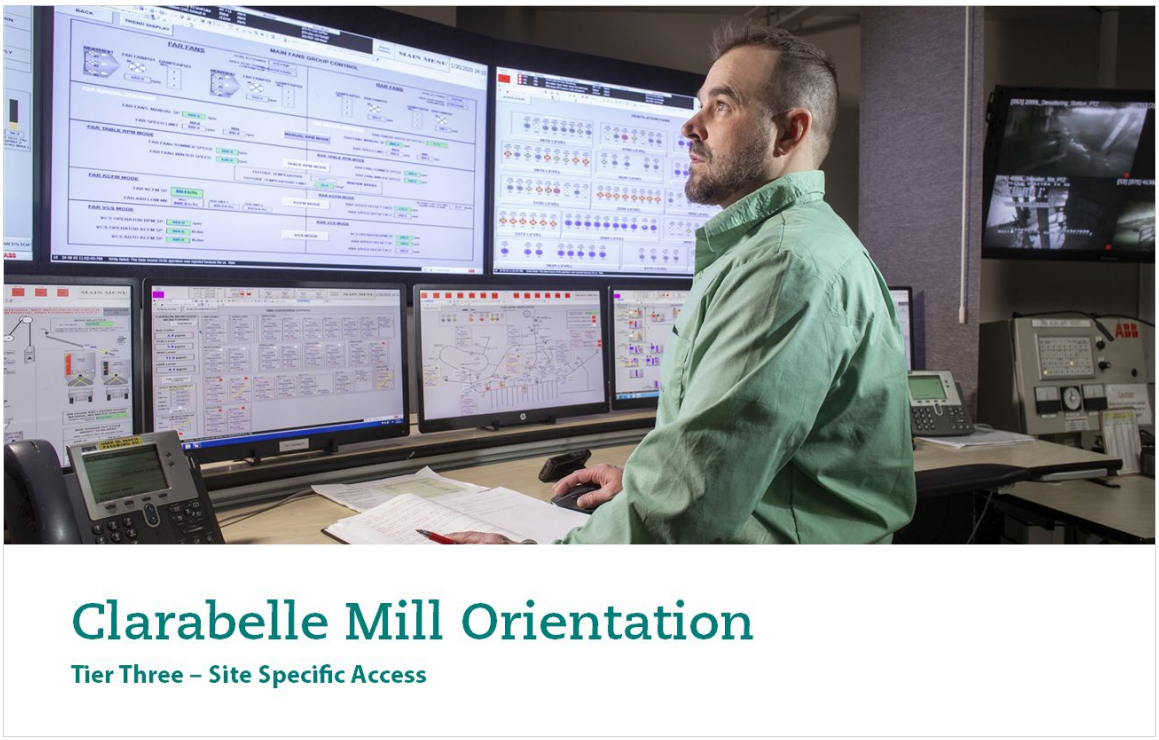
Tier 3: Clarabelle Orientation

1. Clarabelle Mill Orientation

1.1 Clarabelle Mill



1.2 Disclaimer

Disclaimer

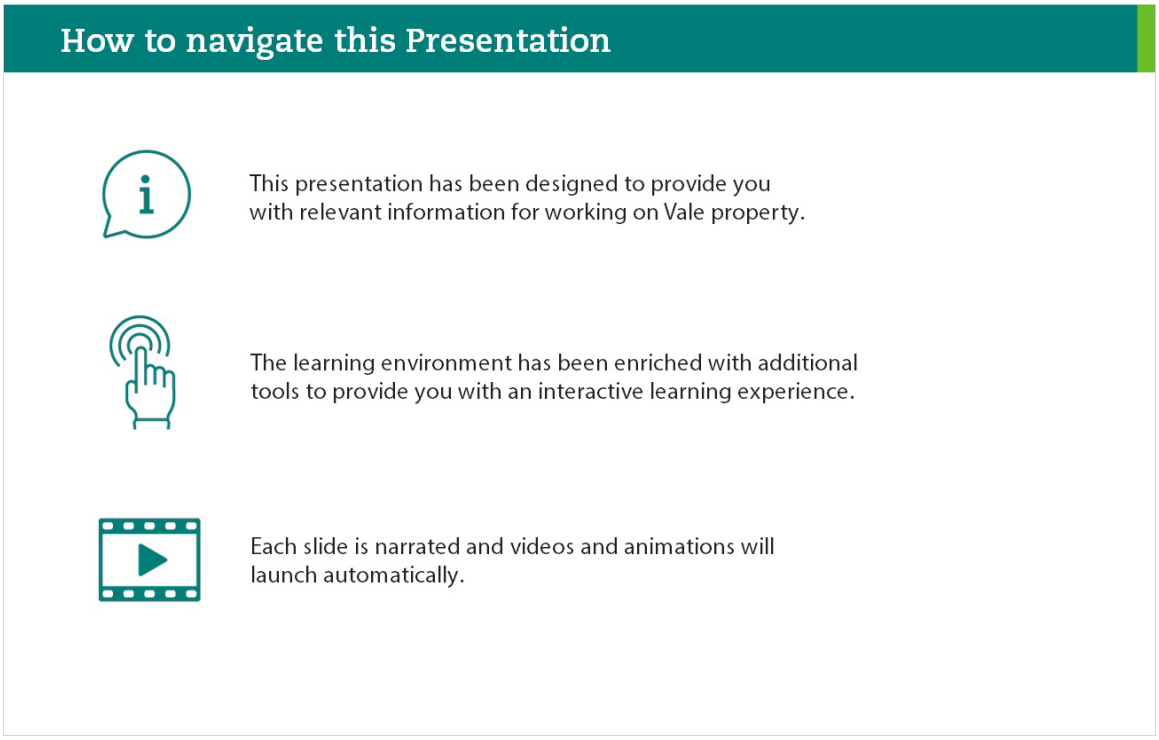
The format, information, ideas and concepts used in this presentation are copyrighted. Reproduction in whole or in part is strictly prohibited. This orientation is for the sole use of personnel of Vale and all divisions and subsidiaries of Vale, and any other use is strictly prohibited without the expressed written consent of Vale.

The information contained within this orientation is intended for controlled use within the Learning and Development Department for Ontario Operations. The content and structure of this orientation provides the learner with an overview of Sudbury Operations focusing on HR policies, Health, Safety and Environment and Operational Controls.

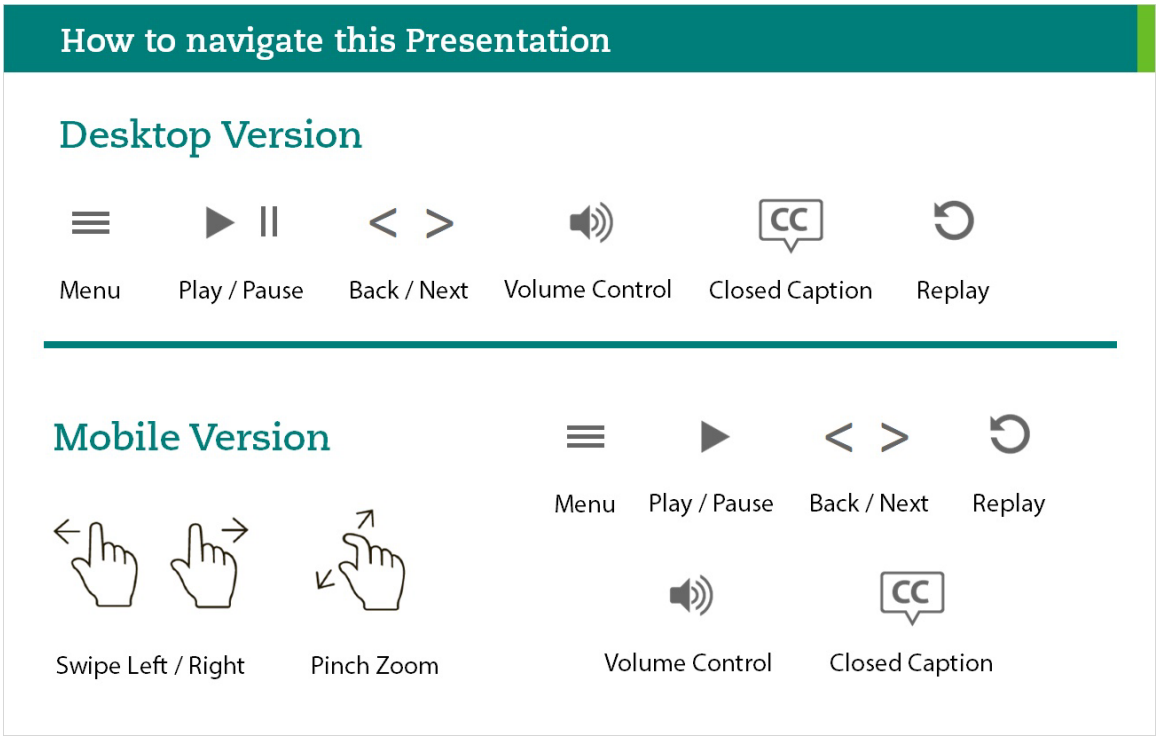
The information herein is intended as a training presentation and is not intended to be the sole source of reference information for this system.

The content of this document is current as of the latest release date. Any discrepancies found should be noted and reported to the Learning and Development Department for action.

