) will be recorded on the inspection report.

Reporting

The inspection reports shall be circulated and reviewed by Management and Supervisors.

Follow-Up

Follow-up reporting on deficiencies must be carried out by the Safety Team, Supervisors, and / or J.H.S.C. members. All work done will be filed. All workers affected by the repair or action will be notified.

Legislation

- Occupational Health and Safety Act, Section 9, (23-29)

SECTION 13 – ENFORCEMENT POLICY

Purpose

All employees are required to comply with the Occupational Health and Safety Act and, Regulations at all times, and on all work sites which AAROC Aggregates is responsible for. The specific guidelines and procedures set out in this HSE Program must also be adhered to.

AAROC Aggregates will not condone any breech of any statutory requirements or the HSE Program. The following disciplinary actions for violations constitute the Enforcement Policy of AAROC Aggregates:

Verbal Warning

- Given where in the opinion of the supervisor, the violation is of a minor nature and which is easily remedied. There is usually a low risk.
- Disciplinary action will result in a safety briefing by the supervisor regarding the violation.

Written Warnings

- A written *Infraction Notice* will be issued where in the opinion of the supervisor the violation is of a major nature which will directly endanger the health and well-being of any person at the workplace.

- Written notices will also be issued for repeated violations of minor nature, at the discretion of the supervisor.

- Disciplinary action for the first written notice will include a mandatory safety talk regarding the violation. Suspension is possible, depending on the circumstances.

- Disciplinary action for a second written notice includes a requirement for the worker to attend a safety meeting. Suspension is possible, depending on the circumstances.

- Disciplinary action for a final written notice will result in the suspension of the worker. If there are extenuating circumstances, the company may waive the requirement to suspend the worker. However, a worker who has received a *Notice of Infraction* for the third time and is allowed to continue working because of extenuating circumstances, must, as a minimum, attend a meeting with management to discuss and establish disciplinary action and further training requirements.

- Any further written notices beyond the third may result in termination at the company's discretion.

EMPLOYEE INFRACTION NOTICE

Employee Information

Employee:	Date:
Location:	Job Title:
Supervisor:	Company: **AAROC**

Type of Warning

☐ First Warning ☐ Second Warning ☐ Final Warning

Type of Offense*

☐ Late/Leaving Early ☐ Absenteeism ☐ Violation of Company Policies
☐ Substandard Work ☐ Violation of Safety Rules ☐ Unprofessional Conduct
☐ Other:

Details

Description of Infraction*:

Corrective Action:

Consequences of Further Infractions:

Employee Statement:

Acknowledgement of Receipt of Warning

By signing this form, you confirm that you understand the information in this warning. You also confirm that you and your supervisor have discussed the warning and a plan for improvement. Signing this form does not necessarily indicate that you agree with this warning.

Employee(s) Signature **Date**

Supervisor Signature **Date**

Witness Signature (if employee understands warning but refuses to sign) **Date**

SECTION 14 – HOURS AND CONDITIONS OF WORK

Purpose

These procedures are in place to ensure employees understand their general workday and if working alone, are monitored and able to summon assistance if needed.

Hours

At AAROC Aggregates the workday varies seasonally and by role, but generally is between 9 - 10 hours/day. Exceptions may occur depending on a work contract in which case the hours will be discussed prior to the job starting.

Meal Breaks

All employees are required to take a half-hour unpaid lunch-break indicated on their daily timesheet. Usually this occurs from 12:00 pm (noon) to 12:30 pm or after five (5) consecutive hours without a meal break. Rotations or delays are permissible only if approved by the supervisor.

Working Alone

Management should take every effort to avoid persons working alone. When it cannot be avoided, the following steps must be implemented before work begins:

- A worker assigned by a supervisor to work alone in a workplace, gravel pit or surface mine shall be well trained, experienced and a competent person.
- Means of communication with the worker must be provided in the form of appropriate two-way radio contact and / or cell phone.
- A plan to check-in with the supervisor or their designate, throughout the shift at regular intervals must be established.
- The worker must be visited by the supervisor at least once during their shift.
- If at check-in, contact with the worker cannot be made, the site must be visited immediately if possible, by a supervisor or other workers. If no one is able to check immediately, then emergency services (911) should be called.
- Contact must be made every time the worker leaves the workplace or is away from their means of communication (i.e. 2-way radio). Indicate a length of time away from the workplace and make contact upon return.
- The worker must communicate at the end of the shift that work has stopped, and the worker is leaving the site.

After Hours

In addition to the above procedures, the following should apply when working alone after hours:

- The contact and check-in policy should be confirmed. It may involve different supervisors or different means of communication
- A spouse or family member should know your work location and schedule. They should also have the supervisor's contact information

SECTION 15 – WORKSITE CONDITIONS

Purpose

To educate employees about the hazards that may occur while working in all types of weather, seasonal conditions and locations and the resources that must be available to them.

Heat Stress

Heat stress is the challenge your body faces due to hot conditions. If your body is unable to cool itself, you can suffer heat related illnesses, which in some cases can lead to death.

All workers need to recognize the early signs and symptoms of heat stress and know how to treat heat-related illnesses.

HEAT STRESS DISORDERS

ILLNESS	SIGNS AND SYMPTOMS	FIRST AID
Heat rash	Red, bumpy rash with severe itching.	Change into dry clothes and avoid hot environments. Rinse skin with cool water.
Heat cramps	Painful, involuntary cramps commonly in the most worked muscles which occur at work or later at home. They are serious because they are a warning of other more serious illnesses	Move to a cool area; loosen clothing; gently stretch affected muscles and drink an electrolyte sports beverage (i.e. Gatorade). If the cramps persist, get medical aid.
Fainting	Sudden fainting after at least two hours of work. Cool, moist skin. Weak pulse	**GET MEDICAL ATTENTION.** Assess the need for CPR. Move person to a cool area. Loosen clothing. Have the person lie down and if conscious, offer sips of cool water. Fainting may be caused by another illness.
Heat exhaustion	Heavy sweating; cool moist skin; body temperature over 38 degree C; weak pulse; normal or low blood pressure; person is tired and weak and has nausea and vomiting; is very thirsty; breathing rapidly or panting; vision may be blurred.	**GET MEDICAL ATTENTION.** This condition can lead to heat stroke, which can kill. Move person to a cool shaded area; loosen or remove excess clothing; provide cool water to drink; fan and spray with cool water. Do not leave affected person alone.
Heat stroke	High temperature (over 41 degree C) and any one of the following: person is weak, confused, upset or acting strangely; has hot dry, red skin; a fast pulse; headache or dizziness. In later stages a person may pass out and have convulsions.	**CALL AMBULANCE.** This condition can kill a person quickly. Move the person out of the sun and into shade or air-conditioning. Remove excess clothing. Fan and spray the person with cool water if they are conscious.

Personal Risk Factors

It is difficult to predict who will be affected by heat stress and when; because individuals vary. However, certain physical conditions reduce the body's natural ability to withstand high temperatures:

- Overweight
- Poor physical condition
- Previous heat illnesses
- Age (over 40)
- Heart disease or high blood pressure
- Recent illness
- Alcohol consumption (previous 24 hrs.)
- Certain medications
- Lack of acclimatization- the body will adapt when exposed to heat for a few days. It usually takes six or seven days. Although acclimatization may be lost in as little as three days.

Heavy physical work coupled with extra clothing or PPE in a humid environment can greatly affect a worker's ability to cope with the heat. This is especially true for an individual who is not acclimatized.

How Can Heat Stress be Controlled?

Management shall:

- Train and educate employees on the risks, symptoms, first aid measures and controls for heat stress and heat stress illnesses.
- Advise supervisors on the procedures for assessing and controlling heat stress.
- Provide the necessary resources to control heat stress (i.e. water).
- Allow sufficient time for workers to become acclimatized.
- Enforce this policy as needed.

Supervisors shall:

- Employ work procedures to help limit the risks of working in hot environments including giving workers extra breaks, cool water and scheduling work for cooler parts of the day.
- Monitor workers for any heat stress symptoms and react accordingly when workers complain of heat stress. Job shutdown may be required.
- Advise management of any heat stress illnesses.

Workers shall:

- Follow instructions and training for controlling heat stress.
- Be alert to symptoms in yourself and others. Advise your supervisor of any heat stress.
- Get plenty of rest and drink small amounts of water regularly.

Assessing Heat Stress using the Humidex

The following four steps are designed to help determine if conditions require action to reduce heat stress.

Supervisors will monitor their crews and follow these steps as needed

Step 1: Training

- Measurements alone cannot guarantee worker protection from heat stress. It is essential workers learn to recognize the early signs and symptoms.
- The ideal heat stress response plan would let workers regulate their own pace by "listening to their body".

Step 2: Workplace humidex

- A thermal hygrometer is a simple way to measure the temperature and relative humidity, however these are rarely available to supervisors. In the case where a hygrometer is unavailable, use the local weather data.
- Once you have the temperature and humidity, use Table A to determine the humidex value.
- From Table B select *Humidex 1* or *Humidex 2* according to the amount of physical activity involved and the level of acclimatization. Although the Heat Stress Response (Table B) is based on workplace measurements not weather reports, it can be used where specific measurements are unavailable.

Step 3: Adjust for clothing

- The humidex plan assumes workers are wearing regular summer clothes (light shirt, pants, underwear, socks and workboots).
- If workers are wearing cotton overalls on top of clothing - add 5 ° C. to the workplace humidex measurement.
- Estimate the correction factor for other clothes or PPE.

Step 4: Adjust for radiant heat

- For outdoor work in direct sunlight between 10 am and 5 pm – add 1-2 ° C to your humidex measurement. Adjust for cloud cover.

The Heat Stress Plan is only a guide. Never ignore a person's signs and symptoms. Workers should always "listen to their body".

TABLE A- HUMIDEX: The Humidex value is where the temperature row and humidity column meet.

Humidex																				
	Relative Humidity (in %)																			
Temp (in °C)	**100**	**95**	**90**	**85**	**80**	**75**	**70**	**65**	**60**	**55**	**50**	**45**	**40**	**35**	**30**	**25**	**20**	**15**	**10**	**Temp (in °C)**
49																			50	**49**
48	-																		49	**48**
47																		50	47	**47**
46			Never ignore someome's symptoms no matter what you measure!															49	46	**46**
45																	50	47	45	**45**
44																	49	46	43	**44**
43																49	47	45	42	**43**
42															50	48	46	43	41	**42**
41															48	46	44	42	40	**41**
40														49	47	45	43	41	39	**40**
39													49	47	45	43	41	39	37	**39**
38												49	47	45	43	42	40	38	36	**38**
37											49	47	45	44	42	40	38	37	35	**37**
36									50	49	47	45	44	42	40	39	37	35	34	**36**
35								50	48	47	45	43	42	40	39	37	36	34	33	**35**
34							49	48	46	45	43	42	40	39	37	36	34	33	31	**34**
33					50	48	47	46	44	43	41	40	39	37	36	34	33	32	30	**33**
32			50	49	48	46	45	44	42	41	40	38	37	36	34	33	32	30	29	**32**
31	50	49	48	47	45	44	43	42	40	39	38	37	35	34	33	32	30	29	28	**31**
30	48	47	46	44	43	42	41	40	39	37	36	35	34	33	31	30	29	28	27	**30**
29	46	45	43	42	41	40	39	38	37	36	35	33	32	31	30	29	28	27	26	**29**
28	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	**28**
27	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25			**27**
26	39	38	37	36	35	34	33	33	32	31	30	29	28	27	26	25				**26**
25	37	36	35	34	33	33	32	31	30	29	28	27	26	26	25					**25**
24	35	34	33	33	32	31	30	29	28	28	27	26	25							**24**
23	33	32	31	31	30	29	28	28	27	26	25									**23**
22	31	30	30	29	28	27	27	26	25	25										**22**
21	29	29	28	27	26	26	25													**21**
	100%	**95%**	**90%**	**85%**	**80%**	**75%**	**70%**	**65%**	**60%**	**55%**	**50%**	**45%**	**40%**	**35%**	**30%**	**25%**	**20%**	**15%**	**10%**	

TABLE B- RESPONSE

Humidex 1 moderate unacclimatized and heavy acclimatized work	Response Never ignore someone's symptoms no matter what you measure!	Humidex 2 light unacclimatized work (sitting/standing doing light arm work)
30-37	**Low** • Alert workers to potential for heat stress. • Ensure access to water.	34-41
38-39	**Medium** • Reduce physical activity (e.g., slower pace, double up, breaks). • Drink a cup of water every 20-30 minutes.	42-43
40-42	**Moderate** • Reduce physical activity further. • Drink a cup of water every 15-20 minutes.	44-45
43-44	**High** • Ensure sufficient rest and recovery time. Severely curtail physical activity. • Drink a cup of water every 10-15 minutes.	46-48
45 or over	**Extreme** • It is hazardous to continue physical activity.	49 or over

Breaks (as a general guide)- guidelines indicate increasing work breaks for heavy physical activity with high humidex readings as follows: **38-39° C- 15 min /hour; 40-42° C- 30 min/hour; 43-44° C- 45 min/hour; 45+° C- stop work until humidex is 44 ° C or less.**

Light work- sitting with light manual work with hands or hands and arms; standing with some light arm work and occasional walking

Moderate work- sustained moderate hand and arm work; arm and leg work or arm and trunk work; light pushing or pulling; normal walking

Heavy work- intense arm and trunk work; carrying; shoveling; pushing and pulling heavy loads; walking quickly.

Acclimatization- a person becomes acclimatized when the body adjusts to long-term heat exposure.

Workers performing "heavy work" could probably be considered acclimatized once we are well into the heat of summer.

Employees shall follow these guidelines

- Wear light, loose clothing
- Drink cool water - 8 oz.(250ml) – every ½ hour
- Take rest breaks as required
- Avoid coffee, tea, alcohol, drugs. Avoid eating hot, heavy meals.
- Don't take salt tablets unless a doctor prescribes them… AND LASTLY

Everyone reacts differently. Listen to your body and stop when you need to

COLD STRESS

Cold stress can affect workers who are not protected against cold. When the body is unable to warm itself, serious cold-related illnesses and injuries may occur, leading to permanent tissue damage and even death.

Air temperature, wind speed and humidity (wetness) are all challenges for a worker and must be counterbalanced with proper clothing, physical activity and controlled exposure.

What is the wind-chill temperature?

At any temperature, you feel colder as the wind speed increases. It can be used as a general guideline for deciding clothing requirements and the possible health effects of cold.

WIND CHILL CHART

		Ambient Temperature (∞C)								
		4	-1	-7	-12	-18	-23	-29	-34	-40
Wind km/h	Velocity mph	Equivalent Chill Temperature (∞C)								
Calm										
0	0	4	-1	-7	-12	-18	-23	-29	-34	-40
8	5	3	-3	-9	-14	-21	-26	-32	-38	-44
16	10	-2	-9	-16	-23	-30	-35	-43	-50	-57
24	15	-6	-13	-20	-28	-36	-43	-50	-58	-65
32	20	-8	-16	-23	-32	-39	-47	-55	-63	-71
40	25	-9	-18	-26	-34	-42	-51	-59	-67	-76
48	30	-16	-19	-22	-36	-44	-53	-62	-70	-78
56	35	-11	-20	-29	-37	-46	-55	-63	-72	-81
64	40	-12	-21	-29	-38	-47	-56	-65	-73	-82

Adapted from: Threshold Limit Values (TLV™) and Biological Exposure Indeces (BEI™) booklet; published by ACGIH, Cincinnati, Ohio

Little danger in less than one hour exposure of dry skin

Maximum danger of false sense of security

DANGER – Exposed flesh freezes within one minute

GREAT DANGER – Flesh may freeze within 30 seconds

Exposure to cold causes 2 major health problems: ***hypothermia and frostbite.***

Hypothermia can affect workers not protected against the cold. When the body is unable to warm itself, and maintain its core temperature, serious illnesses and injury can occur, leading to permanent tissue damage or even death.

HYPOTHERMIA STAGES	SIGNS AND SYMPTOMS
Mild	**Shivering, blue lips and fingers, poor coordination**
Moderate	**Mental impairment, confusion, disorientation, inability to take precautions from the cold, heart slowdown, slow breathing**
Severe	**Unconsciousness, pulse difficult to find or irregular, no shivering, no detectable breathing. In severe cases, hypothermia resembles death. Treat patients as though they are alive.**

First Aid:

- Carefully move the person to shelter. Sudden movements can upset heart rhythm
- Keep person awake
- Remove wet clothing and wrap person in warm covers
- Re-warm neck, chest, abdomen and groin. Do not re-warm extremities
- Apply direct body heat or use safe heating devices
- Give warm, sweet drinks, but only if conscious
- Administer CPR if necessary
- Call for emergency medical help or transport person carefully to hospital

FROSTBITE
Frostbite is a common injury caused by exposure to severe cold or contact with cold objects
It occurs more readily from touching cold metal than cold air
Body parts most affected include face, ears, fingers and toes
Symptoms vary, are not always painful, but often include a sharp prickling sensation
First indication is waxy looking skin that feels numb
Once tissues become hard, it becomes a severe medical emergency
Severe frostbite results in blistering that usually takes about 10 days to subside
Once damaged, tissues will be more susceptible in future

First Aid:

- Warm frostbitten area gradually with body heat. Do not rub
- Don't thaw hands or feet unless medical aid is distant and there is no chance of refreezing. Parts are better thawed at hospital
- Apply sterile dressings to blistered areas
- Get medical attention

How can Cold Stress be Controlled?

Management shall:

- Train and educate employees on the risk factors, signs and symptoms, first aid measures and controls of cold stress and cold stress related health issues.
- Advise supervisors on the measures for controlling cold stress hazards.
- Provide the necessary resources to control cold stress hazards (i.e. shelter).
- Enforce this policy as needed.

Supervisors shall:

- Employ work procedures to help limit the risks of working in cold environments including giving workers sheltered breaks and backup as needed.
- Monitor the wind-chill and temperature readings at your jobsite. See Table 1
- Monitor workers for any cold stress symptoms and react accordingly.

- Advise management of any cold stress illnesses.

Workers shall:

- Follow instructions and training for controlling cold stress.
- Be alert to symptoms in yourself and others. Advise your supervisor of any cold related health issues.
- Select proper clothing to perform the job. Be prepared.

Employees shall follow these guidelines

- Work should be paced to avoid excessive sweating.
- Clothing should be worn in multiple layers and kept dry and clean as possible.
- For work in wet conditions, the outer layer of clothing should be waterproof.
- Almost 50 percent of body heat is lost through the head. A wool knit cap or a liner under a hard hat can reduce excessive heat loss.
- Gloves should be used below -7°C for moderate work. For work below -17°C, thin polyester gloves should be worn under protective gloves.
- Have extra socks available so you can dry your feet and change socks during the day.
- Face protection, a balaclava or hard hat liner should be used.
- Eat properly and frequently. Working in the cold requires more energy than in warm weather.
- Drink fluids often. Hot non-alcoholic beverages or soup are suggested. Caffeinated drinks such as coffee should be limited.
- Alcohol should not be consumed as it impairs the body's ability to regulate temperature.
- Any worker shivering severely should come out of the cold.
- If you get hot, open your jacket but keep hats and gloves on.
- Wear one thick or two thin pairs of socks. Don’t restrict blood flow with tight fitting footwear.

Exposure Limits

Ontario has no legislated limits for work in cold environments; however, **Table 1** below was developed to indicate threshold limit values for properly clothed workers (dry clothing) in below freezing temperatures.

TABLE 1

Air temperature (sunny sky)		No noticeable wind		8 km/h wind (5 mph)		16km/h wind (10 mph)		24 km/h wind (15mph)		32 km/h wind (20 mph)	
°C (approx.)	°F (approx.)	Max work period	No. of breaks	Max work period	No. of breaks	Max work period	No. of breaks	Max work period	No. of breaks	Max work period	No. of breaks
-26° to -28°	-15° to -19°	Normal breaks	1	Normal breaks	1	75 minutes	2	55 minutes	3	40 minutes	4
-29° to -31°	-20° to -24°	Normal breaks	1	75 minutes	2	55 minutes	3	40 minutes	4	30 minutes	5
-32° to -34°	-25° to -29°	75 minutes	2	55 minutes	3	40 minutes	4	30 minutes	5	**Non-emergency work should stop**	
-35° to -37°	-30° to -34°	55 minutes	3	40 minutes	4	30 minutes	5	**Non-emergency work should stop**			
-38° to -39°	-35° to -39°	40 minutes	4	30 minutes	5	**Non-emergency work should stop**					
-40° to -42°	-40° to -44°	30 minutes	5	**Non-emergency work should stop**							
-43° and below	-45° and below	**Non-emergency work should stop**									

Source: Occupational Health and Safety Division, Saskatchewan Department of Labour

Notes

a) This table applies to any 4-hour work period of moderate-to-heavy work with warm-up periods of ten minutes in a warm location and with an extended break (e.g., lunch) at the end of the 4-hour work period in a warm location. For light-to-moderate work (limited physical movement) apply the schedule one step lower. For example, at -35°C (-30°F) with no noticeable wind (row 4), a worker at a job with little physical movement should have a maximum work period of 40 minutes with 4 breaks in a 4-hour period (row 5).

Storms

If you are outdoors:

- If you hear thunder, then lightning is close enough to be dangerous. Move immediately to a place of shelter. Go to a well-constructed, enclosed building. Small, open structures do not provide protection from lightning.
- If no building is available, stay inside your vehicle or machine cab.
- Avoid water, high ground, isolated trees and power lines.
- There isn't a place outside that is safe during a thunderstorm. Make every effort to get into a solid shelter or metal-topped vehicle. If neither is available, find a low-lying area away from tall, pointy, isolated objects, crouch down and put your feet together. Do not lie down. Cover your ears to reduce the threat of hearing damage from thunder.

Legislation

- Occupational Health and Safety Act, Section 25(2)(h)

(Section 15- All tables and information taken from the "Heat Stress" / "Cold Stress" guidelines in the I.H.S.A. Construction Health and Safety Manual)

SECTION 16 – RIGHT TO REFUSE WORK

Purpose

The company recognizes and supports all workers' rights to refuse work based on health and safety concerns.

A worker has the right to refuse work when he/she has reason to believe that:

- Any equipment, machine, device or thing the worker is to use or operate is likely to endanger himself, herself or another person.
- The physical condition of the workplace in which he or she works is likely to endanger them or another person.
- Workplace violence is likely to endanger himself or herself.
- A contravention of the O.H.S.A. and Regulations exists, and that contravention is likely to endanger that worker

Also, company policy states that if through lack of experience they are not competent to do a task safely, they may refuse work.

The worker should first speak with the supervisor or H&S Representative to try and resolve the problem before starting a Work Refusal process.

Procedure for a work refusal

First stage

1. Worker considers work unsafe.
2. Worker reports refusal to his/her supervisor or employer. Worker may also wish to advise the H&S representative. Worker stays in safe place.
3. Employer or supervisor investigates in the presence of the worker and the H&S representative.
4. Either:
    a. **Issue resolved.** Worker goes back to work.
    b. **Issue not resolved.** Proceed to the second stage

Second stage

1. With reasonable grounds to believe work is still unsafe, worker continues to refuse and remains in safe place. Worker or employer or someone representing worker or employer calls MOL.
2. MOL Inspector investigates in company of worker, H&S representative and supervisor or management representative.*
3. Inspector gives decision to worker, management representative/supervisor and H&S representative in writing.
4. Changes are made if required or ordered. Worker returns to work.

* Pending the MOL investigation:

- The refusing worker may be offered other work if it doesn't conflict with a collective agreement
- Until the investigation is complete, the worker shall remain in a safe place that is near as reasonably possible to his work station and be available to the employer for the purposes of the investigation.
- Refused work may be offered to another worker, but management must inform the new worker that the offered work is the subject of work refusal. This must be done in the presence of:
    - a member of the joint health and safety committee who represents workers; or
    - a health and safety representative, or
    - a worker who because of his or her knowledge, experience and training is selected by the trade union that represents the worker or, if there is no trade union, by the workers to represent them.

Legislation

- Occupational Health and Safety Act, Section 43

SECTION 17 – WHMIS

Purpose

WHMIS (**W**orkplace **H**azardous **M**aterials **I**nformation **S**ystem) is a material labeling and information system which addresses the workers "Right to Know" about potentially hazardous substances or chemicals at the workplace.

The company is responsible for providing hazard information on products received from suppliers concerning the use, handling, storage and disposal of the products.

WHMIS GHS

WHMIS has changed to adopt new, international standards for classifying hazardous chemicals and providing information on labels and safety data sheets. Canada has aligned WHMIS with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). This makes hazard identification and classification more standardized.

As of December 1, 2018, WHMIS GHS is in effect. The old system, WHMIS 1988, has been phased out.

Main components of WHMIS:

- hazard identification and product classification,
- labelling,
- safety data sheets, and
- worker education and training.

Hazardous Product Classification

Suppliers are those who sell or import products. When this product is considered a hazardous product according to the WHMIS legislation, a supplier must label the product or container, and they must provide a safety data sheet (SDS) to their customers.

WHMIS GHS applies to two major groups of hazards: physical and health:

- **Physical hazards group**: based on the physical or chemical properties of the product – such as flammability, reactivity, or corrosivity to metals.
- **Health hazards group**: based on the ability of the product to cause a health effect – such as eye irritation, respiratory sensitization (may cause allergy or asthma symptoms or breathing difficulties if inhaled), or carcinogenicity (may cause cancer).

Each hazard class contains at least one category. The hazard categories are assigned a number (e.g., 1, 2, etc.) Categories may also be called "types". Types are assigned an alphabetical letter (e.g., A, B, etc.). In a few cases, sub-categories are also specified. Subcategories are identified with a number and a letter (e.g., 1A and 1B).

The category tells you about how hazardous the product is (that is, the severity of hazard).

- Category 1 is always the greatest level of hazard (that is, it is the most hazardous within that class). If Category 1 is further divided, Category 1A within the same hazard class is a greater hazard than category 1B.
- Category 2 within the same hazard class is more hazardous than category 3, and so on.

Labels

The purpose of the labels is to clearly identify the contents of the hazardous material.

Labels are important because they are the first alert there may be hazards associated with using the product covered by WHMIS legislation. The labels also tell what precautions to take when using the product. Suppliers are responsible for labelling WHMIS products that they provide to customers.

The employer/employees shall not remove or deface labels on incoming containers of hazardous chemicals.

Supplier labels must be written in English and French. They may be bilingual (as one label), or available as two labels (one each in English and French).

The supplier label must include the following information:

1. **Product identifier** – the brand name, chemical name, common name, generic name or trade name of the hazardous product.
2. **Initial supplier identifier** – the name, address and telephone number of either the Canadian manufacturer or the Canadian importer.
3. **Pictogram(s)** – hazard symbol within a red "square set on one of its points".
4. **Signal word** – a word used to alert the reader to a potential hazard and to indicate the severity of the hazard.
5. **Hazard statement(s)** – standardized phrases which describe the nature of the hazard posed by a hazardous product.
6. **Precautionary statement(s)** – standardized phrases that describe measures to be taken to minimize or prevent adverse effects resulting from exposure to a hazardous product or resulting from improper handling or storage of a hazardous product.
7. **Supplemental label information** – some supplemental label information is required based on the classification of the product. Labels may also include information about precautionary actions, hazards not yet included in the GHS, physical state, or route of exposure. This information must not contradict or detract from the standardized information.

A **signal word** is a prompt that alerts you about the degree or level of hazard of the product. There are only two signal words used:
"Danger" - is used for high risk hazards
"Warning"- is used for less severe hazards.
Each hazard class and category has an assigned **"hazard statement"**. Hazard statements are brief, standardized sentences that tell you more about the exact hazard of the product. The statements are short, but they describe the most significant hazards of the product.

Precautionary statements provide advice on how to minimize or prevent adverse effects resulting from exposure to a hazardous product or resulting from improper storage or handling of a hazardous product. These statements can include instructions about storage, handling, first aid, personal protective equipment and emergency measures.

Labels require the following:

- the pictogram, signal word, and hazard statement are to be grouped together;
- to be clearly and prominently displayed on the container;
- to be easy to read (e.g., you can see it easily without using any item except corrective glasses), and
- to be in contrast with other information on the product or container.

An example of a bilingual label:

Product K1 / Produit K1

Danger

Fatal if swallowed.
Causes skin irritation.

Precautions:

Wear protective gloves.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.

Store locked up.
Dispose of contents/containers in accordance with local regulations.

IF ON SKIN: Wash with plenty of water.
If skin irritation occurs: Get medical advice or attention.
Take off contaminated clothing and wash it before reuse.
IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
Rinse mouth.

Danger

Mortel en cas d'ingestion.
Provoque une irritation cutanée.

Conseils :

Porter des gants de protection.
Se laver les mains soigneusement après manipulation.
Ne pas manger, boire ou fumer en manipulant ce produit.

Garder sous clef.
Éliminer le contenu/récipient conformément aux règlements locaux en vigueur.

EN CAS DE CONTACT AVEC LA PEAU : Laver abondamment à l'eau.
En cas d'irritation cutanée : Demander un avis médical/consulter un médecin.
Enlever les vêtements contaminés et les laver avant réutilisation.
EN CAS D'INGESTION : Appeler immédiatement un CENTRE ANTIPOISON ou un médecin.
Rincer la bouche.

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A label will be required to be updated when the supplier becomes aware of any "significant new data".

A **workplace label** must:

- appear on all hazardous products produced in a workplace or transferred to other containers by the employer
- appear in placard form on hazardous products received in bulk from a supplier
- have the following information:
    - product identifier (product name)
    - information for the safe handling of the product
    - statement that the SDS is available
- may contain the WHMIS pictograms.

WHMIS GHS PICTOGRAMS

Pictograms are graphic images that immediately show the user of a hazardous product what type of hazard is present:

	Exploding bomb (for explosion or reactivity hazards)		**Flame** (for fire hazards)		**Flame over circle** (for oxidizing hazards)
	Gas cylinder (for gases under pressure)		**Corrosion** (for corrosive damage to metals, as well as skin, eyes)		**Skull and Crossbones** (can cause death or toxicity with short exposure to small amounts)
	Health hazard (may cause or suspected of causing serious health effects)		**Exclamation mark** (may cause less serious health effects or damage the ozone layer*)		**Environment*** (may cause damage to the aquatic environment)
	Biohazardous Infectious Materials (for organisms or toxins that can cause diseases in people or animals)				

* The GHS system also defines an Environmental hazards group. This group (and its classes) was not adopted in WHMIS 2015. However, you may see the environmental classes listed on labels and Safety Data Sheets (SDSs). Including information about environmental hazards is allowed by WHMIS 2015.

Safety Data Sheets

WHMIS GHS refers to Safety Data Sheets (SDS's). Employers will be required to make sure that all hazardous products have an up-to-date SDS when it enters the workplace. The SDS's must be readily available to the workers who are exposed to the hazardous product, and to the health and safety committee or representative.

You can think of the SDS as having four main purposes. It provides information on:

a. **Identification**: for the product and supplier.
b. **Hazards:** physical (fire and reactivity) and health.
c. **Prevention:** steps you can take to work safely, reduce or prevent exposure, or in an emergency.
d. **Response**: appropriate responses in various situations (e.g., first-aid, fire, accidental release).

SDS's provide more detailed hazard information about the product than the label. They are an important resource to help you learn more about the product(s) used.

SDS's must follow a standard 16-section format. SDSs will be updated when significant new data become available.

Education and Training

Employers are required to establish education and training programs for workers exposed to hazardous products in the workplace. Employers must also make sure that the products are labelled and that an SDS is present for each product and that they are readily available to workers.

Workers are required to participate in the training programs and to use this information to help them work safely with hazardous materials.

Education: refers to the instruction of workers in general information such as how WHMIS works and the hazards of products.

Training: refers to the instruction in site-specific information such as work and emergency procedures. Both education and training are an important part of understanding workplace hazards.

Training Requirements

Employers are required to educate and train workers about WHMIS GHS. Training includes the following:

- hazard classes.
- labels and their required elements such as signal words.
- the meaning of **all** signal words and hazard statements found on labels and SDS's in the workplace, such as *Danger - May cause cancer*.
- hazard pictograms.
- the SDS format and how to locate information needed to work safely with a product.

The Safety Team is responsible for the implementation and execution of the WHMIS program. This may involve in-house training programs or those delivered by third-party trainers.

Supervisors must ensure the following is available at all sites:

- All materials have supplier and/or workplace labels.
- **S**afety **D**ata **S**heets (**SDS**'s) are readily available in the workplace.

Flammable Fuel Use and Storage

- All workers using propane must be certified. Propane must be caged and stored outside. Gloves must be worn when changing a propane tank
- Fuels must be stored and carried in approved containers. Pails or loader buckets are not approved storage containers.
- No smoking is permitted within the vicinity of flammable liquids or gases.
- All tanks, cylinders and containers must be fully closed after use.
- Never leave a running fuel nozzle unattended.

A facility that stores fuel to be dispensed into any moving motorized vehicle or craft is legally required to follow the regulations and codes listed below:

- Technical Standards and Safety Act, 2000
- Ontario Regulation 216/01, Certification of Petroleum Equipment Mechanics
- Ontario Regulation 217/01, Liquid Fuels
- Liquid Fuels Handling Code Adoption Document
- Liquid Fuels Handling Code 2017

GENERAL INSTRUCTIONS AND EMERGENCY PROCEDURES

- In the event of an incident or accident involving personal injury always ensure you are safe and administer first aid if you are trained and certified to do so. Call 911 for any fire or explosion.
- In the event of a suspected leak or product release into the environment greater than 25 litres, notify the supervisor. Supervisors must notify management.
- Management will determine when the spill action centre (1-800-268-6060) is to be notified.
- Know the location of the fire extinguishing equipment and know how to use it.
- Know the location of and how to use the spill kits.
- You should be able to see what is happening at every fuelling position.
- Only persons trained in the Emergency Procedures and safe operation of the equipment are authorized to use the equipment.
- The authority having jurisdiction in Ontario for Liquid Fuels is the Technical Standards and Safety Authority (TSSA) at 1-877-682-8772

Legislation

- Occupational Health and Safety Act, Section 37-42
  Ontario Reg. 860

SECTION 18 – FIRST AID

Purpose

Should an incident occur, it is essential that First Aid / CPR be administered immediately by a qualified First Aid attendant followed by proper medical treatment, as necessary.

The First Aider's role includes three basic steps:

- Recognize the emergency
- Call emergency medical services - 911
- Act according to your skills, knowledge and comfort level

Remember to check the ABC'S

A= Check the Airway
B= Check Breathing
C= Check Circulation

The following are minimum First Aid requirements on AAROC sites:

FIRST AID KITS

- Every site must have a First Aid Kit sized, stocked and maintained as required. The size and contents of a First Aid Kit will vary with the number of workers at the site. Each Supervisor will keep a First Aid Kit in their service vehicle.
- All workers shall be familiar with the location and contents of First Aid Kits.
- Each Supervisor or JHSC Rep. shall inspect/restock the First Aid Kit at least once every 3 months.

FIRST AID / CPR PROVIDERS

- There shall be an adequate number of first aiders at each site as per the current WSIB regulation. This may be a combination of Emergency and Standard First Aid / CPR providers.
- The list of company first-aiders will be posted in the workplace.
- Supervisors must log all first aid treatments.

In the absence of medical personnel, the supervisor will make arrangements to ensure transportation of an injured worker to a medical facility.

Training Requirements

- Workers will be trained in Emergency or Standard First Aid/CPR, as needed.

Legislation

- WSIB Regulation 1101

SECTION 19 – SILICA IN THE WORKPLACE

Purpose

The control of worker exposure to silica, a designated substance, is required by law. It is imperative that employees understand the hazards and necessary controls associated with silica exposure.

Silica (SiO_2) is the second most common mineral in the earth's crust and is a major component of sand, rock and mineral ores. Silica exists in several forms, of which crystalline silica is of most concern.
In the aggregate industry, silica is primarily present in the form of dust. Worker exposure to silica is of particular concern because silica is the primary component of many construction and aggregate materials. Some common materials containing silica include:

- concrete, concrete block, cement, mortar, brick, asphalt
- granite, sandstone, quartzite, slate
- natural rock, stone, sand, fill, top soil

Many activities can generate airborne dust containing silica including:

- crushing/screening, loading, hauling, and dumping of sand, gravel, concrete
- breaking, drilling, grinding, and chipping of concrete or masonry structures
- demolition of concrete and masonry structures
- road construction
- sweeping, cleaning, and dismantling equipment

Exposure to silica can cause **SILICOSIS**, which is the most significant lung disease caused by breathing mineral dusts.

Legislation

The Occupational Health and Safety Act (OHSA) sets out, in very general terms, the duties of employers and others to protect workers from health and safety hazards on the job.

Silica is a **Designated Substance** under the OHSA. The Ministry's Designated Substances Regulation (O. Reg. 490/09) specifies occupational exposure limits (OELs) for silica and requires an assessment and a control program to ensure compliance with these OELs.

Health Effects

The prolonged inhalation of respirable dust containing silica may result in silicosis. The severity of silicosis depends on the concentration of silica dust to which a worker is exposed and the duration of exposure.

The *International Agency for Research on Cancer* has concluded that crystalline silica inhaled in the form of quartz or cristobalite is carcinogenic to humans.

There are three major types of silicosis: chronic, accelerated, and acute.

Chronic Silicosis

Chronic silicosis is most common. Symptoms may not appear for a long time, usually more than 10 years, and may progress and worsen over a period of many years. The effects of silicosis can continue to develop even after the exposure ceases, and they are irreversible.

Accelerated Silicosis

Accelerated silicosis is almost the same as chronic silicosis. However, it develops more quickly, and the lung scars show up sooner. Accelerated silicosis can develop when exposure to large amounts of silica dust occurs over a short time period.

Acute Silicosis

Acute silicosis is a lung disease that develops rapidly. As few as 8 to 18 months may elapse from the time of first exposure to the onset of symptoms, which include progressive shortness of breath, fever, cough and weight loss. There is a rapid progression of respiratory failure.

Controlling the Hazard

Workplace exposure to silica can be controlled by several strategies depending on the existing facilities, equipment and work practices. A combination of controls should include the following:

- engineering controls
- work practices and hygiene practices
- respirators and personal protective equipment
- training.

Engineering Controls

Engineering controls are methods to control silica at the source and minimize the amount that gets into the workplace air. They include:

- Workplace design which minimizes or eliminates the spread of dust
- Equipment selection and modifications
- Dust suppression (i.e. spraying water)
- Mechanical or natural ventilation

Work Practices and Hygiene Practices

Work practices and hygiene practices are on-the-job activities that reduce the exposure potential from contaminated surfaces and work areas.

- Housekeeping. Keep indoor areas clean and dust free (i.e. scalehouses, lunchrooms)
- Dry sweeping and air-blowing should be avoided
- Clean all dirty clothes at end of shift
- Wash hands before lunch or breaks
- No eating, drinking, smoking in dusty areas.
- Equipment air filter replacement as required
- Keep roads maintained with dust control measures (i.e. water, calcium)

Personal Protective Equipment

When the engineering controls and work practices cannot lower the concentrations of silica, then personal protective equipment must be used. Primarily, respirators must be used to prevent the inhalation of dust.

Where respirators are provided, they should be appropriate for the type and the concentration of airborne silica. Workers will be trained in the use and care of the respirator.

