



# THE RESPONSE TO COVID-19 CONTROLS

A Collaborative Document Summarizing  
Submissions from Ontario Mining Association  
Members



August 2020

## **Preamble:**

The COVID-19 pandemic was officially declared by the World Health Organization on March 11<sup>th</sup>, 2020. As mining is deemed an essential service in Ontario, Canada, mining sites needed to remain operational, while protecting their workforce. Therefore, each company rapidly developed and adopted novel prevention and mitigation policies and practices to prevent the spread of COVID at work. Due to the speed with which businesses needed to respond, the ability to share safety practices between groups was limited. However, relatively quickly, it was recognized that the pandemic would be in our communities for a long time to come, and now was the time to begin sharing best-practice so that all mining groups, and other workforces could likewise implement optimal strategies to slow down or prevent the spread of COVID 19 while, continuing to operate.

In this context, MIRARCO Mining Innovation, in partnership with Laurentian University's Centre for Research in Occupational Safety and Health (CROSH), partnered with the Ontario Mining Association's Safety and Training sub-committee to undertake the cataloguing of Ontario Mining Association members' response to the Coronavirus pandemic. Primary goals were to highlight and share best practice.

## **Process:**

After receiving documentation from OMA member companies, regarding the controls they created or modified for COVID management, the project team members organized the data into a modified Bow Tie risk assessment format. The following document is the product of this work and contains the consolidated information received, displaying the controls used, as well as operational standards to consider when implementing such controls. Recommendations (MIRARCO/CROSH), lessons learned, and verification/auditing (company notes) have also been included.

This document can be used in three ways. First, as a reference for mining companies to incorporate a range of controls for preventing the spread of COVID-19. Second, it is valuable to capture actions taken, improvements made, and lessons learned should these measures be required again in the future. Lastly, Ontario Mining are leaders in safety management; given that the hazards are not restricted to a specific industry, the knowledge developed by OMA could be instructive for other industries and institutions and as such, should be shared broadly.

**Disclaimer:** This material is intended to be a summary of current, recommended guidelines and not prescriptive instruction. It reflects the available knowledge and actions taken in Ontario, Canada at the time the document was written. The user is responsible for ensuring compliance with all health and safety legislation and best practice. It is recommended that each operation conduct a risk assessment to determine which aspects of this information is applicable to their mine.

Note: the symbol “ \*\*\* ” throughout the document indicates input from the COVID-19 Resource Industry National Protocol from the Minerals Council of Australia.

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## PREVENTATIVE CONTROLS

### Employee Comes in Contact with Infected Employee

#### 1. Before Traveling to Work

##### *Controls and Performance Standards*

1. Employees fill out an electronic, self-screening questionnaire (daily), prior to leaving for the workday.
  - a. The questionnaire must include questions regarding COVID-19 related symptoms, travel history, and close contacts from the past 14 days.
  - b. Screening prior to arrival at the workplace, may reduce the presence of at-risk employees on site acting as a second layer of prevention.

*Recommendations:* Consider using an electronic system that pairs these responses with the employee's on-site temperature screening results. This could allow for skipping of on-site screening questions. Electronic systems can also adapt to 'daily inputs' versus longer periods away from work to reduce the time-to-complete. Add messaging that reminds employees that they will not be penalized for reporting illness symptoms.

*Verification:* Ensure Human Resources and/or health care teams are monitoring the responses and following up with employees who are not to come to work based on their responses. Electronic systems should flag positive responses, to facilitate.

*Lessons Learned:* While it may be difficult to get everyone to comply with this, self-screening prior to leaving for the day can still save time and money from unnecessary travel to site. Consider whether this is a process that the company wants to retain; for example, pre-work fatigue screening.

#### 2. Travel to Site - Personal Transportation

##### *Controls and Performance Standards*

1. Discourage employees from carpooling as most vehicles do not allow for physical distancing.
  - a. If carpooling must be used, individuals should wear a non-medical face mask. If there are only two riders in the vehicle, have the passenger sit in the opposite corner to the driver to maximize distance.
2. Employees using public transportation are advised to wear a non-medical face mask, avoid crowding while waiting, and maintain distancing whenever possible (onboarding, seating selection).

- a. Consider providing support for alternative, more private, transportation for those who must use public transportation.
- b. Out-of-town employees are encouraged to avoid stopping in local towns, maintaining proper hygiene and distancing if stops are necessary (for example, using restrooms, buying groceries, and refueling).

### 3. Travel to Site - Company Provided Transportation (such as buses, planes and taxis)

#### *Controls and Performance Standards*

1. Employees must line up 2m apart while waiting to board transportation.
  - a. Use physical distancing markers.
2. Masks must be worn while waiting to board, while boarding, while on board, and while unloading.
  - a. Once workers are seated and properly distanced, they may remove their mask to eat/drink; but should replace it, once they are done eating/drinking.
3. Employees must have their temperature taken and screening questions successfully answered prior to boarding. See *Control: Screening Upon Entry to Site* for directions on screening requirements.
4. Maintain physical distancing while on board.
  - a. Reduce the capacity for all modes of transportation.
  - b. Employees should sit by themselves in the window seats, filling every other row.
  - c. Install a clear barrier between the driver and entrance to the transportation.

*Verification:* Having a staff member on the bus/plane, or arranging the boarding process prior to departure can help enforce protocols, including mask wearing and seating arrangements.

*Lessons Learned:* Temperature screening measurements taken with a thermal camera can be impacted by the temperature outside. Individuals must be acclimatized.

### 4. Arrival to Site

#### *Controls and Performance Standards*

1. Employees must wear a mask upon arrival to site.
2. Stagger arrival times with 15-30-minute intervals to avoid congestion.
  - a. Consider grouping start times by job or role (such as diamond drillers, mechanics, production, etc.)
3. There should be one defined entry point for the site to ensure all persons entering are screened.

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4. Install physical distancing markers in the screening area and leading up to screening.
5. Limit who comes on site and entrance to each building, ideally to essential workers only.
  - a. Put external visits and non-essential work on hold.
6. Certain groups of people, including but not limited to: older people, those with diabetes and those with cardiovascular disease; are at greater risk of having serious complications if they contract COVID-19. Develop a program with healthcare professionals to identify and provide accommodations for those who are at high-risk for COVID complications.
  - a. Consider providing accommodations for those living in at-risk communities or households.
  - b. Consider providing accommodations for those with family obligations (e.g. if a family member becomes sick with COVID; if schools are cancelled).
7. All persons who wish to enter the site must be screened daily before entry.
  - a. This includes all essential employees, supervisors, contractors, visitors etc.
8. Only trained personnel wearing the appropriate PPE are to be responsible for screening.
  - a. A checklist must be provided for the screener to perform, prior to initiating screening with workers including: what PPE to wear, where to put PPE on, and how to don, doff and dispose PPE (e.g. proper removal of contaminated gloves).
  - b. Screeners must be trained on how to properly perform the screening as well as what to do if someone does not comply or does not pass the screen.
  - c. Develop a procedure for switching/relieving screeners, which includes screeners screening each other at shift change and performing a personal mental health check-in.
9. Screening must include the following:
  - a. Travel/Contact Declaration
    - i. Do not allow anyone who has travelled internationally in the past 14 days.
    - ii. Consider limiting personnel who have recently travelled outside of the local community, especially to areas with higher COVID-19 rates.
  - b. Symptom check
    - i. Common COVID-19 symptoms to screen for include: fever, cough, fatigue, chills, loss of taste or smell, sore throat and nausea.
    - ii. Look to Ministry guidelines regularly to adjust the symptoms list if needed.
    - iii. Restrict individuals who have been in close contact with an individual who has symptoms or is COVID-19 positive.
  - c. Temperature check
    - i. Develop a protocol and train individuals on how and where to use an infrared thermometer for temperature screening, if that tool is being used.
    - ii. If temperature reading exceeds 38 degrees Celsius, have the individual acclimatize in a designated isolation area. Retake temperature with a medical grade thermometer that is disinfected before and after use. If the temperature again exceeds 38 degrees Celsius, the person is denied entry.

10. If denied entry due to failing the travel/contact declaration, symptom check, or temperature check, or if the employee refuses screening, log the incidence and have a plan prepared for the next steps.
  - a. Positive screens and positive tests should be followed up by a personal check-in with assigned staff, to clarify return-to-work policies.
  - a. If safe, inform the individual to leave that they have been denied access; explain why, ask them to leave the premise and provide them with clear direction on what their next steps are (e.g. their supervisor will call them shortly).
  - b. If not safe, ask the person to go to the designated isolation room and wait for the appropriate instructions.
  - c. Contact designated supervisors.
11. If the resources and facilities allow, set up COVID-19 testing on-site.
12. As information about COVID-19 develops, be sure to update this process.

*Note:* The requirements for allowing re-entry after a screen or positive COVID test should be developed to provide guided timelines and criteria for employees returning to work after symptoms, close contact or confirmed case concerns. This process should align with a Return-to-Work Protocol, and be easily accessible to workers to review, as well as provided to them as a process step in the positive screen protocol.

*Recommendations:* There is a lot of technology being developed that may make the screening process more efficient. For example, there are thermal cameras that will complete the temperature screening without the need for an operator, or cameras that can check multiple employee temperatures at once from a bird's eye view. Using such technology may speed up screening and decrease the need for personnel in personal protective equipment.

Incorporate a check-in with Screeners; to ask how the screening process is working, how they are coping; whether there are any opportunities for efficiencies or problems to be managed. Ensure that screeners are aware and communicate to workers that a screen fail is not grounds for penalty.

Provide information on where the nearest COVID 19 testing facility is.

*Verification:* To ensure everyone is being screened, keep track of who has been screened daily. Safety teams should monitor compliance in those responsible for screening employees, and send weekly reports to various individuals and departments such as the General Manager, Safety and Corporate. Being denied entry at workers' cost is a deterrent for false responding. Ensure that screeners maintain screening diligence as time passes.

