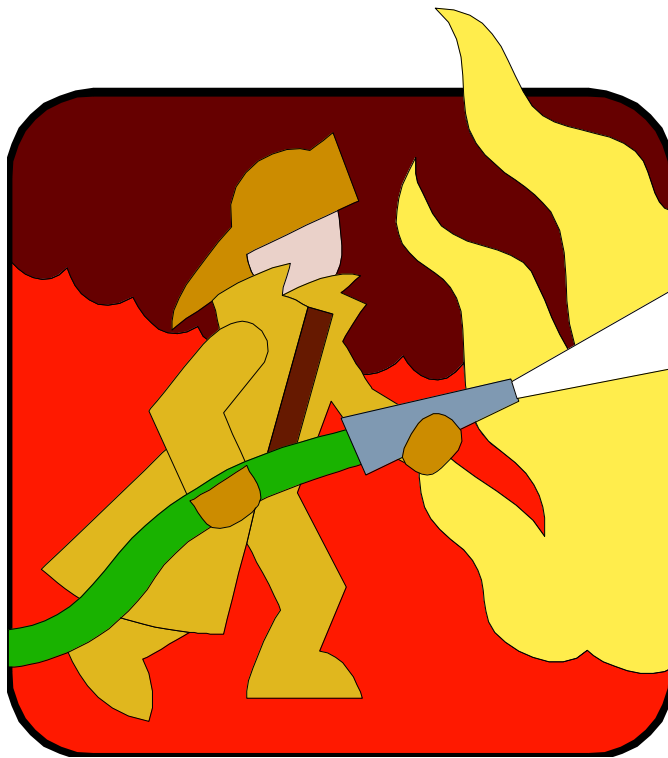


CREIGHTON MINE



**UNDERGROUND
FIRE PROCEDURE
17EMER02
EQUAL CODE
SA213**

CREIGHTON MINE

<u>CRITICAL</u> YES X NO	<u>STANDARD PROCEDURE</u> Underground Fire Procedure	PROCEDURE NO. 17EMER02
OSHA. REG.		

AREA: CREIGHTON MINE

CROSS REFERENCES	MR: <u>MINES REFERENCE MANUAL</u>	MT: <u>MINES TRAINING</u>
	SPI: <u>SPECIAL PROCEDURE INSTRUCTION</u>	LP: <u>LOCAL PROCEDURE</u>
MR:	OSHA:	
MT: EQUAL CODE – SA213	OSHA:	
SPI:	OSHA:	
LP:	OSHA:	

ORIGINATOR:	D. O'Connor	DATE: Jan. 2007
1 ST REVIEW/REVISION BY:	D. O'Connor	DATE: Jan. 2008
8 TH REVIEW/REVISION BY:	B. Keen	DATE: Dec. 2011
58 TH REVIEW/REVISION BY:	P. Aho	DATE: March 2022

<u>REVIEW</u>	
CREW: Print Name _____ Signature _____	Supervisor: Print Name <u>Peter Amiran</u> Signature _____
CREW: Print Name _____ Signature _____	SAFETY Supervisor: Print Name <u>Al Chenier</u> Signature _____
CREW: Print Name _____ Signature _____	OSHE: Print Name <u>Dave Lisi</u> Signature <u>Dave Lisi</u>
CREW: Print Name _____ Signature _____	Training Supervisor: Print Name _____ Signature _____
CREW: Print Name _____ Signature _____	Superintendent: Print Name _____ Signature _____
APPROVER: Print Name <u>John Ryan</u> Signature _____	Mine Manager <u>[Signature]</u> DATE: _____ NEXT REVIEW DATE: May 2023

SAFETY REQUIREMENTS:

1. Annual review by ALL plant personnel
2. Annual Fire Drills to be conducted

CREIGHTON MINE UNDERGROUND FIRE PROCEDURE (17EMER02)

April 20, 2022

GENERAL

1. This is the general procedure to be followed, both on surface and underground, in case of fire underground or fire in any plant building which, in the opinion of the Supervisor-in-Charge, endangers the mine entrances. Copies of this procedure, or suitable excerpts, shall be kept posted in the shaft collarhouse, Refuge Stations, and other prominent places.
2. All persons employed underground, and those who are required to go underground for any reason, must know the standard practice for fire procedure. At least **once a year**, all department heads, both on surface and underground, shall review the fire procedure with their people to ensure that all are familiar and kept fully informed of those parts of this procedure that affect them, and that they understand their proper course of action in the event of a mine fire or fire warning.
3. The Senior Supervisor on Site will be in direct charge of Rescue and Fire Fighting operations and will assume the duties of the Person-in-Charge, who will issue all orders at the time of the emergency. All other departments, including Safety, Mines Technical Services & Geological Services Groups and Maintenance are to be available for duties as outlined by this standard procedure. This procedure has been prepared to deal with any mine fire and it is left to the discretion of the "Supervisor-in-Charge" to modify the various operations in the event of an emergency.
4. All doors are to be left in the position found and no changes are to be made in fan operations until such changes are authorized by the Supervisor-in-Charge.
5. In the event that the phones are not working at the time of a fire emergency, the surface recorders are to use the radio system to contact each refuge station. To avoid confusion and to speed up the process, the Supervisor-in-Charge will designate which radio channels are to be used by the surface recorders.
6. In the event of a power outage, the VOIP phones do not function, only the copper phone lines can be used to contact the refuge stations. In the event this occurs, using a copper phone line, dial the refuge station phone number using all 7 digits instead of the last four. Otherwise the call won't go through.

FIRE CONTROL BASE:

The Fire Control Base is located in Conference Room A.

TELEPHONE 692-2797

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PROCEDURE IN CASE OF FIRE UNDERGROUND

SECTION A - PROCEDURE FOR PERSONS UNDERGROUND

A. PERSONS DISCOVERING THE FIRE

If the fire is small and the person discovering it is able to extinguish it without delay, he/she should do so as outlined below and then notify the Surface Control Room Operator (#2255) and his/her supervisor.

1. Small Electric Fire

Do not use water on these fires. Cut off the power at the nearest switch, if it is possible to get to the switch. If the fire is on a battery powered piece of mobile equipment, extinguish the fire with an appropriate extinguisher, if available. Extinguish the fire with a fire extinguisher approved for use on electrical apparatus. Proper extinguishers are located near all electrical equipment. Care must be taken to avoid getting into heavy fumes produced by fire.

2. Small Oil Fire

Water must not be poured directly onto an oil fire, but a fog nozzle may be used. A Dry Chemical or other approved extinguisher should be used on a small oil fire. A small oil fire burning on a liquid surface, such as a sump or container may be extinguished by using a fog nozzle, or by cutting off the air supply to the fire.

In case of an oil fire the extinguisher must be directed at the base of the fire and not at the flames.

3. Small Fire - Not Oil or Electric

Try to extinguish it at once, using the handiest equipment available - water hose if fire is in development heading or stope, standard fire hose if one is at hand, an extinguisher if available, or sand, fines or gravel.

4. Acetylene Fire

If possible turn off the valves at the tanks. If not possible; then apply water to the tanks with a water hose to cool the tanks. Try to turn off the valves. If not possible, evacuate the area and contact supervision

April 20, 2022

PROCEDURE IN CASE OF FIRE UNDERGROUND
SECTION B - FIRE BEYOND IMMEDIATE CONTROL OR SMOKE FROM A FIRE WHICH CANNOT BE LOCATED

If the fire has gained considerable headway, or if the air is very smoky the person discovering the fire should immediately proceed to the nearest Refuge Station leaving all doors as found. Notify the Surface Control Room Supervisor (#2255), and your Supervisor.

Fire Warning

1. A fire warning is given to the people underground simultaneously by radio notification and injecting stench (Ethanethiol) into the fresh air system. The odour of this gas is similar to rotten onions. On receiving this warning all persons underground are to follow the instructions outlined in **Section C** below.

SECTION C - PROCEDURE FOR PERSONS UNDERGROUND ON RECEIVING FIRE WARNING

1. **All persons will proceed at once to Refuge Stations** leaving the doors as found and **being careful to avoid smoky areas.** Report to the Refuge Station Person-in-Charge.