The following general use, care, and maintenance procedures should be followed whenever respirators are required:

- respirators should be used and maintained in accordance with the manufacturer's specifications
- proper seal of respirators should be checked prior to each use
- storage of respirators should be in a clean and sanitary location
- respirators assigned for the exclusive use of one worker, should be cleaned, disinfected and inspected after each shift
- any respirator parts that are damaged or that have deteriorated should be replaced before the respirator is used.

Each worker must be fit-tested for each type of respirator to be worn. Most fit-testing can be done in-house by the qualified testers. Written records will be kept for each worker and their test results.

Training Requirements

Training is an important component in preventing worker exposure to silica. It is essential for training to cover the following:

- WHMIS training
- the hazards of silica, including health effects and symptoms;
- the recognition of typical operations containing silica;
- personal hygiene, respirator requirements, and work measures and procedures;

- the use, care, maintenance, cleaning and disposal of personal respiratory protective equipment.

(* Information on *Silica in the Workplace* taken from the Ontario Ministry of Labour website *)

Workplace Hygiene Study

In October 2012 and July 2013 AAROC hired an independent consultant to test employee noise and dust exposure in the workplace. Employees were tested in the following lines of employment:

1. Wheel loader operator
2. Crusher grounds crew labourer

Dust

Silica can be found in dust in gravel pits.

The report "MACCK Report for AAROC, October 2012 and July 2013" is available for all the details and data.

Based on the above information our current policy regarding dust is:

Machine Operation

- Working in a clean enclosed cab or structure does not normally require dust protection. However, in certain instances, protection can and should be used if the dust levels are high and/or the dust infiltrates into the cab of the machine.

Working Outside

- When working around operational crushing or screening plants without the protection of an enclosed cab, respiratory protection must be worn
- Generally, a dust mask with a N, R or P rating is suitable. Typically, AAROC uses the 3M 8511 N95 model
- The worker must be fit-tested for the type of respirator used
- The supervisor may require different types of respirators depending on the specific job or task

SECTION 20 – ASBESTOS AWARENESS

Purpose

The control of worker exposure to asbestos, a designated substance, is required by law. It is imperative that employees understand the hazards and necessary controls associated with asbestos exposure.

What is asbestos?

Asbestos refers to naturally occurring minerals once used widely in the construction and building industries. Its strength, insulation properties, ability to withstand high temperatures, and resistance to many chemicals made it useful. It has been banned from use.

Asbestos installed over the past eighty years can pose serious health risks to workers in the renovation, demolition and construction industries.

Health effects

- Asbestos fibres don't break in half across their diameter (width), but rather split into thinner and thinner needle-like fibres along their length.
- An asbestos fibre can remain airborne for a long time and can easily become airborne again after it has settled if there is any air movement.
- The average diameter of an airborne asbestos fibre ranges from 0.11 to 0.24 µm, depending on the type of asbestos and are invisible to the eye.
- Inhalation of the airborne asbestos fibres is what causes asbestos-related diseases:
    - Mesothelioma
    - Lung cancer
    - Asbestosis
    - Other illnesses

Mesothelioma is the #1 cause of occupation-related death in construction

Typical Locations of Asbestos

Sprayed-on fireproofing	Pipe and boiler insulation
Loose fill insulation	Acoustical plaster and tiles
Vinyl asbestos products	Roofing felts/shingles
Asphalt/asbestos limpet spray	Drywall joint-filling compound
Coatings and mastics	

Asbestos cement products:

Probably the most typical asbestos product encountered by AAROC employees is in the form of asbestos concrete pipe. This will typically be found in concrete stockpiles that are to be recycled with the crushing plants.

Legislation

The Ministry of Labour uses factors to categorize the asbestos-related activity into one of three types: Type 1, Type 2, or Type 3.

Anybody who works in a Type 1, Type 2, or Type 3 asbestos operation must be trained by a competent person on the following:

- the hazards of asbestos exposure
- the purpose, inspection, maintenance, use, fitting, cleaning, disinfecting, and limitations of respirators
- personal hygiene and correct procedures for work with asbestos
- how to use, clean, and dispose of protective clothing.

Type 1 operations include…

- Installing or removing non-friable asbestos containing material, other than ceiling tiles, without it being broken, cut, drilled, abraded, ground, sanded, or vibrated.
- Breaking, cutting, drilling, abrading, grinding, sanding, or vibrating non-friable asbestos-containing material if a) you wet the material, and b) you use only non-powered hand-held tools.

AC pipe removal would fall under Type 1 operations, if the conditions above applied. If they do not, then it is either Type 2 or 3.

Type 2 operations include…

- Breaking, cutting, drilling, abrading, grinding, sanding, or vibrating non-friable asbestos-containing material if the material is not wetted and the work is done only with non-powered hand-held tools.
- Working on non-friable asbestos with power tools that are attached to dust collecting devices equipped with HEPA filters.

Type 3 operations include…

- Disturbing non-friable asbestos material in any way with power tools not attached to dust collectors equipped with HEPA vacuums.

Type 2 and Type 3 operations include stricter controls than Type 1.

Environmental Protection Act

The disposal of asbestos is strictly regulated and must be disposed of at an approved landfill.

Transportation of Dangerous Goods

The transportation of asbestos-containing waste from the site to the landfill is regulated by the TDG Regulation and requires specific training, certification and documentation.

AAROC Procedures

1. AAROC employees are not normally trained in asbestos operations, therefore working with asbestos containing material (ACM) is prohibited.
2. If ACM is discovered at a site or project, work must immediately stop and it must be reported to the AAROC Supervisor. **The Supervisor must:**

- Notify AAROC Management and the Owner / Client;
- Notify all affected workers on site;
- Stop work and restrict access at the location of the ACM and
- Do not proceed until a plan is developed.

3. **AAROC Management must:**
    - Consult with the Owner / Client and develop a plan to eliminate/mitigate the asbestos hazards from the AAROC work operations. This may involve using trained and certified subcontractors.

SECTION 21 – PERSONAL PROTECTIVE EQUIPMENT

Purpose

To outline for all employees the requirements for the care and use of their PPE.

The appropriate personal protective equipment (PPE) must be worn by all employees, subcontractors and visitors in required areas of the workplace.

As a minimum, workers in the pits require the use of:

- hard hat, high visibility reflective safety clothing and safety footwear (footwear supplied by employee).
  Additional PPE will be required around equipment, crushing / screening operations. Some areas of the pits may be excluded (i.e. in scalehouses, designated safe zones)

Other tasks / sites may also require the use of:

- hearing protection, respiratory protection, skin protection, eye/face protection, hand protection

Owners or clients may insist on other types of PPE to be worn at their workplaces. Supervisors and workers will be given instruction prior to the job start.

Responsibilities

Management shall:

- Ensure the required PPE is used by workers;
- Provide training and instruction in the care and use of PPE;
- Enforce the proper care and use of PPE at all projects.

Supervisors shall:

- Maintain the necessary supplies of PPE for their site, as required;
- Ensure that all workers are wearing the correct PPE.

Workers shall:

- Wear and use all PPE as required;
- Report to your supervisor any defective or missing PPE.

Types of PPE

Hardhats

- They must be a CSA -Class E, Type 1 or Type 2 model.
- They consist of an outer shell and a 4-point inner suspension.
- Workers shall wear hardhats with retro-reflective material on the front, back and sides if working between sunset and sunrise.
- For best protection, they should be worn correctly with the brim facing forward.
- They should be inspected regularly for cracks or other damage.
- Hardhats should not be painted by the user.
- Consult the manufacturer's instructions for use and care.

Clothing

- Reflective safety vests and safety clothing must meet the current CSA standards. Safety clothing should be Class 2 Level 2 as a minimum.
- Use the vests supplied by AAROC. Different sizes are available.
- Night time operations require the use of reflective arm and leg bands.
- Follow the manufacturer instructions for care, cleaning and storage.
- Do not use plastic vests as they are highly flammable.
- Wear long pants, No shorts, no hoodies with drawstrings.

Eye Protection

- All eye protection must follow the current CSA standards.
- Proper eye protection must be selected to match the specific hazard.
- AAROC typically uses safety glasses with sideshields, used for flying objects and impact protection.
- Face shields or safety goggles may be required for certain applications
- Specialized welding helmets and glasses used for metal cutting provide protection from light intensity and radiation.
- Follow all manufacturer instructions for care and use.
- Employees are reminded that prescription reading glasses are NOT suitable as eye protection.

Hearing Protection

Depending on the noise level and duration, hearing loss may result if proper protection is not used. Measuring sound levels can determine if hazards exist. The unit used to measure the intensity is the decibel (dB). There are legislated guidelines that prescribe the number of decibels a worker can be exposed to. Typically, approved foam ear plugs and/or earmuffs will be used. Boxes of disposable ear plugs will be available at all worksites. Please keep earmuffs clean and inspect regularly for cracks.

Workplace Hygiene Studies

In October 2012 and July 2013, AAROC hired an independent hygiene consultant to test employee noise and dust exposure in the workplace. Employees were tested in the following lines of employment:

1. Wheel loader operator (CAT 980H)
2. Crusher grounds crew labourer (865)

In January 2018 the same consultant was hired to test employee noise exposure in the workplace. Employees were tested in the following operations:

1. Wheel loader operator (CAT 980C)
2. Wheel loader operator (John Deere 844K)
3. Crusher operator (ElRus Cone)

Noise

The Ministry of Labour's established noise regulations require that exposure to 85 decibels or more for periods of time requires the use of appropriate hearing protection devices.

The 2012 / 2013 study determined that both workers required a form of hearing protection:
(The report "MACCK Report for AAROC, October 2012 and July 2013" is available for all the details and data).

1. Wheel loader operator (CAT 980H) - **foam ear plugs required**
2. Crusher grounds crew labourer (865) – **both foam ear plugs and ear muffs required**

The 2018 study determined that 2 of the 3 workers required hearing protection:
(The report "MACCK Report for AAROC, January 2018" is available for all the details and data).

1. Wheel loader operator (CAT 980C) – **foam ear plugs required**
2. Wheel loader operator (John Deere 844K) – **no hearing protection required**
3. Crusher operator (ElRus Cone) – **ear muffs required**

Ear Plugs
AAROC currently supplies the 3M Classic Foam Earplugs with a Noise Reduction Rating (NRR) of 29 dB. All ear plugs supplied for similar work should maintain this NRR or higher.

Ear Muffs
The ear muffs used in the 2018 study were the 3M Optime 105 Peltor, cap mount model. The NRR is rated at 27 dB. All ear muffs supplied for similar work should maintain this NRR or higher.

Based on the above information our PPE policy regarding noise is:

Machine Operation

- Generally speaking, depending on the make and model of machine, employees may need to wear appropriate hearing protection when operating machinery.
- Since not all environments have been measured for noise exposure, it is advised that all employees wear as a minimum **foam ear plugs** when operating machinery, unless that type of machine has been specifically excluded (i.e. John Deere 844K).
- Please note however, that even though a particular model may have been excluded in one study, your specific operating environment may change (i.e... open windows) which may require hearing protection.

Crushing / Processing

- All employees must wear the appropriate hearing protection when working in close proximity to crushing and screening equipment. The minimum protection would be ear muffs.
- Each type of equipment has different noise levels. It is recommended however that employees use:
    - Ear muffs – ElRus crusher operator
    - Ear plugs and Ear muffs – 865 Crusher ground crew labour

Typical Noise Level Measurements for Construction	
EQUIPMENT*	NOISE LEVEL (dBA) AT OPERATOR'S POSITION
Cranes	78 – 103
Backhoes	85 – 104
Loaders	77 – 106
Dozers	86 – 106
Scrapers	97 – 112
Trenchers	95 – 99
Pile drivers†	119 – 125
Compactors	90 – 112
Grinders	106 – 110
Chainsaws	100 – 115
Concrete saw	97 – 103
Sand blasting nozzle	111 – 117
Jackhammers	100 – 115
Compressors	85 – 104

* Generally, newer equipment is quieter than older equipment. (For noise levels of specific equipment, contact IHSA.)

† Pile drivers and explosive-actuated tools generate intermittent or "impulse" sound.

(Table taken from "Hearing Protection, Table 5- PPE" from the I.H.S.A. Construction Health and Safety Manual)

Respiratory Protection

- Respiratory protection must comply with all current CSA standards.
- Some sites may require the use of respiratory protection, like dust masks.
- Supervisors will determine the correct protection to use.
- Each worker must be fit-tested before using a respirator.
- Follow all manufacturer instructions for use, care, cleaning and storage.
- For complete information on respiratory protection selection, see the ***MACCK Report, October 2012 and July 2013.***

Hand Protection

- The correct type of gloves should be used for the specific type of work or job. Gloves will be used based on the specific task.
- In wet conditions rubber gloves may be worn. In conditions where lifting or handling materials, leather palmed gloves may be worn.
- Where materials are sharp or abrasive, gloves with a specific ANSI cut level may be worn.

Safety Footwear (supplied by employee)

- Safety footwear must be worn at all times in every location.
- All footwear must be CSA approved Grade 1 with reinforced toe and insole.

- They are easily identified by the green CSA triangle.
- For workboots, a 6 inch to 9-inch-high style is recommended.
- Please keep all footwear laced up to the top and in good condition.

Fall Protection (See Section 22)

- Where a worker is exposed to the hazard of falling more than three metres, a fall protection system shall be used to protect the worker.
- All fall arrest system procedures and components must be used according to the Mining Regulations including the CSA.
- See your Supervisor to setup a safe work procedure, before work begins.

Skin Protection

- Apply a broad-spectrum sunscreen with a sun protection factor (SPF) of 30 or greater to all exposed skin areas.
- Be sure to cover your ears and the back of your neck.
- Apply sunscreen 20 to 30 minutes before you go out in the sun. Reapply sunscreen every two hours.
- Use an SPF 30 or higher sunscreen lip balm and reapply every two hours. Skin cancers can develop on lips.
- Wear clothing that covers as much of the skin as possible. Tightly woven material will offer greater protection as a physical block to UV rays.
- If you sweat heavily, you may need to reapply sunscreen more often.
- Try to find a shaded area for your breaks and lunch.
- Examine your skin regularly for any unusual changes

Legislation

- Occupational Health and Safety Act, Sections 25, 27, 28
- Mining Regs. 854, Sections 12, 13, 14, 94

SECTION 22 – FALL PROTECTION

Purpose

The purpose of this section is to establish the minimum requirements and guidelines to be used to protect employees from falls when they are working at elevated positions or are exposed to potential fall hazards.

Scope

This procedure is applicable to all employees, and any subcontractor(s) employed by AAROC.

This procedure provides the minimum requirements to be implemented by all employees and subcontractors. Where a Client's requirements are less stringent than those in this procedure, the requirements of this procedure shall still be implemented. Where a Client's requirements are more stringent than those in this procedure, the Client requirements shall be adhered to.

Background

Working from heights is a high-risk activity. Risks can be associated with the use of ladders, personnel lifts, or working on elevated walkways. Proactive protective measures must be taken prior to working at elevated heights.

To achieve 100% fall protection, either primary or secondary fall protection systems are used. In some instances, a combination of both may be required.

Legislation

According to Ontario Regulation 854, Mines and Mining Plants:

Fall Arrest: Section 14

(1) Subject to subsection (5), where a worker is exposed to the hazard of falling more than three metres, a fall arrest system shall be used to protect the worker.

(2) The fall arrest system required by subsection (1) shall consist of a suitable combination of a belt, a full body harness, a lanyard, an anchor and a rope-grabbing device or lifeline.

(3) The belt, full body harness, lanyard and lifeline shall,

(a) be made of material with elastic properties capable of absorbing and minimizing the arrest force in case of a fall;
(b) be designed to distribute a fall arrest force in such a manner that the possibility of injury to the worker is minimized;
(c) be of sufficient strength to absorb twice the energy that may be transmitted to the fall arrest system; and
(d) not be knotted or allowed to become knotted, when used or worn.

(4) When being used and worn against the hazard of falling, the lifeline of the fall arrest system shall be,

(a) anchored so that a worker will fall free of arrest not more than one metre; and
(b) connected to an object that is,
(i) capable of resisting the arrest force in case of a fall, and
(ii) free of sharp edges.

(5) Subsection (1) does not apply to a worker employed in shaft sinking where measures and procedures are adopted and put into effect that will provide equal or greater protection to the worker.

Access to the Workplace: Section 46, 47, 48, 49, 54
46. (1) A safe means of access to a workplace shall be provided by a walkway, stairway or ladderway.

(2) Where workers are required to work, operate, maintain or service equipment, a safe means of access shall be provided as prescribed in subsection (1).

(3) Every walkway and every working platform more than 1.5 metres above the ground shall be provided with,
(a) a handrail not less than 0.91 metre or more than 1.07 metres above the floor of the walkway or platform;
(b) a second rail placed at the mid-point between the top rail and the floor of the walkway or platform or have the space between the top rail and the floor closed by a screen; and
(c) toeboards which shall extend from the floor a height of not less than 100 millimetres.

(4) The handrail required by clause (3) (a) shall be capable of withstanding a load applied in any direction to the top rail of at least 0.9 kilonewton.

(5) Despite clauses (3) (b) and (c), toeboards and second rails are not required on a temporary walkway or working platform or on an underground drilling platform that is normally not more than three metres above the ground.

(6) When a platform consists of wooden planks, the planks shall,
(a) be sound, unpainted and free of large knots;
(b) provide a minimum safety factor of three times the maximum load to which it is likely to be subjected; and
(c) be nailed or otherwise secured against movement. R.R.O. 1990, Reg. 854, s. 46 (6).

(7) Where a means of access to a workplace is inclined at more than twenty degrees and less than fifty degrees to the horizontal, a stairway or ladderway shall be provided.

(8) Where a means of access to a workplace is inclined at more than fifty degrees to the horizontal, a ladder shall be provided.

(9) A stairway shall,

(a) be at an angle not greater than fifty degrees to the horizontal;
(b) not have the rise or vertical distance between landings of a flight exceed 3.6 metres;
(c) have the treads and risers uniform in width and height respectively in any one flight; and
(d) be provided with handrails of adequate strength not less than 0.91 metre and not more than 1.07 metres in height above the treads of the stairs.

47. (1) A ladder shall,
(a) be of strong construction;
(b) be free from broken or loose members or other faults;
(c) be installed and maintained so as to reduce to a minimum the hazard of a person falling therefrom;
(d) if made of wood,
(i) be of sound straight-grain lumber,
(ii) not be painted or otherwise treated in a manner to obscure the grain;
(e) have a distance between centres of the rungs not greater than 300 millimetres or less than 250 millimetres;
(f) have the spacing between rungs not vary more than fifteen millimetres in a ladderway;
(g) have not less than 100 millimetres clearance behind any rung from a wall or any timber or obstruction underneath the ladder; and
(h) project at least one metre above the landing or opening unless strong handholds are provided above the top of the ladder.

(2) A fixed ladder shall be securely fastened in place.

48. (1) Except in an underground mine, a ladderway at an angle steeper than seventy degrees to the horizontal shall be fixed in place and be provided with,
(a) platforms at intervals not greater than seven metres;
(b) a safety cage; or
(c) a protective device which when used will prevent a worker from falling.

(2) Except in an underground mine, where platforms are used in conjunction with a ladderway,
(a) the ladders shall be offset;
(b) a platform shall be provided at each place where ladders are offset; and
(c) the platform shall be not less than 600 millimetres in width by 1.2 metres in length.

49. A portable ladder shall,
(a) be equipped with non-slip feet or otherwise secured;
(b) where any activity in the vicinity may create a hazard to a person thereon, be protected at its base; and
(c) where the ladder has metal or metal-reinforced side rails, not be used near exposed and energized electrical circuits or equipment.

54. (1) A walkway, stairway or ladderway shall be,
(a) maintained in a safe condition;
(b) free from obstructions;
(c) of sufficient size to ensure that crowding does not occur; and
(d) cleared of hazardous accumulation of material without undue delay
(2) Any opening in a floor or other surface which may be a hazard to a worker shall be,
(a) protected by a guardrail; or
(b) covered with securely fastened planks or other material capable of supporting any load to which it is likely to be subjected.

Ladders

Choose the right ladder for the job. Remember the following:

- CSA approved ladders must be used;
- Ladders will be inspected each day before the shift starts
- Defective or broken ladders should be tagged out and removed from the site. Return to the shop.
- Aluminum ladders may not be used where there is a risk of electrocution from overhead wires or other electrical hazard areas. In this case, fibreglass ladders must be used.
- Ladder must be set up at a safe angle. Not less than 1/4 and not more than 1/3 of the length from a point directly below the top of the ladder.
- It must be located so that an adequate landing surface that is clear of obstructions is available at the top and bottom of the ladder.
- All ladders must be placed on a stable base.
- It must be secured at the top and bottom to prevent movement.
- It must extend above the top by at least 1 metre
- When climbing up or down, always face the ladder and maintain 3-point contact.
- Do not carry tools, equipment, or material in your hands while climbing. Use a hoist line for lifting and lowering.
- When a stepladder is being used, its legs shall be fully spread open, and its spreaders shall be locked.
- No worker shall stand or step on the top cap, top step, or pail shelf of a stepladder.

Primary Fall Prevention Systems

Primary fall prevention systems are the preferred choice for performing work in elevated areas. These systems provide walking and working surfaces equipped with standard ***guardrail systems on all open sides.***

In most cases, primary fall prevention systems are sufficient fall prevention methods and do not require the use of additional (secondary) fall protection systems such as a harness / lanyard system.

Guardrails
Guardrails are an integral part of most primary fall prevention systems and must be constructed according to the specifications noted in the Mining Regulations.
Most of AAROC's equipment, machines and plants have guardrails, ladders and stairways constructed to protect workers from falls. This generally eliminates the need for secondary fall protection devices.

Covers
Any opening in a floor or other surface which may be a hazard to a worker shall be,

(a) protected by a guardrail; or
(b) covered with securely fastened planks or other material capable of supporting any load to which it is likely to be subjected

- All covers shall be marked to provide adequate warning of the hazard,
- Only authorized personnel shall be permitted to remove covers.

Secondary Fall Protection Systems

Secondary fall protection systems should only be used after all efforts to use primary fall prevention systems have been exhausted or when being used together with primary systems. The following minimum standards shall be met:

- Full body harnesses are the only type of harness allowed in a fall arrest system. The use of body belts or a safety belt for fall arrest is prohibited.
- A full body harness and shock-absorbing lanyard must be used when working outside guarded platforms more than 3 m (10 ft) above ground level.
- The use of a second shock-absorbing lanyard may be used to achieve continuous tie-off.
- Fall protection devices (safety harnesses, lanyards, etc.) shall be inspected for damage prior to each use. Defective equipment shall be immediately removed from service, tagged and returned to your Supervisor.
- The lanyard shall be attached to the D-ring located in the middle back of the safety harness
- The full body safety harness/lanyard must be attached to a secure anchor point
- Snaphooks attached to shock absorbing lanyards shall be of the double action/locking type design. Simple spring resistant snaphooks shall not be used for fall protection
- Fall protection devices and systems shall not be used for any other purpose other than employee safeguarding.
- Workers in elevated work platforms or personnel lifting devices shall wear full body harnesses and secure their lanyards according to manufacturer instructions.
- In situations where a fall could result in impalement or other injury (i.e. working over a hot process, operating equipment, etc.) fall protection equipment shall be utilized regardless of the potential falling distance.
- Fall protection devices subjected to shock loading imposed during fall arresting shall be removed from service, tagged and returned to the office/shop.
- Fall protection devices shall be inspected on an annual basis by a qualified external inspection agency as required.

- All workers using fall protection devices must complete training specific to the equipment used including procedures on the use, care, inspection and maintenance of the fall protection devices or systems.

Anchor Points
The strength of a personnel fall arrest system is based on being attached to an anchor system that does not reduce the strength of the system. Anchor points must be sufficient to resist the arrest force of a fall.

Lifeline Systems
Lifeline systems are points of attachment for fall protection lanyards and harnesses. Lifelines may be mounted either vertically or horizontally and provide fall protection for personnel working in elevated areas.

- Lifelines shall not be used for any other purpose than fall protection
- Lifelines shall be protected against being cut or abraded (i.e. Softeners around lifelines at anchor point)
- Lifelines must be designed, installed, maintained and removed by persons competent and trained in lifeline installations

Training

All workers using fall protection devices must complete training specific to the equipment used including procedures on the use, care, inspection and maintenance of the fall protection devices or systems.
Training must be conducted by a competent person or organization.

Fall Protection Plan

An employer must develop procedures in a fall protection plan for a work site if a worker at the site may fall 3 metres or more and the worker is not protected by guardrails.
A fall protection plan must specify the following:

- the fall hazards at the work site
- the fall protection system to be used at the work site
- the anchors to be used during the work
- clearance distances below the work area, if applicable, have been confirmed as sufficient to prevent a worker from striking the ground, an object or another level below the work area
- the procedures used to assemble, maintain, inspect, use and disassemble the fall protection system, where applicable
- the rescue procedures to be used if a worker falls and is suspended by a personal fall arrest system and needs to be rescued

The employer must ensure that the fall protection plan is available at the work site and is reviewed with workers before work begins.
The employer must ensure that the plan is updated when conditions affecting fall protection change.

SECTION 23 – GUARDS, CONVEYORS & ELECTRICAL SAFETY

Purpose

To give all workers an understanding of the hazards involved with conveyors and electrical equipment and the controls for those hazards, including guarding and lockout.

Conveyor Regulations:

1. No person shall ride on a conveyor belt.

2. A conveyor shall have,

a) a means to safely apply belt dressing while the conveyor is in motion; and

b) if the conveyor is started automatically, by remote control or if a portion or portions of the conveyor are not visible from the operator's position, a start-up warning device.

3. The following pinch points shall be guarded by a guard that, unless it would render the pinch point inaccessible, extends at least 0.9 metres from the pinch point:

a) The head, tail, drive, deflection and tension pulleys.

b) If the lift of the belt is restricted, the return rollers and the carry rollers.

(3.1). If it is impracticable to comply with the guarding described above then:

a) a fence shall be in place that prevents access to the pinch points;

b) a barricade shall be in place that prevents access to the pinch points; or

c) a gate equipped with an interlocking device, which has a manual reset switch, shall be in place that prevents access to the pinch points while the conveyor is operating.

(3.2) If the position or construction of the conveyor provides equivalent protection that renders the pinch points inaccessible, then guarding, fencing barricades or gates are not required.

4. Guards shall be provided beneath a conveyor,

a) that passes over a worker; or

b) from which falling materials or parts may endanger a worker.

5. A conveyor shall be stopped and the prime mover de-energized, locked and tagged out when the conveyor is undergoing repairs, adjustments or maintenance unless,

a) it is necessary to run the conveyor during such work; and

b) effective precautions are taken to prevent injury to a worker from moving parts.

6. Every conveyor shall have an emergency stopping system that operates a manual reset switch that stops the conveyor.

7. If a conveyor is accessible to a worker, the emergency stopping system is required,

a) at any pinch point on the conveyor that is not set out in **Section 3** and the emergency stopping system must be within easy reach of a worker at each of those pinch points and;

b) at any other locations along the conveyor in order to ensure that the system is always within easy reach of a worker.

8. If a conveyor is inaccessible to a worker by any means listed here:

- a fence
- a barricade
- a gate equipped with an interlocking device, which has a manual reset switch that renders the conveyor inoperative when the gate is moved or opened
- the location of the conveyor renders it inaccessible
- any combination of the above

then the emergency stopping system is required at a location or locations determined by the employer following consultation with the joint health and safety committee or health and safety representative, if any.

Workers should exercise caution when working near conveyors and follow these safety points:

- Ensure that the Original Equipment Manufacturer (OEM) and/or company-fabricated guards are functional and affixed to all required pinch points and areas where a worker may be endangered while in operation. A guard must be designed so that it can only be removed using a tool.

- All workers shall familiarize themselves with the conveyors on their job-site by locating conveyor pinch points, grease fittings, emergency stopping systems, operating controls and start/shut-off procedures.

- It is **strictly** forbidden to remove a guard to access parts of the equipment while the machine is in operation until lock-out and tag-out procedures have been implemented prior to guard removal. ***See Section 24 Lock-Out and Tag-Out.***

- Workers should avoid walking under conveyors, stackers, transfer belts, or similar equipment while in operation. If you can't get around because of the set-up then STOP, look up and around for falling stones, material, or other hazards, and then only proceed through and away from the conveyor if safe to do so.

- Keep loose clothing, tools and body parts away from conveyor pinch points.

- "D" handle shovels are **not** permitted in proximity of crushing/screening equipment or conveyors.

- All emergency stopping systems on all conveyors and/or screen plants must be tested prior to setup and at least monthly. Log them on the inspection checklist. If the systems do not work, they must be repaired. Lock out the unit and contact your supervisor.

- Conveyors should be lowered from their elevated position when moving distances greater than its typical pile shift.

Genset / Crusher Electrical Safety

- Repair, maintenance, or service work is NOT ALLOWED to be performed on electrical components of gensets or other electric processing equipment by an unauthorized employee, nor should an electrical panel cover be removed by an unauthorized employee. Certified electricians or certified mechanics will be called for this type of work.

- All electrical equipment should be grounded to the specifications dictated by the manufacturer or a certified electrician.

- All gensets and electric processing equipment should be inspected regularly by a certified industrial electrician.

- Most electrical motors are operated remotely and therefore employees must be mindful of sudden start ups and proper lock-out procedures. A loud horn or siren should be used to indicate their start up.

General electrical safety – tools, cords, generators

- Use only tools that are polarized or double insulated. Make sure the casings of double-insulated tools are not cracked or broken.
- Make sure that tool cords, extension cords, and plugs are in good condition.
- Use only 3-pronged extension cords.
- Make sure that extension cords are the right gauge for the job to prevent overheating, voltage drops, and tool burnout. A 12-gauge extension cord is typically ideal.
- Receptacles must be GFCI-protected.
- Use only generators with neutral bonded to frame.
- Always use a Type A ground fault circuit interrupter (GFCI) with portable electric tools operated outdoors or in damp or wet locations. GFCI's detect current leaking to ground from a tool or cord and shut off power before damage or injury can occur.

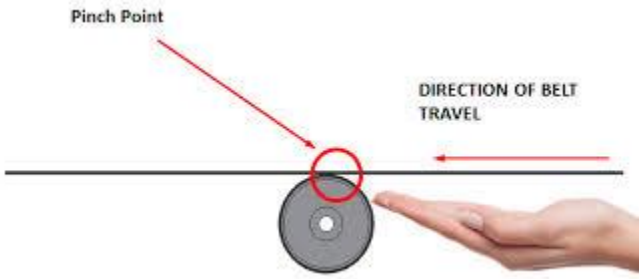
Training Requirements

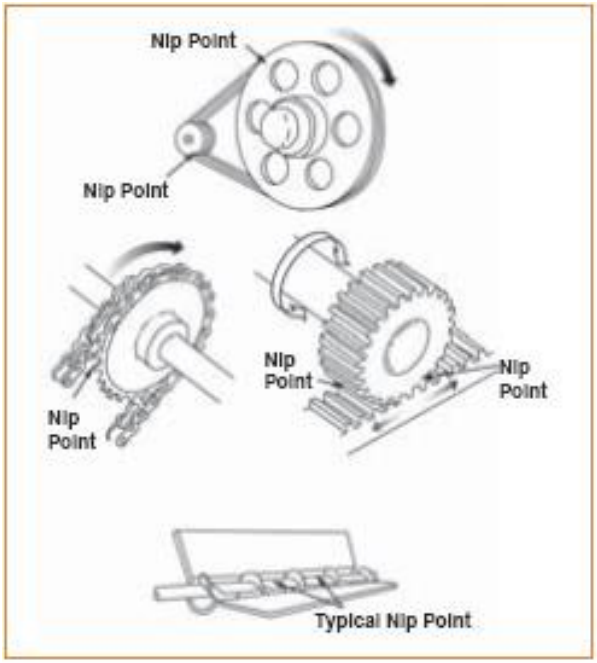
- Employees will be trained in the Surface Miner specialty module if it applies to the task they are performing (i.e. generator, conveyor)

Legislation

- Mining Regs. 854, Sections 90, 159, 160, 185, 196, various

Pinch Points





SECTION 24 – LOCKOUT AND TAGOUT

Purpose

All workers must understand the policies and procedures to lockout and tagout a vehicle, machine or tool due to a defect, hazard or because of maintenance.

- The process of lockout and tagout is used to de-energize equipment and prevent unscheduled or accidental starting, moving or operating.
- Lockout and tagout ensures a safe work environment that would normally be dangerous if equipment were to shift or operate. This is required on all vehicles and machines when any type of work is required, and the worker may be injured because of the nature of the work performed.
- Lockout and tagout will also be required when a vehicle or machine is unsafe to use because of a defect or hazard (i.e. no brakes on a loader).
- Small tools must be tagged out and removed from service when they are defective or hazardous (i.e. a broken ladder, broken chain, leaking fuel tank on a generator). Send all small tools to Aaroc Equipment for evaluation.
- Regular daily maintenance (i.e. checking oil and fluid levels, cleaning cab/tracks) does not normally require lockout because the worker has not removed any safeguards and the procedure is part of a normal daily routine. The worker is not generally exposed to any hazards. Workers are permitted to perform daily maintenance without lockout if the manufacturer instructions permit. Beyond this daily maintenance however, work is prohibited unless lockout is used.
- If a guard must be removed, lockout is required.

The following steps shall be taken:

1. Identify all energy sources (i.e. Hydraulic, Mechanical, Electrical, Chemical, Kinetic, Thermal).
2. Identify the parts to be locked out and the method to lock them out.
3. Notify all affected personnel.
4. Shut the power OFF. Make sure all equipment has been de-energized.
5. Check the moving parts to make sure they have stopped and make sure no material is rolling or falling.
6. Install your own lock and tag at each place you isolate an energy source. If more than one worker is working, each person must install their own locks and tags. Use scissor locks if needed.
7. Check all switches, valves, and gauges. Try operating controls after lock-out to confirm all power is off and locked out.
8. Turn off all controls again.
9. Neutralize all stored energy if present
10. Perform repairs, maintenance and all necessary work.
11. Remove only your lock and tag

12. Check all workers are cleared from the moving parts area and are in sight of the operator. Use loud start signal (i.e. horn) if possible.
13. Start-up equipment again.

- The lock's key is only carried by the person who installed the lock.
- If the lock has 2 or more keys that can open the lock, keep only one key and destroy and throw away the rest. Remember: ONE PERSON, ONE LOCK, ONE KEY.
- The tag shall include the name of the person, the date and the reason for the lockout.
- Both lock and tag need to be applied at each lockout location.
- For electrically powered equipment, the correct breaker(s) must be shut off and locked out at the electrical panel (i.e. electric conveyors).
- Battery boxes will be used on fuel (gas, diesel) powered equipment for lockout. The positive battery cable will be removed from the battery and secured in the lock box. In a series of batteries, use the cable from the battery with wires leading to the starter motor or starter relay.

Multiple Lockouts

When groups of workers are required to lockout and tagout at the same location, certain devices must be used so that multiple locks and tags can be installed at the same time.
These are primarily referred to as scissor lock devices. They allow multiple individual locks/tags to be installed and removed without affecting other worker's lock and tags.

Example:

Scissor locks can be used for electrical equipment at the breaker panel and on diesel equipment on the battery box. AAROC supplies scissor locks to workers as needed.

NOTE:

Always refer to the manufacturer instructions for their detailed lockout procedures if available.

- The specific procedures may vary slightly depending on the equipment and set-up.
- Advise your supervisor that the equipment is locked out.

WHEN IN DOUBT, ASK SOMEONE WHO KNOWS

ALWAYS USE THE LOCK AND TAG TOGETHER

Training Requirements

- Employees will be trained in lock and tag procedures through Surface Miner Common Core and/or after review of this section and specific equipment instruction

Legislation

- Mining Regs. 854, Sections 160, 185, 196(6)

SECTION 25 – FIRE PREVENTION

Purpose

All workers must understand the fire prevention regulations for all worksites and vehicles.

Fire Emergency Responsibilities

Regular inspection of all worksites is done to minimize any unusual fire hazards that may be present. All measures are taken to ensure that these hazards are removed or controlled. Special emphasis is placed on housekeeping and storage practices.

At AAROC worksites, regular monthly safety inspections are conducted.
At the AAROC office, monthly safety inspections are conducted as well as fire inspections conducted by professional third-party technicians.

Employee Procedures for Fire Emergencies

1. Exit the fire area immediately
2. If possible, confine the fire by closing the door in the fire area. Close all doors when exiting.
3. Activate the fire alarm (only applicable at office)
4. Call 911
5. Go to the designated muster point

Supervisors:

1. Clear the area of all other personnel and visitors, instruct all employees and visitors to evacuate the area.
2. Delegate a responsible person to call 911 if not done already
3. Ensure that all employees and visitors have evacuated the area and assembled at the predetermined muster point.
4. Take count of all employees and visitors to ensure that everyone is present.
5. Act as a liaison to emergency service personnel.
6. Wait for instruction by emergency authorities before re-entering the work area.
7. Complete any required documentation

At the office building, a **Fire Safety Plan** has been developed. This plan details the fire prevention and protection devices and procedures for the building, including:

- Emergency contacts
- Procedures in case of fire
- Fire extinguishers
- First aid kits
- Fire alarm system: pull stations, heat detectors, smoke detectors, hose cabinets, 24-hour monitoring, emergency lighting
- Fire drills and logs
- Building diagrams

Fire extinguishers at worksites must be:

- readily accessible in marked locations
- inspected regularly
- promptly refilled after use

Extinguishers must be located:

- where flammable materials are stored, handled or used
- where temporary oil or gas fired equipment is being used
- where welding or open flame cutting is being done
- in mobile equipment

Fire extinguishers are classified according to their capacity to fight specific kinds of fire:
Class A – for fires in ordinary combustible materials such as wood and paper where you need a quenching, cooling effect.
Class B – for flammable liquid and gas fires such as oil, gasoline, paint, and grease where you need oxygen exclusion or flame interruption.
Class C – for fires involving electrical wiring and equipment where you need a non-conductive extinguishing agent.
Class D – for fires in combustible metals such as sodium, magnesium, and potassium.

For most operations, a 4A40BC extinguisher is required.

Containing the Fire
All fires can be very dangerous and life-threatening. Your safety should always be your first priority when attempting to fight a fire.

Before deciding to fight a fire, be certain that:

1. The fire is small and not spreading. A fire can double in size within two or three minutes.
2. You have the proper fire extinguisher for what is burning.
3. The fire won't block your exit if you can't control it. A good way to ensure this is to keep the exit at your back.
4. You know your fire extinguisher works. Inspect extinguishers once a month
5. You know how to use your fire extinguisher. There's not enough time to read instructions when a fire occurs.

How to Fight a Fire Safely:

1. Always stand with an exit at your back.
2. Stand several feet away from the fire, moving closer once the fire starts to diminish.
3. Use a sweeping motion and aim at the base of the fire.
4. If possible, use a "buddy system" to have someone back you up or call for help if something goes wrong.
5. Be sure to watch the area for a while to ensure it doesn't re-ignite.

Never Fight A Fire If:

1. The fire is spreading rapidly. Only use a fire extinguisher when the fire is in its early stages. If the fire is already spreading quickly, evacuate and call the fire department.
2. You don't know what is burning. Unless you know what is burning, you won't know what type of fire extinguisher to use. Even if you have an ABC extinguisher, there could be something that will explode or produce highly toxic smoke.
3. You don't have the proper fire extinguisher. The wrong type of extinguisher can be dangerous or life-threatening.
4. There is too much smoke or you are at risk of inhaling smoke. Seven out of ten fire-related deaths occur from breathing poisonous gases produced by the fire.