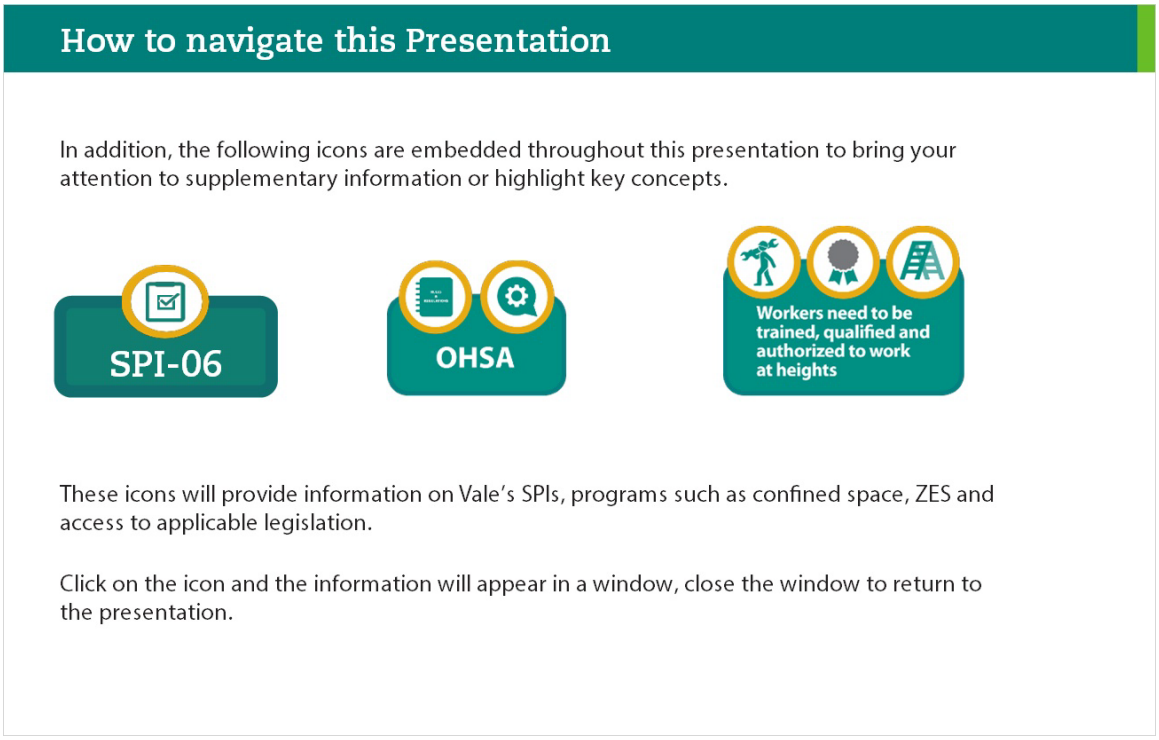
1.3 How to navigate this Presentation



1.4 How to navigate this Presentation

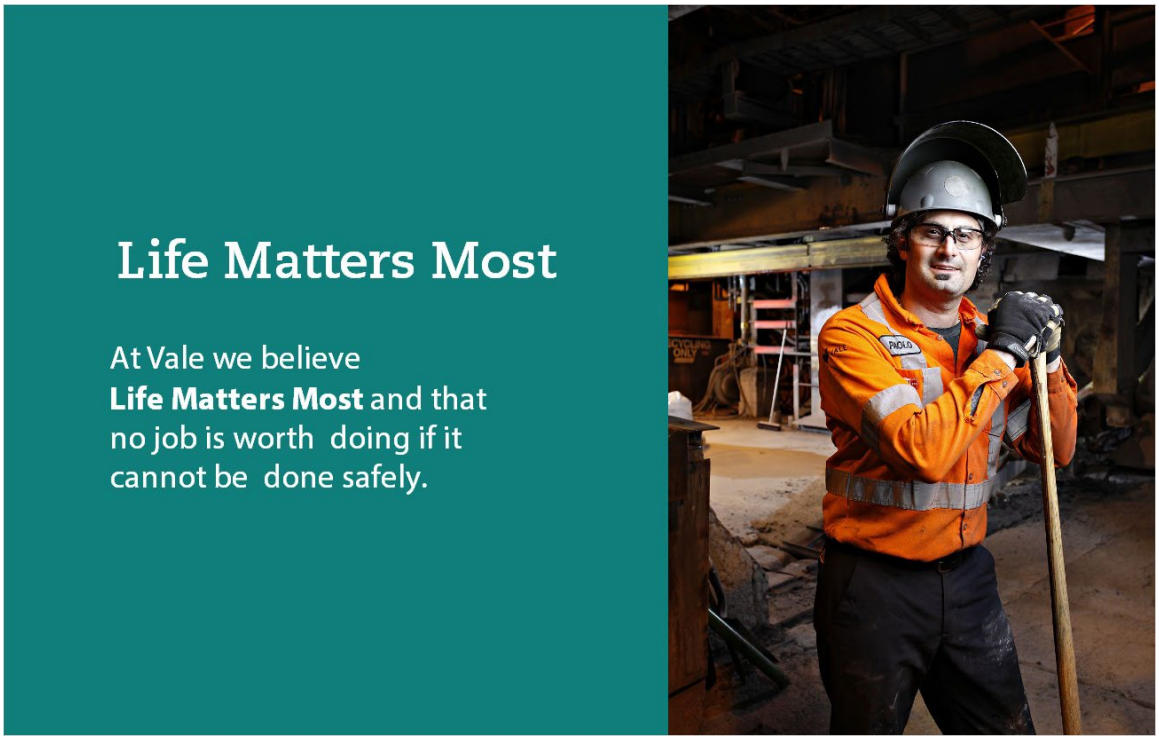


1.5 How to navigate this Presentation



1.6 We are what we do.

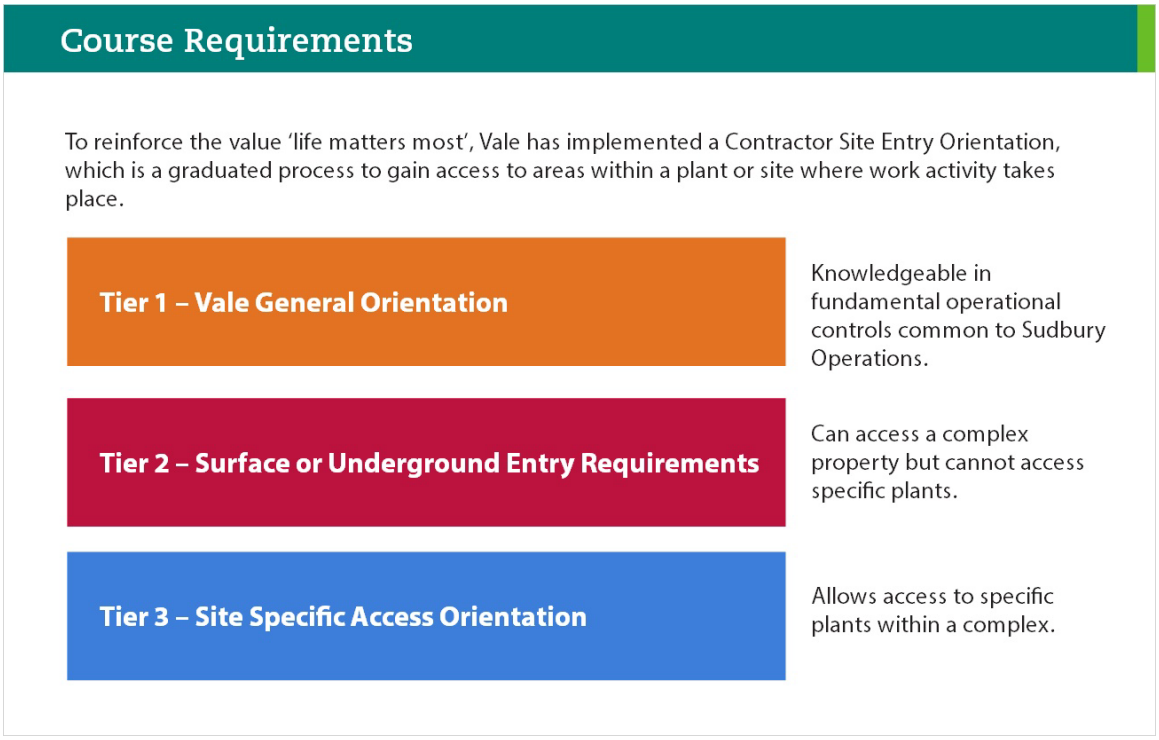
1.7 Life Matters Most



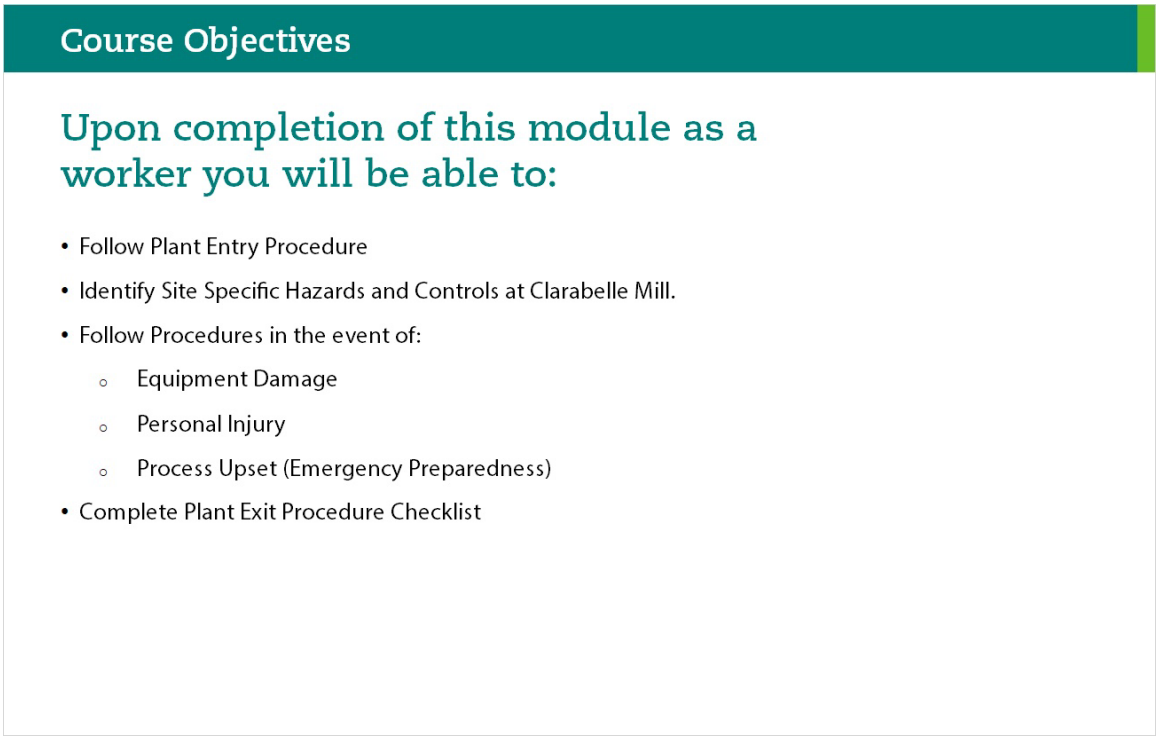
2. Course Requirements

2.1 Course Requirements

2.2 Course Requirements



2.3 Course Objectives



2.4 The Mill Process

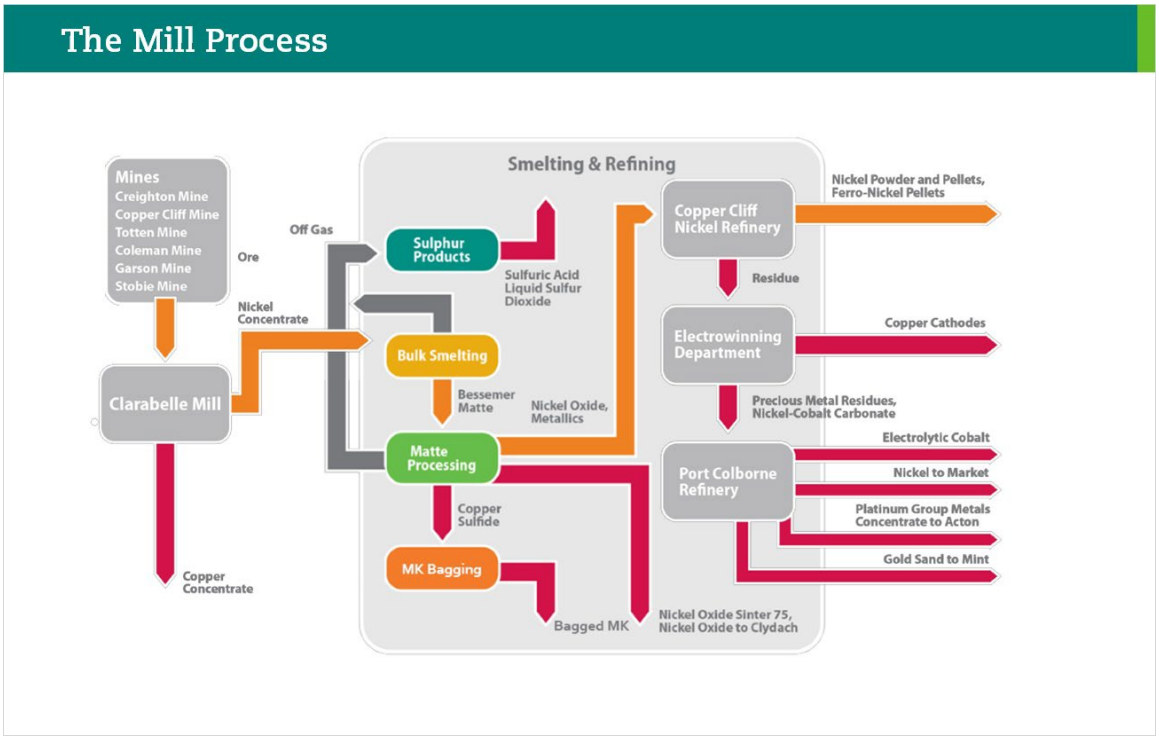
The Mill Process

Clarabelle Mill processes Ore from Sudbury area mines. The Coarse Ore circuit takes the mine ore and directs it to the Crushing plant and the SAG Mill (Semi Autogenous Grinding). From there, the ore passes through the Rod Mills and then the Ball Mills before reaching the Clarabelle Mill Flotation Circuit.

From the Floatation Circuit, Pyrrhotite and rock are removed and sent to Tailings, the Nickel Concentrate is sent to the Booster Station for further processing.

Some Concentrate removed from the ore is sent to the Copper Separation Circuit for further treatment. A copper concentrate is then shipped out as a product.

2.5 The Mill Process



3. Plant Entry

3.1 Plant Entry

3.2 Approaching The Plant

Approaching the Plant

Clarabelle Mill has two points of entry; from RR35 and the town of Copper Cliff.

The Copper Cliff entrance has a gate that restricts access unless you have received authorization and possess a valid Vale Swipe Access Card.

3.3 Parking

Parking

The parking lot at Clarabelle is divided into sections:

Vale Employees: located on the south side of the road, parking spots are available on a first come, first serve basis. The row closest to the guard shack is designated for visitors to the plant (not to be confused with contract workers).

Contract Employees: located on the north side of the road, contractors are required to use the designated pedestrian crosswalk and associated traffic lights to cross the Clarabelle Road.

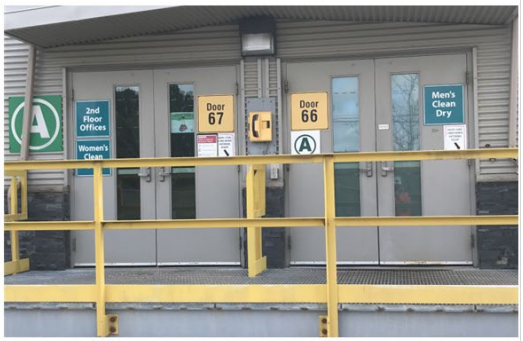
3.4 Approaching Sign-in / Swipe in Location

Approaching Sign-in / Swipe in Location

All individuals, including contractors and visitors, who enter the Clarabelle Mill are required to possess a valid Vale Swipe Access Card, which must be kept on their person at all times and used to swipe in and out at the turnstile check-in/out point.

All contractors and visitors must also sign in when entering the plant, and must sign out when leaving. The sign-in book is located in the guard shack located in the south end of the Vale Employee Parking Lot.

Clarabelle Mill Gate House Entrance