Procedure for Mobile Equipment Operators

- a) The operator must immediately park the vehicle in a safe location and proceed to the nearest Refuge Station.
- b) Parking of vehicles on the ramp is not permitted when there is a fire warning.

2. **Refuge Station Procedure**

One person will take charge and carry out the Standard Refuge Station procedure as follows:

- (a) Close the door and put out all cap lamps but one.
- (b) Plug the drain pipe, ventilation pipe and cracks in the door with clay.
- (c) Refuge Stations equipped with air conditioning units that draw air in from outside the refuge station, are to turn off the A/C and close the shut-off damper inside the Refuge Station. If equipped with a wall mounted style, they can be left on as they do not require outside intake air to operate properly.
- (d) Refuge stations equipped with auxiliary fans that draw air in from outside through an intake louver, are to turn off the exhaust fan and ensure the intake louver closes as well. If the louver stays open, manually close the louver.
- (e) Use a compressed air line only for auxiliary ventilation. Remove the plug in the door after compressed air is turned on.

PROCEDURE IN CASE OF FIRE UNDERGROUND

1. Refuge Station Procedure (cont'd)

- (f) Have all persons sit down and keep quiet. Do not allow people to congregate in groups, keep them spread out through the Refuge Station.
- (g) Station a person at the door to allow others to enter. Do not leave the door open longer than is absolutely necessary and chink the door immediately after closing.
- (h) Have a person walk around occasionally to assist in circulating the air.
- (i) Remain in the Refuge Station until taken away by Mine Rescue or until official instructions have been received. **The air outside the station may be apparently free from gas while actually it may contain Carbon Monoxide which is colourless and odourless but VERY POISONOUS.**
- (j) Chemical toilets are available for use during the emergency only.

Reporting Procedure

- (a) Upon arriving at the Refuge Station the Supervisor or designated person will proceed to fill in the "Refuge Station Report to Surface" form. On it, list the names of any staff personnel or visitors and the serial numbers of all personnel who have reported in at the Refuge Station. **List personnel in the appropriate columns.**
- (c) When contacted from surface give the information on the form to the recorder.

**NOTE: REFUGE STATIONS ARE " NOT " TO CALL SURFACE. YOU WILL BE CONTACTED FROM SURFACE
IF YOU HAVE NOT BEEN CONTACTED WITHIN 1 HOUR CALL 2797 AND REPORT.
WORKING ALONE WILL BE CANCELLED. YOU ARE TO REINSTATE YOURSELF ONCE THE ALL CLEAR IS GIVEN.**

3. Levels Without Refuge Stations

All personnel receiving the fire warning on levels where Refuge Stations are not provided, will go to the nearest Shaft Station or Emergency Fresh air station if one is available unless prevented by smoke and/or fire.

- a) All mine doors must be left in the position found.
- b) On arriving at the Shaft Station, phone the #9 Shaft S.S.L. (#2777) for instructions. The SSL will inform the Supervisor-in-Charge and receive direction.
- c) For areas at #3 Shaft, if working in the Natural Heat Exchange Area off of the ramp from surface to 1725 level and you have entered an Emergency fresh Air station, contact the Control room by radio to inform them of your location.

PROCEDURE IN CASE OF FIRE UNDERGROUND

4. 3 SHAFT REFUGE STATION PROCEDURE (COMPRESSED AIR CYLINDERS)

The first person will take charge and carry out the Standard Refuge Station Procedure as follows (this person may relinquish the position to someone more senior or more qualified once arrived):

- (a) Close the door and put out all cap lamps but one.
- (b) Plug the drain pipe, ventilation pipe and cracks in the door with clay.
- (c) Use the compressed air (5 Jumbo) cylinders to pressurize the Refuge Station by:
 - i) Turn on the first air cylinder only
 - ii) Watch the air pressure by checking the gauge regularly, when the gauge reaches a pressure of 100 psi close the cylinder.
 - iii) Turn on the next cylinder and repeat step ii) above.
 - iv) Contact the **CONTROL BASE at 2797** each time a new cylinder is turned on.
 - v) Do **NOT** adjust the regulator.
 - vi) Remove the plug in the door after the first compressed air cylinder is turned on.
- (d) Have all persons sit down and keep quiet. Do not allow anyone to congregate in groups, keep them spread out through the Refuge Station.
- (e) Station a person at the door to allow others to enter. Do not leave the door open longer than is absolutely necessary and chink the door immediately after closing.
- (f) Have a person walk around occasionally to assist in circulating the air.
- (g) Remain in the Refuge Station until taken away by Mine Rescue or until official instructions have been received. **The air outside the station may be apparently free from gas while actually it may contain Carbon Monoxide which is colourless and odourless but VERY POISONOUS.**
- (h) Chemical toilets are available for use during the emergency only.

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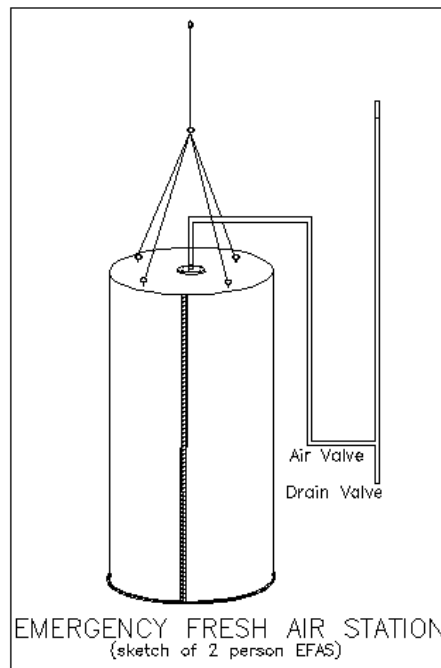
PROCEDURE IN CASE OF FIRE UNDERGROUND EMERGENCY FRESH AIR STATION PROCEDURE-Tent Style

NOTE:

The Emergency Fresh Air Stations are temporary shelter offering breathable air in the event of an emergency. They are intended for use in the event of a fire **ONLY** if you are unable to reach a refuge station or are trapped in the workplace due to smoke.

Procedure

1. Proceed to Emergency Fresh Air Station (EFAS).
2. Turn on compressed air valve (main line) to EFAS.
3. Un-zip the access door and step inside. (Watch footing on tubing floor as it is slippery)
4. Re-zip the door shut.
5. Ensure that compressed valve (inside roof) is open to pressurize the enclosure.
6. Contact the Control Room via radio, give the location, name and numbers of persons inside . and verification the compressed air is on.
7. Remain inside of enclosure until Mine Rescue arrives or released by the Control Group.



PROCEDURE IN CASE OF FIRE UNDERGROUND EMERGENCY FRESH AIR STATION PROCEDURE-Tent Style - #3 Shaft

NOTE 1:

The Emergency Fresh Air Stations are temporary shelter offering breathable air in the event of an emergency. They are intended for use in the event of a fire **ONLY** if you are unable to reach a refuge station or are trapped in the workplace due to smoke.

NOTE 2:

Due to the location of the EFAS, personnel won't have time to open the bottle valves before entering the EFAS, therefore **ALL** bottle valves are to be in the open position at all times. The regulators will be pre-set to supply 85 LPM (3 cfm) of breathing air, sufficient for 4 people.

Procedure

1. Proceed to Emergency Fresh Air Station (EFAS).
2. Un-zip the access door and step inside. (Watch footing on tubing floor as it is slippery)
3. Re-zip the door shut.
4. Turn on the cascade breathing air cylinder master valve located in the top of the tent.
5. Contact the Control Room via radio, give the location, name and numbers of persons inside . and that the breathing air cylinders have been opened.

Remain inside of enclosure until Mine Rescue arrives or you have been released by the Control Group.

PROCEDURE IN CASE OF FIRE UNDERGROUND

EMERGENCY FRESH AIR STATION PROCEDURE – Hard Sided style

NOTE:

The Emergency Fresh Air Stations are temporary shelter offering breathable air in the event of an emergency. They are intended for use in the event of a fire **ONLY** if you are unable to reach a refuge station or are trapped in the workplace due to smoke. A Hard sided Emergency fresh air station is currently located on 6970 level.