When using an extinguisher remember…
P - Pull the pin
A - Aim the nozzle low at base of fire
S - Squeeze the handle
S – Sweep back and forth at base of fire

Once you've discharged an extinguisher, report it immediately to your supervisor.

Inspections

A competent worker must inspect the fire extinguishers at least monthly and shall record the date of the inspection on the tag attached to it.
Annual maintenance inspections will be completed by a 3rd party technician.

Check that:

- it is well supported; all hangers are fastened solidly;
- it is properly charged (read pressure gauge);
- the discharge opening is clear;
- the ring pin is attached properly;
- the inspection tag is attached and current and
- there are no apparent defects

Training Requirements

- All workers will review this section during new worker orientations. Office staff will also review the building "Fire Safety Plan"
- Every worker who may be required to use a fire extinguisher will be trained in its use. This section of the program will be reviewed with all workers.

Legislation

- Mining Regulations 854, Section 41

SECTION 26 – HOT WORK

Purpose

The purpose of this section is to establish hot work safety procedures and to ensure that all hot work operations are performed in the safest manner possible, and in compliance with applicable regulations.

Hot Work defined:

Any work performed that produces an increased risk of fire or explosion from the generation of sparks, flame, ignitable dust or vapour or other sources of ignition and includes welding, flame cutting, soldering, brazing, grinding or other similar work.

Most hot work is performed by staff at the AE maintenance shop in designated welding areas, however some field work may be conducted by other AAROC workers.
When tasks require work to be done outside the shop (i.e. inside a crusher), a Hot Work Permit may be required.

General good practices before performing hot work include:

- Making sure that all equipment is in good operating order before work starts.
- Inspecting the work area thoroughly before starting. Look for combustible materials in vicinity of job area.
- Clearing any combustible materials around the work zone.
- Using water ONLY if electrical circuits have been de-energized to prevent electrical shock.
- If combustibles cannot be moved, cover them with shields. Protect gas lines and equipment from falling sparks, hot materials and objects.
- Securing, isolating, and venting pressurized vessels, piping and equipment as needed before beginning hot work.
- Posting a fire watch within the work area, including during breaks, for at least 30 minutes after work has stopped. Depending on the work done, the area may need to be monitored for longer after the end of the hot work.
- Shut down any process that produces combustible atmospheres.

Personal Protective Equipment

Eye and Face Protection

Welding helmets or face shields provide radiation, thermal, electrical, and impact protection for face, neck, forehead, ears, and eyes.
The filtered or shaded plate is the radiation barrier. It is necessary to use a filter plate of the proper lens shade to act as a barrier to the harmful light rays and to reduce them to a safe intensity.
Always ensure that the correct lens shade is selected for the type of welding being conducted.
When gas cutting, use a face shield or goggles and ensure that the proper lens shade is used.

If unsure of the type of lens shade required, ask your supervisor to check or contact the maintenance shop.
When grinding, use safety glasses and a face shield to protect from flying particles.

Clothing
Clothing should be made of non-synthetic materials such as wool. Woolen clothing is preferable to cotton because it is less likely to ignite. Keep sleeves rolled down and collars buttoned up. Wear shirts with flaps over pockets and pants with no cuffs. Remove rings, watches, and other jewelry. Never carry matches or lighters in pockets. Clothing should be free from oil and grease Wear flame-proof gauntlet gloves and an apron or leggings. Wear high-cut safety footwear laced to the top to keep out sparks and slag.

Hearing Protection
Ear plugs or ear muffs must be used when welding, cutting or grinding.

Respiratory protection
Protection will not be required for most welding operations if adequate outdoor ventilation is provided. However, when ventilation is not adequate, respiratory protection must be worn. Typically, a half-mask respirator with cartridges suitable for welding fume should be used. Consult with your supervisor before work begins to select the proper type.

Welding and Cutting Hazards
Welders are exposed to a wide range of hazards such as inhalation of toxic fumes and gases, serious burns from hot metal, and electric shocks from welding cable.
There are generally 2 groups: **Physical and Chemical Hazards**

Physical Hazards
Ionizing radiation- A common source is the emission of x-rays and gamma rays from equipment used to gauge the density and thickness of pipes and to check welds.
Non-ionizing radiation- A major source is ultraviolet, infrared, and visible light radiation from welding. Radiation produced by the welding process is mainly non-ionizing.

UV
Exposure to ultraviolet (UV) radiation can result directly from the arc or from a reflection off bright objects such as shiny metal or white clothing. It can cause “arc eye” when sight is not adequately protected.

Symptoms of "Arc Eye"
Certain types of UV radiation can produce an injury to the surface and mucous membrane of the eye called "arc eye". The symptoms include:

- pain - ranging from a mild feeling of pressure in the eyes to intense pain in severe instances
- tearing and reddening of the eye and membranes around the eye
- sensation of "sand in the eye" or abnormal sensitivity to light
- inability to look at light sources (photophobia)

Eyes become watery and painful anywhere from 2 to 24 hours after exposure. The condition may last 1–5 days but is usually reversible with no lasting effects. However, repeated exposure may result in scar tissue that can impair vision. UV exposure may also cause a temporary loss of visual sharpness called “fluorescence.” It may eventually lead to the development of cataracts in the eye if eye protection is not worn.

Skin reddening, commonly known as sunburn, is another hazard of UV exposure. Blistering may occur in extreme cases.
The intensity of UV radiation varies with the type of welding. Generally, the higher the temperature of the welding process the higher the UV radiation.

Infrared
Infrared radiation is hazardous for its thermal or heating effects. Excessive exposure to the eye may cause damage.

Visible light
Light is released at high intensity by welding. Short-term exposure can produce “flash blindness” in which vision is affected by after-images and temporary blind spots. Repeated exposure to high-intensity visible light can produce chronic conjunctivitis, characterized by red, tearful eyes.

Noise
Sound waves over 85 dBA emitted at high intensity by welding equipment can lead to hearing loss. Noise has also been linked to headaches, stress, increased blood pressure, nervousness, and excitability. Welding noise is produced by the power source, the welding process, and by secondary activities such as grinding and hammering. Ear plugs or ear muffs must be worn when welding, cutting or grinding.

Electric Shock
Electrical shock is the effect produced by current on the nervous system as it passes through the body. Electrical shock may cause violent muscular contractions, leading to falls and injuries. It may also have fatal effects on the heart and lungs. Electrical shock may occur as a result of improper grounding and/or contact with current through damp clothing or wet surfaces. Even if the shock itself is not fatal, the jolt may still cause welders to fall from their work positions.

Electrical burns are an additional hazard. The burns often occur below the skin surface and can damage muscle and nerve tissue. In severe cases, the results can be fatal. The extent of injury due to electrical shock depends on voltage and the body’s resistance to the current passing through it. Even low voltages used in arc welding can be dangerous under damp or humid conditions.
Welders should keep clothing, gloves, and boots dry and stay well insulated from work surfaces, the electrode, the electrode holder, and grounded surfaces.

Chemical Hazards

Chlorinated solvents for degreasing, zinc chromate-based paint for anti-corrosion coatings, cadmium or chromium dusts from grinding, and welding fumes are all classified as chemical hazards.

Arc welders are at particular risk since the high temperatures generated by the arc can release heavy concentrations of airborne contaminants.

Chemical hazards may injure welders through inhalation, skin absorption, ingestion, or injection into the body. Damage to respiratory, digestive, nervous, and reproductive systems may result.

Symptoms of overexposure to chemicals may include nosebleeds, headaches, nausea, fainting, and dizziness.

The most common chemical hazards from welding are airborne contaminants:

Fumes, Gases and Vapours and Dusts

Fumes

Some of the metal melted at high temperatures during welding vaporizes. The metal vapour then oxidizes to form a metal oxide. When this vapour cools, suspended solid particles called fume particles are produced.

Welding fumes consist primarily of suspended metal particles invisible to the naked eye. Metal fumes are the most common and the most serious health hazard to welders. Fume particles may reach deep into the lungs and cause damage to lung tissue or enter the bloodstream and travel to other parts of the body.

The following are some common welding fumes:

- Beryllium- is a hardening agent found in copper, magnesium, and aluminum alloys. Overexposure may cause metal fume fever. Lasting for 18–24 hours, the symptoms include fever, chills, coughing, dryness of mouth and throat, muscular pains, weakness, fatigue, nausea, vomiting, and headaches. Chronic exposure to beryllium fumes can result in respiratory disease. Symptoms may include coughing and shortness of breath. Beryllium is a suspected carcinogen.
- Cadmium coatings- can produce a high concentration of cadmium oxide fumes during welding. Cadmium-plated or cadmium-containing parts resemble, and are often mistaken for, galvanized metal. Overexposure to cadmium can cause metal fume fever. Symptoms include respiratory irritation, a sore, dry throat, and a metallic taste followed by cough, chest pain, and difficulty in breathing. Overexposure may also make fluid accumulate in the lungs and may cause death.
- Chromium- is found in many steel alloys. Known to be a skin sensitizer, it may cause skin rashes and skin ulcers with repeated exposure. Chromium also irritates mucous membranes in areas such as eyes and nose. Inhaled chromium may cause edema and bronchitis.
- Lead- can be found in lead-based paints and some metal alloys. Lead poisoning results from inhalation of lead fumes from these lead-based materials. The welding and cutting of lead or lead-coated materials is the primary source of lead poisoning for welders.

Symptoms include loss of appetite, anemia, abdominal pains, and kidney and nerve damage.

- Nickel- is found in many steel alloys including stainless steel and monel. It is a sensitizing agent and in certain forms is toxic and carcinogenic. Nickel fumes can also produce cyanosis, delirium, and death 4 to 11 days after exposure.
- Zinc- is found in aluminum and magnesium alloys, brass, corrosion-resistant coatings such as galvanized metal, and brazing alloys. Inhaling zinc fumes during the cutting or welding of these metals may cause metal fume fever.

Gases and Vapours

A **gas** is a low-density chemical compound that normally fills the space in which it is released. It has no physical shape or form. **Vapour** is a gas produced by evaporation. Several hazardous vapours and gases may be produced by welding.

Hydrogen fluoride (HF) gas- can be released by the decomposition of rod coatings during welding and irritates the eyes and respiratory system. Overexposure can injure lungs, kidney, liver, and bones.

Nitrogen oxide (NOx) gas- is released through a reaction of nitrogen and oxygen promoted by high heat and/or UV radiation. It is severely irritating to the mucous membranes and the eyes. High concentrations may produce coughing and chest pain. Accumulation of fluid in the lungs can occur several hours after exposure and may be fatal.

Ozone gas- is formed by the reaction of oxygen in air with the ultraviolet radiation from the welding arc. It may be a problem during gas-shielded metal arc welding in confined areas with poor ventilation. Overexposure can result in an accumulation of fluid in the lungs (pulmonary edema) which may be fatal.

Phosgene gas- is formed by the heating of chlorinated hydrocarbon degreasing agents. It is a severe lung irritant and overexposure may cause excess fluid in the lungs. Death may result from cardiac or respiratory arrest.

Phosphine or hydrogen phosphide- is produced when steel with a phosphate rustproofing coating is welded. High concentrations irritate eyes, nose, and skin.

Asphyxiants are chemicals that interfere with the body's ability to transfer oxygen to the tissues. The exposed individual suffocates because the bloodstream cannot supply enough oxygen for life.

There are two main classes of asphyxiants:

Simple asphyxiants- displace oxygen in air, thereby leaving little or none for breathing. In welding, simple asphyxiants include commonly used fuel and shielding gases such as acetylene, hydrogen, propane, argon, helium, and carbon dioxide. When the normal oxygen level of 21% drops to 16%, breathing as well as other problems begin, such as lightheadedness, buzzing in the ears, and rapid heartbeat.

Chemical asphyxiants- interfere with the body’s ability to transport or use oxygen. Chemical asphyxiants can be produced by the flame cutting of metal surfaces coated, for instance, with

rust inhibitors. Hydrogen cyanide, hydrogen sulphide, and carbon monoxide are examples of chemical asphyxiants—all highly toxic.

Dusts

Dusts are fine particles of a solid that can remain suspended in air and are less than 10 micrometres in size. This means they can reach the lungs. Dusts may be produced by fluxes and rod coatings, which release phosphates, silicates, and silica. The most hazardous of these is silica which can produce silicosis.

Fires and Explosions

There is always a threat of fire with welding. Fires may result from chemicals reacting with one another to form explosive or flammable mixtures.
In welding, **oxygen and acetylene** present the most common hazards of fire and explosion. Pure oxygen will not burn or explode but supports the combustion of other materials, causing them to burn much more rapidly than they would in air.
When exposed to high temperature, excess pressure, or mechanical shock, acetylene gas can undergo an explosive decomposition reaction.

Preventive Measures

Welding hazards must be recognized, evaluated, and controlled to prevent injury to personnel and damage to property.

Types and effects of airborne contaminants produced by welding depend on the working environment, the kind of welding being done, the material being welded, and the welder's posture and welding technique.

Base metal- is an important factor in the production of fumes, vapours, and gases. The base metal will vaporize and contribute to the fume.
Coatings- such as rust inhibitors have been known to cause increased fume levels which may contain toxic metals. All paints and coatings should be removed from areas to be welded as they can contribute to the amount and toxicity of the welding fume.
Welding rod- is responsible for up to 95% of the fume. Rods with the fewest toxic substances can't always be used because the chemistry of the rod must closely match that of the base metal.
Shielding gas- used can affect the contaminants produced. Using a mixture of argon and carbon dioxide instead of straight carbon dioxide has been found to reduce fume generation by up to 25%.
Welding process variables- can have a big effect on the fume levels produced. Generally, fume concentrations increase with higher current, larger rods, and longer arc length. Arc length should be kept as short as possible while still producing good welds.
Ergonomics
Here are some tips for a good working posture while welding:

- Learn to recognize symptoms of work-related musculoskeletal disorders. Repeated uncomfortable postures and tasks can cause injury.

- Avoid awkward body positions which cause fatigue, reduce concentration and lead to poor welds which may need to be repeated.
- Always use your hand to lower your helmet. Do not use a "jerking" motion of your neck and head.
- Position yourself in a stable, comfortable posture.
- Avoid working in one position for long periods of time.
- Always store materials and tools within normal reach.

Ventilation

Ventilation is required for all welding and cutting. Adequate ventilation is defined as:

- the use of air movement to reduce concentrations of airborne contaminants below the acceptable limits in the worker's breathing zone and the work area
- prevent the accumulation of combustible gases and vapours
- prevent oxygen-deficient or oxygen-enriched atmospheres.

Natural dilution ventilation — The majority of AAROC projects will use natural dilution ventilation (i.e., welding outside) When using natural dilution ventilation, you must make sure to "keep your head out of the fume". A portable fan can also be used if necessary, to keep fumes out of your work area.

Fire Prevention

Sparks and slag from welding, cutting and grinding can travel great distances and may contact flammable materials or electrical equipment. Fires have started in smoldering materials that went undetected for several hours after work was done. Take the following steps to prevent fires and explosions:

- Obtain a hot work permit if needed
- Keep welding area free of flammable and explosive material
- Provide fire extinguishers suitable for potential types of fire. Know where the extinguishers are and how to use them
- Provide a firewatch where necessary—a worker to watch for fires for at least thirty minutes afterward

Handling, Storing and Using Cylinders

Handling

- Do not accept or use any compressed gas cylinder which does not have proper identification of its contents
- Transport cylinders securely
- Protect cylinders and any related piping and fittings against damage
- Never drop cylinders or let them strike each other violently
- Chalk EMPTY or MT on cylinders that are empty
- Close valves and replace protective caps
- Secure transported cylinders to prevent movement or upset
- Always regard cylinders as full and handle accordingly

Storage

- Store cylinders upright in a safe, dry, well-ventilated location
- Never store flammable and combustible materials such as oil and gasoline in the same area
- Do not store cylinders near walkways, exits, or in places where they may be damaged or knocked over
- Do not store oxygen cylinders within 6 m (20 ft) of cylinders containing flammable gases unless they are separated by a partition at least 1.5 m (5 ft) high
- Store empty and full cylinders separately
- Prohibit smoking in the storage area

Using

- Open cylinder valves slowly. Only use the handwheel, spindle key, or special wrench provided by the supplier
- Always use a pressure-reducing regulator with compressed gases
- Before connecting a regulator to a cylinder, crack the cylinder valve slightly to remove any debris or dust that may be lodged in the opening
- Never allow sparks, molten metal, electric current, or excessive heat to come in contact with cylinders
- Never use oil or grease as a lubricant on the valves or attachments of oxygen cylinders
- Release pressure from the regulator before removing it from the cylinder valve
- When gas runs out, extinguish the flame and connect the hose to the new cylinder
- Purge the line before re-igniting the torch
- When work is finished, purge regulators, then turn them off. Use a proper handle or wrench to turn off cylinders.

Hoses and hose connections for oxygen and acetylene should be different colours. Red is generally used to identify the fuel gas and green the oxygen. Protect hoses from traffic, flying sparks, slag, and other damage. Avoid kinks and tangles. Repair leaks properly and immediately.

SECTION 27 – HOUSEKEEPING

Purpose

To ensure all employees know the hazards involved with poor housekeeping and the actions to keep the work sites safe.

Poor housekeeping and poor storage practices account for a significant percentage of incidents and injuries.

Rubbish is often irregular in shape, hard to handle, and full of sharp objects. One of the biggest problems is packaging. Too often it gets removed from material and left wherever it falls. This creates tripping and slipping hazards. It also makes other hazards hard to see.

Effective housekeeping and storage prevent incidents and injuries.

- Clean up as work proceeds.
- Keep equipment and the areas around equipment free of scrap and debris.
- Put all garbage and scrap in designated waste containers
- Empty waste containers regularly
- Try and incorporate the "3 R's" hierarchy into site waste management:
    - Reduce
    - Reuse
    - Recycle
- Keep storage areas clean and tidy
- Pile or stack materials in a manner that prevents them from tipping or collapsing
- Secure loose or light materials on the ground to keep them from being blown by the wind.

Flammable and chemical materials

- Remove flammable rubbish and debris immediately from the vicinity of welding, flame cutting, propane heating, and other ignition sources
- Store fuel only in containers approved by the Canadian Standards Association (CSA) or Underwriters' Laboratories of Canada (ULC)
- Refer to the safety data sheet (SDS) for specific information on each chemical
- Follow manufacturer's recommendations for chemical storage
- Observe all restrictions concerning heat, moisture, vibration, impact, sparks, and safe working distance for chemicals
- Have equipment ready to clean up spills quickly
- To keep them separate for special handling and disposal later, store empty chemical containers in secure area away from full containers.

Legislation

- OHSA, Section 25(2)(h)

SECTION 28 – HAND AND POWER TOOLS

Purpose

The purpose of this section is to provide employees with appropriate knowledge related to the care and use of hand and power tools and to protect employees from hazards associated with the improper use of tools or defective tools.

Policy:

- Only trained and/or experienced employees may use/operate tools or equipment
- Tools and equipment shall not be modified, and they are to be used only for their designed purpose
- It shall be the responsibility of the employee to inspect tools and equipment prior to use and to use all tools and equipment in a safe manner
- Employees observed abusing, altering, modifying or misusing tools or equipment shall be subject to disciplinary action
- Employees shall wear all appropriate personal protective equipment while using tools and equipment
- If a tool or piece of equipment is found to be defective, the tool/equipment shall be tagged, taken out of service and sent to Aaroc Equipment for evaluation

Procedures:

1. General Tool Safety

Many serious injuries have resulted from the improper use of tools and equipment. Many of these injuries could have been prevented if the following rules were followed:

Inspection and Maintenance

- All tools will be kept in good working condition with no modifications
- The employee using the tool, must inspect it for good condition prior to use
- If the tool needs repair, send it in to Aaroc Equipment for evaluation
- If the tool is lost or missing, notify your supervisor immediately

Selection

- Use the right tool for the task instead of trying to make the wrong one fit.