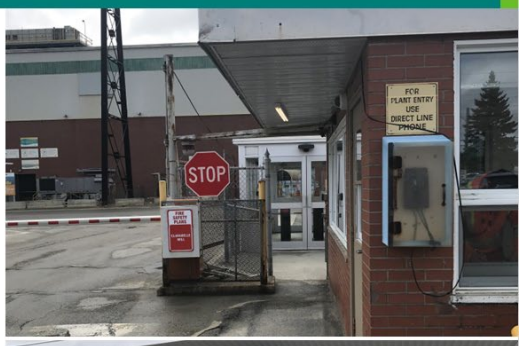
Dry Perimeter Access Doors # 66 or 67

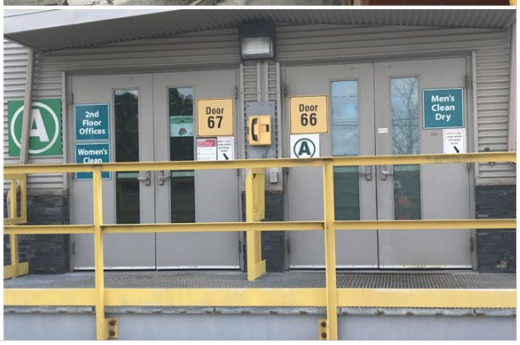
3.5 Approaching Sign in Location

Approaching Sign-in / Swipe in Location

When accessing the plant with a vehicle, only the vehicle driver is permitted to enter the plant if they are authorized to do so.

All passengers are required to exit the vehicle and pass through the turnstile or use Clarabelle Dry perimeter access doors # 66 or 67 and swipe to access the plant, and upon leaving must swipe out before exiting.





Inform your Vale contact person when you are on site so that you may start your job.

4. Plant Hazards and Controls

4.1 Plant Hazards and Controls

4.2 Site Specific Hazards

Site Specific Hazards

Using the tools that you learned in Tier 1 Orientation, ensure you apply the necessary operation controls to mitigate risk associated to the identified hazards.

Be Aware
Be aware of your surroundings and the risks around you.

Follow Policies & Procedures
Our internal policies and procedures guide us in doing our work in a manner that reduces risk.

The following section lists identified hazards that may be encountered in the work you're doing. Knowing if these hazards apply to your work can be found through:

- Vale Contact Person
- PHA/PHR (or other Risk Assessment Tools)
- SLAM

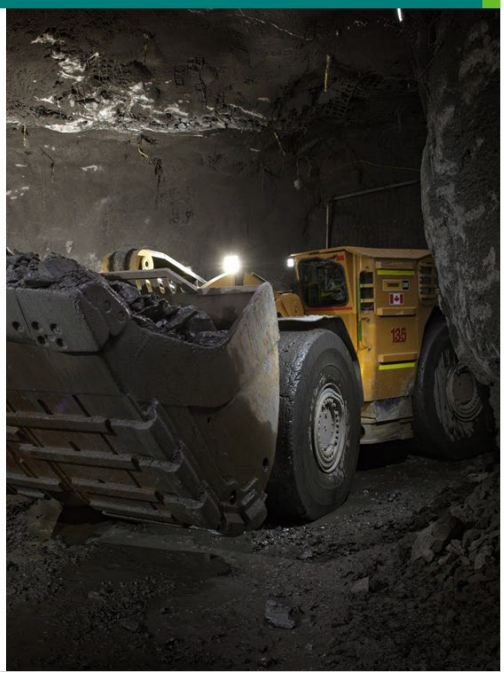
4.3 Site Specific Hazards

Site Specific Hazards

At Clarabelle Mill, workers need to be aware of site specific hazards and their related controls.

These include but are not limited to:

- Overhead Doors
- Conveyors
- Explosives
- Warning Lights/Signs
- Battery Energy Storage System (BESS)
- Wet Muck
- Reagents
- Carbon Disulphide CS_2
- Rubber Lined Pipes



4.4 Overhead Doors - Hazard

Overhead Doors - Hazard

Clarabelle uses overhead doors to access different areas of the plant with mobile equipment.

Pedestrians using these doors introduce several hazards:

- The risk of pedestrians being struck by mobile equipment using the doors for access to buildings.
- Potential compromise of building ventilation, which depends on these doors being in the closed position.

4.5 Overhead Doors - Control

Overhead Doors - Controls

To mitigate the risks associated with doors at Clarabelle Mill, the following steps need to be adhered to:

- Use man doors whenever possible.
- If no man door exists, or no other means to safely gain access or egress, travel through an overhead door only after it is:
  - Stopped and Fully Open.
  - After entering or exiting, return the door to the fully closed position.