*Lessons Learned:* If screening cards are being manually filled out, ensure they are actually being filled out, and not just falsely completed. An alternative to handwritten responses is using self-serve tablets/kiosks that can speed up the process. In addition, some employees may be concerned about confidentiality so consider only record abnormal temperatures.



## 5. On-Site Transportation

### *Controls and Performance Standards*

1. Develop a protocol with photo-illustrated instructions on how to ride in vehicles while travelling on site.
  - a. Post the photo/diagram in or outside the vehicle with the maximum occupancy allowed noted.
  - b. Employees must be familiar with the protocol prior to coming to work.
  - c. The protocol should include specific procedures for entering, exiting and riding in different types of vehicles.
  - d. Where possible, have employees ride in the same vehicles during their shift as a secondary precautionary measure.\*\*\*
2. While waiting to board transportation, riders must maintain a distance of 2m between each other, indicated by markers.
3. Riders should wash or sanitize their hands prior to entering the vehicle.
4. During loading, transportation and exiting vehicles, all riders must maintain physical distancing of 2m.
  - a. The capacity of each vehicle with proper physical distancing in place must be posted outside each vehicle.
  - b. If physical distancing cannot be maintained, non-medical face masks must be worn.
  - c. Where possible, install adjustable dividers to separate riders. The dividers must not be loosely hanging. If dividers cannot be installed and there is only a driver and passenger, the passenger should sit in the opposite corner of the vehicle to maximize distance, and wear a non-medical facemask.
5. Riders should avoid speaking (especially directly face-to-face) and practice proper sneeze/coughing etiquette. All riders should be seated facing forward.

*Recommendation:* Ensure any physical barriers do not create a visual obstruction for the operator.

*Verification:* Audit that everyone is wearing masks prior to departure and consider spot checks if sustained mask wearing is a concern.

*Lessons Learned:* Riders naturally want to sit closer together when they are comfortable with each other, so using visual reminders to physically distance inside the vehicle may be beneficial.

## 6. Use of Locker Rooms

### *Controls and Performance Standards*

1. Stagger use of the locker rooms to decrease the number of people inside at once time.
  - a. Post the maximum capacity outside the entrance to the locker rooms.
  - b. Encourage employees to be swift in the locker rooms and avoid mingling.
2. If possible, have separate entry and exit; if not possible have a defined entry and exit space to limit face-to-face passings through doorways.\*\*\*
3. Space out lockers or block some off to allow for physical distancing.
  - a. If not possible, consider assigning lockers based on shifts so that the employees entering at the same time are not using lockers that are next to one another.
4. Indicate which showers should be used to allow for physical distancing. If necessary, fully remove shower heads to ensure individuals are spaced out.
5. Provide markings on the floors for direction of locker room flow to avoid close passing.
6. If employees using the locker rooms in close proximity is still a concern with the above measures in place, mandate the use of non-medical face masks while using these facilities.

*Recommendations:* Encourage workers to shower after work to prevent transmission home.  
Encourage workers to use onsite facilities to wash gear.

*Lessons Learned:* Blocking off shower heads creates a backlog of people so staggering shifts may be increasingly useful, if not already in place.

## 7. Gatehouse, Line-ups, Wickets and Meetings

### *Controls and Performance Standards*

1. Physical distancing must always properly be maintained.
  - a. Change the size of line-ups and meetings.
  - b. Consider using larger rooms such as shops, or multiple rooms with video feed, if more space is required.
  - c. Use markings on the floors/desks to indicate distancing.
  - d. If chairs are present, separate them.
  - e. Set markers on the floor and/or line dividers for the wicket area.
  - f. Set up plexiglass barriers where possible.

*Verification:* Coaching and/or discipline is used when employees do not physical distance

## 8. Use of the Cage

### *Controls and Performance Standards*

1. Use markers to ensure physical distancing is maintained while lining up to load.
2. Stagger cage runs to reduce the volume of employees.
3. All riders must wash or sanitize their hands before riding.
4. Ensure physical distancing is maintained while riding.
  - a. This can be done by reducing the capacity of the cage so that personnel can stand further apart, or by using barriers (which must be sanitized after each run).
5. Require the use of non-medical face masks as an alternative to distancing protocols.
6. Riders must not face each other, use proper sneezing and coughing etiquette, and limit talking.

## 9. Face Mask Wearing

### *Controls and Performance Standards*

1. All employees must be educated on what type of mask to wear, when they must be worn, as well as how to properly wear, clean their mask and where to put their mask when not wearing it (at work and at home).
2. The use of non-medical face masks should be mandatory when physical distancing is not possible and other protection is not required.
  - a. Examples of places where physical distancing may not be possible may include but is not limited to: the cage, vehicles, lunch room.
3. The use of non-medical face masks should be considered even when physical distancing is possible, particularly in confined spaces (e.g.s. meeting room, locker room, bus/plane, cage).
4. Identify and provide scenarios or roles where the need for masks are likely to occur; communicate this to workers. Specify which type of mask is appropriate for each scenario (for example, brief close interaction may only require a non-medical mask, while extended interaction would suggest an N95 mask or also using a face shield).
5. Encourage the use of non-medical masks in general areas such as the lunchroom and locker rooms and mandate them if adherence is poor.
6. Distribute multiple non-medical masks for all employees to keep, but also have disposable ones available on site for those who may have forgotten their personal ones at home.
7. Have designated cleaning stations for masks and/or respirators.

*Verification:* Coaching and/or discipline is used when employees do not wear a mask when physical distancing is not possible.

*Lessons Learned:* Providing employees with company masks allows for quality control of fabric and fit. However, allowing employees to bring their own mask may increase desire to wear personalized ones as there is potential for variety and personal preference of pattern and fit.

## 10. Use of Cafeteria/Lunch Room

### *Controls and Performance Standards*

1. Reduce capacity of the rooms to allow for physical distancing. Post the maximum capacity outside the room.
2. Stagger lunch/break times to limit persons eating at the same time.
3. Have a defined entry and exit to limit close passing through doorways. \*\*\*
4. Install barriers to separate diners or remove/block off seating to ensure distancing.
5. Encourage employees with their own space (such as their own office) to eat there and avoid common areas.
6. Use physical distancing markers on the floors, especially at service lines.
7. Arrange tables and chairs so that employees are facing one direction and not each other, unless tables are put together so that they are 2m between employees facing each other.
8. Install clear barriers at serving stations to separate kitchen staff from those being served.

*Recommendations:* If possible, install clear barriers to maintain socialization.

## 11. Use of Workstations

### *Controls and Performance Standards*

1. Install barriers around workstations or move them so that they are 2m apart.
2. Have employees work aboveground or in alternative areas that help promote reduced operator interaction.

## 12. Office Use

### *Controls and Performance Standards*

1. Employees should work from home whenever possible. Introduce a phased approach for returning office employees to work.
2. Limit work-related travel as much as possible. Introduce a phased approach for returning to travel given public health guidelines and current updates regarding status of destinations.
3. Have a defined entry and exit to limit close passing through doorways.\*\*\*
4. Post elevator and room capacities outside each set of doors.
5. Limit office access to only essential workers.
  - a. Do not allow visitors.
  - b. Limit entry of delivery personnel.
6. Install clear barriers at reception desk.
7. Post physical distancing reminders throughout the office.
  - a. Markers on the floor for line ups and meeting rooms.
  - b. Designate narrow hallways, stairwells or crowding points to one-way traffic.

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8. Screening upon entry, similar to mine site screening detailed above, must occur daily for all personnel entering the building.
9. Physical distancing must be maintained while waiting for screening and upon entry to the office. Stagger arrival times to help with this.
  - a. Screening includes contact and travel history, as well as a symptoms and temperature check.
10. A log of employees who have accessed the offices should be kept.
11. Ensure that physical distancing is maintained throughout the office.
  - a. Hold meetings via teleconference or in larger rooms.
  - b. Reconfigure the office space to spread desks apart. Avoid face-to-face desk layouts or install barriers where needed.
12. Discourage use of shared spaces such as the lunchroom. Have employees work at their personal desk only. \*\*\*
  - a. If it is necessary to use the lunchroom, it should be reconfigured to support distancing.
13. Non-medical masks must be worn at all times when moving through the office, except when seated at personal desks.
  - a. This includes meetings, photocopying, etc.
14. Encourage employees to do all personal photocopying/printing at one time to limit walking through office.
15. Encourage using personal vehicles for commuting and avoid public transportation.
  - b. Consider financially supporting alternative forms of transportation for those who cannot use personal vehicles.
  - c. Use PPE if riding public transportation, and allow employees to adjust their schedules so they can commute at less busy times.
16. Ensure communication and education on procedures is prioritized.
  - a. Use virtual training to inform employees about what measures will be in place upon their return to work.
  - b. Establish a system for regularly communicating with employees regarding updates, questions, meetings, etc.
  - c. Develop department-specific training if required.
  - d. Continually monitor for updates from the government, local public transportation protocols, building management requirements etc. and communicate these updates
  - e. Develop a feedback plan so that employees can express concerns and have input.
17. Block off accessories in the bathroom to ensure distancing is maintained.

### 13. Communication

#### *Controls and Performance Standards*

1. Information with updates must be sent out as often as required through multiple mediums.
  - a. Examples of dissemination include posters, site TVs, crew line-ups, Supervisors, social media, email and town halls.
  - b. Ensure Supervisors are educated on the latest information and made available for addressing concerns.
2. Establish a COVID-19 specific email, hotline and/or webpage to display information and receive and respond to all COVID-19 related concerns.
  - a. These would allow for employees to access information on their days off.
  - b. Also provide a daily check-in for concerns/highlights for managers/supervisors.
3. An established team/task force/committee responsible for COVID-19 related discussions and decision making should be in continual contact with employees, the local public health unit, local medical personnel, local Indigenous communities, stakeholders, and Human Resources.