Procedure

1. Proceed to the Emergency Fresh Air Station (EFAS)
2. Remove the door seal and crack open the compressed air valve inside the EFAS.
3. If the compressed air line fails, close the valve and open the cascade breathing air bottle system master valve.
4. Slowly open the inlet regulator valve to supply 40 psi.
5. Open the regulator valve and adjust the floating ball inside the regulator to supply 3.0 cubic feet per minute (cfm).
6. Contact First Aid via radio and give the location, name and serial numbers of the persons inside.
7. Remain inside of EFAS until Mine Rescue arrives or released by the Control Group.
8. Once the ALL CLEAR has been received, close either the compressed air valve or the cascade system master valve.
9. Bleed off any residual pressure in the regulator by turning counter clockwise.
10. Report to your supervisor so the system can be recharged.

PROCEDURE IN CASE OF FIRE UNDERGROUND

7. 6800 SNO REFUGE STATION PROCEDURE

For a Vale generated fire alarm, SNOLAB personnel will follow the SNOLAB Underground Lab Fire Safety Plan. The Lab Response Coordinator will take charge and carry out the SNOLAB Refuge Station procedure as follows:

- (a) Complete the SNOLAB UG Fire Checklist and 6800 Refuge Station Report to Surface forms.
- (b) When contacted from surface give the information on the form to the recorder. If there are more than 10 people in the refuge station, email or fax the list of personnel to the appropriate surface recorder.

**NOTE: REFUGE STATIONS ARE " NOT " TO CALL SURFACE. YOU WILL BE CONTACTED FROM SURFACE !!!
IF YOU HAVE NOT BEEN CONTACTED WITHIN 1 H OUR CALL 692-2797 AND REPORT.**

- (c) Remain in the Refuge Station until escorted by Mine Rescue or until official instructions have been received. **The air outside the Refuge Station may be apparently free from gas while actually it may contain Carbon Monoxide which is colourless, odourless and tasteless; but VERY POISONOUS.**
- (d) For a SNOLAB generated fire alarm, the Lab Response Coordinator will follow the steps outlined in the Underground Lab Fire Safety Plan and will notify the Control Room Operator of the status.

PROCEDURE IN CASE OF FIRE UNDERGROUND

8. Use of dead end or "blind" headings

In the event of a mine fire there is a possibility that some people might not be able to reach a Refuge Station or other previously arranged safe location due to smoke or gas. In such an emergency they should retreat from the smoke into a dead end or "blind" heading. Turn off the auxiliary vent fan, if operating and retreat as far back in the heading as possible. If compressed air is available, open the valve to pressurize and prevent smoke from entering.

Personnel are to wait in the heading until instructed otherwise by the Control Group and/or Mine Rescue.

9. Use of Compressed Air

When there is not time or material to build a proper barricade, compressed air from a header or hose may be used to provide good air in the immediate base area, either by keeping the smoke away, or by providing a small zone of good air close to the header. To ensure that the person gets only air from the header, the person should cover it with a coat or piece of vent tubing etc., and keep their head under the cover.

10. Procedure for Logistics Personnel at No. 9 Shaft

Upon smelling stench or receiving notification of a fire, proceed immediately to the nearest Refuge Station.

ACTIVE REFUGE STATIONS	PHONE NO
1040 Level - EFAS	radio (Cascade System)
1500 Level	2621 (Cascade System)
3800 Level	2145
4000 Level	2730, VOIP - 2408
4600 Level	2406
5000 Level	2624
5400 Level	2646
5800 Level*	2250
6200 Level	2429
6400 Level	2456
6600 Level	2366
6800 Level	2468
6800 Level – SNOLAB	2752
6800 Level – EFAS	2266
6970 Level – EFAS	2681, VOIP - 2436
7000 Level	2770, VOIP - 2405
7200 Level	2384, VOIP - 8120
7200 Level Garage	2512, VOIP- 2382
7400 Level	2348, VOIP -2486
7400 Level Garage	2359, VOIP -2499
7530 Level	2567, VOIP -2487
7680 Level	2569, VOIP -2509
7810 Level	2165, VOIP -2168
7940 Level	2162, VOIP- 2279
8070 Level	2426,
8200 Level	2162, VOIP – 8199
8330 Level	TBD

Note: Refuge stations marked with an asterick (*) may be decommissioned at a later date once Div. 4/5 has been completely decommissioned.

Note: In the event of a power outage, only the copper phone lines work. The full 7 digit number must be dialed and only from another copper phone line. The exchange code for the copper lines is 682.

PROCEDURE IN CASE OF FIRE UNDERGROUND

Mine Rescue Team Briefing Guideline

The following questions need to be answered and used for team briefings including 2 sets of 11" x 17" prints. These questions are routinely used by mine rescue teams during briefing throughout the province:

1. What information is available about the incident
2. Is the fire a battery or battery electric vehicle fire?
3. If battery related; are the MSDS sheets available?
4. If the fire is at SNOLAB what type of fire is it?
5. If the fire is at SNOLAB, where is the fire?
6. If the fire is at SNOLAB is HAZMAT required?
7. Where and how many persons are missing including last location and specialized training (first aid, mine rescue). These need to be put on the prints.
8. What actions have been taken so far up to team briefing
9. What is the Intention of Control group for team (see to safety of personnel, fight fire(s), etc.)
10. Where is the fresh air base location (get under oxygen) and status of backup/standby teams
11. Is incident a potential heat exposure (fire, explosion, loss of ventilation)
12. Identify communications that are available and locations, is leaky feeder system working in area?
13. Ensure that channel 16 is used by mine rescue teams for communications
14. What is the current status of Mine infrastructure such as air, water, electricity (power shutoff, locked), etc.
15. Identify the refuge station locations in immediate area (phone number)
16. Identify potential rest or cooling areas
17. Identify the route of team travel and transportation (type, large enough for team and patients)
18. What are the expected conditions on route of travel, including heat exposures (any obstructions such as supply trucks, etc.)
19. Was there any seismic activity in this area today? Check with MTS.
20. What is the ventilation paths (fresh air, return air, is it normal today) ?
21. What is the visibility expected along the route of travel ?
22. What Mine Rescue equipment is available or required for the team ?
23. Identify the location of fire fighting equipment and hydrants/stand pipes ?
24. Identify the location of first aid equipment and stretcher caches.
25. Identify the location of tools and supplies (garages, shops, tool rooms, etc).
26. Establish a time limit for the team to complete their tasks of 2 hours. (4 hour apparatus)
27. Provide the team with written instructions and maps. There are 2 sets required, 1 for team and 1 for the briefing officer to use for recording team progress and data.

**PROCEDURE IN CASE OF FIRE UNDERGROUND
SURFACE CONTROL ROOM OPERATOR'S PROCEDURE**

DATE OF FIRE _____ TIME FIRE REPORTED _____
LOCATION OF FIRE OR SMOKE _____ REPORTED BY _____
DESCRIPTION OF FIRE: _____

IMPORTANT:

- Detailed Screen Instructions are on Page 18 & 19 if required.

1. Time of Stench Injection _____ TIME _____
2. **You will inject stench by:**
 - (a) Activating the Fire Screen and press the fire sequence buttons Auto stench injection system. Go to detailed screen to check valves etc. _____ TIME _____
 - (b) If the automatic system does not fire, try to manually inject stench from the stench injection page. If this fails, contact the First Response Person and instruct them to inject the stench manually as per the procedure on page 18. _____ TIME _____
3. Notify the S.S.L. & have 1 person go to stench Room to verify stench has injected.
TIME of Notification _____ TIME of "All Clear" _____
4. Call Protection Services Office at 2292.
TIME of Notification _____ TIME of "All Clear" _____
5. **NOTIFY THE MINE MANAGER and SENIOR ON CALL** _____ **TIME OF NOTIFICATION** _____
7. Shut down the muck circuit.
TIME of Notification _____ TIME of "All Clear" _____
8. Contact the Sand plant to have the pour stopped.
TIME of Notification _____ TIME of "All Clear" _____
9. Contact the Water Treatment plant (692-9500, 692-2310) to stand-by for assistance if required.
TIME of Notification _____ TIME of "All Clear" _____
10. Call personnel on page 17 _____ TIME of notification _____
11. **Assume the duties of the supervisor-in-charge until relieved by senior management.**
12. Assign personnel to carry out the MTS duties if you haven't been able to contact any MTS personnel (pg. 29 – 43).

NOTE: A) When there is no S.S.L. at No. 9 Shaft, the Control Room Operator must carry out the following duties on receipt of a fire alarm: (Page 20)

- i. **ONLY** inject stench if there are people Underground
- ii. Re-call anyone if line was busy

13. Notify **ONLY** those called in steps 3 thru 9 when the **"ALL CLEAR"** has been given

Control Room Supervisor _____

April 20, 2022

PROCEDURE IN CASE OF FIRE UNDERGROUND

CONTROL ROOM OPERATOR FIRE PROCEDURE

(List of Senior Officials to be called)

In the following lists, **CONTACT MINE MANAGER, SENIOR ON CALL** and only one person in each group - try the first name if no answer, try the second, if no answer, try the third, etc

Tell them that they are the first to be notified in their group.

NAME	POSITION	I.P PHONE	HOME PHONE	TIME CALLED
John Ryan	Mine Mgr.	692-2212	705-692-9665	_____
		Cell	705-507-0175	_____
Sr. Mine On-Call		SEE CURRENT SENIOR ON CALL LIST		_____
SNOLAB Manager On call		SEE CURRENT SNOLAB ON CALL LIST		_____

Paul Aho	Vent. Spec.	692-2215	705-525-5199	_____
			Cell 705-923-1042	_____
Cindy Grenier	Vent Tech.	669-4772	Cell 705-465-2738	_____

Contact ONE person below to call out 12 MTS personnel

Brandon Smith	CME	618-4086	Cell 705-618-4086	_____
Robert Pelkey	CMG	692-2550	Cell 705-280-5995	_____
Dave Lisi	Worker Rep.	692-2600	705-670-2701	_____
			Cell 705-561-4619	_____
Lyle Young	OSHE		705-866-5538	_____
			Cell 705-929-6538	_____
Steve Saari	OSHE		705-585-1603	_____
Dave Lachance	OSHE		705-692-9981	_____
Stephen Langen	OSHE		705-692-4292	_____

Control Group at 692-2797

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PROCEDURE IN CASE OF FIRE UNDERGROUND

FIRE RESPONSE SCREEN

AUTO OPERATION

1. The Fire Response Screen is called up by activating the Fire Response Control Button which is located on the main menu screen.
2. In order to initiate the system, the Sequence Control Buttons have to be activated.
 - a) Seq. #1 -touch once.
 - b) Seq. #2 -touch twice.
 - c) Seq. #3 -touch three times.

NOTE: It is important to ensure that there is a green bar around the buttons before the next sequence is started.

3. Once the sequence buttons have been activated a "MASTER BUTTON" will appear just below the 3 sequence button.

"THE MASTER BUTTON" when activated will:

- A) Actuate the Auto Stench System.
- B) Activate the Auto Purge Valve (this valve will stay open for 15 minutes).
- C) Activate an Announcement over all mine radio channels that Stench has been injected. This is repeated 5 times.

If all the systems are properly activated, the box which has "Stench Injection" written in it will turn from yellow to green indicating that all of the systems have properly injected stench.

MANUAL OPERATION – CONTROL ROOM

Should a system not inject, try to manually inject that system from the Control Room stench panel. To do this proceed as follows:

1. Click on the STENCH CONTROL button once.

NOTE: The system injecting (Main or Back up) will be highlighted by a green outline.

2. Click on the appropriate injection button for the cylinder(s) that didn't inject.

April 20, 2022

PROCEDURE IN CASE OF FIRE UNDERGROUND

MANUAL STENCH INJECTION PROCEDURE

FIRST RESPONSE PERSON or CONTROL ROOM OPERATOR

Upon receiving notification from the No. 9 Shaft Control Room Operator that the Automatic system has failed to inject stench, proceed with the following procedure **PRIOR** to any other duties:

STEP 1 - BACK-UP AUTOMATIC SYSTEM

1. Take the key (#60) and without delay proceed to the PLC control panel at the Surface Feeder & Conveyor Load-out.
2. Open the door and insert the key into the switch marked " **STENCH** ". Turn the key, this will fire the Stench System automatically.
3. Call Control Room Operator (2255) to confirm system fired. If this Fails, proceed to step 2 below, Manual System. All personnel working around the stench system should have radio contact with the control room.

STEP 2 - MANUAL SYSTEM

1. Access to the Stench Room at #9 Shaft (lower deck) can be made by contacting the Control Room Operator (at #2255) from the phone outside the Stench Room who will release the magnetic lock. Alternately use the Stench Injection key (#60) in the switch.
2. Determine from the control room Operator which system is to be fired (Main or Back up) To **EXIT** the stench room, **push the red** button next to the door to release the magnetic lock. In the event of a power failure, the magnetic lock will automatically release.

STEP 3 - PROCEDURE TO MANUALLY INJECT STENCH at 9 and 3 SHAFT

1. Open the **RED MANUAL BYPASS** valve by sliding the clip out of the way on all three of the System A or System B banks.
2. Observe the pressure gauges, when the system decreases to zero the stench has been discharged.
3. Close the valves, slide the clip back into position.
4. Close the stench room door.
5. 3 Shaft portal system is located at the south side of the 3 shaft heater house.
6. 1725 L panel is located on 1725 level in 25 x-c just above the ramp to 1900 level.

NOTE: Do not open the YELLOW VENT VALVES. These are used by the IM's when re-charging the system.

STEP 4 - Phone No. 9 Shaft Control Room Operator (**2255**) and inform him stench has been injected.

STEP 5 Manual Purge Air

1. Proceed to the tunnel that goes around the Stench Room to the load out
2. Close valve #1
3. Open valves #2 & #3
4. Wait 15 minutes
5. Close valves #2 & #3
6. Open valve #1
7. Contact the Control Room Operator that the purge is complete.

Note: Contact Training Department if you require a review of this Procedure

**PROCEDURE IN CASE OF FIRE UNDERGROUND
SHAFT SERVICES LEADER**

DATE: _____

TIME: _____

On notification of a fire by the #9 Shaft Control Room Operator the S.S.L. will:

1. Send one person to manually inject stench **if required** to do so prior to any other duties. Ensure there is radio communication.
TIME _____
2. Announce on the paging system : **"Underground Fire - required personnel proceed to your duty stations and anyone on surface who is tagged underground is to tag out ASAP"**.
TIME _____
3. Notify the Hoistmen (cage & skips) of the situation.
TIME _____
4. Contact the Cage tenders and instruct them to bring cage to surface. The SSL is to remain in control of the cage.
TIME _____
5. When contacted by personnel from a shaft station, inform the Supervisor-in-charge of the names and location of these people.
TIME _____
6. Rope off the shaft and record the name or serial numbers of all persons brought to surface. Tape is located in a drawer in the SSL's office. Record the names/numbers on the attached form and contact the MTS coordinator on channel 1 and report the names/numbers. After the "ALL CLEAR" is given remove the tape.
TIME _____
7. Account for the shaft crew and contact the MTS coordinator on channel 1 and report the names/numbers.
TIME _____
8. Have the shaft decks cleared of all material
TIME _____
9. Standby the telephone and log all notifications, clearances, etc.
TIME _____
10. Allow no one to go underground unless authorized to do so by the Supervisor-in-Charge.
TIME _____
11. When the **"ALL CLEAR"** is given, notify Hoistmen and Cagetenders.
TIME _____

NOTE:

ON OPERATING DAYS OCCASIONALLY THERE MAY BE NO SSL AVAILABLE AT #9 SHAFT S.S.L.'s OFFICE OR ANYONE CAPABLE OF ANSWERING PHONES. THE "CALL FORWARDING" TO THE #9 SHAFT CONTROL ROOM MUST BE ACTIVATED BY THE S.S.L. BEFORE LEAVING THE PHONES UNATTENDED.

Shaft Services Leader _____

ITEM NO. 5

Ensure the tape is removed after the “ ALL CLEAR” has been given.

[illegible]

April 20, 2022

INSTRUCTIONS FOR CONTROL ROOM OPERATORS IN THE EVENT OF STENCH INJECTION WHERE MINES TECHNICAL SERVICES PERSONNEL ARE NOT PRESENT OR UNABLE TO TEND TO DUTIES NORMALLY ASSIGNED

NOTE: In the event that the phones are not working at the time of a fire emergency, the surface recorders are to use the radio system to contact each refuge station. To avoid confusion and to speed up the process, the Supervisor-in-Charge will designate which radio channels are to be used by the surface recorders.