Use

- When applying force with a tool, remember that it may slip, break. Watch your hands and your balance to avoid injury.
- Select the right protective equipment for the task and use it properly.
- Do not use tools and equipment that you have not been trained or are not experienced in using.

Care

- Take proper care of your tools and equipment. Keep them stored where they will not get damaged and will not present a hazard.
- Check your tools and equipment prior to use for defects, wear, or damage. Immediately remove from service and tagout any defective tools.

2. Hand Tool Safety

- Hand tools shall only be used for the purpose for which they are intended.
- All appropriate PPE will be worn while using hand tools.
- Wrenches, including adjustable, pipe and socket shall not be used when jaws are sprung to the point of slippage.
- Pipe wrench parts (i.e., jaws) are not to be removed and used for anything other than the manufactured use.

Hand tools shall be tagged out and removed from service if any of the following defects are present:

- Impact tools, such as hammers and chisels, with visible signs of mushrooming, cracking or bending.
- Wooden handle tools, such as hammers, picks, shovels, and brooms with visible sign of cracking, loosening or splintering of the handle.
- Wrenches, such as adjustable, combo and pipe with visible signs of bending, cracking, defective handles or other defects that impair their strength.

3. Electrical Power Tool Safety

- All appropriate PPE will be worn while using power tools.
- Use only tools that are polarized or double insulated. Make sure the casings of double-insulated tools are not cracked or broken.
- Make sure that tool cords, extension cords, and plugs are in good condition.
- Use only 3-pronged extension cords.
- Make sure that extension cords are the right gauge for the job to prevent overheating, voltage drops, and tool burnout. A 12-gauge extension cord is ideal.
- Always use a Type A ground fault circuit interrupter (GFCI) with portable electric tools used outdoors or in damp or wet locations. GFCI's detect current leaking to ground from a tool or cord and shut off power before damage or injury can occur.
- Do not connect electrical power unless the operating switch is turned off.
- Employees shall avoid loose fitting clothing when operating power tools.
- The power source on tools shall be physically disconnected prior to attempting any repairs or attachment replacement.
- Protective guards on power tools shall not be removed, altered or modified.
- Trigger/switch locks on power tools are prohibited.
- Electrical tools shall not be hoisted or carried by their power cords.
- Cords are tripping hazards. Route them so as to minimize interference in walkways.

Electrical power tools shall be tagged out and removed from service if any of the following defects are present:

- Power cord is frayed, cut or damaged. The use of electrical tape to cover damage to cords **is prohibited**.
- Defective or faulty on/off switches.
- Loose or defective components

4. Air Power Tool Safety

- All hoses exceeding 1/2" inside diameter shall have a safety device at the source of supply or branch line to reduce pressure in case of hose failure.
- Chicago fittings shall be pinned.
- Attachments on air tools shall be secured by retainer pins and rings.
- Do not connect air unless the operating switch is turned off.
- Do not disconnect tool until air supply is shut off and air pressure is bled off.
- Air power tools shall not be hoisted or carried by their hoses.
- Hoses are tripping hazards. Route them so as to minimize interference in walkways.

Air power tools shall be tagged out and removed from service if any of the following defects are present:

- Air power tools, such as air power grinders, impact wrenches with visible signs of deformities in the body of the tool, improperly functioning actuator, bent or deformed blades, or any signs of obvious damage to the air supply line fittings.
- Hoses must be visually inspected for cracking, signs of aging, worn or damaged connecting fittings, or any other obvious deformities, such as blistering or bulges.

5. Quick Cut Saws

Quick cut saws are high-powered as compared to similar tools. Hazards include high-speed blade rotation, blade exposure during operation, and exhaust from the internal combustion engine.

The saws also create clouds of dust when dry cutting masonry and showers of hot sparks when cutting metal products, especially steel.

These hazards can result in cuts, kickbacks, exposure to carbon monoxide fumes, exposure to dusts, burns, flying particles hitting the eye, and other injuries from flying material when work is not secured for cutting or when blades fly apart.

Hazard control:

- Train operators to use quick-cut saws properly and to wear the right protective equipment such as eye, hearing, and respiratory protection as well as face shields and gloves
- Keep saws in good working condition, equipping them with proper blades or disks, and use them with all guards in place
- Secure work to keep it from shifting during cutting

Care

Quick-cut saws must be serviced and maintained in accordance with the manufacturers' instructions. Cracked, broken, or worn parts should be replaced before the saw is used again. Guards and air intakes should be cleaned regularly and often. Abrasive disks should be checked before installation and frequently during use. In confined areas, make sure that ventilation is adequate. Gasoline-driven saws release carbon monoxide (CO) gas, which is odourless, colourless, and highly toxic.

Starting and Use

- Use caution when preparing the oil/gasoline mixture and when fuelling the saw
- Check the saw for leaks. Sometimes vibration makes gas lines leak.
- Start the saw in an area clear of people and obstacles. Under no circumstances should anyone be standing in front of the saw as it starts or while it's running.
- Put the saw on a smooth hard surface for starting.
- The guard should be properly set for the type of cut beforehand.
- Assume a solid well-balanced stance. Do not wrap the starter cord around your hand—this can cause injury.
- Set one foot on the rear handle, put one hand on the top handle to lift the blade off the surface, and use the other hand to pull the starter cord
- Once the saw is running, release the throttle and make sure the engine drops to idle without the disk or blade moving.
- Run the engine at full throttle and let the disk or blade run freely to make sure it turns on the arbor without wobbling or vibrating.
- The quick-cut saw is a heavy, powerful tool that must be held by hand. Operators need a secure stance with legs apart for balance and support.
- The saw should be held at a comfortable, balanced location in front of the operator. Grip the saw firmly with one hand on each handle.
- Hold your forward arm straight to keep the saw from kicking back or climbing out of the cut
- Work should be supported so that the disk or blade will not bind in the cut.

Kickback can happen extremely fast and with tremendous power:

- For cutting, keep the throttle wide open.
- Ease the blade down onto the cut line. Don't drop or jam the blade down hard.
- Move the saw slowly back and forth in the cut.
- Hold the saw so that disk or blade is at right angles to the work and use only the cutting edge of the disk or blade.
- Never use the side of a disk for cutting. A worn disk will almost certainly shatter and may cause severe injury.

SECTION 29 – OPERATORS, VEHICLES AND EQUIPMENT

Purpose

To give all employees instructions for the care and use of their vehicles and equipment

Equipment- General

All workers must be competent for the type of equipment or vehicle they will be operating. All vehicles, machinery, tools and equipment shall be maintained in a condition that does not endanger a worker.

Equipment Pre-Start:

- All vehicles, machinery, tools and equipment must be used in accordance with the manufacturer's operating manuals.
- A daily circle check inspection shall be performed on all mobile equipment and commercial vehicles prior to start-up by the operator. A company inspection record has been developed for this purpose. Document the inspection and submit copies. Brake tests are included in the inspection for mobile equipment:

  Equipment Brake Testing Procedures

  All operators shall follow the manufacturer brake testing procedures for the type of equipment they are operating AND follow the procedures described in the Mining Regulations.

  1. Test the brakes according to the manufacturer procedures. A copy of the procedure is provided in the operator's manual. Typically, the procedure is also copied, laminated and placed in the cab of the machine.

  2. Test the brakes in accordance with this Mining Regulation:

     105. (1) When in use, a motor vehicle, other than a motor vehicle running on rails, shall,

     (a) be in safe working condition;

     (b) have brakes which will stop and hold the vehicle under full load conditions on all operating grades, slopes and ramps;

  The Regulation above requires the operator to ensure that the machine can be stopped and held stationary by all braking systems with its maximum load on the maximum grade, slope or ramp in its area of operation.

  (7) A procedure for the testing, maintenance and inspection of each motor vehicle shall be adopted and the procedure shall,

  (a) schedule the testing of brakes, steering, lighting and other safety components prior to initial use of the motor vehicle for the shift;

  (d) provide a record of the testing, maintenance, inspection and testing that has been carried out; and

  (e) provide for the testing, maintenance and inspections to be performed by competent persons.

The Regulation above requires the operator to perform brake tests, among other items, prior to the initial use of the machine for the shift and to record the results on the pre-operational inspection records provided by AAROC. Follow all the instructions in the inspection.

Equipment Pre-Start:

- Pull cords and emergency stops are to be tested and logged for processing equipment.
- Cables, chains, straps, hooks and other hoisting devices shall be inspected before use for damages like: cracks in welds; links or cords cut or kinked; and abrasions/scarring of materials that could weaken their strength and cause them to break.
- Regularly inspect catwalks and ladders for cracks or loose bolts so they don't fall or break when climbing or standing on.
- No worker shall operate a vehicle or machine unless they are competent to do so. Specialty module training must be completed within legislated timeframes.
- Passengers are *not* allowed in or on a vehicle/machine unless a seat and seat belt is provided, unless it is for training purposes.

Utility Locate Procedures

New Pit Locations:

All new locations must have utility locates completed before any excavation can begin.

1. AAROC management will arrange utility locate requests through Ontario One-Call and any other utility owner that is required.
2. The locates will be available onsite to the supervisor and all operators.
3. The following locate items will be adhered to:
    - All services and utilities must be accurately located and marked.
    - The locates must not be expired
    - The locates must clearly indicate the area of excavation
    - If paint marks or flags that mark the utility boundary are missing, call for re-locates. Do not guess where the utility is located.
    - If the service may pose a hazard, it must be shut off and disconnected. If it cannot be shut off or disconnected, the service owner shall be requested to supervise the uncovering of the service during excavation.
    - Pipes, conduits and cables for gas, electrical and other services in an excavation shall be supported to prevent their failure or breakage.

If there is any doubt as to the location of the utility, locates that are not clear, exposed utilities not shown on the locates, or any other issue, STOP work and call the utility company for help.

Existing Pit Locations / Client Locations:

Typically, all utility services are located prior to pit operations commencing. If utilities are located within the licenced pit boundaries, they will be clearly marked and/or fenced off to restrict access.

If an area that is not within the licence boundary needs to be excavated, follow the procedure for a new pit location.

If excavating at a Client location, please check with the Client prior to any excavation to determine if utilities are present or if locates are required.

Overhead Powerlines

This section is intended to ensure that every reasonable precaution shall be taken to prevent hazards to workers due to energized electrical equipment.

An electrical hazard can be defined as:

- a dangerous condition where a worker could make electrical contact with energized equipment or a conductor, and from which the person may sustain an injury from shock and/or;
- there is potential for the worker to receive an arc flash burn, thermal burn, or blast injury.

Electric shock is the passing of electric current through the body.

An arc flash is a release of energy caused by an electric arc. The flash causes an explosive expansion of air and metal.

Mining Regulations

Sec. 159

(1) Electrical work shall not be performed on energized equipment except where,

(a) de-energizing the equipment,

(i) would increase or introduce additional hazards, or

(ii) is not feasible due to equipment design or operational limitations;

(b) equipment and personal protective devices and clothing that are appropriate to the work are provided and used;

(c) the employer has established written measures and procedures for energized work to protect the health and safety of workers;

(d) no hazard from explosive or flammable materials exists; and

(e) all necessary precautions to work safely are taken.

(2) Except as provided for in subsection (1), no object shall be brought closer than the distance specified in Column 2 of the following Table to an exposed, energized overhead electric supply line of the voltage specified in Column 1:

TABLE

Column 1 Voltage of Powerline	Column 2 Minimum Distance
300 to 150,000 volts	3 Metres
150,000 to 250,000 volts	4.5 Metres
Over 250,000 volts	6 Metres

5) Machines that have movable or extendable booms must not be operated in close proximity to energized electrical supply lines unless,

(a) they are operated in accordance with subsection (1); or

(b) the operator of the machine has been authorized to perform such work and,

(i) there is a clearance between any part of the machine and the energized line that is more than the greater of,

(A) one-half the maximum horizontal reach of the boom, or

(B) the distance determined under subsection (2),

(ii) the lines are disconnected and grounded,

(iii) the machine is a railroad crane operating on railroad tracks and the supply line is energized to less than 750 volts direct current, or

(iv) the supply lines are guarded against contact by any part of the machine or its load.

(6) Subsections (2) to (5) apply only with respect to electrical lines installed on the surface and electrical equipment used on the surface.

Procedures

If a piece of equipment or vehicle may have the potential of encroaching the minimum allowable distance to an overhead powerline as stated in the Table, the following procedures are required:

- Arrange for a competent signaller to assist the operator/driver;
- Notify the operator/driver of the electrical hazard before work starts and
- Provide enough warning devices / signs in the vicinity of the hazard so at least one is always visible to warn the operator/driver.

Ensure that affected workers and operators are familiar with these procedures and will not proceed with the work until they are fully implemented.

When working at construction projects, similar procedures are required, however always check with the project supervisor before working in vicinity of overhead powerlines for the project specific procedures.

Equipment Operation:

- Three-point climbing procedures must be used when climbing into the cab of a machine or vehicle.
- Operators must always turn on all beacons and lights when travelling on public roadways, regardless of time of day, to ensure maximum visibility.
- All dump trucks must have an operating reverse alarm.
- All mobile equipment must have an operating reverse alarm. Before backing up (reversing) your equipment, check your blind spots. If blind spots can't be seen while seated, then either physically get out of the cab to check your path or use someone to guide you.
- Excavators must not reverse unless they swing to travel forward or use a signaller to reverse.
- All exposed moving parts must be guarded to prevent injury.

- All buckets, blades, forks or other devices shall be lowered to the ground when unattended by the operator, unless proper blocking or jacking is used (i.e. maintenance).
- No worker shall operate a backhoe or similar excavating machine in such a way that it or part of its load passes over a worker.
- Always be aware of overhead hazards, such as power lines. Equipment must maintain minimum distances from power lines. Please notify supervisor if working near a power line. Special procedures may apply.
- A functional parking brake must always be applied when a wheeled machine is unattended. If there is no parking brake or it is inoperable, then other means must be taken to prevent the vehicle/machine from rolling away.
- When operating a tractor backhoe, always ensure the parking brake is applied and the transmission in neutral before swinging the seat around to operate the rear attachments.
- Operators shall not use personal devices or cell phones while operating equipment. The 2-way / CB radios must only be used when it is safe to do so. Do not use the radios when reversing the machine. Do not use radios when working in areas that require your full attention (i.e. near ground workers, etc.…)
- If a dump truck or other vehicle gets stuck and needs help, never push the vehicle from the rear, always pull out the vehicle from the front with a strap or chain. Always get permission from the driver first.

Equipment Parked - Shutdown:

- Machines must be locked and secured with the master key turned off or removed at the end of the shift, nights or when the machine is parked and unattended. This is to prevent unauthorized individuals from operating/starting the equipment.
- Store attachments, tools, buckets, forks, etc.. in safe and secure areas when finished with them, even if just for a few minutes. Make sure they are not able to tip over, fall or move suddenly (i.e. wedge loader forks into a stockpile).
- Unsafe or hazardous vehicles/machines/tools must be locked and tagged out and the supervisor must be notified immediately.

Equipment Maintenance Policy

The employee understands and agrees to ensure the following maintenance policy is followed during their employment at AAROC. The employee understands that any violation of this policy will be grounds for corrective action and/or dismissal.

The operator will:

Circle Check

1. Perform and document a daily circle check prior to operating a machine to inspect for leaks, cracks or other issues which could be detrimental to the operation of the machine and/or the safety of themselves or co-workers. All deficiencies will be documented on the inspection record provided. Any deficiency that affects the safety or durability of the machine will be reported immediately to AAROC Equipment. Submit copies of the inspection.

Idling Policy

2. Vehicle and equipment idling policy requires the responsibility of the operator to perform an engine shut down if it's expected that engine idle time will exceed 3 minutes. This positive action will reduce emissions and noise pollution, reduce maintenance and fuel costs, prolong warranty coverage, avoid negative perception of idling company vehicles and is beneficial for our environment.
   In extreme conditions or for health and safety reasons, a supervisor may choose to temporarily override certain conditions of this policy, however the idle policy will remain as stated unless otherwise directed by a supervisor.

Cab Cleanliness Policy

3. Please ensure windows are cleaned every morning, garbage is removed every evening and the cab floor swept every night.

Lube & Grease

4. Lube and grease all fittings (not connected to an auto-lube system) during the work day no later than at the end of their work day.
5. Monitor that the auto-lube system has an adequate supply of grease and that all grease points are receiving grease.
6. Ensure that all vital fluid levels are within operating range while operating a machine.

Vandalism protection/ organization / serviceability safety

7. Ensure that all applicable guards are in place at the end of the shift.
8. Ensure that the machinery is parked in a well-lit location, if available.
9. Ensure that the machinery is parked near the site access, beside the other machinery if possible.
10. Ensure machinery is parked in such a way as to relieve any sources of potential energy or potential safety hazards.
11. The operator will ensure that all padlocks are installed and secured and that all doors are closed and locked.

If the employee is not completely sure or aware of the correct procedures to accomplish the above tasks, they agree to refer to the operator's manual located with the machine and/or contact the AAROC Equipment repair shop for clarification.

The employee orientation form must be completed

Excavators

Due to limited visibility, the swing zone of an excavator is a no-go zone for any worker while the excavator is operating.

If you need to enter this zone for any reason, you must first:

- clearly communicate your intentions with the operator and get their approval
- the excavator must stop working while you are in the swing zone
- communicate again with the operator when you are away from the zone

Excavator operators must also be aware of hazards in their swing zone. Use a signaller if working in close proximity to objects such as hydro poles, vehicles or buildings.

Elevated work platforms

Includes any vehicle-mounted device, telescoping or articulating, or both, which is used to position personnel. These include scissor lifts, articulated and telescopic booms.

Typically, all elevated work platforms will be rented units. Operators must ensure they are trained and familiar with the model before use.

AAROC employees must follow all the requirements and procedures when using an elevated work platform:

Please note that equipment not designed for use as a personnel lift shall not be used (i.e. front-end loader buckets, backhoe buckets).

- Only competent trained workers are authorized to operate elevated work platforms. Training will be provided by an authorized training provider.
- Training certificates must be carried by the worker while operating the elevated work platform.
- Operators are also required to review the owner's manual and shall be given ample time to become familiar with the equipment and its controls before operation is permitted.
- Controls shall be tested prior to use to determine that they are in safe working condition.
- The elevated work platform will be inspected prior to use and as instructed by the manufacturer. The inspection will be logged on an inspection sheet provided by the manufacturer or owner of the work platform.
- Workers are not permitted to stand on the rails of elevated work platforms.
- A body harness shall be worn by the operator, and a lanyard appropriately attached for fall protection while operating the elevated work platform. Follow the manufacturer instructions for lanyard attachment to the proper anchor point. Ensure you have 100% tie off.
- Other types of personal protective equipment (PPE) (i.e. safety glasses, gloves), shall be worn according to the specific task.
- Workers shall not be permitted to use an elevated work platform as a means of access.
- Large or excessive amounts of material, excluding tools, shall not be transported in an elevated work platform. Other material lifts would be necessary for such activities.
- Load limits specified by the manufacturer shall not be exceeded.

- Elevated work platforms that can operate horizontally shall set brakes and outriggers, when used, be positioned on pads or a solid surface, and chock wheels before using on an incline.
- Look in direction of travel and make sure that the path is firm and clear of obstructions that may cause the platform to overturn or collide with people, vehicles, etc. Ensure barricades and signs are provided as a means of control if required.
- Ensure that the weather conditions are favourable for the work and avoid any adverse weather that could affect the work platform lifting activities.
- Prepare a plan to rescue a worker suspended after a fall.
- Articulating and extendable boom platforms, primarily designed as personnel carriers, shall have both platform (upper) and lower controls. Upper controls shall be in or beside the platform within easy reach of the operator. Lower controls shall override the upper controls. Controls shall be plainly marked as to their function. Lower level controls shall not be operated unless permission has been obtained from the employee in the lift, except in case of emergency.

Any field modifications should only be approved by the manufacturer. Alterations or modifications to aerial lifts shall not be performed unless explicit written consent has been attained by the equipment manufacturer.

Lifting Stackers

Incidents have occurred when chains used to lift stackers have unexpectedly failed and the stacker crashed to the ground.

Please follow these procedures when lifting stackers and conveyors:

- ***Use the correct chain.***
  (½" Grade 80 chain has a lifting capacity of 5400 kg).
  If unsure of which chain to use, ask someone who knows.
- Do not use the stacker lifting chain for other tasks (i.e. pulling out trucks)
- When lifting the stacker, lift straight up and do not allow the chain to contact or rest on the bucket's cutting edge.
- Inspect your chain before use for cracks, damage or stretched links. Get replacement as required.
- **DO NOT** go or work under a stacker while it is being lifted or maneuvered with the bucket and/or chains. To clean around the kingpin, use a long-handled scraper. Inspect from a safe distance beside the stacker, not under it.

Quick Couplers

All operators of quick coupler attachments must be trained in their proper use and care. AAROC may use more than one type of coupler from different manufacturers, so an operator must be trained on whichever type they are using.

Training for quick couplers shall follow the manufacturer operation instructions and must include:

- engaging, use, disengaging and maintenance procedures, including the training for a ground test.

A copy of the manufacturer`s operator manual shall be readily available for each type of coupler being used. Preferably the manual will be stored in the cab of the machine.

Lock out and Tag out

All workers must know the policies and procedures to lockout and tagout a vehicle, machine or tool due to a defect, hazard or because of repair and maintenance.

SEE SECTION 24 FOR ALL INFORMATION

- The process of lockout and tagout is used to de-energize equipment and prevent unscheduled or accidental starting, moving or operating.
- Lockout and tagout ensures a safe work environment that would normally be dangerous if equipment were to shift or operate. This is required on all vehicles and machines when any type of work is required, and the worker may be injured because of the nature of the work performed.
- Lockout and tagout will also be required when a vehicle or machine is unsafe to use because of a defect or hazard (i.e. no brakes on a loader).
- Small tools must be tagged out and removed from service when they are defective or hazardous (i.e. a broken ladder, broken chain, leaking fuel tank on a generator). Send all small tools to Aaroc Equipment for evaluation.
- Regular daily maintenance (i.e. checking oil and fluid levels, cleaning cab/tracks) does not normally require lockout because the worker has not removed any safeguards and the procedure is part of a normal daily routine. The worker is not generally exposed to any hazards. Workers are permitted to perform daily maintenance without lockout if the manufacturer instructions permit. Beyond this daily maintenance however, work is prohibited unless lockout is used.
- If a guard must be removed, lockout is required.

NOTE:

Always refer to the manufacturer instructions for their detailed lockout procedures if available.

- The specific procedures may vary slightly depending on the equipment and set-up.
- Advise your supervisor that the equipment is locked out.

WHEN IN DOUBT, ASK SOMEONE WHO KNOWS

Company Vehicles and Drivers

Please remember that all drivers must comply with all road and traffic legislation and any company procedures when operating a company vehicle. See the **Company Vehicle Policy** at the end of this section.

Some of the most common infractions include:

- Drivers not wearing seat belts
- Drivers speeding
- Drivers using hand held cell phones
- Loads not secure

- Daily vehicle inspections not completed when required

Please follow all regulations:

- Make sure you have a valid driver's licence that is appropriate for the class of vehicle you will drive. Do not drive with an expired or suspended licence.
- Ensure all required paperwork is in the vehicle: ownership, insurance and for **commercial vehicles this includes the CVOR certificate and daily inspection.**
- All drivers of **commercial vehicles must** complete daily written inspections as per MTO regulations. Submit them to the office.

What is a Commercial Vehicle?

A commercial motor vehicle is defined as a vehicle with a registered gross weight or actual gross weight in excess of 4,500 kilograms. This also includes trailers.
A yellow sticker will be placed on the left-side of the vehicle (on the window on trucks) to indicate it is registered as commercial. The RGW will also be listed on the ownership.
If a truck tows a trailer and the trailer has a yellow sticker, they are both considered commercial.

Commercial Vehicle Daily inspections

All drivers of commercial vehicles must complete a daily inspection report. The inspection and report are valid for 24 hours. If a trailer is attached, it must be included.

- Drivers will complete the report prior to driving the vehicle.
- If access to a daily inspection report is unavailable, get one before you start driving.
- Drivers will notify the shop immediately if a defect is found and await further instruction.
- The vehicle may be driven with minor defects, but they must be reported. If defects affect the safe operation of the vehicle, they must be repaired before operation of the vehicle on a public road.
- Drivers must submit inspection reports to the office.
- Ensure all loads are secure with chains, straps as needed. Check with office if any load permits are required.

On the daily inspections:

Fill in ALL information on the form including:

- First and last name
- Odometer reading
- Licence plates including trailers
- Write the specific location. Example - do not write *"Office"*, instead write "*3003 Page St.- London"*
- Date and time
- Company name

Commercial Vehicle Logs
Any travel beyond a **160 km radius** from a driver's start point that day requires a log entry. A log is also required if your start location is different than your end location. Examples would include those working out of town. Logs will be in digital format as of June 2022.

Allowable Driving time
Ontario's hours-of-service regulation governs the maximum driving times and minimum off-duty times of commercial vehicle drivers.

A driver:
- must have 10 hours off-duty in a day
- cannot drive more than 13 hours in a day
- cannot drive after 14 hours on-duty in a day

After a period of at least 8 hours off-duty, a driver cannot:
- drive more than 13 hours
- drive after having been on-duty for 14 hours
- drive after 16 hours has elapsed

All timesheets will be reviewed. This includes digital apps. Management will review hours of service to ensure drivers are complying with legislation.
Vehicles may also be equipped with GPS devices to track and monitor location, speed, hours, and vehicle performance.

Files for each driver will be created and maintained. Files will contain a copy of:
- current driver abstract
- training documents
- incident reports / enforcement

Driver Fatigue
Driver fatigue is a major safety concern. Regulatory provisions alone are not enough to control the harmful effects of driver fatigue on the safety of all road users.

Fatigue is a state of mental and/or physical exhaustion which reduces a person's ability to perform work safely and effectively. Fatigue is the result of not getting enough sleep. Managing fatigue is one component of the approach to employee well-being.

Aggravating factors
Various external factors related to traffic conditions, roadway conditions, the weather, monotony, or the complexity of the tasks to be performed affect a person's resistance to fatigue. Not to mention personal factors, such as a person's state of health, age, or the time of day a person feels more alert.

Time of day
Certain times of day are more favorable to sleep, and others to wakefulness. The risk of falling asleep at the wheel is greater in the early afternoon and at night.

How long you have been awake
After 17 waking hours, physical and mental performance declines considerably and is worse than if the person had a blood alcohol concentration of 50 mg per 100 ml of blood.

Sleep debt
Regardless of age, if a person does not get enough sleep, he or she accumulates a sleep debt. A sleep debt of five hours has the same effect as a blood alcohol concentration of 50 mg per 100 ml of blood.

Sleep disorders
Sleep disorders, such as sleep apnea, which affects many drivers, amplify the effects of fatigue.

Alcohol, medications, and other drugs
The effects of fatigue are greatly amplified by consuming alcohol, certain medications, or other drugs

Employees must follow these requirements:
- be fit for duty - free from alcohol and drugs;
- not chronically use over the counter or prescription drugs to increase mental alertness.
- report tiredness/fatigue to supervision and supervisors shall take appropriate action to assist the worker.
- be rested prior to starting work.
- monitor their own performance and take regular periods of rest to avoid continuing work when tired.

Management Strategies to Minimize Fatigue
- training workers and supervisors to recognize the causes is likely the best and most reasonable control – making them understand that they need to sleep.
- critical work, high risk work should be completed when a worker is expected to be most alert from 9:00 am to 1:00 pm
- complying with hours-of-service regulations
- the addition of extra workers to assist in managing any hazards posed by fatigue.

AAROC utilizes vehicle GPS, hours of service and site observations to track and monitor drivers. If fatigue becomes evident, management can intervene accordingly.

Tips for driving
The best advice is to not drive if you are tired. However, some other tips include:
- keep vehicle well ventilated.
- avoid caffeine or other drugs to keep you awake (you will feel very tired when they wear off).
- listen to the radio (especially "talk" radio).
- eat lightly and avoid heavy fatty foods.
- stop often, about every two hours, to get out of the vehicle and get some fresh air.

Shared responsibilities
Employers are responsible for providing employees with enough time to recuperate from accumulated fatigue and carry out their daily activities.
Employees are responsible for using the time so provided to recuperate and come to work well rested.

AAROC will train new drivers on fatigue during worker orientations.

MTO Zero Tolerance Regulations
You will not be allowed to have **any cannabis** (as well as other drugs that can be detected by an **oral fluid screening device**) **or alcohol** in your system if you are driving a motor vehicle and:

- You are 21 or under;
- The vehicle you are driving requires an A-F driver's licence or Commercial Vehicle Operator's Registration (CVOR) or;
- You are driving a road-building machine (i.e. graders, bulldozers, loaders, rock trucks, excavators).

Drivers, in addition to drugs or alcohol, are not permitted to operate a vehicle if their ability or alertness is impaired by fatigue.

Driver Licences
We request driver abstracts from the MTO at least twice per year to ensure all drivers are properly licenced for the vehicle that they may drive, however if you have an expired or suspended licence, you must notify the office immediately and stop driving any vehicles until the issue is resolved.

Drivers that do not comply with legislation will be responsible for any fines/tickets issued to them.
All violations committed by a driver while operating a commercial vehicle impacts the company CVOR. The CVOR is monitored regularly by the company to check violations.

Transportation of Dangerous Goods
The purpose of the Transportation of Dangerous Goods (TDG) Act and Regulations is to promote public safety when dangerous goods are being handled, offered for transport, or transported by road, rail, air, or water (marine).
The TDG Regulations are a set of rules that prescribe safety standards and shipping requirements for thousands of different dangerous goods. The Regulations also provide a means of communicating the nature and level of hazard and risk associated with these dangerous goods. The key elements of TDG Regulations are:

- Training
- Preparation of documents such as shipping papers
- Using dangerous goods safety marks to communicate hazards that the product may pose to the public or the environment
- Reporting incidents

Training
All AAROC workers shipping or transporting dangerous goods as defined by Transport Canada, must receive TDG training. Training will be provided by a qualified third-party and be renewed at expiry every 3 years. Workers must carry their training certificate, at all times while working.

Shipping
Before shipping dangerous goods, a shipping document must be prepared. The information required in a shipping document is specified in Part 3 of the TDG Regulations.
As a minimum, the shipping document must contain:

- Consignor's name and address in Canada
- Date of shipment
- Description of the dangerous goods
- The quantity in metric measurement
- The 24-hour number of an individual who works for the consignor or the telephone number of a person who is not the consignor, such as CANUTEC,

The shipping document template prepared for AAROC must be used. The document will be carried in the vehicle while transporting the dangerous goods. It must be kept in the driver's door bin or on the front seat. When the shipment is complete, the shipping document must be submitted to the main office for filing. The document will be kept for a minimum 2 years.

Safety Marks
Part 4 of the TDG Regulations requires dangerous goods safety marks to be displayed on a means of containment containing dangerous goods in transport.
A dangerous goods safety mark can be a label, placard, orange panel, sign, mark, letter, word, number or abbreviation, or any combination of these things.
Dangerous goods safety marks are displayed on a means of containment to identify dangerous goods and to show the nature of the danger they pose. Dangerous goods safety marks give a quick identification of dangerous goods in the event of an emergency situation such as a release of dangerous goods from a means of containment.
The type of dangerous goods safety marks required will depend on the size of the container and on the classification of the dangerous goods.

Labels
A label must **always** be displayed on a small means of containment containing dangerous goods in transport. One label is required for the primary class, as well as one for each subsidiary class of the dangerous goods.
Labels for the primary and subsidiary classes can be displayed on any side, except the top or bottom, of a small means of containment, and on the shoulder of cylinders.

Placards
As per Section 4.15 of the TDG Regulations, the **primary class placard** for each dangerous good contained in a large means of containment must be displayed on each side and on each end of the large means of containment. Each placard only needs to be displayed once on each side and

each end regardless of how many products in the large means of containment correspond to that class (primary or subsidiary).

Example:

Dangerous Goods at AAROC include:

- Fuel – gasoline, diesel
- Propane
- Batteries

Incidents

All incidents involving the transportation of dangerous goods must be reported to management and follow the procedures outlined in Section 9- Incident Investigations.

Company Vehicle Policy

Purpose

The purpose of this policy is to outline the acceptable practices for drivers of AAROC Aggregates vehicles. AAROC has provided vehicles for carrying out certain employment duties to enhance productivity and accessibility. Company vehicles are required to be cared for with due concern.

Definitions

A "company vehicle" or "workplace vehicle" is any vehicle that the company assigns to a driver to support their transportation needs for their employment duties.

Vehicle Operating Requirements

Drivers who are provided access to vehicles are required to monitor the vehicle appearance, content security, and to ensure proper operation.

a) Pickup / Dropoff

- Vehicles parked at 3003 Page Street should be locked in the yard, with the keys stored in the lock box inside the wash bay. Access to wash bay is by Key Card, or access code provided by the supervisor.

b) Daily inspection

- Ensure daily inspection is completed.
- If the vehicle has a yellow sticker, ensure that the inspection is documented according to the MTO guidelines in the back of the inspection book.
    - Inspection records must be submitted daily, and no later than Monday of the following week.

c) Cleanliness / Appearance

- Ensure the exterior of the vehicle is cleaned when required. A minimum of once per week.
    - Vehicles may be left in the yard Friday evening to receive a wash over the weekend.

- Ensure the interior of the vehicle is kept clean and safe.
  - Remove all garbage daily.
  - Always keep windows clean and clear.
  - Periodically dust/wipe down the interior of the vehicle.
- Keep tools, supplies, and equipment organized in an orderly, secure and accessible manner.
- Report any damage to seat covers requiring replacement.

d) Storage of valuables

- Ensure valuables are always stored / locked.
  - During the day, if vehicle left unattended in a public area, the vehicle and all doors (tailgates, toolboxes, etc.) must be locked.
  - Equipment, generators, saws must be stored inside a secured area at night, or the vehicle must be stored inside a secured garage or shop.
    - Vehicles may be left in the John Aarts Group yard overnight, after checking the above into Stores/Parts Department.

e) Maintenance

- Drivers assigned vehicles are responsible for timely and routine maintenance in accordance with the company maintenance procedures located in console of vehicle (report if missing).
- Complete daily pre-trip inspection, report or repair all deficiencies immediately.
  - Submit a copy of daily pre-trip inspection to shop.
- Drivers are responsible to ensure that all required documents are in the vehicle (Ownership, Insurance Card, Inspection, CVOR).
- Complete regular service as required. 10,000 km service for light duty/pickup trucks. 500-hour service for heavy trucks. (Drive through Jiffy Lube or arrange appointment with closest Ford dealership, AAROC Equipment shop).

f) Driving

- Driving is restricted to the employee-driver, except in emergencies. Personal use of vehicle (pickup truck) is restricted to an allowable radius of operation. Any excessive personal use or any requirement for drivers outside of the assigned employee-driver must be pre-approved. Also applies for travel beyond the city limits.
- All drivers are required to abide by all federal, provincial, and local motor vehicle regulations, laws, and ordinances. Under the Smoke-Free Ontario Act (SFOA) smoking is prohibited in workplace vehicles.
- All fines, defense costs and other legal penalties arising out of ticketed offenses are the responsibility of the driver.
- Drive vehicles in a safe and courteous manner. Be patient, avoid negative actions towards fellow drivers (i.e. Road rage).
- Avoid speeding. Always operate the vehicle at safe speed.
- Look ahead, avoid hard acceleration or hard braking.
- Avoid extended idle time. Company and municipal policies prohibit idling longer than 2 minutes, except where the temperature is over 27 degrees or below 5 degrees Celsius.

- A driver may not operate a vehicle at any time when their ability is impaired, affected, or influenced by alcohol, illegal drugs, prescribed drugs, medication, illnesses, fatigue, or injury.
- No driver may have, or permit possession of, alcohol or illegal drugs in a vehicle being used for business purposes.
- The driver is responsible to ensure all occupants are wearing safety belts when operating or riding in a vehicle.
- Riders are not permitted in rear, or on running boards, of truck.
- Drivers are responsible for ensuring that all doors are locked while the vehicle is in motion.
- All incidents must be reported immediately to dispatch and your supervisor. Reporting requirements include completion of any forms utilized by the company for the purpose of documentation and recordkeeping.
- All vehicle problems, or defects, must be reported immediately to your supervisor or the shop. Reporting requirements include completion of any forms utilized by the company for the purpose of documentation and recordkeeping.
- Drivers are required to notify their supervisor of any tickets, incidents, or other violations they have received while driving. Notification must be as soon as reasonably possible but in no way later than the next scheduled driving duty to be performed. Note: Speeding includes driving too fast for the conditions, e.g. rain, fog and heavy traffic.
- Traffic Violations are not considered reimbursable costs. All violations, including parking tickets and speeding tickets, will be the responsibility of drivers. Violations will be subject to disciplinary action, up to and including termination, in accordance with the severity of the violation.
- Violations of any of the above provisions may result in disciplinary action ranging from a written reprimand to a temporary or permanent loss of company driving privileges, suspension or dismissal.
- If you must make or take a business or personal phone call, use the autodial and hands-free option on your cellular phone. Be sure the phone is mounted in the vehicle or stored in a compartment. Driving safety always takes precedence over talking on the phone.

Management responsibility and commitment

AAROC management understands that the safe operation of vehicles and equipment is essential to protect not only the driver or operator but also the safety of other workers and the public. Furthermore, the preservation and sustainability of the environment is essential.

The procedures and policies described in this section provide instruction, advice, and training to operators and drivers so that incidents can be avoided, and the environment protected. AAROC will continue to ensure that these procedures are followed in order to comply with all regulatory requirements.

Training Requirements

- All workers operating vehicles or equipment in the pits regulated by the Surface Miner program must complete the Common Core modules and any applicable Specialty module training as per the current legislation (Mining Regs. 854, section 11)

- All vehicle drivers must have the appropriate license class issued by the MTO (i.e. DZ,)
- Transportation of Dangerous Goods training, as required
- Training on this section in new worker orientations

Legislation

- Mining Regs. 854, Sections 11, 105-108, 110, 117-119
- Ministry of Transportation, CVOR requirements

SECTION 30 – PIT TRAFFIC SAFETY

Purpose

To ensure all employees understand vehicle and pedestrian traffic policies in the pits. Loading and hauling practices are also outlined.

Pit Traffic, Roadways, and Traveled Areas

- Roads must be regularly maintained to be free of washouts and major potholes.
- Roads must be maintained to minimize hazards from slipping or skidding of vehicles.
- Roadways must enable vehicles to pass each other safely and;
- Roads must avoid steep grades wherever practical

Illumination

Most pits have outdoor artificial lighting at the scalehouse and employee parking areas to provide illumination in the early morning or evening hours.

Processing operations use artificial lighting from the mobile equipment or use lighting from control towers/trailers.

If night-time operations are being conducted in other areas of the pit where lighting is unavailable, then arrangements must be made to use portable light stands as needed.

Traffic Management Regulations

An employer at a mine shall, in consultation with the joint health and safety committee or health and safety representative, develop and maintain a written traffic management program. The program shall include measures and procedures to,

a) prevent collisions, of motor vehicles, that may endanger the health and safety of workers by addressing hazards relating to reduced or impeded visibility of motor vehicle operators; and
b) protect the health and safety of workers and pedestrians who may be endangered by the movement of a motor vehicle.
c) A copy of the program shall be provided to the joint health and safety committee or health and safety representative and shall be kept readily available at the mine site.
d) The program shall be reviewed at least annually.

The Traffic Management Program, including the Risk Assessment Checklist, Traffic Plan and Site Map will be posted in the scalehouse at each pit location.

Pit Traffic Safety

- All vehicles must adhere to the posted speed limits and warning signs.
- Vertical drops, road edges, cliffs or accesses to deep water must be protected by berms of half the height of the largest tires in operation in the pit. This includes tipping areas and fill dumps.

- Trees and other vegetation or materials within 2 metres of the rim of a surface mine and likely to endanger a person, must be removed.
- Right of way is given to loaded vehicles and larger equipment when working or traveling in a pit. This is because of equipment blind spots and loaded vehicles require greater distances to stop than unloaded vehicles.
- Dust control measures shall be taken on roadways as necessary.

Pedestrians, Visitors and the General Public

- Customers in small vehicles or those unfamiliar with the pit will be directed to marked "safe zones" to wait to be loaded or escorted by the loader operator.
- The above customers must remain inside their vehicles unless directed by the loader operator. The operator must verbally direct customers where to stand when loading a vehicle or trailer. If the customer ignores the request, the operator should cease loading and redirect the customer before commencing again.
- Cars and small trucks must never be allowed to park along side of a stockpile that is not in natural repose.
- No customers are allowed to load themselves unless they are within a safe zone.
- All customers must be given a weigh ticket so they are aware of their gross weight.

Dump Truck Operation

Dump trucks and dump trailers can and have tipped over when their boxes were lifted. The result can be serious injury or death to the driver and/or nearby workers. Serious vehicle and property damage can also occur.

Factors that can cause the truck or box to tip over:

- slightly sloping or uneven ground level
- material that gets stuck in the box causing an imbalance
- large portion of loads caught in tailgates
- soft ground under tires
- mechanical defects

Procedures:

Operating:

- Ensure a properly documented pre-operational vehicle inspection has been completed.
- Check in with scale attendant or loader operator when first arriving to pit.
- Seat belts must be worn when operating vehicle.
- Obey all Highway Traffic Act regulations. Obey all warning / traffic signs.
- Follow all proper haul routes.
- Windshields, windows and mirrors must be kept clean to ensure good visibility.
- Use 3-point contact when entering or exiting the vehicle.
- Report all incidents or hazards to the loader operator or scale attendant.

- Only park the vehicle in designated areas that will not pose a hazard to other traffic.

Loading:

- The location of the driver must be known by the operator at all times. Stay inside the truck cab while being loaded.
- Watch the load being loaded with your mirrors; notify the operator right away if you see any issues especially on the blind side.
- Communicate with the operator when the loading is complete.
- Ensure your weight is within allowable limits before leaving the pit.
- Truck drivers must ensure their load is secured (tailgate locked and no loose material to spill onto road) and tarped before leaving pit.

Unloading:

- When material is dumped from a vehicle, the dump point shall include features (i.e. berms) to prevent the vehicle from going over the bank or edge.
- When dumping on top of a fill dump or stockpile, ensure the unloaded material will not become a hazard for any workers, vehicles that may be located at the bottom of the slope.
- When reversing, truck drivers must be mindful of any pedestrians or other traffic. Use a signaler if necessary.
- Drivers must always visually inspect the area above them for overhead wires or other hazards.
- Trucks must be level enough to dump safely. While raising the box, maintain a good centre of gravity. If you suspect the box is off centre, immediately lower the box and re-position the truck.
- Stay in the cab during dumping and keep your seatbelt on. You're less likely to be injured in a rollover. If the truck starts to tip DON'T TRY TO JUMP OUT.
- Always try to lower the box as soon as the load has been dumped. This lowers the centre of gravity.
- Check the box periodically to ensure all loads are emptying properly. Clean out as needed. Use an excavator to clean out if needed.
- Check box when dumping sticky material like clay. It may stick to one side of the raised box or it may stick in the upper portion, creating a top-heavy or unbalanced load.
- Be aware of frozen loads that may become stuck in the box.
- Report all mechanical issues. Stability can be affected by poor suspension, uneven tire pressure, and worn or inadequate lifting systems.
- Ensure that the tailgate locks work properly.
- Ground workers should always wear high-visibility clothing or safety vests. Make eye contact with the driver when approaching.
- Never stand, work or use machinery beside a truck or trailer when it is dumping. Be visible and stay out of the danger zone.

Legislation

- Mining Regs. 854, Sections 18, 90-92, 105.1, 116, 118

SECTION 31 – STOCKPILE AND PIT FACE SAFETY

Purpose

All workers must understand the hazards and risks of working around stockpiles and pit faces and the procedures used to control those hazards.

All work must meet the requirements of the Occupational Health and Safety Act and Regulation 854 Mines and Mining Plants.

General Rules

- Stockpiles shall be inspected for hazardous conditions regularly by a competent person.
- Stockpiles shall be made safe before an operator/machine is allowed to work close to or on top of the stockpile.
- The top of a stockpile shall be graded to promote surface runoff and no ponding of water shall be allowed on top of the pile.
- When removing earth, clay, sand or gravel by means of powered equipment:
    - The working face shall be sloped at the angle of repose; or
    - The vertical height of the working face shall not be more than 1.5 metres above the maximum reach of the equipment.
- Stockpiles in safe zones must not be higher than 3 metres.
- Persons on foot must maintain a distance no less than the height of a working or vertical pit face. A minimum of a 1:1 relationship between height of face to distance to the base must be maintained.
- Persons on foot at the top of a pit face must maintain a distance greater than 3 metres from the edge. If cracks on the surface are seen; then stay 3 metres from the crack.
- There shall be no access of heavy equipment within 2 metres of the crest of a slope unless the loose material has been pushed and compacted with a bucket. On a slope that has an overall profile steeper than the angle of repose, the crest of the pile shall be excavated in benches using an excavator or equivalent.
- Material must be dumped back from the edge of a pile or face. Material should be pushed by a machine using a “bumper” of material in front of the machine at the edge.
- Berms of appropriate height should be used to protect the edges of piles or pit faces in traveled areas. The height of the berm must be a minimum of the radius of the largest wheel in the pit.
- Trees and other vegetation or materials within 2 metres of the rim of a surface mine and likely to endanger a person, must be removed.
- Overhangs, undercutting or tunneling of material both in a stockpile or pit face is not permitted.

Stockpile Characteristics

- Processed granular material is usually placed in a stockpile by conveyors or by carrying the material by bucket or truck. Stockpiles created by these methods from materials found in our pits will typically have a slope at its edges ("Angle of Repose") of about 30 to 37 degrees. This angle of repose is the natural state at which the material falls and conforms to. When loading out of a stockpile the angle of repose and the natural state of the granular material no longer exists.

- In dry warm conditions granular material found in our pits will generally act more free-flowing and the material will continually fall towards its angle of repose. This falling of material is not instantaneous though and can happen at any moment.
- In the winter and in wet conditions materials found in our pits will freeze or stick and not naturally fall to their angle of repose. Overhangs may occur in these situations which are unsafe.
- Regardless of weather conditions some materials will not free flow to their angle of repose. These materials possess an inherent stickiness property and will form overhangs even in the summer. Examples are recycled asphalt and concrete.
- When external forces are placed upon a stockpile its contents may shift because of them. A good example of this is when weight from a piece of machinery is placed on top of the pile near the tipping edge. The weight placed on the stockpile can cause the material to fall to a new angle of repose. The effects of this can cause the piece of equipment to fall with the material supporting its weight. This can be unsafe.

Stockpile Mining Safety Rules

- Stockpiles shall be excavated in such a manner so as not to result in a concave working face on a horizontal plane.
- Loaders must excavate a stockpile at right angles. Loading shall be uniform along the entire working face.
- Trucks must not dump at the top of the pile where the toe (bottom) has been removed.
- Samples must not be taken from a stockpile by hand unless it is in complete repose and no other activity is being performed on the pile. (i.e. Machines traveling on top of the pile). The preferred method of sampling is to use a loader and create a sampling platform less than 1 metre high and in a safe location away from the working face of the stockpile.

Overhang Procedures

- Overhangs and vertical cut faces in stockpiles are potential hazards. Their stability can be reduced by wet conditions caused by precipitation and snow melt.
- **If an overhang develops an unsafe condition occurs.** The overhang must be dealt with before any further loading or excavating can occur. If the loader can reach the overhang, then the operator must knock down the overhang before continuing.

- If the overhang cannot be removed safely by the mining equipment, then it must be protected from access using berms and/or safety barrels and signage. The operator must also notify their supervisor of the unsafe condition.
- Removing an overhang that cannot be managed by a loader can be performed by a hydraulic excavator. The operator of the excavator must be trained in managing overhangs. When knocking down the overhang the excavator must never be positioned in the falling path of the overhanging material. The preferred method of knocking down an overhang is to excavate behind the overhang from on top of the pile.
- The stockpile may be excavated in benches each not exceeding the allowable height of the vertical face.
- The loader operator can load from another safe area of the stockpile if an overhang exists on one side. Try to load from the side of the stockpile which has the greatest exposure to the south.
- If because of the material type or season, the stockpile is becoming prone to overhangs, it must be stockpiled no higher than the maximum reach height of the machine mining out of it. i.e. A 980H Cat loader will reach 6.36m in height. A 980H loader cannot mine a pile greater than 6.36m that is prone to overhangs. The reason for this is that the loader operator can manage the overhang themselves if it occurs.
- In the event that the stockpile height exceeds the vertical reach of the equipment and there is a likelihood that overhangs will occur, the excavation shall proceed in benches beginning from the upper part of the pile.
- Since in the winter all materials in our pits are susceptible to overhangs, stockpiles will be constructed with a “winter loading face” which consists of material piled no higher than the reach of the machines loading out of it. A part of or the entire stockpile can be constructed with a winter loading face. Construction of winter stockpiles should be attempted in the fall season before frost sets in.
- If space is limited more than one lift/bench can be constructed when creating the winter stockpile. Ramps double the width of the loader and at a slope of 1:10 should be constructed to reach the upper bench levels. Large enough loading and turn around areas must also be constructed with safety berms at their edges. Bench heights are determined by the maximum reach of the machine used to load material out of the stockpile.

Legislation

- Mining Regs. 854, Sections 61, 88

SECTION 32 – REVISIONS

For quick reference these are the Revisions / Additions for the 2022 AAROC Health and Safety Section.

1. Date, Management signing revised on:
   - Health and Safety Policy
   - Workplace Violence and Harassment Policy

2. Section 9- Incident Investigations
   - Revised section/table to include new O. Reg. 420 reference for notices and reports under the OHSA.

ENVIRONMENTAL PROGRAM

Environmental and Social Sustainability Policy

At AAROC Aggregates we strive to apply environmental and social sustainability principles wherever and whenever possible. Sustainability can be broadly defined as ***"meeting the needs of the present generation without compromising the ability of future generations to meet their own needs".*** Following this principle will help contribute positively to the environment and society and at the same time, provide long-term economic benefits to future generations.

Environmental sustainability ensures that natural resources are preserved, the environment is protected, the economy isn't harmed, and the quality of life for people is improved or maintained. We strive to use "green" solutions when possible.

Social sustainability considers the practices and policies that are best for all people connected with the company; from workers to community members. A socially sustainable company aims to cultivate diversity, quality of life, equity, and leadership. It encompasses human rights in all its operations and business decisions.

AAROC is committed to:

- Following legislative and regulatory procedures and practices;
- Creating environmental and social awareness in our operations and among our staff;
- Using effective waste management plans to encourage reduction and recycling;
- Conserving natural resources, especially aggregates;
- Using innovative ways to minimize our footprint at each work site;
- Respecting our employees' diverse talents, initiative and leadership;
- Providing a safe and healthy workplace;
- Supporting communities where we operate;
- Offering equal employment opportunities and
- Providing training on our environmental and social responsibilities to our employees.

The management of AAROC will be responsible for adopting and enforcing this policy. Management will also endeavor to create an environment where its employees will feel comfortable carrying out environmental and social sustainability policies and procedures.

Date: February 1, 2022

Signature:

Ryan Aarts, CEO

SECTION 2- ENVIRONMENTAL PROGRAM

PURPOSE

AAROC strives to be an environmental steward and use 'green' solutions wherever and whenever possible. We respect responsible environmental policies and procedures and adhere to the rules of our clients, the MNRF and the MECP.
We will continue to use preventative measures and controls to protect and preserve the natural environment whenever possible.

WORKSITES, PITS

AAROC management will work in conjunction with client instructions, best practices and/or legislative requirements to identify potential hazards that may impact the environment and use controls to mitigate those hazards. Typical examples include:

ADVERSE EFFECT	CONTROLS
Runoff from washing	Settling ponds, drainage/swales, proper collection tanks
Pollution, waste	Proper waste collection and disposal, recycling, housekeeping
Chemicals, hazardous spills	Spill kits, employee training, SDS's, proper chemical storage
Equipment fuels/oils/grease contamination	Licensed mechanics for servicing, waste oils pumped into trucks and removed from site, trained fuel delivery service, small oil/grease quantity storage onsite
Trees and vegetation damaged	Removals only as per site specific documents, protected areas fenced or delineated
Dust	Water applied as required
Pumping/dewatering not allowed, pumping into wrong location	Pumping to be controlled through permits and/or site specific procedures

Spills

According to the Ministry of the Environment, Conservation and Parks:
Spills means a discharge:

- *into the natural environment*
- *from or out of a structure, vehicle or other container*
- *that is abnormal in quality or quantity in light of the circumstances of the discharge*

You must report a spill if it:

- *causes harm or material discomfort to any person*
- *injures or damages property or animal life*
- *impairs the quality of the natural environment air, water or land*
- *causes adverse health effects*
- *presents a safety risk*
- *renders property, plant or animal life unfit for use*

- *leads to the loss of enjoyment of the normal use of property*
- *interferes with the normal conduct of business*

In some cases, you do not have to report a spill. O. Reg 675/98 under the EPA classifies 11 types of spills, circumstances, industry types or activities that exempt you from reporting. If you are unsure, it's best to contact the Spills Action Centre."

AAROC Procedures

Spills don't have to be chemical in nature. Any material that is abnormal in quality or quantity discharged into the natural environment is classified as a spill (i.e. silt into a body of water).
In order to prevent spills and conduct proper clean-up and disposal, the following procedures will be used:

Prevention of Spills/Leaks/Discharges

Appropriate storage containers must be used for all hazardous substances and stored in a manner to prevent contact with incompatible materials and to prevent damage. Use the SDS as required.

Daily circle checks of vehicles, equipment and machinery must be conducted by the operator.

Containment of Spills/Leaks/Discharges

Workers must be careful when dispensing oils, greases or other chemical materials. Use caution when handling products to prevent overfilling or spills.
Spill containment equipment (kits) must be maintained on site in case of emergencies. Spill kits will typically be located in the scalehouse.

IN CASE OF A SPILL

1. If equipment/machinery is involved, shut it off if able;
2. Contain spill immediately if safe to do so;
3. Notify supervisor and workers in vicinity;
4. Participate in reporting the incident

All spills/leaks or discharges must be cleaned up recognizing worker and public safety first.
Proper protective and clean-up equipment must be readily available and used.

Always refer to the SDS for proper clean-up and disposal procedures.

Time is of the essence when cleaning up a spill.
Options to reduce spill area:

1. Use absorption materials in the spill kit.
2. Use earth berms
3. Eliminate any pressures or flows if safe to do so. (i.e. Turn off machine)

Disposal of waste material

The supervisor must contact management and arrange for proper disposal. This may include a truck(s) transporting larger quantities of waste material to an approved facility (i.e. landfill, soil treatment facility).

Reporting of Spills/Leaks/Discharges

Workers must report all incidents of spills, leaks or discharges to their supervisor.
The supervisor will immediately notify management to discuss if a spill report needs to be completed. The spill will be cleaned-up regardless.
Management will determine if the spill must be reported to the MECP as per the legislative requirements.

Who to notify of a spill?

It shall be the responsibility of management to ensure that the notification requirements established under section 92 of the *Environmental Protection Act* are fulfilled. Notification should be made as soon and as quickly as possible under the circumstances.

Management shall ensure that the following notification occurs:

- the 24-hour Ministry of the Environment, Conservation and Parks (SAC) - Spills Action Centre, **1-800-268-6060**;
- the regional or local municipality where the spill occurs;
- the owner of the pollutant if it is known or can easily be ascertained;
- the person having control of the pollutant where the identity of that person is known or may be easily determined; and
- where necessary, the local police or public authorities.

Provide the following information, if available:

- Name of company or individual responsible
- Location of the spill
- Your name and telephone number
- Time of the spill
- Type and approximate quantity of material discharged and any associated hazards
- Status, including corrective actions being taken to control the spill

What is the Spiller's responsibility?

- Notify the municipality and MECP SAC
- Ensure public safety and protection of the environment
- Stop, contain and clean up the spill
- Dispose of the spilled material appropriately
- Remediate the site, if necessary
- Cooperate with affected parties and enforcement groups
- Prepare a written report
- Investigate and implement a corrective / preventative action plan, if necessary

Preparation of an Incident Report

An incident report shall be prepared by management. The report shall be made available to an MECP inspector only upon request.

The Incident Report shall include:

- the date, time, location and duration of the release of the pollutant;
- type of pollutant released;
- approximate quantity released;
- the circumstances and cause of spill;
- details of the contaminant and clean-up efforts and the names of all those involved in the clean up;
- an assessment of the effectiveness of the containment and cleanup efforts;
- the method used to dispose of the pollutant;
- details relating to any matter, thing, plant or animal or any part of the natural environment that is affected;
- location of the disposal site; and
- any potential adverse effects caused by the spill.

Pumping / Dewatering

It is extremely important that water is only pumped at a site if it is allowed. There are very strict MECP regulations regarding pumping and taking of water.

If there **is a permit** issued for the taking or pumping of water, it must be complied with. The supervisor is responsible to confirm:

a) the permit is valid and present at the site;
b) compliance with all items listed on the permit. This may include amount of water allowed to be pumped in one day, times of day pumping is allowed, where water may be pumped to, reporting procedures, when permit expires etc..

If there is **no permit** issued, pumping water may not be allowed depending on the site. The supervisor must contact management for clarification.

Always check if you need to pump water. Some issues that typically arise are:

- pumping into sewers (sanitary or storm)
- pumping offsite
- pumping more than 50, 000 litres per day

PLEASE NOTE: If water is to be pumped into a storm system, protection and/or filtering measures MUST be in place before entry into the storm system. Although protection might be provided at the outlet, it is also required before the water enters the system.

Excess Soils Management

As per Ontario Regulations legislated by the MECP, excess soils imported into AAROC pits for reuse must be tested, managed, and documented according to certain requirements. Please see AAROC's "Fill Management Plan" (separate document) for all information and instruction pertaining to excess soil.

RIGHT TO REFUSE

As part of AAROC policy, all workers have the right to refuse work which they believe may be harmful or damaging to the environment. This includes tasks that the worker is not trained or qualified to perform. The orders to do the work may come from an AAROC Supervisor, General Contractor (Constructor) or an Owner however, stop the work and discuss the issue further with AAROC management.

SECTION 3 – REVISIONS

For quick reference these are the Revisions / Additions for the 2022 AAROC Environmental Section:

1. Date, Management signing revised on:
   - Environmental and Social Sustainability Policy

2. Excess Soils Management section added, see page 146.

EMPLOYEE ORIENTATION

Purpose

To provide new employees with a clear understanding of AAROC's Health, Safety and Environmental (HSE) Policies and Program, applicable legislation and any site specific safety information. Roles and responsibilities of each workplace party must be explained.

It is management's responsibility to schedule an orientation session with each new employee. This may be in-person, virtual or a combination of both.

New employees should be paired off with those more experienced wherever possible as the experienced employees are likely to have higher safety and hazard awareness within the specific work environment and with company procedures.

An Employee Orientation Record must be completed, and a copy of the record must be filed digitally. The orientation will be logged on the HCSS Skills app.