### 14. Education and Training for Working During COVID-19

#### *Controls and Performance Standards*

1. Distribute information on what the virus is, how it is transmitted, and the symptoms associated with it.
  - a. Various mediums of education should be used to spread awareness. Examples include posters, site TVs, crew line-ups and Supervisors, social media, email and town halls.
2. Information must be distributed on general site-wide virus measures in place. This includes but is not limited to: proper handwashing, avoiding touching the face, physical distancing, what to do if you develop symptoms, current policies, and staying home if ill or in contact with a suspected/confirmed case.
3. Training must occur on how to properly wash and use masks, respirators, and other PPE such as gloves and gowns.
4. Contractor workforces must adhere to the same rules regarding prevention of spreading illness and be trained on guidelines and procedures as all other personnel on site.
5. Where protocols cannot be practically implemented, be sure to perform a risk assessment to determine alternate controls and inform employees on where these alternatives may occur.\*\*

*Recommendation:* Develop a guidebook or protocol plan that encompasses everything regarding COVID-19. It should be distributed and reviewed with anyone entering the site.

*Verification:* Employees must sign a document that states they understand the guidebook contents for ensuring the health and safety of themselves and others. Additional sign off should be done for additional training.

## 15. Non-essential Activities

### *Controls and Performance Standards*

1. Suspend non-essential activities to limit the personnel required to be on site.
2. Encourage telecommuting as much as possible. Assess each sectors' needs and capacity for distance work.
  - a. Ensure all working files and technology is accessible to employees working from home. \*\*\*
3. Temporarily halt or modify training, audits, fire drills, and any other work that may put workers at risk if it does not require immediate attention.
  - a. Consider alternatives such as providing online learning, using virtual meetings or training simulators\*\*\*, training in larger spaces, training in smaller groups, etc.
4. Employees should avoid travelling to affected regions or go on interregional travel for work whenever possible.

## 16. Deliveries

### *Controls and Performance Standards*

1. Delivery drivers, suppliers and anyone else distributing products are to be informed of all protocols and procedures in place prior to arriving on site. Additional information can be found within the order information.
2. Personnel should remain in their vehicles. If they are required to leave their vehicles, they must go through all screening procedures.
3. Site contact should escort them to the desired location.
4. Paperwork can be left in mailbox or handled without PPE if it has been untouched for 48 hours.
5. Develop a procedure for receiving packages and any other shipments where risk of exposure is a concern.

*Verification:* Delivery drivers are escorted to and from the gatehouse.

## 17. Use of the Infirmary

### *Controls and Performance Standards*

1. Restrict the number of people allowed in at one time to maintain physical distancing.
2. Move to online appointments whenever possible.
3. Suspend non-essential medical services until safe to gradually resume.

## 18. Returning Home

### *Controls and Performance Standards*

1. Properly wash your hands immediately upon returning home.
2. Set down personal belongings on a surface that can be easily disinfected.
3. Wash dirty clothing in water with increased temperature.
4. Disinfect items that you need to use at home.

## 19. Additional Verification and Auditing for General Protocols Implemented Around Site

1. Develop forms that supervisors and inspectors can fill out based on workplace observation, that are designed to gain insight on whether or not various COVID-19 critical controls are being adhered to.
  - a. Indicate the required frequency of submission and review the responses submitted regularly.
  - b. Questions should primarily revolve around adherence to physical distancing, mask usage and hand washing, in various scenarios such as in general work areas and vehicles.
  - c. Rotate the individuals completing the form for each department so that it is a fresh set of eyes examining each time.
  - d. The form should have an option for pictures and comments to be included in addition to general feedback.
2. Have Supervisors or designated persons continually walking around the site to encourage and enforce proper COVID-19 protocols.
  - Engage with employees and see how things are going by asking for feedback.



## Employee Comes in Contact with Contaminated Surface

### 1. General Cleaning and Disinfection

#### *Controls and Performance Standards*

1. Adjust cleaning scheduling based on the risk for each area, such as how often the area is used and what the surface is.
2. Ensure that those who are responsible for cleaning and disinfecting are properly trained on disinfection procedures.
  - a. Cleaners (and employees where applicable) must be aware of which product to use and how frequently, how to clean different types of surfaces (such as hard vs soft surfaces), and how to properly wear the appropriate PPE.
3. Educate employees on the difference between disinfecting, cleaning and sanitizing.
4. Install portable hand washing and sanitizer stations throughout site,
  - a. Locations can include entrance to every building, parking lots \*\*\*, tag-in board, wicket, mine dry entrance, control rooms, the cage, warehouse centre, entrance to lunchroom, badge board, etc,
5. Increased cleaning throughout site and in high-traffic areas,
  - a. Including but not limited to door handles, handrails ramps, offices, equipment, taps, light switches and telephones.
  - b. Keep doors open (that do not need to be shut for safety or security reasons) and convert doors to foot open rather than hand open to reduce touching.
6. Increase cleaning of bathrooms and showers.
7. Develop a protocol for cleaning and disinfection of bunkhouses after each employee's stay.
8. Cleaning products and disinfectant are to be readily available for use.
  - a. Increased purchasing of disinfectant products and organize usage to limit waste.
  - b. Larger bottles of hand sanitizer for public use.
  - c. Individual pocket-size bottles of hand sanitizer.
  - d. Disinfecting wipes available across site and in vehicles.
  - e. Ensure cleaning and disinfecting products used on surfaces that may come in contact with food are food-safe.
9. Increase laundry washer water temperature and dryer heat.

### 2. Cleanliness of Vehicles

#### *Controls and Performance Standards*

1. Enhance disinfection before and after each use of all transportation equipment.
  - a. Especially high touch points like handles, controls, seats and the steering wheel.
  - b. Include cleaning as part of the pre-operational checklist.

2. Ensure proper PPE, especially non-medical face masks are worn while travelling any time there are passengers in the vehicle.
3. Keep cleaning and disinfection products available in the vehicles such as hand sanitizer, spray bottles, paper towels and/or wipes.
4. If barriers have been installed, ensure they are disinfected after each route.

*Recommendations:* Use photos/diagrams to show the high-touch points that need extra attention when disinfecting.

As possible, reduce the exchange of operators between vehicles.

*Verification:* Include the cleaning of vehicles in the pre-op and use a sign-off sheet for employees to fill out after each trip to indicate the passenger area has been cleaned.

### 3. Cleanliness of Equipment

#### *Controls and Performance Standards*

1. Limit sharing of tools and equipment whenever possible.
  - a. Ensure they are disinfected before any exchange.
2. Clean and disinfect equipment and workspaces after each use and/or with increased frequency.
3. Clean inventory of protection equipment intended for visitors after each use.
4. Sanitize essential portable devices before and after use (SPOT, GPS, radios).
5. Do not allow sharing of PPE such as helmets, hardhats and gloves.

### 4. Cleanliness in Dry/Locker Rooms

#### *Controls and Performance Standards*

1. Each employee is to wash their hands, change into their personal protective gear, and wash their hands again before exiting.
2. Develop guidelines (specific to the site and facilities present) that employees should follow for maintaining cleanliness of their personal belongings within the locker room, and for taking their belongings home.
  - a. Separate what is considered 'dirty' and 'clean' items. Items from home are clean and should not be intermingled with work items.
    - i. For example, a person could have a work cloth items bag and a home items bag so that they can package work clothes in their work bag, shower at work and then put on home clothes.

## 5. Cleanliness of the Cafeteria and Lunch Rooms

### *Controls and Performance Standards*

1. Kitchen staff must take extra precautions when preparing food to keep the kitchen clean such as extra disinfection and wearing masks.
2. Employees must wash hands prior to entering the cafeteria and lunchrooms.
3. No sharing of condiment bottles or salt and pepper shakers. Use individual packets.
4. Employees to disinfect coffee maker, drink dispensers and other shared machines after use.
  - a. Shared food, make-your-own and buffet style serving should be avoided to limit touching of food and utensils by multiple employees.
5. Increase cleaning and disinfecting on surfaces such as tables and chairs.
6. Employees must disinfect their eating space themselves before and after each meal.
7. Ensure additional resources are available for providing food for take-away meals or those in isolation if necessary.

*Recommendation:* Consider technology that checks employees' temperature upon entry to the cafeteria/lunch room in case symptoms may have developed throughout the day/night.

*Verification:* Security reminds/watches employees washing their hands as they enter the cafeteria.

## 6. Recreation Changes

### *Controls and Performance Standards*

1. Temporarily close saunas.
2. Close recreation facilities unless increased cleaning and physical distancing can be maintained and verified.
3. Temporarily prohibit team games and sports where close contact and sharing of equipment would occur.

*Recommendation:* Opt for activities where employees can remain apart such as yoga, tennis, or running.

## 7. Implementation of Checklists/Inspection Forms

### *Controls and Performance Standards*

1. Checklist must be completed daily to ensure the cleaning, maintenance, and availability of cleaning products throughout the site
  - a. Rooms and areas that should be monitored may include but is not limited to: board room, cage, dry, gatehouse, headframe and shaft station, huddle/wicket, kitchen, latrine, shared office space, mobile equipment, refuge station/tent, shared transportation, warehouse, workplace
2. Each room/area should have its own list of requirements for supplies and protocols.

3. Keep a log of cleaning supplies and where they are being distributed to see what areas are using more or less of it.
  - a. Regularly perform checks on how available items such as cleaning supplies, masks and sanitizer are in all areas.

*Verification:* Tracking use of cleaning supplies can indicate regular cleaning practice.

## 8. Office Cleaning and Disinfection

### *Controls and Performance Standards*

1. Develop a procedure or protocol for how disinfection and cleaning will occur during the pandemic.
2. Increase the frequency of cleaning in shared spaces as well as private offices
  - a. This includes bathrooms, office spaces, high touch areas, the lunchroom and its components etc.
  - b. Encourage employees to have less items on their desks to reduce the number of items cleaned.
  - c. Employees should be responsible for disinfection in addition to the responsibilities of designated cleaners.
  - d. Post signage for when something has been cleaned or when cleaning is scheduled.
  - e. Staff responsible for this cleaning must properly be trained on the enhanced cleaning practices.
3. Ensure hand sanitizer, wipes, disinfectant sprays and hand soap is readily available throughout the office.
4. Deliveries should be accepted with proper PPE if there is concern about how long the package has been in transit.
  - a. Consider using company staff deliveries between offices.
5. Develop a hygiene protocol for employees to follow when using the lunchroom.
  - a. Shared food should be temporarily discontinued.
  - b. Use single-serve packages instead of shared items.
  - c. Have employees disinfect touched surfaces on appliances after use (such as fridges, microwaves and coffee machines).
  - d. Encourage the use of personal reusable items (such as mugs) instead of shared items
6. Modify emergency plans to address physical distancing in the case of an emergency and communicate these changes to employees.
7. Post signage on proper sneezing and coughing etiquette, hand washing, etc.
8. Adjust HVAC to increase outdoor air intake, upgrade filters and run for longer periods of time. Consider using portable air filters.
9. Train employees on how to use, remove, care for, and dispose of PPE where applicable.

*Recommendation:* Consider touchless hand sanitizer and soap dispensers, as well as individual bottles of hand sanitizer for employees to keep on their person.

## MITIGATION CONTROLS

### Single Employee Is Feeling Unwell, Is A Suspected Case, or Tests Positive for Covid-19

#### 1. Entry to site

##### *Controls and Performance Standards*

1. If the employee is feeling unwell but has not entered the site, the screening questionnaire and temperature check should prohibit the individual from entering the site.
2. If the employee is a suspected/confirmed case or has been in contact with a suspected/confirmed case, they will not be permitted to enter the site as per the screening requirements.
3. Follow the Return to work policy or requirements that are developed when allowing employees to return to work and enter the site for 1 and 2 above.
  - a. The requirements are based on if there was known contact with a case, travel history and/or if symptoms were present
  - b. Complete return to work forms with symptom and testing history

*Recommendations:* The best protection is to prevent any sick worker from entering the worksite.

Therefore, efforts to develop and maintain a strong screening process are important.

- Efforts should include consideration of human fallibility. For example, workers could lie on the symptom check, particularly if they are concerned about repercussions for not being able to work, or if they don't believe they have COVID (e.g. just a cold). Regular and clear communication should be provided to prevent these occurrences, including clear messaging on what to do if they are not feeling well, for a quick return-to-work.
- Also, due to the repetitive nature of the screening process and the potential familiarity between the screener and the screenee – repetitive, daily screening can create passivity with the questions over time. Regular reminders about the importance of due diligence, for both groups are required to maintain good screening protocol.

*Recommended verification:* Randomly occurring observance of screeners and screeners, should be performed to ensure due diligence is maintained.

#### 2. Thorough Disinfection

##### *Controls and Performance Standards*

1. Determine what specific areas and surfaces need to be cleaned and disinfected based on where the employee had been in the past 48 hours if they are feeling unwell.
  - a. Key locations include the cage, lunchroom, dry, vehicles, and bathrooms.
2. Fogg and deep clean all surfaces in all bunkhouse rooms, and hallways, floors, walls and ceilings around the site if a confirmed case was on site.

### 3. Communication

#### *Controls and Performance Standards*

1. Develop a communication protocol for if an employee develops symptoms or fails active screening including:
  - a. Have a designated person, supervisor, health team, local health unit etc. for employees to immediately contact for more information on next steps. Ensure each Screener and manager on-duty has the current, on-site contact.
  - b. Using a commonly agreed upon process; CEO, mine and office managers, and the Task team will all be immediately communicated to about the case development, for essential decision-making.
  - c. Inform local communities of the confirmed case.
  - d. Have a designated person/team assigned to begin contact tracing as soon as possible (see contact tracing below).
  - e. Communicate possible exposure to all workers while maintaining confidentiality.

Recommendations: Pre-identify ‘who’ are the key local community members to contact and how they are to be contacted; if a case is reported at the mine.

Have a designated staff/team to answer worker questions; to alleviate concerns and direct appropriate behaviours.

### 4. COVID-19 Testing

#### *Controls and Performance Standards*

1. Test either using a quick test or PCR test at the local health unit.
  - a. If using quick tests, verify that they have been validated by an external and reliable source and that they have a high sensitivity and specificity. All other controls should still be in place.
2. A PCR test is the gold standard test and should follow up a positive quick test.

### 5. On-Site Isolation

#### *Controls and Performance Standards*

1. If you cannot safely send the person off-site, use your pre-identified, onsite location for isolating a potential case and enact your protocol for its use, including:
  - a. Have the individual isolate in the designated room or bunkhouse that has a separate bathroom.

- b. Provide safe travel home if necessary. Enact an evacuation plan for when workers must be sent home or to hospital. Home-based care can help alleviate pressure on local health services. \*\*\*
  - c. The isolation place and bathroom must be disinfected once the affected individual is moved.
  - d. If the individual must travel on site while feeling unwell, ensure they travel alone in the rear of a vehicle. Consider using nursing staff to assist with relocation. Immediately disinfect the entire vehicle after travel.
  - e. Include who to contact and in what order.
2. Additionally, develop a camp isolation protocol for sustaining long-term on-site isolation.

*Recommendations:* Ensure your protocol has been communicated to key personnel including screening personnel (before it is needed). Post the instructions outside the door to the isolation room, so they are available in an emergency.

If an emergency transport vehicle is identified/ready, consider putting plastic covering where the person is to be placed; to be pulled down after the person is removed to reduce spread and facilitate disinfection.

## 6. Contact Tracing

### *Controls and Performance Standards*

1. Enact your protocol for contact tracing as soon as possible.
  - a. Perform risk assessment to determine the depth of contact tracing needed.
    - i. Always perform contact tracing for suspected cases and confirmed cases of COVID-19.
  - b. Contact tracing may be done by various personnel such as medical personnel, Human Resources, designated contact tracers or the local health team. Ensure the team is trained on how the procedure works.
  - c. Procedure should include a thorough interview of where the employee has been in the workplace, who they were in close contact with, what their symptoms entailed, who they travelled with, etc for the past 48 hours as a minimum. Note: the local health unit should be conducting a similar process for public contact tracing.
    - i. Look back at employees' journals that include where they went, what work that person did that day, and what interactions they had
  - d. Instruct those who may have come in contact with the affected individual to: be tested at the local health unit (in addition to onsite testing, if available); to self-isolate and self-monitor until test results are returned or the required amount of time with no symptoms has elapsed.

*Recommendations:* Technology is coming out that can assist with a more accurate contact tracing process. Apps on cell phones or Bluetooth bracelets can track the location of workers, while RFID tags may help recall who was in contact with who and for how long.

Recommendation: Using existing information (job role, shift, start-of-day screen); continuously track person-to-person contacts, for a rapid-response in contact-tracing, if a worker has a positive test. As possible, maintain worker ‘bubbles,’ to limit overall contact between workers; so that a positive test doesn’t impact the entire workforce.

Staff should be prepared for and supported regarding the way people will respond to being notified that they may have been in contact with COVID-19.

### **Outbreak with Multiple Employees Infected (in addition to previous 6 mitigation controls)**

#### **1. Entry and Exit to/from site**

##### *Controls and Performance Standards*

1. Lock down the gatehouse/entrance so that no one can enter or exit the site.
2. Enact a protocol for if employees must be evacuated or quarantined on site.

#### **2. Thorough Disinfection**

##### *Controls and Performance Standards*

1. Fog and deep clean all surfaces in all bunkhouse rooms, and hallways, floors, walls and ceilings around the site.
2. Determine what specific areas and surfaces need to be cleaned based on crew, location of work, and movements over the last 14 days.
  - a. Key locations include the cage, lunchroom, dry, vehicles, and bathrooms.

#### **3. COVID-19 Testing**

##### *Controls and Performance Standards*

1. Contact the local health unit to determine if widespread testing of employees is required.



## Business Interruptions

### 1. Activate the Crisis Management Plan

#### *Controls and Performance Standards*

1. Activate the Crisis Management Plan if critical resources fall below defined levels.
2. Move to care and maintenance instead of production.
3. Continually monitor what can safely resume as the situation changes.
4. Move workers from one site to another if worker levels fall too low and it is necessary for those roles to be filled.
5. Update any emergency plans to include provisions for COVID-19 (such as how to maintain proper physical distancing or when to wear a mask).
6. A continuity plan for each department should be developed to ensure mitigation for staff absences.
  - a. Prepare to have back-up personnel that have been cross-appointed and cross-trained in the event of illness.

### 2. Manage stakeholders

#### *Controls and Performance Standards*

1. Communicate to employees updated information.
2. Continually provide updates, track social media, provide relevant information etc. to various stakeholders.

### 3. Monitoring Employee Attendance

#### *Controls and Performance Standards*

1. Track unplanned employee absences on a daily basis.
  - a. Can be done via an electronic form.
2. Identify safe operating max absenteeism limit.
3. Engage contingency plan in case absenteeism approaches the established limit for a safe operation.

## Compromised Employee Wellbeing

### 1. Mental Health Supports

#### *Controls and Performance Standards*

1. Distribute information (such as posters) on how to care for your mental health, especially during COVID-19.
2. Ensure employees are aware of how they can access support, either on-site or locally.
3. Use leadership as a source of support and instilling calm.
  - a. Increase frequency of mental health being a topic of discussion across the entire company.
  - b. Consider allowing select employees to take an optional layoff.
4. Monitor employees who may be at a greater risk, such as those on a mental health program.
5. Focus on virtually connecting employees who are working from home.
6. Set up de-stressing activities such as yoga and running.
7. Ask employees for feedback on how they feel and what can be improved.