PURPOSE:

Specifically to underground emergencies where stench is injected; certain duties in the **CREIGHTON MINE UNDERGROUND FIRE PROCEDURE** are assigned to the Mines Technical Services (MTS) department.

In the event of an underground emergency occurring during an evening, night or weekend; MTS people are normally off site. As per the current procedure, they are called out by one senior MTS who has been advised of the situation from the Control Room Operator by telephone.

If circumstances either delay or do not allow MTS people to arrive on site, their duties must be assumed by whoever is available on site.

All tasks in the fire procedure are important and should be completed. **When there are insufficient people present, the Control Room Operator must prioritize and manage the situation on hand with whatever resources are available.**

NOBODY IS TO VACATE THEIR ASSIGNED POST UNTIL AUTHORIZED TO DO SO BY THE SENIOR IN CHARGE.

PROCEDURE:

Normally, **12** people are required to complete all of the MTS duties but the minimum required tasks can be achieved with as little as **6**. These people can be employed by either VALE, be contractors, delivery drivers or SNO personnel.

With the **exception of the PSO**, any of the personnel on the property can be utilized to complete the required tasks. The **CONTROL ROOM OPERATOR** must manage the situation with what little resources are available until:

- He/she is either relieved of the responsibility.
- More people arrive on site and he/she can make adjustments to the duty assignments.

People being assigned to the duties are to immediately go to the duty board currently located by the **ENGINEERING OFFICE** on the second floor of the building. To locate it, climb the south stairs (across from the Div. 6 Supervisors Office) and once at the top turn right. The duty board is situated on the right hand wall immediately before the 1st doorway. There are **12** clipboards and people arriving for duties must take them in the order they are numbered, therefore the first person arriving will assume duty #1, the second assume duty #2 etc.....**Note: DO NOT remove all of the clip boards. Take only those duties that people are available for. This will eliminate confusion once MTS personnel arrive at the mine site.**

DUTY #1: SCRIBE

The first person to arrive at the duty board will remove clipboard #1 and go to the Fire Control Base in the Div. 6 Supervisors Office. Follow all instructions on the cover sheet.

The control room operator will have to exercise discretion for this assignment as it requires an individual who is suitably literate and extremely thorough. All activities, conversations, people arriving and departing must be noted with the maximum possible accuracy.

If no suitable candidates are present, the Control Room Operator should assume this duty. He can carry his cell phone and assign his SSL to the chair until relieved by a competent candidate.

Duty # 2(a), (b), (c), (d): SURFACE RECORDER

This entails accounting for all personnel underground. **Use one sheet per refuge station.** Surface telephones are manned and all active refuge stations are called by telephone to account for all individuals that have tagged in.

NOTE: In normal and ideal conditions, duties 2(a), (b), (c) and (d) are assumed by 4 different people. If a personnel shortage exists, these duties will be shared by 1 to 4 people.

NOTE: Although the telephones in the ventilation area are specified, the Control Room Operator can designate another area with available telephones for ease of monitoring. **The control room operator must be aware at all times of where these phone calls are being made from.**

Duty # 3(a), (b), (c) and (d): TAG IN BOARD

This entails manning the underground tag in board. The person(s) assigned this duty will communicate with the person(s) completing duties 2(a - d) and obtain a list of people underground who have been accounted for. From the list they will reverse the underground tags of those whose names are on the list so that the photograph on the back is facing out. Any tags not turned must be reported immediately to headquarters.

NOTE 1: The optimum number of people to complete Duty 3 is 4. In an emergency, it can be accomplished with 1 or 2 people.

NOTE 2: Unless there are not enough people available, the people completing Duty #3 will not be the same people completing Duty #2.

DUTY #4: 9 SHAFT GATE

Is to man the temporary gate at the #9 SHAFT parking lot. The 1 or 2 person(s) assigned to this task will keep any non essential vehicle(s) or person(s) off the property until the all clear has been given. Record the name(s) of any person(s) and or vehicle(s) entering or leaving the property. Deflect all non essential vehicles into the parking lot.

DUTY #5: ACCOUNTING FOR PEOPLE WORKING ALONE

The person assigned this task will proceed to FIRST AID and obtain a printed list of those on the working alone list. The list will then be compared to those accounted for on the tag board. Notify First Aid of those accounted for and have First Aid remove them from the working alone list. Notify Headquarters of anyone not accounted for.

DUTY #6: ENGINEERING OFFICE COORDINATOR

This duty is essential. The person assigned this duty will travel to all the assigned posts and act as a liaison between the control room supervisor and the people doing the work. This person will be the main contact between the duty persons and headquarters.

NOTE: Employees assigned to complete the MTS tasks are not to release themselves if MTS personnel show up to relieve them. They are to be released by the Supervisor-in-Charge, or his/her designate only.

PROCEDURE IN CASE OF FIRE UNDERGROUND
PROTECTION SERVICES PROFESSIONAL FIRE PROCEDURE

NOTE: MTS will send a person to assist you.

DATE _____ TIME _____

REPORTED BY WHOM _____ LOCATION OF FIRE _____

DESCRIPTION & SEVERITY OF FIRE
(BE BRIEF) _____

Contact the Control Room Operator if report is received directly from Underground

1. Call #1 First Aid, Copper Cliff (682- 6622) give basic details TIME OF CALL _____
2. Call the ProtectionServices Professional Supervisor. TIME OF CALL _____
3. Lock the gate in the **open** position. TIME COMPLETED _____
4. On day shift contact either the CME (5242) or the Execution Supervisor (2264) inform them of the fire and ask for assistance with the #9 Shaft gate (MTS Duty #4). TIME OF CALL _____
5. Print out a copy of the Working Alone Screen and put it in Emergency Mode. After MTS personnel have accounted for these people clear the screen. TIME READY _____
6. When asked by the Control Room Supervisor for assistance, call the people listed in theProtection Services Professional Checklist. Notify the Control Room Supervisor when this task has been completed. TIME CALLED _____
7. **Only when instructed** by the supervisor in charge do you make the following phone calls

(a) (a) Mine Rescue Station (1-855-421-9656) TIME CALLED _____

:

(b) **(DO NOT notify #1 First Aid to call Mine Rescue unless the Mine Rescue Station has first been notified)**

Please give the the following information as a minimum:

- o District your mine is in: Sudbury
- o Emergency type: **Test** or **Emergency**
- o Name of Mine: _____
- o Address of Mine: 1039 regional Rd. 24, Lively
- o Nature of Emergency: **Fire** or **Fall of Ground** or **Medical Injury** etc....
- o Name of Person Calling: _____
- o Phone Number to call for more details: _____

(c) Contact Copper Cliff, #1 First Aid and have them call out Mine Rescue
(16 TOTAL, 3 X 5 MAN TEAM + 1 BRIEFING OFFICER) IN THE EVENT OF AN EVERBRIDGE
MALFUNCTION; REFER TO THE MINE RESCUE CALL OUT LIST THAT RESIDES IN /SUDBURY
QUICK LINKS/EMERGENCY/ ON THE INTRANET.

TIME CALLED _____

(d) When instructed to do so, contact #1 First Aid to request emergency medical services
TIME CALLED _____

8. If required to provide on-site medical services, contact Copper Cliff #1 First Aid and ask for assistance
TIME CALLED _____
9. Ensure that the main gate at #9 Shaft is open. **ONLY EMERGENCY VEHICLES are allowed on the property.** All other vehicles to be directed through the temporary gate set up at the parking lot entrance into the parking lot where they are to wait or leave. The person(s) assuming duty #4 to record the names & numbers of authorized people entering / leaving. Provide this person with the record forms contained in the "Fire Procedure" binder and direct them to go to the gate area and document all names of personnel Entering/Exiting the plant. Allow SNOLAB personnel to enter at this time.
10. When the mine **"ALL CLEAR"** has been given, notify Copper Cliff No. 1 First Aid TIME CALLED _____

Protection Services Professional _____

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PROCEDURE IN CASE OF FIRE UNDERGROUND
CHECKLIST FOR THE MINE ENGINEER OR THEIR DESIGNATE IN CASE OF FIRE AT
CREIGHTON MINE

On receipt of a call from the Protection Services Professional raising the Fire Alarm, proceed as follows:

A) Contact sufficient personnel (12) to do the following jobs:

1. Headquarters (1 person req'd)

Go to the Fire Control Base in Conference Room A. Operate the telephone (2797), log all calls and write down all instructions.

2. Phones (4 people req'd)

Set up telephone operators in #9 Shaft Engineering Office.

3. Check In Board (3 people req'd – 6 max.)

Appoint three (3) people to check the Tag-in Board and Visitor's Book at #9 Shaft. Obtain a copy of the list of personnel in Refuge Stations from telephone operators and turn tags of those that have been cleared. **Contact the Control Base at 2797 to determine the critical area to be CLEARED FIRST.** Return information to the Engineering Office.

4. No. 9 Shaft Gate (3-4 persons req'd)

Set up a temporary gate at the parking lot entrance and direct any non essential vehicles to the parking lot to either wait or leave the property. Record names of people entering or leaving the plant, time of arrival of Mine Rescue truck, ambulances and Company officials. Also record names and numbers of people reporting to work but prevented from entering. Instruct these people to report to the amphitheater to await further instructions. Install a guardrail just inside the building entrances directing people entering the plant to report to the amphitheater. 2 hand held radios are available on the cabinet located below the survey task board in the engineering office; coordinate the channel used with the person assuming duty #6.

5. Working Alone (1 person req'd)

Proceed to the First Aid and pick up the copy of the working alone screen. Check those working alone against the Refuge Station reports to ensure they are accounted for..

6. Engineering Office (1 person req'd)

Take charge of the Engineering Office and help co-ordinate clearing of the mine. Liaison with Control Group and also between phone monitors and check in board group to relay information. Roam constantly between all tasks and personnel in the amphitheatre. Keep everyone informed as required. 1 hand held radio is available on the cabinet located below the survey task board in the engineering office; coordinate the channel used with the person(s) assuming duty # 4.

B) When the "**All Clear**" has been received:

1. Have the personnel performing Duty's #2A, 2B, 2C and 2D contact the PSP first and **ALL** of the refuge stations to give the "**ALL CLEAR**" for employees to return to work. Remind them to re-establish their Working Alone procedure.
2. Release all of the Engineering and Geology personnel from their duties.

PROCEDURE IN CASE OF FIRE UNDERGROUND

DUTIES OF MINES TECHNICAL SERVICES PERSONNEL

During a fire at Creighton Mine, Mines Technical Services Personnel are to perform duties as detailed by the Chief Mine Engineer or his designate. During a fire or a practice on day shift, the Chief Mine Engineer or his designate is to assign duties in order of priority, i.e., Duty No. 1 to be assigned first, Duty No. 2 to be assigned next, etc.

During a fire or practice on an "Off Shift", the Chief Mine Engineer or his designate will be contacting people at home to report to the Mine. **The First person to report to the mine will assume Duty No. 1, the Second person to report will assume Duty No. 2, etc.** (NOTE: People closest to the mine to be called first).

All people reporting will proceed to the hallway opposite conference room A. There they will check which duties have been taken and will take the next one in line. Anyone reporting to the mine and not assigned a duty will remain in the Mines Technical Services Office.

Note 1: Ensure that where required all necessary safety equipment (ie: glasses, boots, hard hat, etc.) is donned prior to taking up posts.

Note 2: If not already done, ensure that all necessary emergency prints have been transported from the vault to **Headquarters.**

DUTY

1 - Control Room Recorder(Scribe)

2a - Phones – surface recorder

2b - Phones – surface recorder

2c - Phones – surface recorder

2d - Phones – surface recorder

3a - 9 Shaft Tag-In Board (in charge of the board)

3b/c - 9 Shaft Tag-In Board (assist 2b/c)

3d - 9 Shaft Tag-In Board (assist 2d)

4 - 9 Shaft Gate

5 - Working Alone Station

6 - Engineering Office Co-ordinator (cabinet between survey and vent areas)

PROCEDURE IN CASE OF FIRE UNDERGROUND
DUTIES OF MINES TECHNICAL SERVICES PERSONNEL

DUTY NO.1

Go to Fire Control Base located in Conference Room A. Operate telephone (2797), log all calls and record all instructions.

Instructions:

1. Record the events in a chronological order as discussed including the following:
 - a) Names and times of all personnel entering the control room, there may be personnel from the All Mines Call-out list, if you do not know who they are enquire.
 - b) All particulars as known of the emergency (if a fire, what, where, when, who is involved etc.)
 - c) Log all calls in & out, when, who, what said (if necessary ask the person in charge what he wants recorded in the log)
 - d) All decisions made regarding the emergency (ie: Mine Rescue Team briefed)
 - e) Don't be afraid to ask for clarification of an instruction or name if not sure what was said

Attach all records and Logs to this sheet and return to the **VENTILATION DEPT.**

DATE: _____ RECORDED BY: _____

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PROCEDURE IN CASE OF FIRE UNDERGROUND

DUTIES OF MINES TECHNICAL SERVICES PERSONNEL

DUTY NO.2 (a)

Note: In the event of a power outage, only the copper phone lines work. The full 7 digit number must be dialed and only from another copper phone line. The exchange code for the copper lines is 682.

TELEPHONE OPERATOR NO. 1 (1040 Level-5400 Level)

1. **Wait 15 minutes** from the time stench is injected then **Call all Refuge Stations** on this page. Use one refuge station report form per refuge station. The designated person on each level will give you information on all people in the Refuge Station. All information received must be reported on the attached "Refuge Station Report to Surface" form. Record the names and serial numbers of those recorded under the proper heading on each form.
2. If certain Refuge Stations do not answer, phone those stations again. **If you get a "Not in service" message, try the number again a few minutes later. (When calling from an VoIP phone to a bell phone already in use this message will be generated instead of a busy signal).** If no one in the Refuge Station has assumed the function of designated person, assign one person to do so. As soon as the level has been recorded, give the attached sheet to the Engineering representative doing duty No.3.
3. When the all clear has been sounded, phone the PSP and inform them of the **"ALL CLEAR"**.
4. When the all clear has been sounded, phone all Refuge Stations and report **"ALL CLEAR"** for employees to return to work.
5. Remind them to re-establish their Working Alone procedure.

1040 Level EFAS	Radio only(CHANNEL 12)
1500 Level Refuge Station	2621
3800 Level Refuge Station	2145
4000 Level Refuge Station	2730, VOIP - 2408
4600 Level Refuge Station	2406
5000 Level Refuge Station	2624
5200 Level Refuge Station	2325
5400 Level Refuge Station	2646

NOTE: Ensure **SERIAL NUMBERS** are given on "Refuge Station Report to Surface Form". If serial numbers are not known then obtain names.

Ensure personnel tags are legible and not doctored in any way. If any tags are found to be in poor condition, note the name so the tag can be replaced

FIRE CONTROL HEADQUARTERS PHONE NO. 2797

April 20, 2022

PROCEDURE IN CASE OF FIRE UNDERGROUND

DUTIES OF MINES TECHNICAL SERVICES PERSONNEL

DUTY NO.2 (b)

Note: In the event of a power outage, only the copper phone lines work. The full 7 digit number must be dialed and only from another copper phone line. The exchange code for the copper lines is 682.

TELEPHONE OPERATOR NO. 2 (5800 Level - 6800 Level)

1. **Wait 15 minutes** from the time stench is injected then **Call all Refuge Stations** on this page. Use one refuge station report form per refuge station. The designated person on each level will give you information on all people in the Refuge Station. All information received must be reported on the attached "Refuge Station Report to Surface" form. Record the names and serial numbers of those recorded under the proper heading on each form.
2. If certain Refuge Stations do not answer, phone those stations again. **If you get a "Not in service" message, try the number again a few minutes later. (When calling from an VoIP phone to a bell phone already in use this message will be generated instead of a busy signal).** If no one in the Refuge Station has assumed the function of designated person, assign one person to do so. As soon as the level has been recorded, give the attached sheet to the Engineering representative doing duty No.3.
3. When the all clear has been sounded, phone the PSP and inform them of the **"ALL CLEAR"**.
4. When the all clear has been sounded, phone all Refuge Stations and report **"ALL CLEAR"** for employees to return to work.
5. Remind them to re-establish their Working Alone procedure.