If at any time an overhead door does operate properly, i.e. Cannot be fully opened or closed;

- **Do not travel through the door**
- **Place a status tag on the door controls**
- **Rope off the door if required**
- **Contact the control at 6659 to have repairs completed.**

4.6 Conveyors - Hazard

Conveyors - Hazard

Clarabelle Mill has numerous conveyor belts throughout the plant. Operating conveyors present numerous hazards to workers:

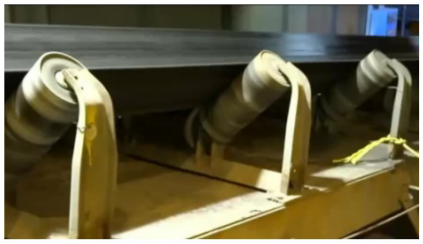
- Moving parts of the conveyor belt assembly can injure workers. Although there is guarding at head and tail ends, the areas in between aren't always guarded.
- Conveyor belts at Clarabelle Mill are most often operated on remote and can be started/stopped at any time without warning; operators in the vicinity can be exposed to moving parts.

4.7 Conveyors - Control

Conveyors - Controls

To mitigate risk…..

- Access to conveyor galleries is restricted.
- All access points have a physical barrier installed to prevent unauthorized access.
- Access can only be granted by the Control Room Supervisor after the belts have been cleared of muck and shut down.
- If there are any jobs or tasks that needs to be performed outside of this procedure, a JHA is to be performed and recorded to minimize the risk and potential danger.



4.8 Conveyors - Muck Slides - Hazard

Conveyors Muck Slides - Hazard

Conveyors on "E" Floor

- "E" Floor of the Crushing Plant has conveyors that present the danger of a potential muck slide out of the feeders.

4.9 Conveyors - Muck Slides - Control

Conveyors Muck Slides - Hazard

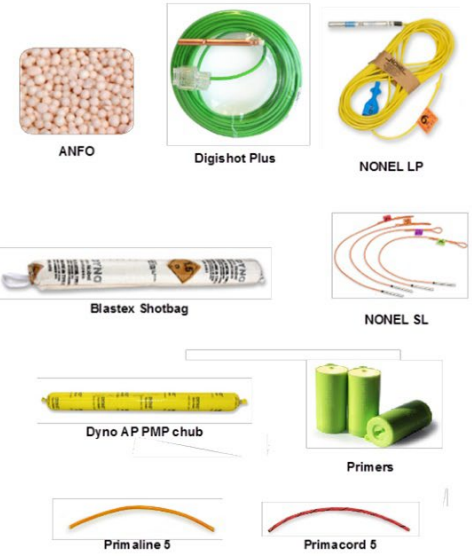
To mitigate risk...

- Signs are installed in the area to warn workers of the hazard.
- Do not go near or under 24-BC-101 unless you call the Control Room and get permission.

4.10 Explosives - Hazard

Explosives- Hazard

Because Clarabelle processes ore that comes directly from the mines, there exists the possibility that explosive materials may be found in the ore.



4.11 Explosives - Control

Explosives - Controls

Any worker who comes across suspected explosives must do the following:

- Treat any suspicious material or device found in the ore that's suspected to be explosives as such.
- If possible, immediately stop any affected equipment.
- Never handle the explosive or in any way attempt to remove the device from the ore.
- Call the Control Room (6659) and inform them that you have found an object in the ore that may be an explosive.

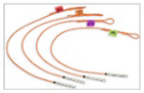
From that point on, the Clarabelle Control room has a detailed procedure on steps to take depending on the circumstances.


ANFO


Digishot Plus


NONEL LP


Blastex Shotbag


NONEL SL


Dyno AP PMP chub


Primers


Primaline 5


Primacord 5

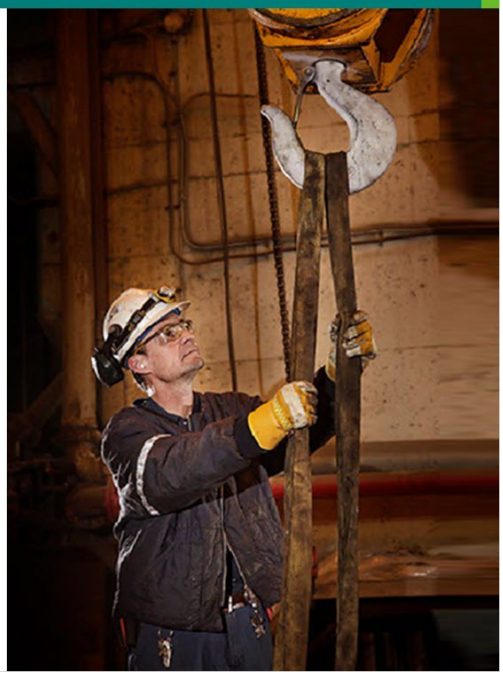
4.12 Crane Movement - Hazard

Crane Movement - Hazard

Cranes are used to facilitate the movement of materials through Clarabelle Mill.

Hazards associated to crane movement include:

- Suspended Loads
- Contact with stationary equipment



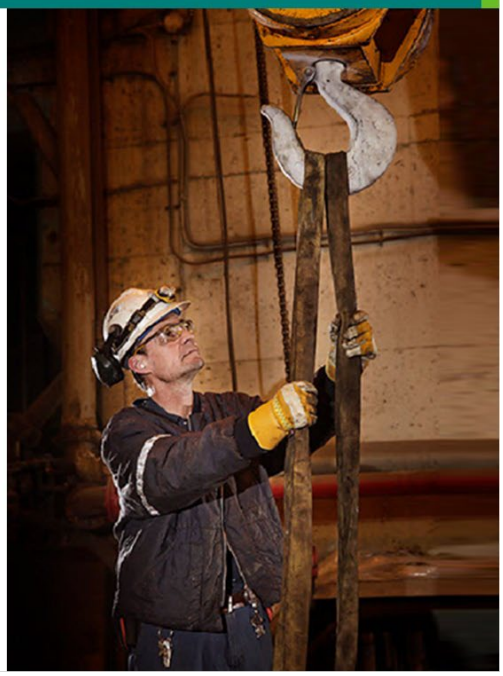
4.13 Crane Movement - Control

Crane Movement - Control

To maintain the safety of employees working around cranes the following controls are in place:

- Flashing red lights indicate that an overhead crane is being used; look up before entering areas.
- The cranes also have sirens to warn you that they are in use.
- Do not walk under a suspended load.

Listen and watch for crane travel before crossing any part of the Mill or Crushing Plant

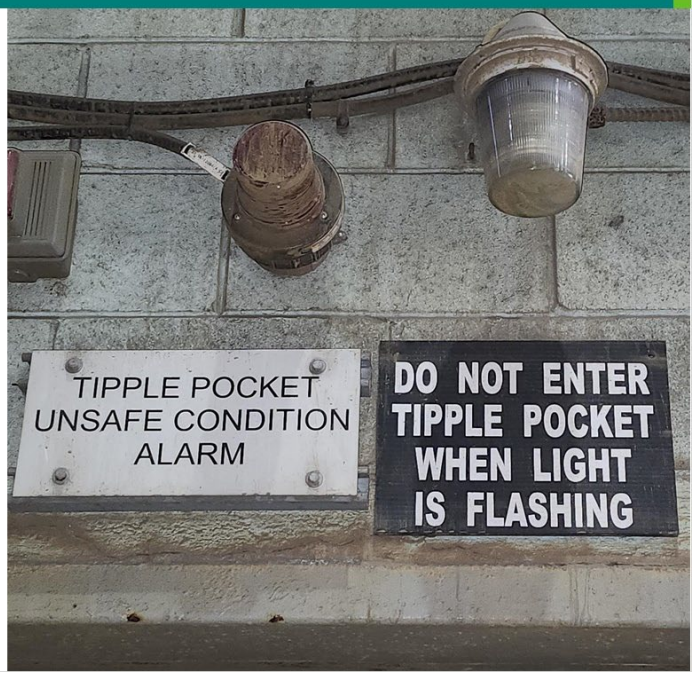


4.14 Tipple Pocket - Hazard

Tipple Pocket - Hazard

Mine ore that comes to Clarabelle Mill is dumped into the Tipple Bin; a bin that goes 250' underground and is pulled with six feeders and two conveyor belts.

When the bin is low, there's a greater chance of muck slide from the feeders below.

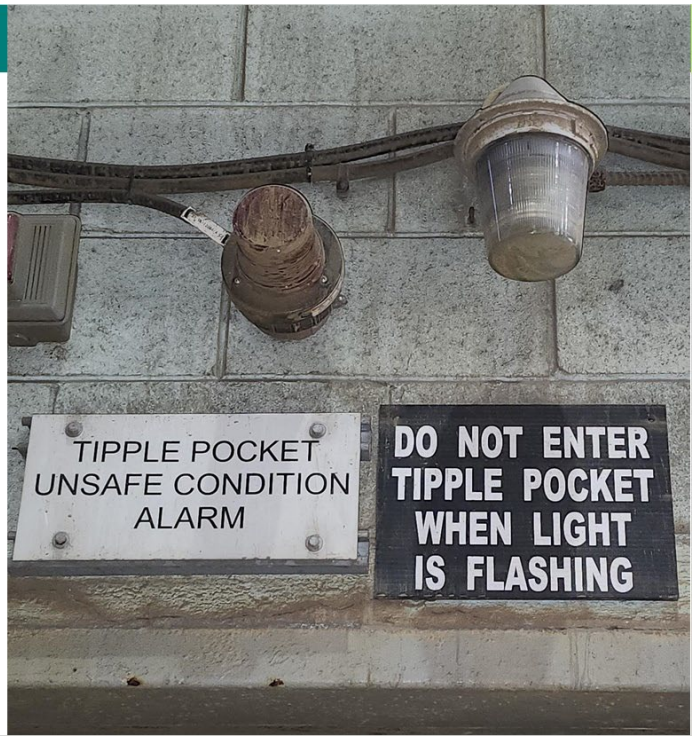


4.15 Tipple Pocket - Control

Tipple Pocket - Control

To maintain the safety of employees working in the tipple pocket, the following controls need to be adhered to:

- If the purple light above the Elevator Door in the Tipple Building is on, do not go down to the Tipple Pocket.
- If already in the area and the purple light in the Tipple Pocket activates, leave the area immediately.
- If the purple light in the incline area just below the Reel House is activated, do not go down to the Tipple Pocket.



