



Keno Hill District Operations
Management Health and Safety Program

Effective:
January 17, 2018



Revision No.	Date	Originator (Name/Initials)	Reviewed/Checked By (Name/Initials)	Pages
1.0	30 June 2012	Safety Manager	Don Ethelston	9
1.1	May 1, 2017	Mine Manager	Ken Fedak	8
1.2	Jan 15, 2018	Mine Manager	Ken Fedak	

- This document will be regularly updated to reflect revisions.
- Updated Management Health and Safety Program (MHSP) documents will be distributed to all authorized personnel.

Authorized Distribution/Location List:

- General Site Manager Office;
- Mine Manager Office;
- Mill Manager Office;
- Site Services Manager Office;
- Health and Safety Manager/Coordinator(s) Office; and
- Exploration Office.

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1. INTRODUCTION

The purpose and intent of this document is to communicate the framework of Alexco's Management Health and Safety Program (MHSP). The MHSP provides an effective health and safety management plan and guides the successful exploration, development and operations at Keno Hill. The MHSP is updated during critical milestones and changes to operational status and conditions as Alexco continues its development and operations activities at the Keno Hill District.

1.1 MHSP OBJECTIVES

We the members of the mining industry, have a responsibility to protect all workers engaged in its activities from personal injury and health hazards. The operating company, in cooperation with service companies within the industry, will promote methods and practices that have potential for improving safety performance.

With the alignment of the MHSP to Alexco's corporate Health and Safety Policy, all Alexco personnel including contractors will be positioned to support and deliver on safety performance, while meeting the MHSP objectives as listed below:

- Manage safety accountability with all stakeholders across the project;
- Reduce the number of reportable injuries and accidents;
- Strive to maintain a Lost Time and Serious Injury free workplace;
- Continue to improve Alexco's Safety Culture through behavior change.

To meet our responsibility, we will operate under the following guiding principles:

RESPONSIBILITY

The operating company, when acting as prime contractor, is responsible for coordination and general supervision of all activities at the work site, including activities carried out by contractors, sub-contractors, service companies and suppliers. While all parties have a responsibility to promote worker safety, the operating company recognizes its leadership role in promoting worker health and safety on the basis that it has the greatest power to influence work site situations. It is the responsibility of workers and employers to refuse to perform unsafe work practices.

PRIORITY

Activities will be conducted on the basis that safety of all personnel is of vital importance, whether those personnel are employed by an operating company, a contractor, a sub-contractor, a service company or a supplier.

RECOGNITION

The process of selecting contractors, sub-contractors, service companies and suppliers, and the administration of contracts, will include recognition and support of good safety performance. Support and recognition based on good safety performance will also be provided by all employers to their employees.

COMMUNICATION

Alexco Resource Corp. management is constantly looking for ways to improve our Safety Program. We appreciate and request any suggestions that will improve our programs.

We provide direction to our employees through our safety policies and meetings. Our Managers make job-site visits to observe operations and ensure Standard Work Procedures are being followed. Workers are encouraged to present any concerns or questions they may have regarding the Safety Program to Management. Suggestions can also be directed to the Safety Coordinator and the Mine Manager.

1.2 ORGANIZATIONAL STRUCTURE

The structure of the Keno Hill Mine Operations corporate and site management and safety department is shown in the figure below. As operations change in the district, the organizational structure will also change based on management and supervisory requirements and positions.





1.3 SAFETY DEPARTMENT WORK ROSTER

The majority of Keno Hill Mine Operations personnel rotate on a 2 weeks on and 2 weeks off work schedule. By adopting this rotation, the department is capable of supporting and delivering consistent coverage across the project. When personnel are on rotational time off, their functional groups are shadowed by those on site and supported through Alexco's site management personnel. The Mine Manager's work schedule is split between the Health and Safety Coordinator shift schedules to ensure continuity during cross shifts, allowing important face-to-face exposure to both shifts and operations management.

2. RESPONSIBILITY AND ACCOUNTABILITY FOR SAFETY

2.1 MANAGER'S RESPONSIBILITIES

Managers protect employees and the company by:

1. Providing information, instructions and assistance to all supervisory staff in order to protect the health and safety of all employees, contractors and subcontractors.
2. Encouraging employee involvement in safety by demonstrating management's commitment to safety.
3. Providing all supervisory staff with an understanding of the accident prevention program and ensuring compliance with Yukon Occupational Health and Safety legislation.
4. Providing all supervisory staff with proper, well-maintained tools and equipment, as well as any other special personal protective devices that may be required.
5. Ensuring that all workers are adequately qualified to perform their work.
6. Providing ongoing safety education programs and ensuring that training needs are identified and met.
7. Monitoring departments and projects and hold them accountable for their individual safety performance.
8. Ensuring that accidents and incidents are reported and investigated and corrective actions are taken.
9. Setting a good example.

2.2 SUPERVISOR'S RESPONSIBILITIES

Supervisors maintain a safe worksite by ensuring:

1. Knowledge and appliance of the company's safety policy and relevant Yukon Occupational Health and Safety legislation.
2. That all employees are educated to work in a safe manner and that they use all protective devices and procedures required by this company and by legislation to protect their health and safety.
3. That only safe work practices are used.
4. That unsafe conditions and behavior are corrected immediately.
5. That all employees know what is expected of them.
6. That training needs are identified and met.
7. To arrange for medical treatment when required, in the case of injury or illness, including transportation to a doctor or hospital when necessary.
8. To report all accidents immediately, to investigate all accidents fully and to advise management on how to prevent similar accidents in the future.
9. That all equipment is appropriate and well maintained.
10. To carry out regular inspections to identify hazards and remove them where possible.
11. That all employees know and are prepared to deal with the hazards of their work and any specific hazards on the worksite.
12. That personal protective equipment is available, properly used, stored, maintained and replaced when necessary.
13. That a good example is set.

2.3 WORKER'S RESPONSIBILITIES

Workers protect themselves, fellow workers, the public, and the environment by:

1. Reading and becoming thoroughly familiar with the company's safety policy, safe work practices, procedures and rules.
2. Actively participating in safety program development and maintenance.
3. Following safety standards and safe work procedures set out by the employer, employees and regulatory requirements.
4. Refusing to perform work when unsafe conditions exist (as defined in Yukon Legislation) and to refuse to perform work they are not competent to perform.
5. Reporting all potential hazards to supervisors.
6. Immediately report all accidents and injuries to their supervisor(s).
7. Participating in all training offered by the employer, either on or off the worksite (e.g. First Aid, WHMIS training).
8. Using the required personal protective and safety equipment.
9. Checking tools and equipment, including personal protective and safety equipment for hazards before using them.
10. Knowing the location, method of contact for first aid and emergency equipment.
11. Setting a good example.

2.4 CONTRACTORS, SUBCONTRACTORS, AND CONSULTANTS' RESPONSIBILITIES

Contractors, subcontractors and consultants' responsibilities are to:

1. Ensure that their programs and operations comply with contractual and regulatory requirements.
2. Insist on safe performance throughout their operations by ensuring contractors and employees are competent to do their work properly.
3. ensure subcontractors and employees meet safety expectations.
4. Provide the time and resources required to enable subcontractors and employees to do their work properly.
5. Remedy any workplace conditions that are hazardous to the health or safety of the employer's workers.
6. Ensure that the workers are aware of known or reasonably foreseeable health and safety hazards to which they are likely to be exposed and are aware of their rights and duties under regulations.
7. Provide and maintain protective equipment in good condition, safety equipment, devices, and clothing as required and ensure that these are used by their employees.
8. Provide their workers the information, instruction, training, and supervision necessary to ensure the health and safety of other workers in the workplace.
9. Consult and cooperate with the joint Health and Safety Committee and worker health and safety representatives for workplaces of the employer.

3. TRAINING

3.1 PURPOSE

The purpose of this policy is to provide for general and specialized safety and related training throughout all levels of the organization.

3.2 POLICY

Alexco Resource Corp. will provide, and employees will participate in all safety and related training that is necessary to minimize losses of human and physical resources of the company.

This training includes but is not limited to:

- Safety orientations for newly hired personal
- Job specific training;
- Safety training for supervisor's and management;
- Task and trade specific training and certification;
- Specialized safety and related training; and
- Refresher and update training.

The following 11 discipline-specific standards shall be utilized to provide an overview of technical and operational requirements:

1. Surface Fire Prevention and Response;
2. Underground Ground Control;
3. Underground Fire Prevention and Response;
4. Energy Isolation;
5. Mobile Equipment;
6. Electrical Safety;
7. Work Permit System;
8. Cranes and Lifting Equipment;
9. Occupational Health and Hygiene;
10. Job Hazard Analysis (JHA); and
11. Confined Space Entry

3.3 SAFETY MANAGEMENT SYSTEM

Alexco utilizes a formal online Environmental Health and Safety Management System (EHS) through SafetySync to deliver the training modules and courses and document training records and compliance. All training delivery and records necessary for implementation of the MHSP are stored in SafetySync. New employees are given a login identity and a password. The safety department identifies the required courses for each employee, depending on their specific job responsibilities. Courses can be completed individually or in a classroom setting.

4. JOINT OCCUPATIONAL HEALTH AND SAFETY COMMITTEE

4.1 PURPOSE

The joint worksite health and safety committee unites workers and management in discussions of worksite procedures and safety. The committee helps foster a positive attitude toward safety among all members of the worksite.

4.2 COMMITTEE RESPONSIBILITIES

The Committee responsibilities are to:

- Become familiar with regulations and guidelines for worksite health and safety committees
- Hold meetings once per month
- Review reports of unsafe acts or conditions and recommend corrective measures
- Identify unhealthy or unsafe conditions at the worksite
- Review reports from investigations of first aid incidents, accidents and near misses
- Look into safety concerns pointed out by any employee on the work/camp site
- Review written safe operating procedures and codes of practice before they are distributed
- Review safety communications before they are distributed
- Recommend to the employer new safety practices and changes to safety practices and general policy
- Identify and recommend recipients for safety rewards
- To promote safety awareness and activities within the work force.

4.3 RECORDS OF MEETINGS

Minutes of the committee meetings will be kept with a copy posted on the message board located in the camp kitchen common area. The original copy held on file with the safety coordinator and a copy to the mine manager. Copies will also be distributed to all committee members prior to the next meeting for follow up for discussion on follow up on recommendations.

4.4 MEMBERSHIP

The committee will be comprised of equal numbers of representatives from employees and management. A representative from each section will be on the board. These sections include but are not limited to: exploration, mining, milling, maintenance, site services and safety.

4.5 EXECUTIVE

The committee will have two co-chairpersons, one employee representative and one management representative as selected by the committee. The co-chairs will alternate chairing the monthly meetings. A secretary will also be appointed to record minutes of each meeting.



4.6 INSPECTIONS

Through regular formal and informal inspections work site conditions and work procedures are monitored. Inspections ensure that company safety standards and regulatory requirements are being followed, as well as meeting inspection requirements recommended by equipment manufacturers. Inspections also enable the identification of hazards before they become a problem by revealing where improvements to equipment, work procedures worker training, and worksite conditions are needed. Both committee members, and employees are expected to participate in worksite inspections with the safety officer. It is recognized that all employees have extensive experience in their respective fields.

4.7 GOVERNMENT INSPECTIONS

Government inspectors will from time to time inspect the mine site. The inspectors may assess records, plans, policies, and equipment or work procedures. They may interview anyone on the worksite and they the right to remove any item they need to inspect further. Anyone on the site at the time of the inspection must cooperate with government inspections.

5. HAZARD ASSESSMENT AND CONTROL

Successful recognition of potential safety hazards and the ability to eliminate these hazards plays a major role in Alexco's MHSP. This requires the participation of everyone involved including workers, supervisors and managers who must take responsibility to eliminate potential hazards within their own work place. Hazard control will be accomplished by regular inspections of worksite conditions, equipment, employee actions and job procedures conducted by supervisors, safety coordinator and employees. These inspections are to be documented and reported to Alexco management on the appropriate report form. Corrective action taken will also be reported and documented.

5.1 HAZARD IDENTIFICATION

We endeavor to eliminate all site-specific hazards prior to the commencement of work. The Hazard Identification Checklist is completed during the initial inspection. A sample of the checklist is attached. Since worksite conditions are constantly changing as projects progress, the

Hazard Identification Checklist must be updated accordingly and any changes are communicated to workers immediately. Workers are required to identify any potentially hazardous situations to their Supervisor or Safety Coordinator. The Supervisor and/or Safety Coordinator is responsible for documenting the hazards as well as any corrective action required to remedy it. Any new hazards may be communicated at the tailgate meetings.

5.2 EQUIPMENT MAINTENANCE PROGRAM

Alexco operates a fleet of equipment, hand and electrical tools. Each piece of equipment has an Equipment Log Book. When each unit has been serviced or any work performed there will be an entry place in the logbook. All equipment is checked and maintained prior to moving to any work site. All equipment is subject to regularly scheduled servicing as determined by the manufacturer. It is the responsibility of the Supervisor or equipment operator to ensure that regular servicing and preventative maintenance has been performed and recorded in the equipment logbook. Necessary maintenance on rented equipment must also be completed. The operator of each piece of equipment is responsible for bringing any mechanical deficiencies to the attention of his supervisor and/or mechanic so that the required maintenance can be performed. If you are unsure of the required maintenance schedule of a piece of equipment ask your supervisor or the mechanic to find out the set schedule.

5.3 PURCHASING/ENGINEERING CONTROLS

In order to eliminate any jobsite hazard that may develop due to substandard materials, those responsible for purchasing ensures that adequate equipment and materials are purchased.

All materials purchased must be properly tagged and identified with appropriate WHMIS symbols. Should material be distributed without proper WHMIS tags inform your supervisor or safety coordinator.

5.4 INSPECTIONS

The safety coordinator along with representation from area supervisor and workers will conduct regular inspections of all worksites. These inspections will focus on work site conditions, tools, equipment and use of proper safe work procedures. All job sites will be inspected for safety deficiencies. An inspection is the result of a site tour by the safety coordinator and/or site supervisor. Should deficiencies be found the personnel performing the tour will address the safety issue directly and ensure the safety issue is addressed. (i.e.: the site supervisor walks through the job site and notices that the workers are not wearing their safety glasses in the required work areas.) The supervisor will inform each worker of their responsibilities and if required hold an impromptu tailgate safety meeting to ensure all personnel are aware of the required regulations.



5.4.1 HOUSEKEEPING

General housekeeping in the workplace is considered a high priority during inspections. Good housekeeping, demonstrated by orderliness and cleanliness of the job site, usually suggests a safe, well-managed job and pride in the work is being done. Poor housekeeping can ultimately lead to injuries and damage.

5.4.2 ONGOING (INFORMAL) INSPECTIONS

Ongoing inspections will be conducted by supervisory personnel who do most of their work on the job site, watching for unsafe acts and unsafe conditions. In many cases discussing the unsafe act with workers and/or issuing instructions to correct the unsafe condition can correct the problem. Situations that require additional corrective action need to be recorded by the supervisor for follow-up.

5.4.3 PLANNED (FORMAL) INSPECTIONS

These planned inspections are conducted by the supervisor, safety coordinator and workers and/or by an inspection team (JHSC members). These inspections are conducted on a regularly scheduled basis.

6. ACCIDENT INVESTIGATION POLICY

Occupational Health and Safety Regulations

Report and Investigations Section 30 (1)

In this section, are the following definitions:

“Serious Accident”

- 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 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

“Serious Injury”

- A. an injury that results in death
- B. fracture of a major bone, including the skull, the spine, the pelvis, or the thighbone,
- C. an amputation other than of a finger or toe,
- D. loss of sight of an eye,
- E. internal bleeding,
- F. third degree burns,
- G. dysfunction that results from concussion, electrical contact, lack of oxygen, or poisoning,
- H. an injury that results in paralysis (permanent loss of function)

6.1 ACCIDENT AND NEAR MISS PROTOCOL AND INVESTIGATION

6.1.1 WORKERS COMPENSATION BOARD REPORTING

All accident/incidents resulting in injury must be reported to immediate supervisor. If an injury is severe enough to require medical attention this report must be forwarded to Workers Compensation Board within three days of the accident as per legislation.



6.1.2 ACCIDENT/INCIDENTS

Any type of loss that could include: any and all injuries equipment damage, work interruptions, spills, unexpected releases, theft, damage, fires, explosions and natural disaster.

6.1.3 NEAR MISS

Near Miss or “close calls” don’t result in injury but may cause property damage. If an employee had been in a slightly different place or position certain injury could have occurred. Often described as “sheer luck” that nothing happened. Reporting, investigating and discussing the matter the employees will likely have helpful suggestions to prevent a similar incident from reoccurring.

6.1.4 ACCIDENT/INCIDENT RESPONSE PROCEDURE

1. Stop. