

APPENDIX G
Health and Safety Protocols
and
Emergency Response Plan



A SUBSIDIARY OF CAPSTONE MINING LTD.

# **MINTO MINE**

EMERGENCY RESPONSE PLAN
HEALTH AND SAFETY POLICIES AND PROCEDURES

**JULY 2010** 



# This controlled document will be regularly updated to reflect revisions. Next scheduled update – January 2011

- Updated Emergency Response Plan (ERP) documents will be bound and distributed to all authorized personnel.
- All Minto Mine personnel must have ERP training and know where to gain access to the document in the event of an emergency.

# **Authorized Distribution / Location List:**

# Minto Explorations Ltd. – Minto Mine:

Health and Safety Office General Manager Office First Aid Room Mine Rescue Station Mill Control Room Refuge Stations

## **Minto Explorations Ltd.:**

Minto Explorations Ltd. Vancouver Office

## Community:

Yukon EMS Dispatch Whitehorse Pelly Nursing Station Carmacks Nursing Station Yukon Wildland Fire Management Carmacks

#### **Government:**

Occupational Health & Safety - YWCHSB

## **Primary Partners On-site Contractors:**

Selkirk First Nation – Pelly Crossing Pelly Construction Site Office Dyno Nobel Site Office

# **Contents**

1.0 EXECUTIVE SUMMARY	3
PART ONE: EMERGENCY RESPONSE PLAN	
2.0 EMERGENCY RESPONSE PLAN PURPOSE	3
3.0 DEFINITIONS	
3.1 "EMERGENCY"	
3.2 "SERIOUS INJURY" AND "SERIOUS ACCIDENT" UNDER OH&S ACT	4
4.0 INITIAL RESPONSE TO EMERGENCY - MINTO MINE	5
5.0 FIRST AID PATIENT ASSESSMENT MODEL	5
6.0 FOLLOW UP TO SERIOUS INCIDENT - MINTO MINE	8
7.0 SERIOUS INCIDENT RESPONSIBILITY MATRIX	
8.0 CONSIDERATIONS FOR SITE OR CAMP EVACUATION	10
9.0 UNDERGROUND EMERGENCY ACTION PLAN	
10.0 REPORTING THE EMERGENCY:	
10.1 EMERGENCY WARNING RESPONSE	15
10.2 REFUGE STATION CODE OF CONDUCT	16
10.3 MAIN VENTILATION CONTROLS IN CASE OF FIRE	
10.4 RESPONSE PERSONNEL	
10.4.1 SURFACE EMERGENCY – SYSTEM OF RESPONSE	18
10.4.2 UNDERGROUND EMERGENCY – SYSTEM OF RESPONSE	18
10.5 MINE VENTILATION OUTAGE ACTION PLAN	19
11.0 MINE RESCUE	20
12.0 MINTO MINE RESCUE TEAM	
13.0 EMERGENCY EQUIPMENT AND EQUIPMENT LOCATIONS	21
14.0 BACK UP MINE RESCUE	
15.0 MISSING PERSONS ACTION PLAN	24
16.0 OUTBREAK OF SICKNESS/GASTROENTERITIS ACTION PLAN	25
17.0 EMERGENCY CONTACT INFORMATION	
17.1 EMERGENCY CONTACT LIST	27
PART TWO: HEALTH AND SAFETY POLICIES AND PROCEDURES	
1.0 RETURN TO WORK PROCEDURE	
2.0 AIR EMERGENCY PROCEDURE AT MINTO MINE AIRSTRIP	
3.0 MEDICAL EVACUATION PROCEDURE	32
4.0 SAFETY PROJECT LIST	
5.0 UNDERGROUND SAFETY REQUIREMENTS	38

### 1.0 EXECUTIVE SUMMARY

This document consists of two parts, the Emergency Response Plan in part one and the Health and Safety Policies in part two.

# PART ONE: EMERGENCY RESPONSE PLAN

### 2.0 EMERGENCY RESPONSE PLAN PURPOSE

This guide sets out the response protocol in the event of an Emergency as defined in the following section.

It is intended for use as a quick reference handbook for managers and supervisors. Incident reporting and investigating is also outlined.

In an emergency situation it is imperative that due diligence is exercised as well as discretion. The priorities are the protection of **LIFE**, **LIMB** and **PROPERTY/ENVIRONMENT** – in that order.

#### 3.0 DEFINITIONS

#### 3.1 "EMERGENCY"

An "**Emergency**" is defined as any occurrence meeting one or more of the following criteria:

- 1. Any "serious injury" or "serious accident" as defined in OH&S 33(1) (see Section 2.2),
- 2. Any incident requiring first aid or rescue response to the scene,
- 3. Any fire requiring discharge of a fire extinguisher,
- 4. Any release of mill process solution outside of containment,
- 5. Any release of a hazardous product where there is potential for that product to enter a waterway,
- 6. Any hazardous product spill of reportable volume, as defined in Section 11.0.
- Landslide, earthquake, avalanche or flooding where injury or property damage results or may result.
- 8. Major power failure
- 9. Missing person
- 10. An alarm of unknown origin
- 11. Motor vehicle accident
- 12. Loss of life

# 3.2 "SERIOUS INJURY" AND "SERIOUS ACCIDENT" UNDER OH&S ACT

## (Excerpt from Occupational Health & Safety Act)

**33.** (1) In this section,

## "Serious Injury" means:

- a) an injury that results in death,
- b) fracture of a major bone, including the skull, the spine, the pelvis, or the thighbone,
- c) amputation other than of a finger or toe,
- d) loss of sight of an eye,
- e) internal bleeding,
- f) full thickness (third degree) burns,
- g) dysfunction that results from concussion, electrical contact, lack of oxygen, or poisoning, or
- h) an injury that results in paralysis (permanent loss of function);

### "Serious Accident" means:

- (a) an uncontrolled explosion,
- (b) failure of a safety device on a hoist, hoist mechanism, or hoist rope,
- (c) collapse or upset of a crane
- (d) collapse or failure of a load-bearing component of a building or structure regardless of whether the building or structure is complete or under construction,
- (e) collapse or failure of a temporary support structure,
- (f) an inrush of water in an underground working,
- (g) fire or explosion in an underground working,
- (h) collapse or cave-in, of a trench, excavation wall, underground working, or stockpile,
- (i) accidental release of a controlled product,

- (j) brake failure on mobile equipment that causes a runaway,
- (k) any accident that likely would have caused serious injury but for safety precautions, rescue measures, or chance. (As amended by SY 1988, c.22, s. 5; SY 1989, c. 19, s.6)

Reprinted from "Occupational Health and Safety with Mine Safety Regulations." Yukon Workers' Compensation Health and Safety Board. Department of Justice, Government of the Yukon. 1992

# 4.0 INITIAL RESPONSE TO EMERGENCY - MINTO MINE

### **Code One Protocol**

In the event of an emergency, the following protocol will be followed.

- Any employee witnessing the Emergency will call out "Code 1, Code 1, Code 1" on their current working radio channel, then they will change to channel 1 (Emergency Channel) and call out "Code1, Code 1, Code 1" and wait for a response form Safety/Medic.
- 2. Site Safety will then call "Code 1, Code 1, Code 1" on all radio channels.
- 3. Upon hearing a Code 1, all personnel will safely stop work, all equipment is to be shut off and all vehicles will safely pull over to the side of the road. Mill and Assay Lab personnel will go into 'blast mode', where all personnel will report to control rooms and lunch rooms, while the mill remains operational.
- 4. Site Safety/Medic will respond with "What is the nature of the Emergency" on channel 1.
- 5. Employee will then state the Nature of the emergency, their name and their location.
- 6. Employee will then follow all instructions given to them by Site Safety/Medic until they arrive on scene.
- 7. The Medic will conduct a scene assessment and assume command of the scene if human life is threatened in any way. If no threat to human life is assessed, command is transferred to Safety Representative or Emergency Response Team Captain. Unified Command Structure will be utilized once the General Manager/Area Manager are on scene.
- 8. Only Site Safety can initiate an "All Clear" for all employees to return to regular work.

### 5.0 FIRST AID PATIENT ASSESSMENT MODEL

### THE ROLE OF THE FIRST PERSON AT THE SCENE

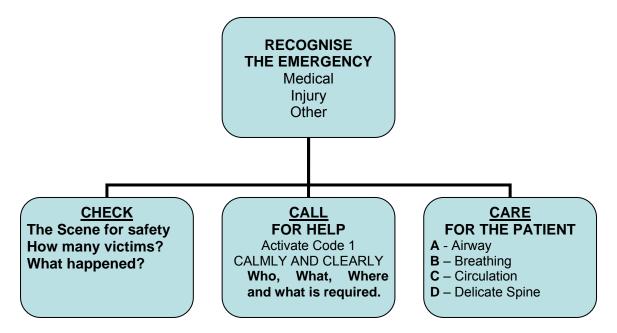
- 1. **CHECK** Recognize the emergency
- 2. **CALL** Activate Code 1 / first aid to attend the scene
- 3. CARE Act according to your skills, knowledge and comfort level

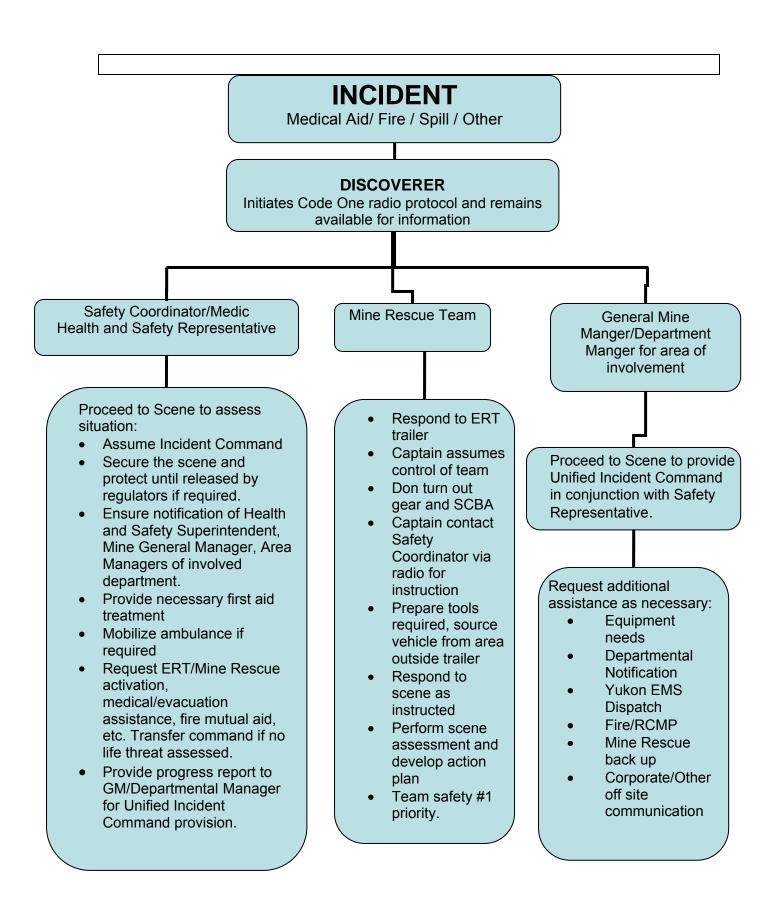
A "**medical emergency**" is an illness or condition that needs immediate medical attention. For example:

- Anaphylactic shock
- Diabetic emergency
- Heart attack
- Others

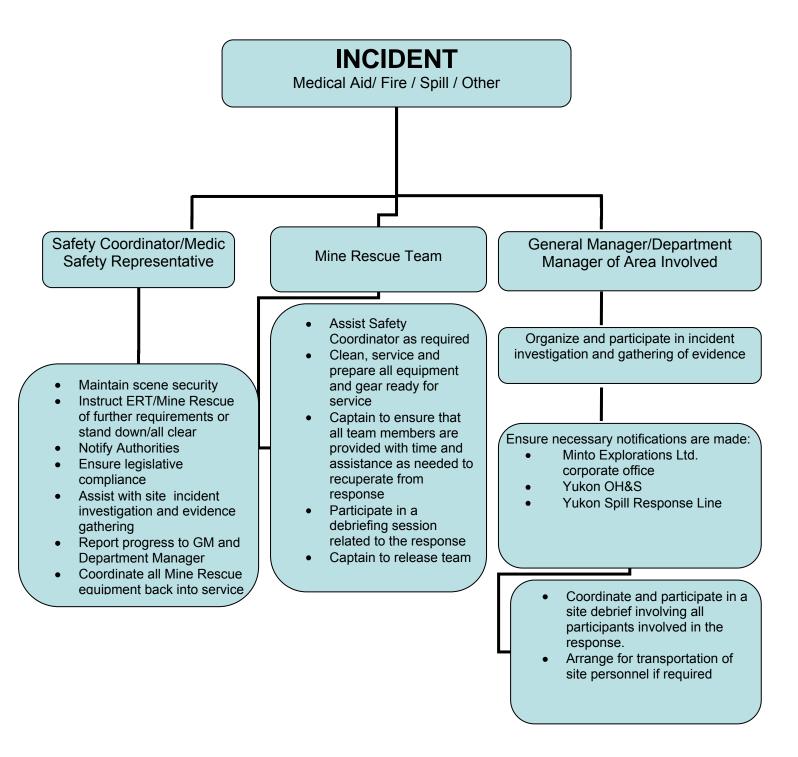
An "**injury**" is damage to the body caused by external force. For example this damage can cause

- Broken bones
- Burns
- Wounds
- Others





# 6.0 FOLLOW UP TO SERIOUS INCIDENT - MINTO MINE



# 7.0 SERIOUS INCIDENT RESPONSIBILITY MATRIX

POSITION	RESPONSIBILITIES
Safety Coordinator/Medic (Health and Safety Designate)	<ul> <li>Ensure area supervisor has been notified of incident</li> <li>Initial scene assessment and Incident Command</li> <li>Coordinate initial response</li> <li>Provide first aid treatment if necessary</li> <li>Mobilize ambulance to scene, if required E.R.T. and specialized resources mobilization &amp; consultation</li> <li>Attend and coordinate response for all incidents involving "serious injury" and "serious accident", as defined in Sec. 33, OHS Act</li> <li>Notify General Manager and Department Manager</li> <li>Request additional external resources as necessary and provide history and assessment for medical evacuations.</li> <li>Coordinate recovery and investigative activity</li> <li>Ensure all government reporting has been completed</li> <li>Organize and conduct post-incident debriefings</li> <li>Assist with Incident Investigation</li> </ul>
Area Supervisor	<ul> <li>Coordinate evacuation of work area</li> <li>Account of workers under his/her responsibility</li> <li>Be available to Incident Command for information and assistance requests.</li> </ul>
General Manager	<ul> <li>Receive briefings on incident details</li> <li>Provide direction as required</li> <li>Ensure notification of regulatory agencies, government and Minto Explorations Ltd. corporate office as required</li> <li>Verify scene remains secure until released by regulators (if applicable)</li> <li>Verify compliance with standards and government regulatory requirements</li> <li>Forward necessary reports to regulatory agencies</li> <li>Responsible to authorize all off site communication</li> </ul>
Department Manager	<ul> <li>Responsible to authorize all off site communication</li> <li>Respond to scene and provide Unified Command in conjunction with Health and Safety Designate</li> <li>Attend at all incidents involving "serious injury" and "serious accident", as defined in Sec. 33, OHS Act</li> <li>Coordinate and participate in incident investigation process. Determine contributing causes and take immediate proactive action</li> </ul>

### 8.0 CONSIDERATIONS FOR SITE OR CAMP EVACUATION

In the event of requiring partial or total evacuation of site, several options are available and must be considered depending on the time of year and availability of transport company provision.

With the exception of medical aid incidents, external resources including evacuation arrangements will be authorized by the General Manager or his designate. Travel arrangements should be coordinated through the travel department or HR and Purchasing department should be involved in all decisions that will result in costs being associated. Designated travel coordinator needs to begin arranging connecting flights or hotel accommodations as soon as evacuation is decided.

Options for evacuation are by road or air, depending on the time of year and availability of barge or Ice Bridge. Air transportation is dependent on weather and availability of aircraft. Early notification of airlines is critical for preparation of staff and aircraft. Accurate weather assessment from site is critical to incoming aircraft. Designated person to provide must be arranged.

#### Road accessible

- Transportation by Coach (47passenger/bus) Whitehorse (Yukon Alaska Charters)
- Transportation by Van Pelly Crossing (Tom Gill)
- Transportation by onsite bus Carmacks (on site)
- Transportation by air Pelly Crossing/Whitehorse (Alkan Air, Air North, Combination) Staging of people can be accommodated at Yukon Alaska Tours Recreation Facility, Whitehorse airport or local hotels as available. Arrangement for staging needs to be planned and documented to provide a location to communicate further travel or housing options for individuals once arranged by travel coordinator. Consider supplying food and drink to people in staging and ensure communication is available. Documented list of who is where needs to be maintained.

#### Road not accessible

- Transportation by air Pelly Crossing/Carmacks/Whitehorse (Alkan Air, Air North, Combination)
- Transportation by air/road combination Air to Carmacks and Air/Coach to White horse. \* Fuel may need to be arranged to be delivered to Carmacks to refuel planes for multiple flights. The designated air agency will arrange for fuel transfer. Mackenzie Petroleum -867-668-4441 or 867-332-3755 cell, Pace Setter – 867-633-5908, North of 60 – 867-633-8820.
- Bus to river crossing and helicopter (Trans North Helicopters) transfer across river to Coach (Yukon Alaska Charters).

Staging of people can be accommodated at Carmacks Air Terminal. Consider supplying food and drink to people in staging and ensure communication is available. Documented list of who is where needs to be maintained.

### **Incident Type:**

### Fire Alarm in Mill

## **Initial Emergency Response Action:**

- 1. Activation of <u>Emergency Protocol</u> by Control Room Personnel [calling code 1 to initiate Paramedic and ERT response].
- 2. All non-control room personnel in Mill are to proceed to nearest exit point.
- 3. Paramedic will move Ambulance out of Ambulance Bay and into front courtyard, not to be blocked by any vehicles.
- 4. Control Room will advise Site Safety of Alarm location.
- 5. Site Safety will advise Control Room personnel on whether or not to evacuate Control Room.
- 6. Once evacuated from Mill, all personnel are to proceed to MUSTER POINT, which is located to the west of the onsite office building near camp.
- 7. All personnel are to stay inside MUSTER POINT unless advised by Site Safety or ERT.
- 8. No personnel are to block Emergency Response vehicles, Ambulance or Equipment.
- 9. Camp Administration will proceed with Mill shift roll-call at MUSTER POINT. Roll-call list will be given to ERT Captain / Site Safety.
- No personnel will be allowed back into Mill without alarm being cleared by Site Safety.
   Only Site Safety can advise Control Room to disengage Fire Alarm after investigation of cause.
- 11. Failure to evacuate Mill will result in disciplinary action, which may result in removal from site.

## **Incident Type:**

Fire Alarm in Camp

# **Initial Emergency Response Action:**

- 1. Activation of Emergency Protocol by Kitchen Staff [calling code 1 to initiate ERT response].
- 2. All personnel in Camp are to proceed to nearest exit point and proceed to Muster Station (located behind Pelly Manor).
- 3. Once at the Muster Station, staff are to stand behind company signs to assist roll call.
- 4. Site Administration will bring personnel roster sheets to Muster Station and delegate supervisors to perform roll call (roster sheets are updated daily per company and are hanging on the wall of the construction trailer).
- 5. Supervisors will perform roll call and inform Site Administration if any employees are missing (and who they are)
- 6. Site Administration will relay this information to ERT Captain.
- 7. All employees will remain at Muster Station until "All Clear" is given by Site Safety or ERT Captain.
- 8. Failure to evacuate Camp will result in disciplinary action, which may result in removal from site.

### 9.0 UNDERGROUND EMERGENCY ACTION PLAN

In an emergency situation it is imperative that due diligence is exercised as well as discretion. The priorities are the protection of **LIFE**, **LIMB** and **PROPERTY** – in that order.

Please see **Section 2 of this ERP document** for further definition of a SERIOUS reportable incident / accident. All SERIOUS reportable incidents / accidents require notification of the YT OH&S Mine Inspector as defined in the Occupation Health and Safety Act – Mine Safety Regulations.

# "Underground Emergency" means:

The unforeseen combination of circumstances, unusual occurrences or resulting state which may endanger lives or the workings of the mine. This emergency may call for immediate action from management and or trained mine rescue, fire and first aid personnel.

Emergencies may include:

- Personal injury
- Loss of life
- Unexpected / Unintentional explosion
- Fire / Heat / Smoke
- Falls of ground
- An inrush of water
- Equipment failure
- Power Failure
- Loss of main ventilation
- Major earthquake
- Situation on surface requiring evacuation of underground

### 10.0 REPORTING THE EMERGENCY:

Where an EMERGENCY exists that may affect mine personnel, evacuation procedures must be initiated.

### <u>Underground Emergency – Other than Fire</u>

Any person discovering an emergency shall:

- 1. If safe to do so try to rectify the situation with the tools you have at the scene
- 2. Perform first aid if safe to do so
- 3. Rope off or barricade the area if possible
- 4. Escape to nearest refuge station following up cast ventilation or out of the mine and warn all others along the way.
- 5. Report the emergency by calling the appropriate numbers from the Emergency Contact Number sheet located in the refuge station
  - When reporting the incident it is of extreme importance that you include the following information.
    - Who is calling and who is involved?
    - What happened and what have you done?
    - When did this happen?
    - Where are you and where is the emergency?
    - Who and what do you need for a response? First aid, rescue stench gas, other assistance?
    - Stand by the phone and wait for further instructions

#### <u>Underground Emergency - Fire:</u>

Where a fire exists that may affect other personnel working in the area, evacuation procedures must be initiated:

Anyone discovering a fire shall:

- 1. Activate fire suppression system if fire is on equipment.
- 2. Warn all personnel in the immediate area (voice, radio, and phone) to evacuate to a safe location.
- 3. Initiate the Stench Warning System.
- 4. If safe to do so, use nearby fire extinguishers to extinguish the fire.
- 5. Do not expose yourself to unnecessary risk and keep a clear area of retreat behind you.
- 6. If the fire is too big, do not hesitate, leave the area immediately and evacuate.

- 7. Proceed in up cast direction to nearest refuge station or out of the mine if safe to do so. Utilize self rescue device to protect from smoke exposure.
- 8. If unable to travel safely to refuge station, take refuge in heading and utilize air header and any available material vent tubing, clothing, etc to construct a shield around yourself. Remain in the location until mine rescue team arrives.
- 9. Once you have reached the refuge station or fresh air base follow refuge station protocols and provide for accountability.

# 10.1 EMERGENCY WARNING RESPONSE

<u>Upon being notified</u> of a mine emergency evacuation either by radio, phone or stench warning:

- 1. Stop work immediately,
- 2. Note the time you received the warning
- 3. Calmly proceed in an up cast direction to the nearest refuge station or out of the mine.
- 4. Once safely at the refuge station or central muster location, follow the refuge station protocol and provide for accountability.
- 5. Review the barricading procedures posted inside the refuge chamber.
- 6. Once inside, if smoke and gases leak in around the door frame, use the foam sealant provided to seal the door frame.
- 7. There is a compressed air line in the inner chamber. Open the air valve a ¼ turn to ensure a supply of breathing air and create a slight positive pressure to keep smoke and gases out.
- 8. Each chamber has a CO<sub>2</sub> exhaust valve located on an outer wall 2 feet above the floor. Find it and open it when using compressed or bottled air. This will prevent the chamber from over-pressurizing and allows carbon dioxide from your exhaled breath to escape. Carbon dioxide is much heavier than air; that is why the valve is low on the wall.
- 9. If the compressed air line loses pressure, the compressed air bottles can be used to provide a source of breathing air. Turn the compressed air line off. If fire caused the failure, air could be withdrawn out of the chamber through the air line.
- 10. Turn on all 4 compressed air bottles. Turn the regulator knob and adjust the outlet pressure to 25 – 30 psi. Adequate breathing air and slight positive pressure will be provided.

- 11. Check the mine phone for operation and call outside the mine. Report the following information:
  - Your name and name of others in refuge.
  - Refuge Chamber location.
  - Outside conditions.
  - That you are safe in refuge.
- 12. Remain in the refuge as long as you are safe, even if communication is cut off.
- 13. Do not be tempted to wander about the mine seeking safe passage out.
- 14. Remain in the refuge until you are rescued by mine rescue personnel or contact is made declaring it safe to leave the refuge station by mine official in charge of the emergency.

# 10.2 REFUGE STATION CODE OF CONDUCT

In the event that it is found necessary to use this refuge station for emergency survival the following information will assist you in succeeding in a constructive and safe manner. The first person to arrive at the refuge station should record the names and health status of all individuals as they arrive at the refuge station. This information will need to be communicated right away.

Someone has to be appointed "in charge". This person must have leadership qualities and have a good understanding of mine rescue and mine survival procedures. This individual must maintain good discipline and have the ability to assure and calm down anyone in the refuge station who may be claustrophobic or inclined to panic. Once a captain has been chosen their directions should be supported by the balance of the team. The captain must keep everyone calm and focus on securing the integrity of the refuge station and maintain communications with surface if possible.

It is up to the team to ration air supply, water supply, food supply, and lighting.

Oxygen must be conserved in the event that the mine compressed air fails. A person at rest in a calm state of mind requires far less oxygen than someone excited and active. An average person consumes the oxygen in the air at about 0.75 cubic meters (1 cubic yard) of air every hour. An area 10 feet wide x 10 feet high x 10 feet long contains enough oxygen to sustain one person for 36 hours. Everyone should remain calm and limit their physical activity. One person should be delegated to move around on a regular basis to check the physical condition and emotional state of the team. This will also physically stir and mix air around the refuge station.

Remember that carbon dioxide is heavier than air and will migrate to the floor. It is not wise to lie on the floor for this reason. This is also the reason why one person should move around occasionally to mix the carbon dioxide with the ambient air. Smoking should not be permitted.

All lamps should be turned off and kept off while mine electricity is still available. If the outside power supply is interrupted then the lamps should be used one at a time. The balance of the lamps should be gathered up by the captain and rationed just like the air,

water, and food. The lack of light for long periods of time can affect the emotional state of some people so conserving the lamp power should be taken very seriously by all.

Any injured survivors must be treated with the existing first aid equipment in the refuge station and in the emergency basket. This includes minor cuts and wounds to prevent infection from setting in. The responsibility of the team safety is paramount to the captain. The survival of the whole team depends on this and is why everyone involved in a disaster should cooperate and support to the best of their ability.

# 10.3 MAIN VENTILATION CONTROLS IN CASE OF FIRE

In the event of an underground fire, efforts will be undertaken to ensure ventilation to the mine is maintained. Operation of the main ventilation fans in will be guarded and monitored to ensure continuous operation of the fans at all times. The effects of the alteration to the main ventilation fans shall be clearly understood before any changes are made.

#### During a mine fire:

There will be no alteration to the operation of the main fans without the authorization of the Mine Manager or Designate.

# 10.4 RESPONSE PERSONNEL

# 10.4.1 Surface Emergency – System of Response

- 1. Initiate Code 1 protocol
- 2. Safety Coordinator/Medic will initiate ERT call out through Mill Control Room
- 3. ERT will respond to the ERT trailer
- 4. ERT Captain will assume control of team
- 5. ERT will don turnout gear and SCBA
- ERT will communicate via radio channel 1 to Safety Coordinator for instructions regarding nature of emergency, staging instructions, scene assessment and command designation
- 7. ERT will gather all tools/equipment required, load vehicles obtained from back of mill and respond to designated staging area
- 8. Command will be transferred to ERT captain upon arrival with verbal report if no life threats are assessed.
- 9. If life threats are assessed, command will be maintained by Safety Coordinator/Medic.
- 10. Unified Command structure will be formed upon arrival of General and Area Manger.

### 10.4.2 Underground Emergency – System of response

- 1. Initiate mine rescue/emergency response notification procedures as directed by UG Shift boss or designate.
- 2. Upon completion of the emergency response notification procedure:
  - a) Assign designate to initiate and maintain a log of events.
  - b) Establish the COMMUNICATION CENTER.
  - c) Keep all Communication Equipment on Standby.
  - d) Direct operations personnel to COMMUNICATION CENTER.
  - e) Confirm Incident Coordinator (IC) response has been initiated.
  - f) Complete the EMERGENCY DATA SHEET by obtaining the following information:
    - Name of person reporting the emergency
    - Nature and severity of injuries and/or incident
    - Assistance required
    - Location of emergency
    - · Number of people involved

- 3. Operations personnel will delegate a mine official in charge of the rescue operation and develop a preliminary plan.
- 4. Mine rescue team will respond to the mine rescue room
- 5. Mine rescue team captain will assume command of the team
- 6. Team will don all protective gear and bench test SCBA
- 7. Team will prepare all equipment needed to respond UG
- 8. Team will await instructions by Coordinator
- 9. Team will be advised of plan
- Back up Mine Rescue team respond to mine rescue room for briefing and preparation for back up assistance.
- 11. Tertiary back up mine rescue team(s) must be considered and depending on the initial assessment of situation contact needs to be made for mutual aid as soon as reasonably possible.

# 10.5 MINE VENTILATION OUTAGE ACTION PLAN

In the event of fan failure due to a malfunction, accident, power failure, or other such unplanned or unscheduled event, this action plan applies to all underground employees and contractors whose work areas are affected by the temporary interruption of the operation of the main, booster, or auxiliary fans in the mine.

# **Main Ventilation Interruption Procedure:**

Less Than 2 Hours:

- Diesel mobile equipment, mucking operations, will cease in all active production and development headings supplied by mechanical ventilation until the main ventilation system is restored. ... OR ... The active heading is continually monitored for air quality and is maintained in compliance with the applicable standards.
- 2. All other work relevant (scaling, cleanup, maintenance, etc) to the active heading may continue per normal operations provided the air quality remains in compliance with the applicable standards.
- 3. Diesel mobile equipment for access to, or egress from, the mine will continue per normal mine operations provided air quality remains within compliance of the standards. If the ventilation is forced the diesel equipment must be shut down until ventilation is re-established.

#### Two Hours or More:

1. Air quality testing will be performed by Supervision in all active headings affected by the ventilation interruption. Where air quality is not within compliance of the

- standards for mine ventilation, all personnel shall be withdrawn from the active heading affected.
- 2. Ventilation to the affected active headings shall be restored to normal and the air quality in the affected active workings shall be tested by Supervision to ensure the air quality meets the requirements of the standards prior to the return to work in the area.
- 3. Prolonged ventilation interruption will require air quality testing in the affected active workings at least every four hours until ventilation has been restored.
- 4. In areas where air quality prevents continued testing, normal ventilation shall be restored for a minimum of two hours before persons enter the area to test air quality ... OR ...Suitable self contained breathing apparatus and procedures consistent with YT WCBOHS Regulations will be followed by competent persons to perform air quality testing the effected area.
- Diesel mobile equipment for access to, or egress from, the mine on the main haulage ways will continue per normal mine operations provided air quality remains within compliance of the standards.
  - a. This is contingent on the mine having flow through exhaust. If the ventilation is forced the diesel equipment must be shut down and the mine evacuated until ventilation is re-established.

Mine Quality Air Standards						
Oxygen	Minimum 19%	Normal oxygen	air	is	21%	
Carbon Monoxide	Permissible limit 35 PPM					
Nitrogen Dioxide	Permissible limit 3 PPM					
Sulfur Dioxide	Permissible limit 2 PPM					

#### 11.0 MINE RESCUE

Minto Explorations Ltd. will have a trained mine rescue team available for mine emergencies.

If the mine rescue team is required, back-up teams need to be readily available. Minto Explorations Ltd. has in place cooperative agreements with the Alexco Resource Corp. at the Bellekeno Mine and with Yukon Zinc at the Wolverine Mine as well as divisions of Procon Mining and Tunneling.

If the incident requires Mine Rescue back up response the YT OH&S Mine Inspector, Alexco Resource Corp and Yukon Zinc must be notified immediately, advised of the situation and to prepare to respond immediately pending available resources.

# 12.0 MINTO MINE RESCUE TEAM

Name	Agency	Capacity
Bissell, Keith	Minto Exploration	Surface Mine Rescue/ERT
Cook, Mike	Minto Exploration	Surface Mine Rescue/ERT
Crottey, David	Minto Exploration	Surface Mine Rescue/ERT/OFA 3
Davies, Kheil	Minto Exploration	Surface Mine Rescue/ERT
Edzera, Sean	Minto Exploration	Surface Mine Rescue/ERT
Goebel, Mark	Minto Exploration	UG/Surface Mine Rescue Instructor/OFA
Henry, Garth	Minto Exploration	3/PCP
Michelson, Richard	Minto Exploration	Surface Mine Rescue/ERT/EMR
Monteith, Tyrone	Minto Exploration	Surface Mine Rescue/ERT
Plater, Adam	Minto Exploration	Surface Mine Rescue/ERT
Silverfox, Ryan	Minto Exploration	Surface Mine Rescue/ERT/Captain
Spruit, Arjen	Minto Exploration	Surface Mine Rescue/ERT
Swanson, Jeremy	Minto Exploration	Surface Mine Rescue/ERT/OFA 3/EMR
Wettstein, Curtis	Minto Exploration	Surface Mine Rescue/ERT

# 13.0 EMERGENCY EQUIPMENT AND EQUIPMENT LOCATIONS

EMERGENCY EQUIPMENT	LOCATION	USE IS AUTHORIZED BY:
Ambulance	Minto Ambulance Bay	Safety Coordinator/Medic ERT Captain
Medical Jump Kits	First aid room Safety Coordinator/Me Medic room	
AED Automatic External Defibrillator	Minto Ambulance	Safety Coordinator/Medic
Oxygen Airway Adjuncts (OPA)		
Spinal Precautions Spine Boards & Head Blocks	Ambulance and Mine Rescue Room	Safety Coordinator/Medic ERT Captain

Stiff Collars Spider Straps KED – Vehicle extrication device		
Splints Regular Sager traction splint	Ambulance and Mine Rescue Room	Safety Coordinator/Medic
Wound Management Burn Dressings Sterile Water Bandages & Dressings	First aid room Jump Kits Ambulance	Safety Coordinator/Medic
EPI Pens Anaphylactic Shock / Allergies	First aid room Jump Kits Ambulance	Safety Coordinator/Medic

# 14.0 BACK UP MINE RESCUE

Agency	Contact Personnel	Office Contact Number	Home Contact Number
YT OH&S Mine Inspector	Ossie Venasse	867-334-2002	1-800-661-0443 (toll free)
Alexco Resource Corp	Formal Plan Pending		
Yukon Zinc	Formal Plan Pending		

### 15.0 MISSING PERSONS ACTION PLAN

Potential exists where persons may become lost on or traveling to and from the property. Such incidents can occur under the following circumstance:

 Employee or Contractor personnel engaged in surface exploration, travel or any other activities are overdue and can not be located or contacted.

Upon notification that personnel are unaccounted for on the property you should:

- 1. Immediately advise the Area Supervisor, Safety Designate and Area Manager
  - Designate a mine official in charge of the search and communications/planning.
  - Assess and determine the level of response required.
  - Gather all available information about the missing persons including last known location.
  - Advise the RCMP of the circumstances and request further assistance
  - Designate ERT/Mine Rescue to stand-by and assist the RCMP in search efforts as directed
  - Any search activity needs to be coordinated through the mine official in charged of the search. Search by vehicle should be conducted with two people in each vehicle, in coordination with RCMP and have effective communication and plan in place prior to conducting search.
  - Survival gear, rescue tools, tow straps, fuel, etc should all be considered and taken along during search activities.
- 2. Stand-by to provide further information and assistance as required.
- 3. Once search is complete follow up notification to all involved must be conducted including RCMP.
- 4. Provide for follow up investigation to identify contributing factors and recommend future prevention actions.

# 16.0 OUTBREAK OF SICKNESS/GASTROENTERITIS ACTION PLAN (Yukon Center for Communicable Disease Guideline)

#### **Case Definition for Gastroenteritis:**

- At least one of the following must be met: Two or more liquid or watery stools above what is normal for the person within a 24-hour period, OR
- Two or more episodes of vomiting in a 24-hour period, OR
- Both of the following:
  - (a) lab confirmation of a known enteric pathogen and
  - (b) At least one symptom compatible with gastrointestinal tract infection (I.e. nausea, vomiting, diarrhea, abdominal pain or tenderness)

#### **Outbreak Definition:**

• Three or more cases of gastroenteritis infection (as defined above), potentially related, occurring within a four day period, within the facility.

## Case characteristics:

- Abrupt onset of diarrhea and vomiting
- Fatigue and occasional low-grade fever
- Average duration 18-24 hours, rapid recovery

# Suspected etiology:

 Noro type virus. Confirmation by obtaining sample and sending in for analysis. Sample kit available in first aid and instructions are attached.

## Response measures:

- 1. Sick bay and isolated washroom facilities needs to be provided.
- 2. A second area made available for post-acute, recovering patients.
- **3.** Communication to site informing of the situation and requesting people to report illness and use strict personal hygiene practices.
- **4.** Cleaning of the quarantine areas undertaken by people informed of the risks and trained in the protection required. Food must be delivered, provisions for hydration need to be ensured. Electrolyte replacement fluids should be provided. Squincher is currently being placed into warehouse stock.
- **5.** Cleaning of all other areas using Virox or bleach solution: 3x per day bathrooms and corridors and common rooms.
- **6.** Kitchen and dining areas are cleaned on a continual basis
- 7. Discontinue communal food dispensing (salads, etc) All food portions individually wrapped.
- 8. Contact Yukon Communicable Disease Control to advise of outbreak.
- **9.** Consider notification of off site personnel that may be scheduled to come into camp during outbreak and decide on travel restrictions, interruptions during the period

# Recommendations for ongoing management of outbreak

## A. If decline in case numbers to sporadic or nil:

- · Laundering of all bedding: sheets, pillow cases, and quilts or blankets
- Laundering of all clothes used by or exposed to sick individuals.
- Cleaning of all surfaces with standard veridical disinfectants (bleach or Virox).
- Clothes that have been stored and unexposed to sick persons can be left in place
- Any drawers, shelves, etc. used by sick individuals should be cleaned.

# 1. If sporadic new cases (1 to 2 per day):

- Continue use of Sick Bay and isolation area
- Continue food preparation precautions
- Allow new staff in but with briefing on situation and need for vigilant personal hygiene

# 2. When no new cases reported for at least 48 hours:

- Terminal cleaning of isolation areas, cleaned as above with Virox or bleach solution.
   Designate and maintain a smaller isolation area for possible new cases over next 2 to 4 weeks
- Allow new staff to come in for normal tour of duty
- Return to normal food preparation

# B. If continued high numbers (more than 3 new cases per day) or escalation of cases:

- Continue isolation/sick bay area with appropriate cleaning regimen
- Continue daily monitoring of new cases and their origin (bunk house)
- If more than one new case per bunk house, undertake intense cleaning of entire affected bunk.
- Close non-essential common areas
- Allow no in-rotation in of new personnel
- Consider camp closure according to demands on personnel

# C. If continued high or increasing numbers despite measures in B. being followed:

- Close camp with clean out of entire camp: bunkhouses, food preparation and consumption areas, offices, common rooms and all non-industrial sites.
- Allow reopening of site following clean up.

# D: If apparent cessation of outbreak followed by new cases after 48 hours or more:

Follow recommendations as in B and C above.

# 17.0 EMERGENCY CONTACT INFORMATION

	17.1 EMERGENCY CONTACT INFORMATION  17.1 EMERGENCY CONTACT LIST						
	LOCATION  LEGAL DESCRIPTION: N 62.37.210 E 137.14.042  EASTING 385371 NORTHING 6945190  LOCATION  NAD 83						
TRAVEL MINE SIG	FROM WHITEHORSE, HEAD WEST ON ALASKA HIGHWAY, TURN NORTH (RIGHT) ONTO HIGHWAY #2, TRAVEL TO APPROXIMATELY KILOMETRE 430, and TURN WEST (LEFT) ONTO ROAD MARKED BY MINTO MINE SIGN. WAIT FOR RIVER BARGE ENTER ON MINE ROAD AT KM27. BARGE OR BRIDGE CREW WILL PROVIDE ROAD RADIO PROTOCOLS AND FURTHER INSTRUCTIONS.						
	Ac	FREQUENCY ccess Road mergency		CHANNEL 16 1	-	RECEIVE 162.075 151.115	REQUENCIES TRANSMIT 167.055 151.115
ALL E		CIES ANNOUNO PERSONNE L	CE 'CODE 1, CO COMPAN Y	ODE 1, CODE PHONE #	<b>E 1' ON C</b> EXT.	E-MAIL	MEDICAL RADIO
Disp	oatch	Control Room	Minto Ex.	604-759- 0860	458		7
Safety /	Medical	Arjen Spruit	Minto Ex.	604-759- 0860	444	arjens@mintomine.co	1
Safety/N	Medical	David Crottey	Minto Ex.	604-759- 0860	444	davidc@mintomine.co m	1
		,	OFF-SITE N	MEDICAL CO	NTACTS		
Nursing S Whitehors Yukon Co	tation - Pe tation - Ca se General	Hospital ble Disease Contr		PHONE NUM 867-537-44 867-863-44 867-393-87 867-667-81	44 44 00 78	24 hr After hours c 24hr CANUTEC -	s/day 613-992-4624
1 010011 00	orition com					(col	lect)
EVACUATION / RESCUE							
Yukon EMS Dispatch – All medical 867-667-3333 transfers here						s/day	
Air North Trans Nor	th Helicop	ter		867-456-83 867-668-21		867-335-121	10 24hrs/day
Alkan Air	Alaska		Coach	867-668-21	07		s/day
Transporta		10010	704011	867-668-59	44	24hrs	s/day
Search an	nd Rescue Pelly Cross	.` ′		867-537-55 867-537-55 867-863-55	55	867-66	7-5555 7-5555 7-5555 MINE
DEPART	TMENT	PERSONNEL	COMPANY	PHONE	# EX	E-MAIL	RADIO
Acting Ge Manager	neral	Jaime Delgado	Minto Ex.	604-759 0860	9- 439	jaimed@mintomine	e.com
Health and	d Safety	Mark Goebel	Minto Ex.	604-759 0860	9- 440	) markg@mintomine	e.com 1
Mill Manag	ger	Daniel Sepulveda	Minto Ex.	604-759 0860	9- 477	daniels@mintomin	e.com
Mill Forman	General	Daryl Johnston	Minto Ex.	604-759 0860	454	darylj@mintomine.	com 7
Mill Forman	General	Dave Barrett	Minto Ex.	604-759 0860	454	daveb@mintomine	com 7
Site Maint		Martin Mann	Minto Ex.	604-759 0860	457	_	
Site Servi	ces	Steven	Minto Ex.	604-759	9- 224	stephenm@minton	none.c 16

		Maunder		0860		om	
Human Reso	ources	Jon Newnham	Minto Ex.	604-759- 0860	441	jonn @mintomine.com	
Explorations Group	i	Taras Nahnybida	Minto Ex.	604-759- 0860	228	tarasn@mintomine.com	
Explorations Group	i	Brian Willet	Minto Ex.	604-759- 0860	228	brianw@mintomine.com	
Pelly Superinter	ndant	Clint Abel	Pelly Const.	604-759- 0860	460	clinton@pelly.net	14
Pelly Superinter	ndant	John Garvice	Pelly Const.	778-785- 3184		john@pelly.net	14
Domco Man	ager	George Aguiar	Domco	604-759- 0860	230	Domcomintoadm@hotma il.com	
Dyno Super	visor	Dale Wearmouth	Dyno Nobel	403-775- 6143		dnna.minto@am.dynonob el.com	14
Dyno Super	visor	Rene Mercereau	Dyno Nobel	403-775- 6143		dnna.minto@am.dynonob el.com	14
Assay Manager	Lab	Bella Ocampo	SGS	604-759- 0860	447	bella.ocampo@sgs.com	
Assay Manager	Lab	Sandra Dewar	SGS	604-759- 0860	447	sandra.dewar@sgs.com	
Superior Pro Yukon Energ Yukon Spill I YTG Disaste Yukon WCB	y Respon er and E		867-334-1627 1-800-676-2843 867-667-7244 867-667-5220 800-661-0443		24hrs		
Forest Fire F	Reportin	g	888-798-3473			Carmacks Duty Officer – 8 1989	67-332-
Conservation Coroner	n Office	r	-	67-996-2202 67-667-5310		867-335-2327 cell	

# PART TWO: HEALTH AND SAFETY POLICIES AND PROCEDURES

### 1.0 RETURN TO WORK PROCEDURE

# Objective:

Provide a safe and efficient means of reentry into the workplace following an employee absence due to illness or injury resulting in the worker being unable to resume full duties. The objective of this procedure is to provide a return to work plan that will safely transition an employee back into the workplace recognizing abilities, restrictions and any associated limitations and resulting in a return to full regular duties in an efficient and safe timeline. The return to work plan must entail meaningful and productive work, defined by both the employer and employee, while maintaining good business sense. The timeline for recovery along with assessment and consultation specific to each case will determine the availability of accommodation possibilities. In the event of undue hardship or health and safety concerns, accommodation will not be possible.

### Scope:

This procedure pertains to employees that are unable to return to full duty work due to an illness or injury. Safety, human resources and department leaders will work collectively in the facilitation of the employees return.

#### **Procedure:**

- Safety will maintain regular communications with ill/injured worker during their absence from employment. Once it is determined that a return to work is possible, the worker will be required to get a functional abilities assessment by a physician. If worker is released to full duties he needs to report to the first aid attendant for a follow up assessment and provide the paperwork prior to starting work. If there are any restrictions required for the return to work, this procedure will apply.
- Safety and human resources will work together in conjunction with the worker, YWCHSB claim administrator and any medical professionals involved to gather as much information pertaining to the abilities, limitations and restrictions that the employee may have upon return to work at the mine site. YWCHSB functional abilities form is the required document provided for the physician to communicate restrictions. A generic Minto version is available for cases not related to YWCHSB.
- Once all pertinent information has been gathered and a return to work date decided and confirmed by YWCHSB or medical professional, department superintendent will meet with Human Resources and Safety Superintendent to develop a return to work plan within the worker's original department. This plan will address tasks, time, reporting concerns, and reassessment requirements. (supervisor, worker, first aid, physician) Compliance with all applicable regulations, company policies and safe work practices must be maintained within the plan.
- If the accommodation is not possible within the worker's original department, the General Manger will canvass other areas of the mine site for positions that could accommodate a plan of return.
- In the event that the worker cannot be accommodated, communication in this regard needs to be documented and forwarded to the worker and YWCHSB representative

- (if applicable). Options for short term disability (STD) coverage or lost time benefits must be discussed with the worker. Human resources are the primary contact for STD coverage as Safety department is primary contact for YWCHSB claims information.
- Once a plan has been developed, a written copy must be provided to worker and YWCHSB representatives (if applicable) prior to worker return. Department supervision, human resources and First aid/Safety Coordinator will be provided copies once signed by all parties and the original will be kept in the Safety Office.
- Worker must report to First Aid upon initial return to provide any documentation from physicians or YWCHSB. Worker will review and sign return to work plan and further follow up will be arranged.
- Documentation is critical. Supervisor must maintain record of all conversations and checks regarding the workers response during the reentry process. First Aid/Safety Coordinator will maintain all follow up first aid assessment documentation.
- Reassessment by First Aid/Safety Coordinator upon completion of return to work plan is critical and information will be forwarded to worker and WCB representatives by Safety Superintendent. Copy will be maintained on file.
- It is the workers responsibility to notify supervisor immediately of any concerns regarding his/her condition or with the work assigned during the reentry period.
- Subsequent evaluations by medical professionals will be completed specific to the
  case and progress of healing process. Functional abilities reports supplied from the
  reassessments will be evaluated to dictate future modifications to the RTW plan. The
  goal is to return the worker to full duties as soon as safely possible.

Concerns or clarification of this procedure should be directed to the originator.

#### 2.0 AIR EMERGENCY PROCEDURE AT MINTO MINE AIRSTRIP

## **Initial Emergency Response Action:**

- 1. Activation of Emergency Protocol [calling code 1 to initiate Safety Coordinator/Medic and ERT response]. All work on site will stop, including Mill and Tailings operations until resources available.
- 2. Safety Coordinator will respond to scene with ambulance to perform scene assessment and determine safe staging location.
- 3. Safety Coordinator/Medic will radio Control Room for them to call (in order) and relay following information:

Agency	Phone Number	Information to Relay	
--------	-----------------	----------------------	--

General Manager/Area Manger	Radio	Respond to Scene to provide assistance
Camp Administration	Ext. 230	Obtain exact passenger count and list
Yukon EMS Dispatch	(867) 667-3333	Inform of plane crash with number of potential patients.  Confirm safety of air strip.  Inform that one medic is on scene and will triage / treat patients. Medic will relay history and assessment information as soon as
RCMP – Carmacks	(867) 863-5555	Inform RCMP of plane crash and that Yukon EMS has been notified. Request Search and Rescue assistance and helicopter.
Whitehorse General Hospital	(867) 667-393- 8700	Inform RN that plane has crashed with passenger number; Yukon EMS dispatch and RCMP have been contacted.
Carmacks Nursing Station	(867) 863-4444	Inform RN that plane has crashed with passenger number; Yukon EMS dispatch and RCMP have been contacted.
Pelly Crossing Nursing Station	(867) 537-4444	Inform RN that plane has crashed with passenger number; Yukon EMS dispatch and RCMP have been contacted.

- 4. ERT Captain will advise ERT members in roles of response.
- 5. Air Strip road will be cleared of all traffic. Only requested resources and staff will be allowed on air strip and access road.
- 6. Non-stable patients will be treated by Paramedic and will remain at airstrip for evacuation.
- 7. Ambulance Bay will be used for stable-patient treatment/transport area.
- 8. All vehicles will be moved out of Ambulance Bay / Con shed area. Camp access road will be blocked and guarded.
- 9. Non-critical care transport helicopter (RCMP) can transport stable patients to Minto Government Air Strip, utilizing area outside of Ambulance bay/Con-shed/camp for helipad.

- All medical transfer decisions related to critical or non stable patients will be made by Yukon EMS dispatch.
- 11. Casualties will be remain undisturbed at scene pending RCMP, Coroner, and YWCHSB investigation completion.

## 3.0 MEDICAL EVACUATION PROCEDURE

# **Initial Emergency Response Action:**

- 1. Minto Explorations Ltd. Medic will control all medical / trauma emergencies.
- 2. Upon patient assessment, Medic will determine course of action, including return to work or further medical assessment and evacuation.
- 3. If medical evacuation is deemed necessary, the Medic will contact Yukon EMS Dispatch @ 867-667-3333 and provide history and assessment findings. EMS dispatch call is a two element call and Medic will need to provide history and assessment twice. The first element dictates the triage of the transfer and the second element is directly to a medical professional responsible for the transfer. These two elements should be available back to back. Yukon EMS Dispatch is responsible for transfer method decision.

Yukon EMS Dispatch	(867) 667-3333
Pelly Crossing Nursing Station	(867) 537-4444
Carmacks Nursing Station	(867) 863-4444
Whitehorse General Hospital	(867) 393-8700

- 4. All Yukon EMS transfer either by road, air or combination is provided with nursing and paramedic personnel. Air transport is provided flight nurse and flight paramedic. Triage decisions will be made based on patient condition and other emergencies taking place in the area. We are a high priority community as deemed by Yukon EMS and all efforts to supply our needs will be made. One hour plus flight time is the mandate for response by EMS so medic needs to consider that as part of his treatment and care. EMS dispatch provides all patch call information to receiving facilities if they are involved in the transfer in any way.
- 5. In the event that a transport decision is made without or outside of consultation with Yukon EMS Dispatch, they need to be notified as soon as reasonably possible to provide for additional transport from destination and/or to document transfer decisions made.

### **Off-Site Transfers**

# Ice Bridge + Minto Barge available

- 1. Non-critical, stable patients that require further medical assessment and do not require medical attention during transfer will be taken off site by a designated Minto Explorations employee at the first available time.
- 2. Non-critical, stable patients that require further assessment and medical attention during transfer may be taken off site via Ambulance. EMS dispatch must be contacted prior to departure to coordinate the transfer, receiving facility and the possibility of further transfer requirement. If EMS dispatch will not be involved in the actual transfer operation, a call to the receiving facility by Minto Medic is required (patch). If EMS dispatch is involved in any way with the actual transfer they will make the patch calls.
- 3. Emergency, unstable patients will be evacuated off site through coordination between Minto Medic and Yukon EMS Dispatch. In cases of extreme weather that does not permit landing at the Minto Air Strip, the government Air Strip may be utilized on the east side of the Yukon River.

Alternate helicopter services if required (500ft ceiling, daylight only).

- HeliDynamics: 867-668-3536
- TransNorth Helicopters: 867-668-2177 (Whitehorse) 867-863-5551 (Carmacks)

# Ice Bridge + Minto Barge unavailable

- 1. Non-critical patients that require further medical assessment and do not require medical attention during transfer will be taken off site on the earliest scheduled flight.
- 2. Non-critical stable patients that require further assessment and medical attention during transfer will be taken off site through coordination between Minto Medic and Yukon EMS Dispatch.
- Emergency, unstable patients will be evacuated off site through coordination between Minto Medic and Yukon EMS Dispatch. Yukon EMS dispatch is responsible for all transport decisions.
- 4. If weather does not permit landing at the Minto Air Strip, rotary-wing aircraft may be utilized, dependant on weather, alternate locations are: barge landing, km 13 rock piles.
  - Alternate helicopter services if required (500ft ceiling, daylight only).
  - HeliDynamics: 867-668-3536
  - TransNorth Helicopters: 867-668-2177 (Whitehorse) 867-863-5551 (Carmacks)
  - a. If extreme weather does not permit any aircraft to land on site, the patient will remain in the care of the Minto medic, until weather permits evacuation.

5.	In instances where a patient requires transport and; no flights can be arranged, Minto Barge un-operational, water flowing on Yukon River, the patient may be transported to the east side of the Yukon River by boat (Man Boat or Barge Life Boat) and it will be arranged through Yukon EMS Dispatch for transfer of care at river crossing.

# **4.0 SAFETY PROJECT LIST**

Safety Project List

Date	Priority	Projects	Progress	Date	Notes
Dute	THORICA	riojeca	riogicas	Dute	110003
May 11 2010	2	Communicate ISM safety theory to management team	Initiated		Minimal outside of HR, Safety and Jaime Delgado
					Need departmental involvement in group setting- could incorporate risk
May 11 2010	3	Develop a site wide 5 point safety system			assessment, preshift inspection, operational report, etc  Have committed to regular attendance 5 services, Pelly and Mine Tech. Current
					toolbox talk needs augmentation with documented safety meeting minutes.
May 11 2010	2	Attend and support departmental safety meetings	Partial		Two way communication required.
ridy 11 Loto		, , , , , , , , , , , , , , , , , , , ,	raraa		Manpower request and business case for cross shift. Continuity required in
	_				many situations. Organization of tasks and delegation between Safety
May 11 2010	2	Restructure and organization of Safety Dept	Initiated		Coordinator and Superintendent ongoing.
					Statistical data base cleaned and reconciled, monthly and weekly reports
					reconciled Current system not user friendly and labor intensive. Hard copy
		Clean up filing backlog and sort information on hard and electronic copy			filing 3/4 complete. Lack of space in First Aid office an issue. Critical
May 11 2010	2	within Safety Department	Partial		documentation should be stored in Manager office.
					Have identified many needs in this area, no organized or structured attack has
					been planned for interdepartmental review. Three procedures have been
					recently revised or created in Safety Department and for Site wide use. Two
May 11 2010	2	Site wide policy and procedure review	Initiated		are in progress or at discussion/review. Compliance requirment
					Needs prioritized to weekly and monthly site wide reports currently. Frequency
					and severity is desired by corporate. Sort and chart by type, department and
		Source software to manage critical documents and maintain statistics.			crew. Simply Safety Review scheduled for July 5th with HR and IT.
May 11 2010	3	Define company needs for statistical information.	Initiated		Reorganization and reconciliation of current statistics complete on July 2 2010
					Hateley to a second to Man to a second to the second to th
		Action plan to address items identified site wide as significant safety issues.			Hoisting issue complete - Mine inspector involvement. Initiatives at primary crusher have addressed several major concerns. Crusher plug issue/mini rock
		Crusher plugs, mechanic shop floor, carpenter shop floor, millwright shop			breaker outstanding, guarding and access issues at crusher - Daniel Sepulveda
May 11 2010	1	space, hoisting with equipment other than crane, etc,	Initiated		involved. Shops and floor - no defined plan or timeline. Legislated requirment
May 11 2010	2	Support, training and structure for JOHSC			Compliance requirment
May 11 2010	3	Source a site wide risk assessment tool and implement			
		Refocus intention of incident investigation process and train supervision.			
		Currently first aid/safety coordinator completing incident reports with little			
	_	area involvement. 75% of total incident investigations are outstanding or			
May 11 2010	3	have no follow up on corrective action.			Revision in progress, currently up to date but requires additional information
May 11 2010	2	Revise orientation	Initiated		and removal/simplification of some information.
May 11 2010	3	Develop Wildlife Control Program	Initiated		Some improvement steps taken but no official program as of yet
May 11 2010	1	Develop a Site Emergency Response Plan	Initiated		Format required for environmental permit aplication - Colleen Roche
		Evaluate the risk of security of people and property. Develop plan to			
May 11 2010	4	address.			
M11 2010	3	Develop and institute a vessely Size Rick Assessment			
May 11 2010	3	Develop and institute a yearly Fire Risk Assessment			
		Mandate departmental training requirements. Mill operations core modules,			
	2	equipment operation sign off/competencies		I	Compliance requirment

Safety Project List

			<del>ee,</del>		
Date	Priority	Projects	Progress	Date	Notes
		Create a structured yearly plan for ERT training with core competency			
		requirements and a tracking system to ensure compliance. Implement and		1	
May 11 2010	1	provide training by qualified/competent instructors.		1	Compliance requirment
				1	
		Work with HR to investigate changes and deficiencies in current drug and		1	Discussion and transfer of Charter of Rights and Legal issue documentation to
May 11 2010	3	alcohol testing program.	Initiated		Jon Newnham.
		Define required safety training across site and initiate plan to conduct as		1	
May 11 2010	3	defined. Example - Big 5, TDG, Fire Extinguisher, First Aid		1	Compliance requirment
May 11 2010	3	defined. Example - big 5, 106, fire Extinguisher, first Aid		<del>                                     </del>	Compliance requirment
May 11 2010	2	Critical path planning related to safety for underground operation		1	
Thuy III Louis	_			<u> </u>	One RTW case currently in place. Defined program development partially
May 11 2010	3	Develop and implement Return to Work Program	Initiated	1	complete.
June 15 2010	2	Revise blast clearing and guarding procedure	Initiated		
June 15 2010	5	Revise lock out policy to improve lock owner identification			
		Revise confined space entry policy to improve watch person communication		1	
		as well as rescue provision consideration (harness in vert entry, retrieval		1	
June 15 2010	4	systems,etc)		1	
June 15 2010	4	Fuel filling and transferring procedure creation	Initiated	<del>                                     </del>	
June 15 2010			I House	<u> </u>	
June 15 2010	3	Gas testing training for Safety Coordinators and Mill Operations Supervisors		1	
		Hot work permit process needs defined fire watch and final inspection			
June 15 2010	5	addition			
		Review the workings and ownership of fire water system. Define critical		1	
		valves that are at risk unsecured. Define monthly check and test		1	
June 15 2010	5	requirements.		1	
Julie 13 2010	,	requirements		<del> </del>	
June 15 2010	5	Non work related JHA training for site supervision		1	
June 15 2010	5	Job specific JHA requirements		1	
June 15 2010	5	MSDS update and review			Compliance requirment
June 15 2010	3	Source fire extinguisher filling and servicing training for Safety Coordinators.		<u> </u>	Compliance requirment
3 45 3010	4	Create monthly fire extinguisher check sheet valid for property	*-W-1-J	1	Dave Cretter has begun compiling list
June 15 2010	4	Create monthly fire extinguisher check sheet valid for property.	Initiated	<del>                                     </del>	Dave Crottey has begun compiling list
May 11 2010	1	Source medical director as required under legislation	Initiated	1	Global Medical currently getting licenses in order for the Yukon.
. lay 11 2010	-		Inducu	<del>                                     </del>	
June 15 2010	3	Trucker orientation revision required		1	
		Excavation permit to be created in coordination with engineering,		1	
June 15 2010	4	maintenance and safety		1	
		·			
June 15 2010	4	ATV training required for ATV operators - Engineering Mine Tech			
		Safety, Environmental and Emergency response issues related to barge			
June 15 2010	2	operation	Initiated	<u> </u>	John Dawson, Mark Goebel, Larry Sjonnesen and Jaime Delgado involved
		-			•

**Safety Project List** 

Date	Priority	Projects	Progress	Date	Notes
June 15 2010	4	Institute an avenue for people site wide to access safety information, documentation and forms in electronic version.			
May 11 2010	2	Source drug testing training for Safety Coordinators - currently no one certified to conduct.			Compliance requirment
May 11 2010	1	Channel 1 improvements as it is very unreliable and an extreme risk as this is the emergency channel			Some information has been communicated but no definate timeline
May 11 2010	2	Source emergency response equipment, fire fighting apparatus and define facility to store, maintain and house Safety, First Aid Facilities, ERT equipment, Training and Admin (IT)			
May 11 2010	2	Source training/certification for Safety Coordinators for SCBA maintenance			Compliance requirment
June 15 2010	4	Indoor crane training and revise the pre use log books.			Compliance requirment
May 11 2010	3	Institute a safety award program			
June 15 2010	4	YWCHSB Choices Program			
June 15 2010	5	Develop inventory control and check in first aid			
June 15 2010	2	Provide for audiometric testing requirements on a regular basis.	Sourced	August-10	Compliance requirment
		Institute a system to ensure drinking water meets regulated standards.  Include testing, maitenance and inspection of delivery system. Training and			
July 1 2010	1	certification.	Initiated		Compliance requirment

# **5.0 UNDERGROUND SAFETY REQUIREMENTS**

**Underground Safety Requirements** 

Time	Priority	Need	Progress	Date	Notes
4 mos	1	Main Vantilation Cortons			Main contribution from attackers quitchers are
4 mos	1	Main Ventilation System	1		Main ventilation fans, starters, switchgear, etc.
1 mos	1	Auxiliary Ventilation			Auxiliary fans, vent tubing, associated hardware, switchgear, etc
1 mos	1	Escape way considerations			Ladders, landings, doors,
3 mos	1	Stench gas warning system			Control system, switch gear, dispersal piping, supply of stench gas/extra bottles for testing and in case of activation
3 mos	2	Central blast system			Complete system required
1 mos	1	Blast warning lights, system			
3 mos	1	Communications			Leaky feeder system required, additional radios and phones
6 mos	1	Dry area provisions			Dry and washing facilities required at or near the portal entrance
1 mos	1	Refuge stations			Portable refuge station(s) as required depending on location and number of people for initial work and plan for development of permanent refuge stations moving forward. Must be clearly identifiable and include emergency water, compressed air, bottled breathing air/oxygen, CO2 accumulation provision, door sealant, communication provision, first aid kit, stretcher, blankets, fire extinguishers, seating capacity, lighting, toilette provision, source of heat, map of mine, copy of ERP and refuge station instructions
1 mos	1	Underground specific Emergency Response Plan			
	2	Mine Rescue Station			Area to store, maintain and prepare Mine rescue gear. Used as staging area for emergency
1 mos	1	Self rescuers			MSA W65 self rescue devices for all personnel plus extra and stock in stores
1 mos	1	PPE			Mucker boots, Shaft hats, vibration gloves, miner belts,
1 mos	1	Tag board system			Can be built on site but require tags
2 mos	1	Head lamps and charging banks			New WisdomKL5M LED Li-ion lamp and NWCR charging banks. I trialed this system and switched over to it at the Cantung mine. Used for 2 years. Very cost effective and reliable. Takes 6 weeks for delivery from China.
1 mos	1	Mine rescue gear			Full compliment of mine rescue gear to be stored on surface in Mine Rescue Room - Coveralls, tools, stretcher, back board, signaling devices, first aid kit, oxygen delivery system, full body harnesses, rope rescue equipment, fire fighting equipment, extrication equipment (lifting and moving bags)

# **Underground Safety Requirements**

Time	Priority	Need	Progress	Date	Notes
1 mos	1	2- Ocenco SCBA for victim and training unit			
111103	'	2" Ocenico SCBA for vicum and d'allining drift			
3 mos	1	12 Dragger BG 4 SCBA			
2 mos	1	12 spare Oxygen bottles			
2 mos	1	Dragger Bench testing equipment			Vacuum pump, etc.
3 mos	1	Oxygen booster pump			Materline
2 mos	2	3 - multi gas detection units			Need to test O2, CO, LEL and NO2 other gasses - H2S or SO2
1 mos	3	Dragger gas testing pump and tubes			For back up to electronic testing and for specific tests for ammonia, acid gas, etc.
1 mos	3	Personal CO/O2 gas detection			Small personal devices worn by scoop operators or others where gas levels may be inconsistent with a regular 2 hour check.
1 mos	3	Signage			Explosives, Do Not Enter, Slow, Arrows, Refuge, Phone, Escape way
2 mos	4	Firefighting foam machine, mini pump system			New style units on a trailer or buggy, utilize high pressure water and foam to fight fire. Designed for minimum water use applications. Need on with diesel engine.
2 mos	4	Mine rescue trailer			Can be built on site or custom ordered. Will hold all gear, stretcher, fire fighting equipment.
1 mos	4	Multiple fire extinguishers			All transformer, fuel storage, refuge, working headings, - 20lb cartidge activated dry chem type.
1 mos	1	Training Program			System in place to train and ensure competancy of workers. Will require dedicated manpower.
3 mos	1	CO detection for compressed air			
3 mos	1	Fire supresion for all mobile equipment			Training, tools and parts to inspect and service units.
2 mos	3	Fire supresion/protection for fuel storage			Depending on where fuel storage will be located, may need fire resistant doors, foam system, etc
1 mos	3	Environmental spill kit supplies			Several overpacks and sorbant pads and booms
2 mos	1	Oil skimmer			Installed in main sump to skim oil out of water. Can be reclaimed and burned in used oil furnace