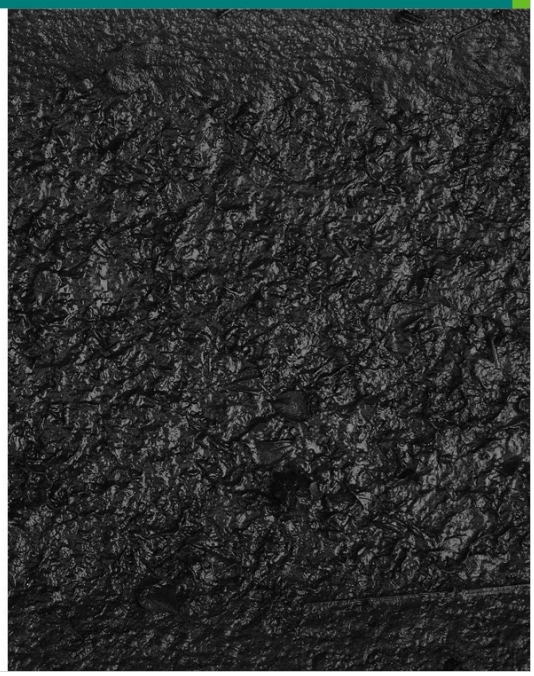
4.16 Wet Muck - Hazard

Wet Muck- Hazard

Mill Ore (muck) from all mines is delivered and dumped in the Tipple by truck and rail car to feed the Clarabelle Mill process.

Wet muck has excessive amounts of water in the ore and appears:

- Wet
- Soupy
- Has a slurry type consistency
- Water is visibly draining from the ore material.

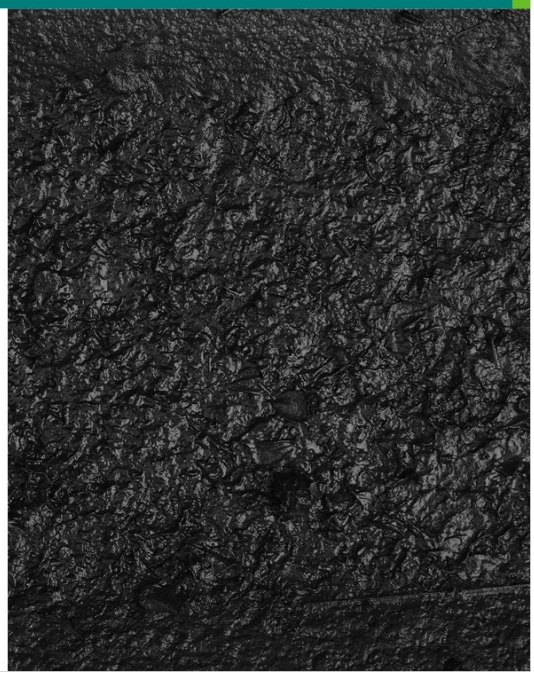


4.17 Wet Muck - Control

Wet Muck- Hazard

Wet muck has the potential to create "run of muck" conditions and poses a significant risk to workers and equipment further down the process including:

- Uncontrolled movement of wet material
- Engulfment of workers
- Damage to equipment



4.18 Wet Muck - Control

Wet Muck- Control

Due to the risks associated with wet muck, the driver must be aware of the controls that are in place to mitigate the uncontrolled movement of wet material.

If the wet muck condition is recognized at the point of loading, the truck needs to be off-loaded to ground at the Copper Cliff Mine Stock Pile Yard.

If the wet muck condition is recognized while dumping the ore at the Tipple, then the driver must immediately:

- Contact Clarabelle Mill DCS Control Room to advise that wet muck has been dumped into the Tipple Bin.
- Advise on the location of the source material (i.e. – which mine was the ore loaded from for delivery).
- Advise the supervisor of the driver so that the ore is stopped being loaded and is investigated.

Clarabelle Mill DCS Control Room:
705-682-6659

4.19 Mill Building 1st - 2nd Floor Ramp - Hazard

Mill Building 1st-2nd Floor Ramp - Hazard

To bring materials from the 1st floor to the 2nd floor of the Mill Building, there is a ramp designated for forklift use.

When the forklift is using the ramp, there is limited distance for pedestrians to be in the same area, increasing the chance of pedestrians being injured.

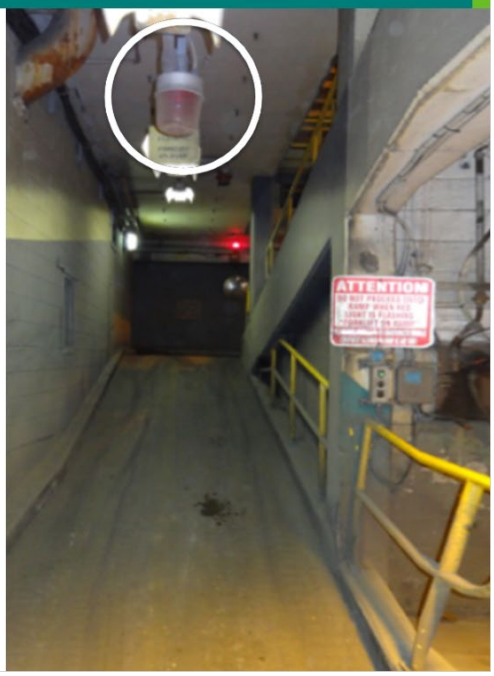
4.20 Mill Building 1st - 2nd Floor Ramp - Control

Mill Building 1st-2nd Floor Ramp - Control

While the forklift is operating, pedestrians are completely restricted from the area and are to take the following action:

- If there is a red flashing light at the entrance to a ramp, a Forklift is using the ramp and no pedestrians can enter; either wait for the light to deactivate or use the elevator.
- As an added precaution while using the ramp as a pedestrian, be aware that the lights can be activated at any time.
- Monitor the convex mirror while walking on the ramp.

Additionally, no buggies, handcrafts or any other unauthorized mobile equipment allowed on the ramp on the ramp at any time. (Only designated for Vale Forklift)



4.21 Flushing Lines - Hazard

Flushing Lines - Hazard

If Clarabelle's operating process gets plugged with material, the Mill Process Operators may need to flush process lines.

Process material existing in these pipes during flushes can exit a 4" line at a rate of over 4000 Gal/Min.

The pressure associated with this flow can easily knock over and injure a worker.

4.22 Flushing Lines - Control

Flushing Lines - Control

To warn workers in the area of a flush, flashing amber lights are located on the north side of the mill building on the pump floor.

Additionally, there are warning signs in this area.

4.23 Reagents - Hazards (General)

Reagents – Hazards (General)

Reagents are compounds or mixtures that are added to process to cause chemical reactions. Some of these reactions create additional hazards due to the reaction.

The following reagents are some of the ones used in Clarabelle Mill's floatation process:

- **FloTec Frother:** Makes bubbles smaller in the floatation process.
- **Lime:** Provides pH control. This product is caustic, upwards of pH12.
- **Percol:** Used to modify the density of liquids.

4.24 Reagents - Controls (General

Reagents – Controls (General)

For the most part, workers will not come into direct contact with reagents at Clarabelle Mill. However, the following are good work practices that will help mitigate any exposures to reagents in the Mill operating areas:

- Use appropriate PPE.
- Standard PPE requirements apply and in addition:
  - Neoprene rubber where prescribed.
  - Respirators in areas identified.
  - Chemical goggles/faceshields in accordance with procedures.

There are specific policies and procedures for work around reagents. In adhering to Golden Rule #1, only qualified and authorized personnel are to complete this work in accordance with these policies and procedures.

4.25 Reagents - Controls (General

Reagents – Controls (General)

Apply standard good hygiene practices;

- No smoking, drinking and/or eating in the workplace.
- Before smoking or eating in designated areas remove PPE, and ensure that all exposed skin surfaces are washed with soap and water.
- PPE must be removed prior to entering the lunchroom.

There are specific policies and procedures for work around reagents. In adhering to Golden Rule #1, only qualified and authorized personnel are to complete this work in accordance with these policies and procedures.

4.26 Reagents - Hazards - By-Products

Reagents – Hazards By-Products

There are also reagents at Clarabelle Mill that pose the same primary hazards as general reagents. However, through their use they cause additional hazards:

- **Sodium Cyanide:** Used in the separation of copper (it makes it float). As it breaks down, it turns into Ammonia and Hydrogen Cyanide Gas.
- **Sulfuric Acid:** Used as a pH modifier and it also has the potential of creating Hydrogen Sulphide Gas (H_2S).
- **Potassium Amyl Xanthate:** allows certain minerals to be attracted to bubbles during floatation. As it breaks down it turns into Carbon Disulphide (CS_2).

4.27 Sodium Cyanide - Hazard

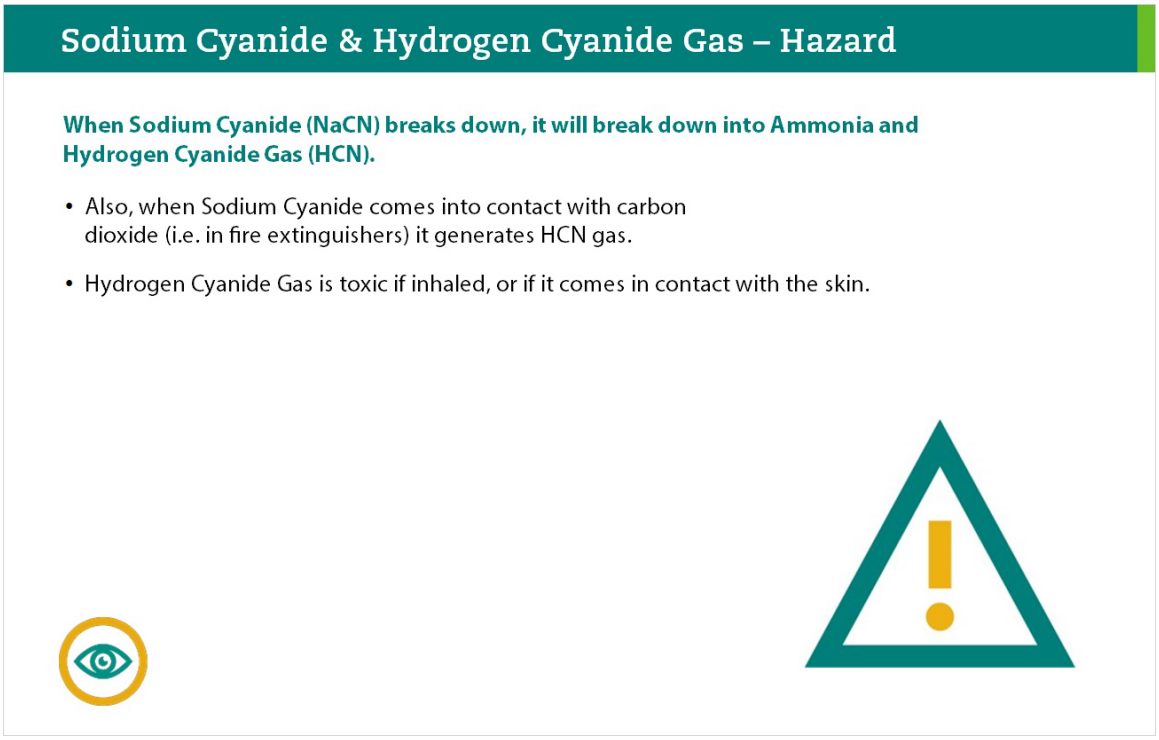
Sodium Cyanide – Hazard

Sodium Cyanide (NaCN) is used during the flotation process. Cyanide's main function is to remove the xanthate from the surface of nickel minerals so that the copper minerals float off which makes an enriched copper concentrate for market.

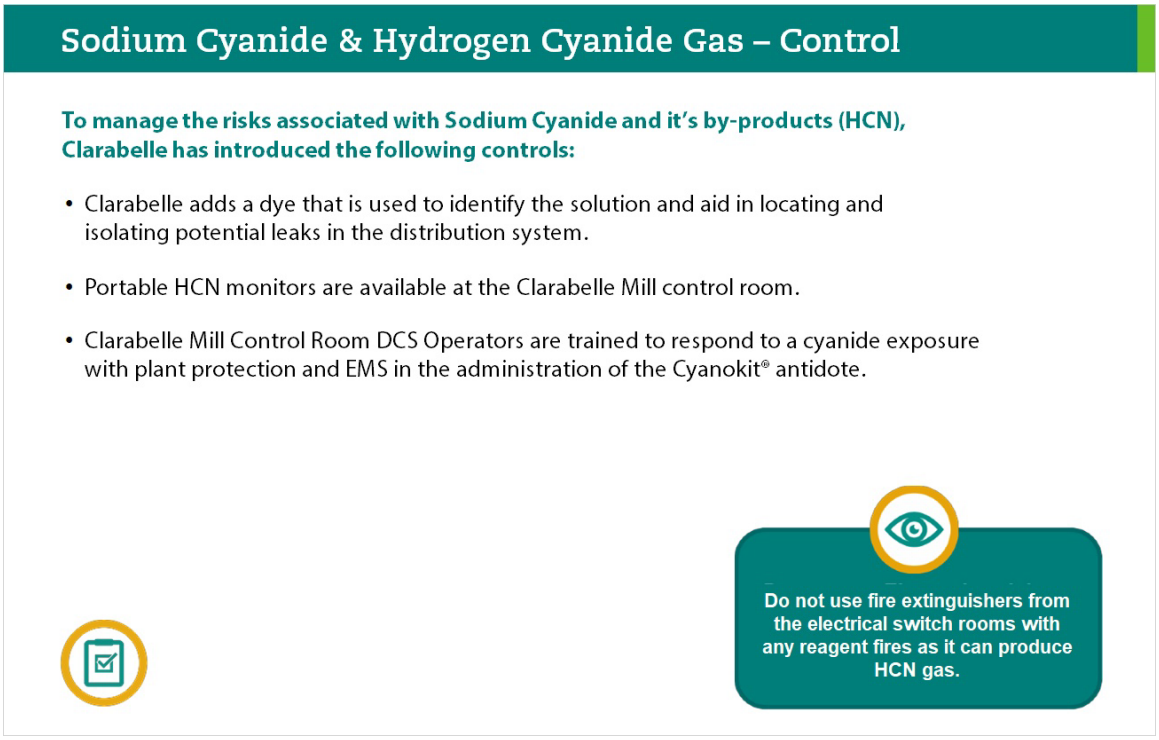
- Cyanide compounds (liquid, solid, and/or gas) are powerful and rapid-acting poisons. They deplete oxygen throughout the body, inhibiting oxygen activity in the cells.

	Inhalation	Absorption	Ingestion
Route	• Readily absorbed from lungs. • Symptom onset: seconds to minutes.	• Rapidly absorbed through skin. • Symptom onset: 30-60 minutes.	• Absorbed through gastrointestinal tract. • Symptom onset: rapidly fatal.
Signs & Symptoms	Throat irritation, metallic taste in mouth, salivation, flushing of skin, headache, weakness of limbs, dizziness, laboured breathing, nausea and vomiting, which can be followed by weak and irregular heartbeat, unconsciousness, convulsion, coma and death.	Dermal absorption: Sodium cyanide liquid is corrosive and may cause severe pain and skin burns. Solutions are corrosive to the skin and eyes, and may cause deep ulcers, which heal slowly. Ocular absorption: Symptoms may include redness, pain, blurred vision, and eye damage.	It is corrosive to the gastro-intestinal tract causing burning in the mouth and esophagus. Larger doses may produce sudden loss of consciousness and prompt death from respiratory arrest. Smaller but still lethal doses may prolong the illness for one or more hours. Bitter almond odour may be noted on the breath or in vomit.

4.28 Sodium Cyanide and Hydrogen Cyanide Gas - Hazard



4.29 Sodium Cyanide and Hydrogen Cyanide Gas - Control



4.30 Hydrogen Sulphide Gas - Hazard

Hydrogen Sulphide Gas – Hazard

Clarabelle uses sulphuric acid to modify pH levels in the floatation process. This acid can be handled safely, responsibly and without incident.

The significant hazard associated with sulphuric acid is that when this it's mixed with sulphide ores, there exists the possibility of creating Hydrogen Sulphide Gas (H_2S).

Hydrogen Sulphide, sometimes referred to as "Sewer Gas" has an Occupational Exposure Limit (OEL) of 10ppm over an 8hr shift.

Range (in ppm)	Associated Health Effects
1-5	Moderately offensive odor, possibly with nausea. Headaches with prolonged exposure.
20-50	Nose, throat and lung irritation. Digestive upset, loss of appetite. Sense of smell starts to "fatigue".
100-200	Severe nose, throat and lung irritation. Ability to smell odor disappears.
250-500	Potentially fatal build-up of fluid in the lungs (pulmonary edema) especially if exposure is prolonged.

4.31 Hydrogen Sulphide Gas - Control

Hydrogen Sulphide Gas – Control

There are controls that can mitigate employees exposure to H_2S:

- **Ventilation:** Clarabelle Mill has engineered ventilation systems to manage airflow through the plant, avoiding any accumulations of reagents and their by-products.
- **Operating Procedures:** there are defined procedures that Mill Process Operators follow with the use of reagents.
- **Testing:** whether personal monitors, or electronic sensors installed in certain areas, levels of Hydrogen Sulphide are monitored.

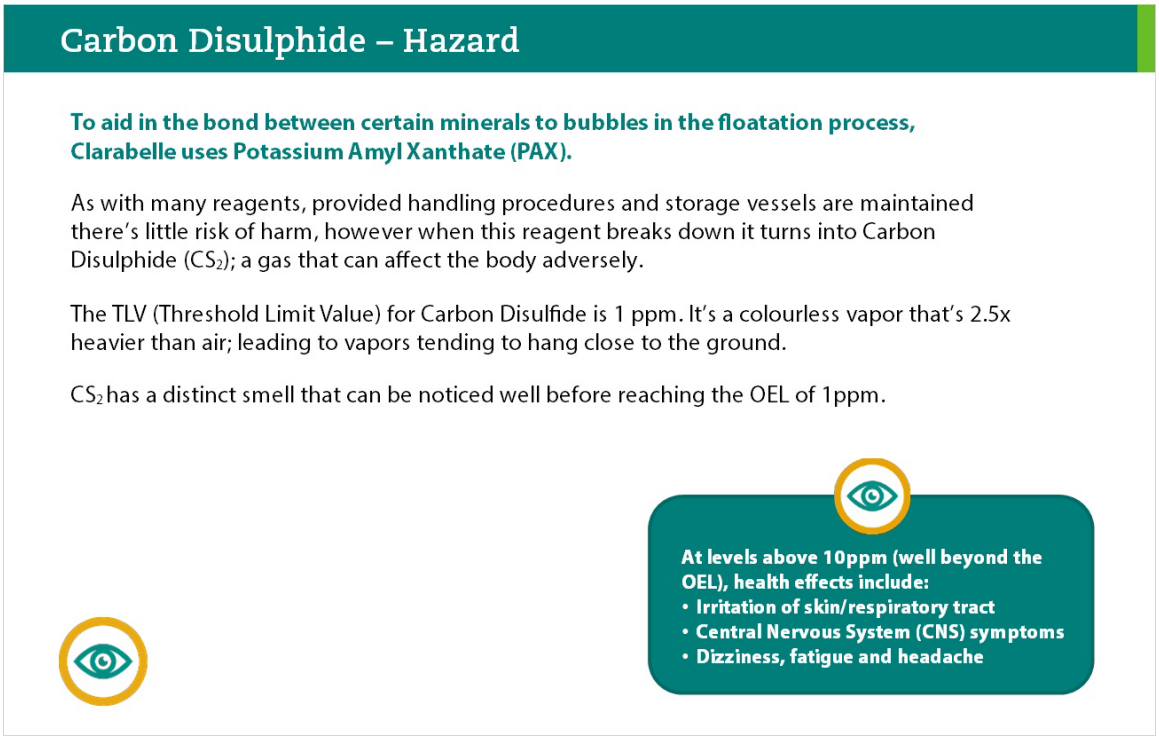
4.32 Hydrogen Sulphide Gas - Control

Hydrogen Sulphide Gas – Control

Additionally, a continuous monitoring system has been installed.

- If the acid room or sulphuric acid addition points read 3 ppm level of Hydrogen Sulphide, a red light and an intermediate siren will signal to stay out of the areas of high elevations.
- At 10 ppm of H_2S, an Outvac continuous alarm will be sounded to evacuate the building.

4.33 Carbon Disulphide - Hazard



4.34 Carbon Disulphide - Control

Carbon Disulphide – Control

To manage the risks associated with CS_2, Clarabelle has introduced the following controls:

Engineered ventilation systems: to maintain airflow to dilute accumulation of airborne contaminants.

Restricted Access: depending on concentrations of CS_2 some areas are identified with either signage ropes/chains or swing gates as being restricted unless respirators are worn.

PPE: the use of ½ face respirators fitted with organic cartridges will protect workers to 10x the OEL.

**Powered Air Purifying Respirators have restrictions; not all models have the ability to filter CS_2. Inquire with your Vale Contact Person as to their use.

4.35 Carbon Disulphide - Control

Carbon Disulphide – Control

Respirator Protection

Due to the chemical properties of CS_2, respirators with organic vapor cartridges used in a CS_2 contaminated area require more frequent respirator cartridge change out.

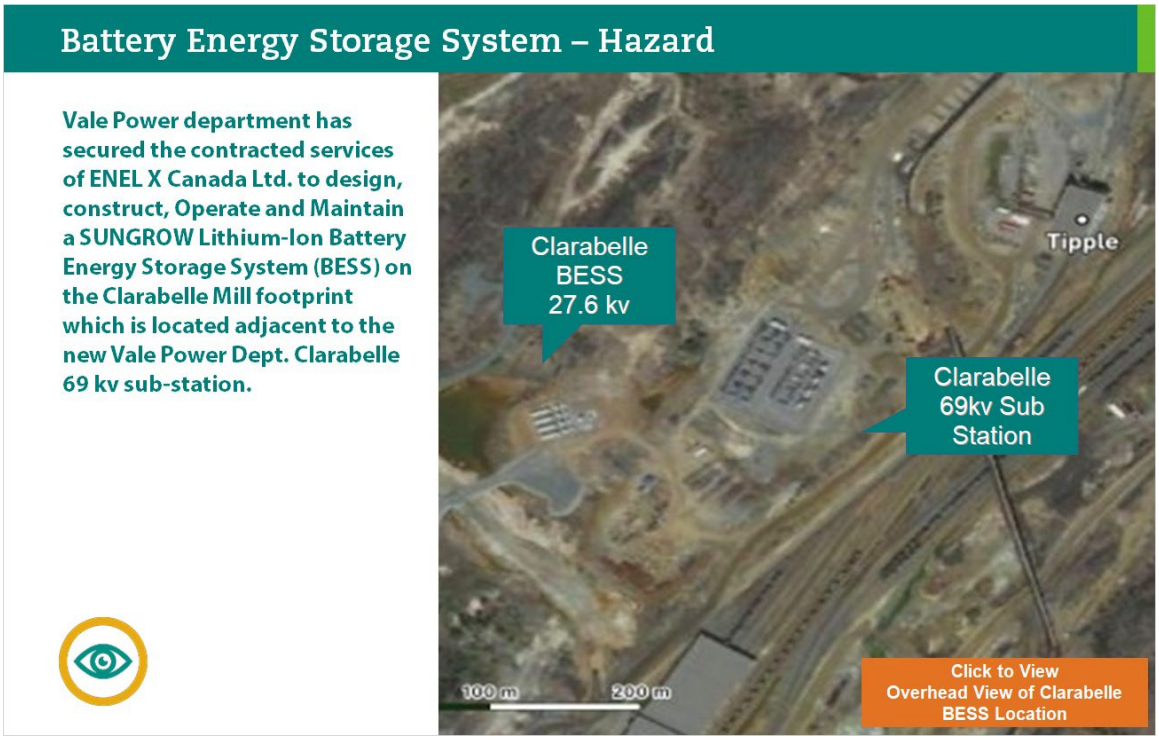
Current respirator cartridge change frequency for Vale workers:

Change Frequency – Summer Use
Using 3M respirators is 3 hours.
Using Honeywell (North) MSA respirators is daily.

Change Frequency – Fall/Winter/Spring Use
Using 3M respirators is 6 days.
Using Honeywell (North) MSA respirators is daily.

Note: The change frequency is based on current conditions and is subject to change. Contractor assessments are required to determine required respirator cartridge change frequency.

4.36 Battery Energy Storage System – Hazard



Overhead view (Slide Layer)

Hide
Overhead View of Clarabelle
BESS Location

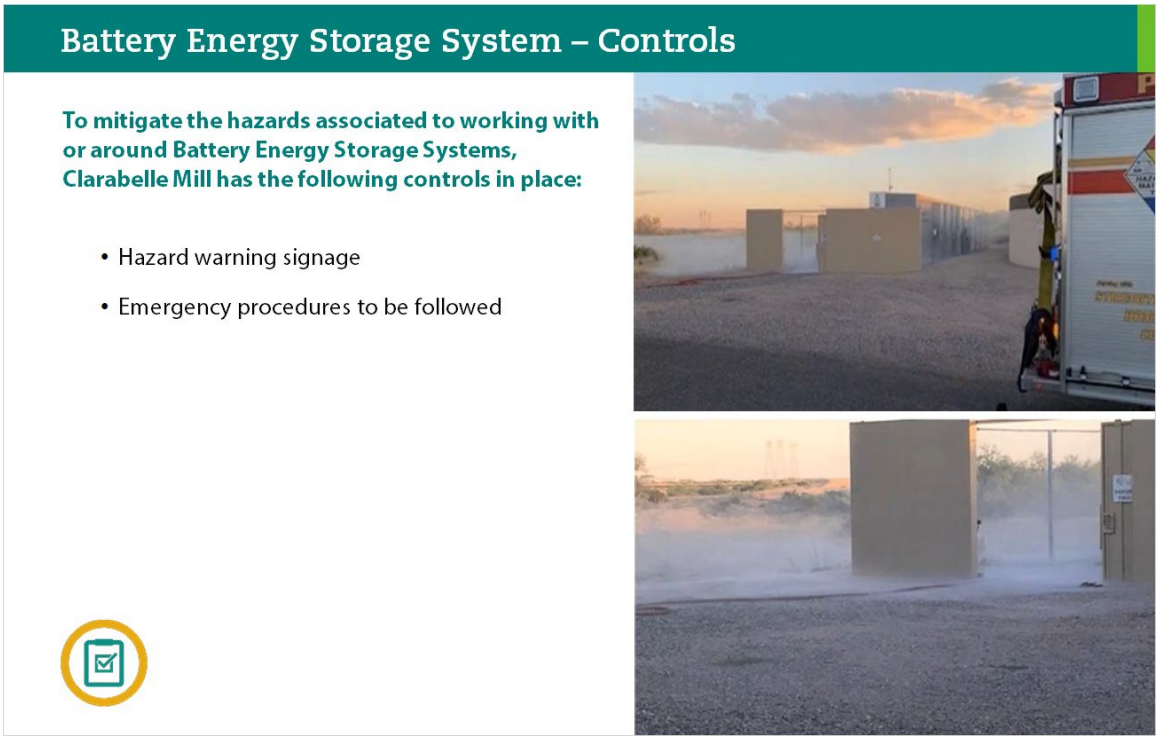
4.37 Battery Energy Storage System – Hazard

Battery Energy Storage System – Hazard

The Clarabelle BESS Emergency Management Risk Assessment hasbeen completed and the potential hazard of Battery Thermal Runaway has been identified, leading to the following hazards:

- Fire, which could include batteries and other components with toxic smoke
- Off-Gassing without fire, which include toxic gases such as;
  - Carbon monoxide (CO)
  - Hydrogen fluoride (HF)
  - Hydrogen cyanide (HCN)
- Explosion. (Hydrogen, Hydrocarbons)
- Smoke

4.38 Battery Energy Storage System – Controls

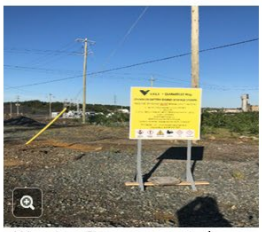


4.39 Battery Energy Storage System – Controls

Battery Energy Storage System – Controls

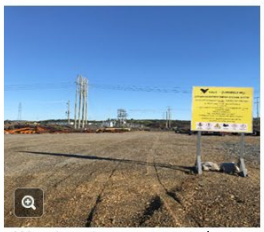
Hazard warning signage has been placed at the following locations.

Perimeter Fencing warning signage



Warning Signage erected on the North-East corner of the Clarabelle 69kv Sub-Station

Warning Signage erected at Access Road of Clarabelle Road



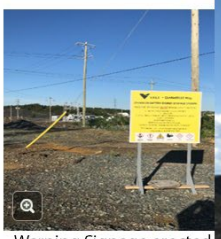
Warning signage erected at the SAG Mill waste liner storage area past Tipple

Untitled Layer 1 (Slide Layer)

Battery Energy Storage System – Controls

Hazard warning signage has been placed at the following locations.

Perimeter Fencing warning signage



Warning Signage erected
the North-East corner of t
Clarabelle 69kv Sub-Statio

4.40 Battery Energy Storage System – Controls

Battery Energy Storage System – Controls

Emergency procedures

1. In the event of emergency if you see or smell smoke or fire near the battery containers or the fire suppression alarm sounds, DO NOT APPROACH the containers, notify the Clarabelle Control Room of the emergency:

   - Move away from the emergency,

   - Clarabelle Control Room to notify Vale Power Dept # 1 Sub Control Room Operator at (705)-682-6677 and report "There is an Emergency at the Battery Energy Storage Facility at Clarabelle Mill".

2. Clarabelle Control room to activate a Level 1 alarm for INVAC and accounting of personnel.

***Everyone* is to *know* and *understand* their role in the event of an emergency.**

4.41 Battery Energy Storage System – Controls

Battery Energy Storage System – Controls

Emergency procedures

3. The On-Scene Coordinator will be supplied by Vale Power Dept. who has a better understanding of the BESS, and can coordinate a controlled shut-down of the BESS to mitigate the event.

4. The Clarabelle First Responders may be required during a BESS Level Emergency to facilitate a water supply for Greater Sudbury Fire Service (GSFS), the following Clarabelle Mill Fire Hydrants have been identified to facilitate a water supply for GSFS.

   - Tipple wall hydrant
   - Hydrant # 8 near the Clarabelle fuelling bay
   - Hydrant # 9 near OH Door # 11
   - Hydrant # 6 near the electrical shop

***Everyone* is to *know* and *understand* their role in the event of an emergency.**

4.42 Rubber Lined Pipes - Hazard

Rubber Lined Pipes – Hazard

Rubber is bonded to metal or plastic to provide a tough, corrosion resistant lined pipe. Clarabelle Mill sometimes uses rubber lined pipes and vessels in it's process.

- The health hazard common to rubber lined pipes is the potential for fire during hot work.

4.43 Rubber Lined Pipes - Control

Rubber Lined Pipes – Control

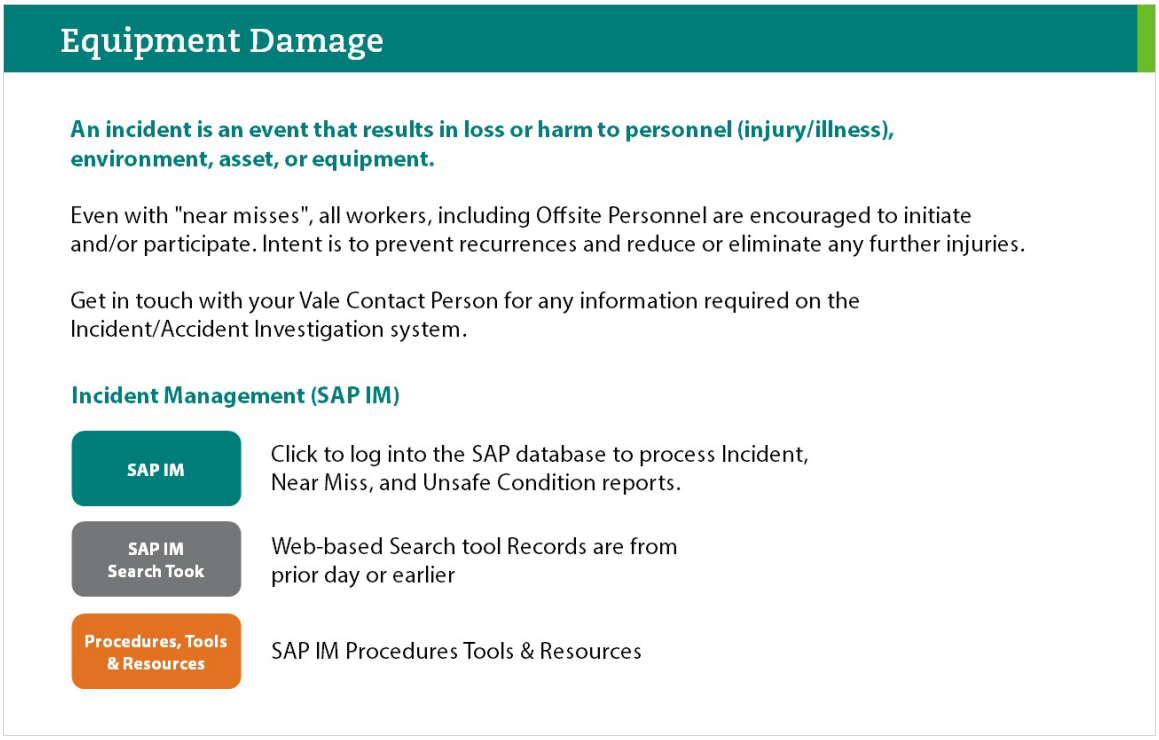
To mitigate the risk of fires with rubber lined pipes, Clarabelle has implemented the following:

- All pipes at Clarabelle Mill are presumed to be rubber lined and must be treated as such, until proven otherwise.
- All rubber lined pipes and vessels in the vicinity of hot work should be capped with a non-flammable cover, and mechanically fastened, to prevent it from being accidentally or inadvertently removed.
- All hot work must be guarded by a dedicated fire watch guard with a fully charged and **running** water hose capable of directing water at the pipe or vessel; this is to prevent fire, not to fight fire.

5. Equipment Damage

5.1 Equipment Damage

5.2 Equipment Damage



6. Personal Injury

6.1 Personal Injury

6.2 Personal Injury

Personal Injury

Clarabelle Mill

In the case of personal injury, generally, contact your Supervisor….. report immediately to First Aid. In the event you cannot physically report to First Aid, phone first aid:

Emergency Numbers

Gatehouse……5738

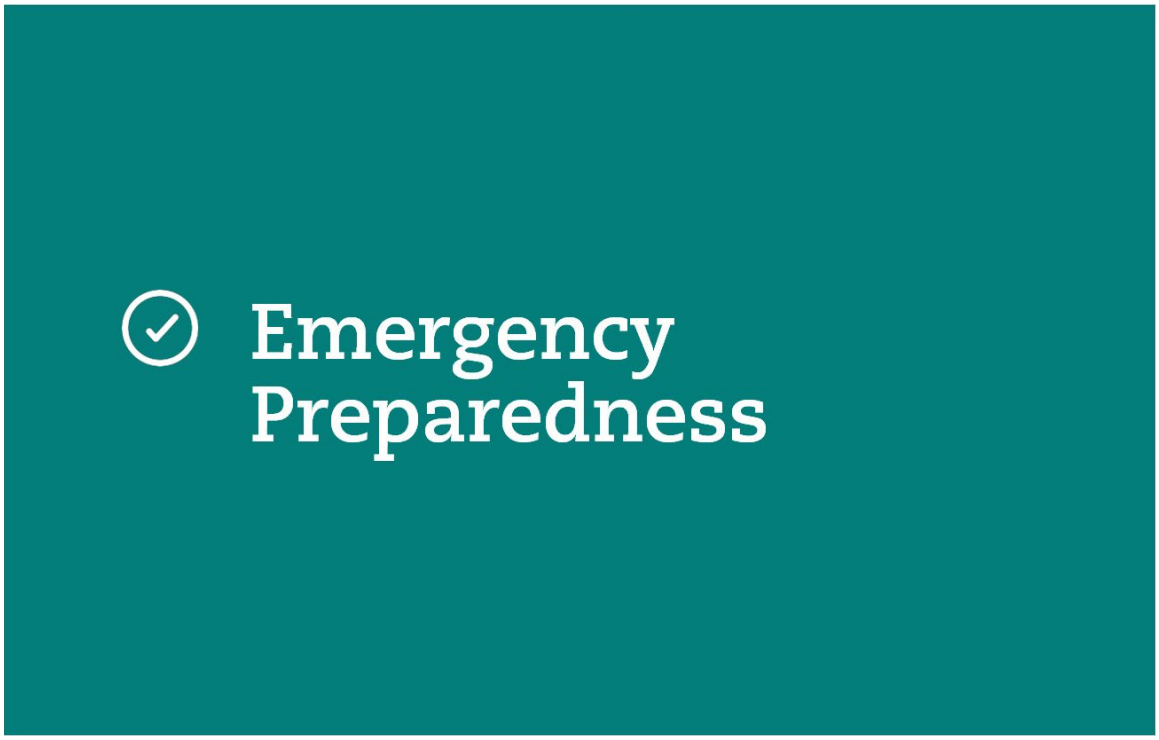
Ambulance……..……..……6622

Fire……..……..……6622

Clarabelle Mill Control Room…….…...6659

7. Emergency Preparedness

7.1 Emergency Preparedness



7.2 Emergency Preparedness

Emergency Preparedness

The Surface Tier 2 Orientation provided guidance on the application of Emergency Preparedness including activating an emergency and how to classify.

The following is how to respond to an emergency at the Clarabelle Mill.

7.3 Clarabelle Mill

Notification – Clarabelle Mill

Before you begin work, find out:

- Where the nearest phone is
- Where the emergency numbers are posted
- What the nearest door number is

All roads have signage.

All maps have routes identified.

Emergency Numbers

Clarabelle Mill First Aid……..5738
Clarabelle Mill Control Room….6659
#1 First Aid……6622
Ambulance……6622
Fire……..6622

7.4 Emergency Preparedness Procedures – Site Specific

Accessing the INVAC / OUTVAC Area – Employee Dry

During either an Invac or Outvac emergency, workers are to leave their area from the nearest available exit and proceed to the assembly area inside the Employee Dry and follow the assembly procedures, making sure to account for all workers present.

** Those in the Tipple area report to the Tipple area lunchroom (invac) or the Tipple area parking lot (outvac), and account through the Clarabelle Control Room DCS.

7.5 Emergency Preparedness Procedures – Site Specific

Accessing the INVAC / OUTVAC Area – Employee Dry

All Vale Production & Maintenance employees enter Door 60/66 and assemble on the dirty side of the dry in posted designated areas.

All other personnel, including Staff, visitors, women and contractors will enter door 62/67 and assemble on the second floor.

8. Plant Exit

8.1 Plant Exit

8.2 Plant Exit

Plant Exit

Good work practices dictate that you close the loop on work you were doing to avoid creating risks or hazards for other work groups, cross shifts, or other work in the area. Here are some tasks to consider when getting ready to exit the plant to ensure your safety and that of those around you:

Housekeeping: Is your worksite cleaned up after your job?

Personal Lock and Tag: Has your personal protection been removed at the end of the shift?

Status Tagging: Is there ongoing work that needs a status tag placed or is there equipment in Bad Order that needs to be identified?

End States: Have you left the process in the proper state?

Waste Segregation: Have you disposed of materials in the appropriate waste receptacles/bin/area?

Control room: Do I need to let the control room know that I'm clear of an area?

Vale Contact Person: do they need an end of shift report from me?

Permits: do I need to close or hand in any permits?

Sign out: at the gate or other designated areas.

9. Conclusion

9.1 Conclusion

9.2 Conclusion

Conclusion

This concludes the material for the Clarabelle Mill Tier 3 Orientation. You should now have a working knowledge and understanding of:

- Plant Entry
- Site Specific Hazards and Controls for Clarabelle Mill
- Procedures in the event of:
  - Equipment Damage
  - Personal Injury
  - Process Upset (Emergency Preparedness)
- Plant Exit Procedure

This Orientation provided information to access the Clarabelle Mill. In order to feel comfortable with the area, you may arrange a field visit with your Vale Contact Person to specifically identify procedures provided in the Orientation.

Additionally, depending on the site or work you're doing, you may require task-specific information through either the local Learning & Development Group or your Vale Contact Person.

9.3 Start The Module Quiz