5800 Level Refuge Station	2250
6200 Level Refuge Station	2429
6400 Level Refuge Station	2456
6600 Level Refuge Station	2366
6800 Level Refuge Station	2468
6800 Level EFAS	2266
6800 L – SNOLAB Refuge Station	2752

NOTE: Ensure **SERIAL NUMBERS** are given on "Refuge Station Report to Surface Form". If serial numbers are not known then obtain names.

Ensure personnel tags are legible and not doctored in any way. If any tags are found to be in poor condition, note the employees name so the tag can be replaced.

FIRE CONTROL HEADQUARTERS PHONE NO. 2797

April 20, 2022

PROCEDURE IN CASE OF FIRE UNDERGROUND

DUTIES OF MINES TECHNICAL SERVICES PERSONNEL

DUTY NO.2 (c)

Note: In the event of a power outage, only the copper phone lines work. The full 7 digit number must be dialed and only from another copper phone line. The exchange code for the copper lines is 682.

TELEPHONE OPERATOR NO. 3 (6970-7530 Level)

1. **Wait 15 minutes** from the time stench is injected then **Call all Refuge Stations** on this page. Use one refuge station report form per refuge station. The designated person on each level will give you information on all people in the Refuge Station. All information received must be reported on the attached "Refuge Station Report to Surface" form. Record the names and serial numbers of those recorded under the proper heading on each form.
2. If certain Refuge Stations do not answer, phone those stations again. **If you get a "Not in service" message, try the number again a few minutes later. (When calling from an VoIP phone to a bell phone already in use this message will be generated instead of a busy signal).** If no one in the Refuge Station has assumed the function of designated person, assign one person to do so. As soon as the level has been recorded, give the attached sheet to the Engineering representative doing duty No.3.
3. When the all clear has been sounded, phone the PSO (2292/2111) and inform them of the **"ALL CLEAR"**.
4. When the all clear has been sounded, phone all Refuge Stations and report **"ALL CLEAR"** for employees to return to work.
5. Remind them to re-establish their Working Alone procedure.

6970 Level – EFAS	2681, VOIP -2436
7000 Level Refuge Station	2770, VOIP - 2405
7200 Level Garage Refuge Station	2512, VOIP - 2382
7200 Level Refuge Station	2384, VOIP - 8120
7400 Level Ref Sta	2348, VOIP -2486
7400 Level Garage Refuge Station	2359, VOIP -2499
7530 Level Refuge Station	2567, VOIP -2487

NOTE: Ensure **SERIAL NUMBERS** are given on "Refuge Station Report to Surface Form". If serial numbers are not known then obtain names.

Ensure personnel tags are legible and not doctored in any way. If any tags are found to be in poor condition, note the employees name so the tag can be replaced.

FIRE CONTROL HEADQUARTERS PHONE NO. 2797

April 20, 2022

DUTIES OF MINES TECHNICAL SERVICES PERSONNEL

DUTY NO.2 (d)

Note: In the event of a power outage, only the copper phone lines work. The full 7 digit number must be dialed and only from another copper phone line. The exchange code for the copper lines is 682.

TELEPHONE OPERATOR NO. 4 (7680-8200 Level)

6. **Wait 15 minutes** from the time stench is injected then **Call all Refuge Stations** on this page. Use one refuge station report form per refuge station. The designated person on each level will give you information on all people in the Refuge Station. All information received must be reported on the attached "Refuge Station Report to Surface" form. Record the names and serial numbers of those recorded under the proper heading on each form.
7. If certain Refuge Stations do not answer, phone those stations again. **If you get a "Not in service" message, try the number again a few minutes later. (When calling from an IP phone to a bell phone already in use this message will be generated instead of a busy signal).** If no one in the Refuge Station has assumed the function of designated person, assign one person to do so. As soon as the level has been recorded, give the attached sheet to the Engineering representative doing duty No.3.
8. When the all clear has been sounded, phone the PSP and inform them of the **"ALL CLEAR"**.
9. When the all clear has been sounded, phone all Refuge Stations and report **"ALL CLEAR"** for employees to return to work.
10. Remind them to re-establish their Working Alone procedure.

7680 Level Refuge Station	2569, VOIP -2509
7810 Level Refuge Station	2165, VOIP -2168
7940 Level Refuge Station	2162 , VOIP -2279
8070 Level Refuge Station	2426 VOIP
8200 Level Refuge Station	2162, VOIP – 8199

2162 – is a party line and is for emergency use only, i.e during a power outage

NOTE:

Ensure **SERIAL NUMBERS** are given on "Refuge Station Report to Surface Form".
If serial numbers are not known then obtain names.

Ensure personnel tags are legible and not doctored in any way. If any tags are found to be in poor condition, note the employees name so the tag can be replaced.

FIRE CONTROL HEADQUARTERS PHONE NO. 2797

April 20, 2022

PROCEDURE IN CASE OF FIRE UNDERGROUND DUTIES OF MINES TECHNICAL SERVICES PERSONNEL

DUTY NO. 3a, 3b, 3c & 3d (#9 Shaft)

The person assuming the role of Duty 3a is charge of the tag in board. They are to direct personnel as required and also to maintain order around the board.

Check the Underground Visitors Book in First Aid and record the names of visitors on Form 2.

Obtain copies of the "Refuge Station Report to Surface" Form from the telephone operators in Mines Technical Services. Compare the list of numbers on the report form with the numbers of personnel tagged in on the board. Turn the tags (picture facing out) of all people whose numbers or names appear on the report form and stroke off the numbers or names on the report form. Record the names and numbers of tags not turned on Form 2. Return Form 2 and the "Refuge Station Report to Surface" Forms to Mines Technical Services Office.

Colour Code for Picture Tags on Tag-In Board:

Blue – Operating/Training/ Mines Research

Yellow - Maintenance

Green - Staff

Red - Mine Rescue

Black - Contractors

White - O.S.H.E (Hourly Only)

If someone is found to be still tagged in but isn't on the property the following steps are to be followed in order to verify that person(s) have left the property:

- 1) Verbal - Contact them at home by calling the phone number on the tag. If no response or a message has been left, complete step 2.
- 2) Verbal – contact their supervisor for confirmation they've left the property. If not sure or supervisor can't be contacted, complete step 3.
- 3) Visual - review camera footage of the person leaving the property. Permission to complete this step must be received from the PSP's supervisor prior to reviewing the footage. **Note:** it is advisable to have someone here that knows what the individual looks like as the tag may not provide enough clarity for identification. If person isn't detected, proceed to step 4. **Note: Step 4 requires authorization from the Supervisor-in-charge.**

- 4) Check locker for
clothes are here and street clothes are gone.

confirmation mining

Turn all tags back face up after the all clear has been given.

- NOTE:**
- 1) Do not allow the cross-shift to tag-in, in an emergency during shift change.
 - 2) Employees should be told **NOT** to remove their tags
 - 3) Hang the sign on the tag in board if at shift change.
 - 4) If help is required to check the tag board, especially during day shift, notify the Engineering Office.

PROCEDURE IN CASE OF FIRE UNDERGROUND

FORM 2

VISITOR'S TAGGED IN UNDERGROUND LOG BOOK AND TAGS NOT TURNED

VISITOR NAME	TAG NUMBER	LEVEL	VALE CONTACT
NAME	SERIAL NUMBER	LEVEL	SUPERVSIOR

RETURN THIS FORM TO THE VENTILATION DEPT.

April 20, 2022

PROCEDURE IN CASE OF FIRE UNDERGROUND

DUTIES OF MINES TECHNICAL SERVICES PERSONNEL

DUTY NO. 4 (2-3 PEOPLE REQUIRED)

NOTE: Keep out all non-essential vehicles until the "All Clear" has been given. Person #1; go to the parking lot entrance and erect a rope barricade where all non essential vehicles are to either leave the property or remain in the parking lot until allowed in. The rope is located in a box mounted to the post painted yellow by the entrance to the parking lot. Person #2 will man the 9 shaft gate to record the Names/Numbers of personnel entering / leaving the plant or prevented from entering / leaving the plant. **Direct these people to the amphitheater (At the discretion of the senior in charge or their designate; these people can be either released or redirected).** Sno lab employees follow the usual sign-in sign-out procedure. Personnel are not to leave the property unless verbal permission is received from the supervisor-in-charge or their designate. Report information to the #9 Shaft Engineering office coordinator.

Only Emergency Vehicles and the following personnel will be allowed entry:

GCS Fire Services or Mine Rescue	Copper Cliff Officials
Creighton Mine Employees	
First Response Team members	SNOLAB Personnel
Other People as requested by the Supervisor In Charge	

NOTE: Should the **MEDIA** show up at the gate and ask questions, contact the Control Group at 2797.

Third person assigned to this task is to Install guardrails just inside the building entrances and will instruct all non-essential personnel to report to the amphitheater to await further instructions. The exits from the men's dry are to be guardrailed as well.

NOTE: HIGH VISIBILITY INSULATED COATS ARE LOCATED IN THE HORIZONTAL CABINET IN THE MTS OFFICE BESIDE THE DEVELOPMENT SURVEYORS WORK STATION.

2 hand held radios are available on the table below the survey task board in the engineering office; coordinate the channel used with the person assuming duty #6.

April 20, 2022

PROCEDURE IN CASE OF FIRE UNDERGROUND
DUTIES OF MINES TECHNICAL SERVICES PERSONNEL
DUTY NO.5

Working Alone Station – First Aid

Proceed to First Aid and get a print out of the Working Alone Screen from the PSP. Obtain a copy of the “Refuge Station Reports” . Ensure that all those on the working alone list are accounted for on the Refuge Station Documents. **Return to the Working Alone Station and have the PSP “CLEAR” the screen of those that have been accounted for.** Notify the Control Group of anyone “NOT” accounted for.

Assist PSP as required.

Notify the Control Group (2797) of anyone unaccounted for.

Names of unaccounted personnel

Working Alone #	Name	Supervisor

RETURN THIS FORM TO VENTILATION DEPT.

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PROCEDURE IN CASE OF FIRE UNDERGROUND

DUTIES OF MINES TECHNICAL SERVICES PERSONNEL

DUTY NO. 6

Mines Technical Services personnel assigned to this duty are to take the Engineering Fire. You must continuously travel from headquarters to all personnel manning the duties, the gate guards and people marshalled into the amphitheater.

1. You must carry the radio with you at all times.
2. **1 hand held radio is available on the table below the survey task board in the engineering office; coordinate the channel used with the person(s) assuming duty # 4.**
3. Ensure that ALL required duties (page 30) are being performed as required. Assign additional personnel as required.
4. Liaison with the Control Group to ensure any other needs are being met.
5. Ensure that the Tag-In board area is **controlled** to prevent unnecessary congestion or confusion.
6. Assign someone to record the names and numbers of personnel whose tags do not appear on the Tag-In Board on Form 8. Compare Form #2 and Form #8 and you will then be able to determine:
 - a. Personnel tagged on surface - not reported underground.
 - b. Personnel reported underground - not tagged on surface.
 - c. Verify the number of tags match the number of people listed on the surface record forms.
 - d. Ask the Control Group/ First Aid for the names of any personnel who may have called up from underground. Record these names on the appropriate surface record form.
7. Direct any additional personnel to assemble in the amphitheater to await further instructions.
8. If prints are required for mine rescue, go to S:\Common Files\Ventilation\PDF Fireplan by level for updated fire plans.
9. Regularly check with gate personnel for any issues that need resolving. Rotate these people as required if the emergency lasts longer than 60 minutes.
10. Regularly give people in the amphitheatre status updates.
11. Ensure that the "ALL CLEAR" has been communicated to the PSP and refuge stations when given by the Control Group.
12. Ensure that ALL of the MTS personnel assigned duties as per page 30 have been released.
13. Ensure that everyone has logged in & out for record keeping and pay purposes.

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PROCEDURE IN CASE OF FIRE UNDERGROUND

On receipt of a Fire Call, the **Mine Rescue Co-ordinator** will complete the following tasks:

1. Attend the site and provide assistance to the Supervisor –in-Charge.
2. Work with the Mine Rescue Officer and mine rescue members to assemble mine rescue apparatus, form teams and appoint captains for each team.
3. Work with the Mine Rescue Officer to make a work / rest schedule if a number of teams are involved.
4. Arrange for mutual aid assistance if required.
5. On the base station radio in the **Conference Room A**, change the channel to read “**MINE RESCUE**”
6. Change the Mine Rescue cap lamps to “**CHANNEL 16**”
7. **Note:** If deemed as necessary during an emergency, the base radio station in the FIRST AID office has the “**MINE RESCUE**” channel available.
8. Test the radios.

PROCEDURE FOR MINE RESCUE CHANNEL(CHANNEL 16) ACTIVATION



As described in the above picture **(LOCATED IN THE CONTROL ROOM)**

1. On radio #1, push the “UP ARROW” button until the display reads “**MINE RESCUE**”
2. On radio #2, push the “+” button until the display reads “**CHANNEL 2**”



3. On the base station radio in the **Div. 6 Supervisors Office**, change the channel to read “**MINE RESCUE**”
4. Change the Mine Rescue cap lamps to “**CHANNEL 16**”
5. If deemed as necessary during an emergency, the base radio station in the FIRST AID office has the “**MINE RESCUE**” channel available.

MAINTENANCE SUPERINTENDENTS OR THEIR DESIGNATES

On receipt of a Fire call the Maintenance Superintendent or designate will complete the following tasks:

1. Arrange to keep the compressors and all main fans operating. Arrange for back-up compressors as required.
2. Have electricians available for any requirement.
3. Report to Fire Control Headquarters.
4. Have the stench system recharged immediately after the ALL CLEAR has been given or on the first day shift following the fire.
5. Have the breathing air bottles checked and /or replaced on the Emergency Fresh Air Stations on 1040, 1500 and 6970 levels. The minimum bottle pressure is 1950 psi.

LOGISTICS SUPERINTENDENT OR THEIR DESIGNATE

On receipt of a Fire call the Logistics Superintendent or designate will complete the following tasks:

1. Ensure that the #9 Shaft deck has been cleared of trucks, supplies, etc.
2. Make sure that the surface area between #9 Shaft and ramp from lower deck are clear to the First Aid rooms, shops and mine gates.
3. Arrange to have a truck or bus on hand for transportation between shafts if required.
4. Ensure that the area outside of the Mine Rescue Room is clear of obstructions.
5. Have the Jumbo Breathing Air Cylinders at 1040 and 1500 Refuge Stations replaced if they have been used.
6. Arrange to provide fire fighting material as required.
7. Set up a commissary where personnel may obtain food and beverages.
8. Set up a rest area for mine rescue members to sleep when on rotation

VENTILATION SPECIALIST OR THEIR DESIGNATE

1. Assist the Supervisor-in-Charge in planning rescue and fire fighting operations.
2. Bring the Emergency Plans to Headquarters. These plans are located in the vault in the MTS office in a cabinet marked "**EMERGENCY FIRE PLANS**".
3. Ensure the alternate stench system is armed and ready to inject.
4. Ensure "**Fire Screen**" has been "RESET" prior to recharging system (only after stench sequence has been completed)
5. Ensure that any changes to sensors, fans, etc. have been returned to normal.
6. Collect all **LOGS** from
 - A) Sr. Mine Official In-charge (pg 16 & 17)
 - B) Control Room Operator (pg 18 & 19)
 - C) S.S.L (pg 22)
 - D) Plant Services Person (pg 27 & 28)
 - E) Mine Technical Services personnel (pg 39,40,42,44) plus refuge station forms from u/g.
7. Issue Fire Report as per Vale procedure.

Surface Fire – Procedure for Personnel Underground

In the event of a surface fire, personnel underground will be notified via an **ALL STATIONS** radio alert or if the fire is attached to No. 9 shaft, stench will be injected.

If stench has been injected, follow the requirements for an underground fire. If an **ALL STATIONS** radio message is transmitted, stop work and report to a refuge station to await further instructions.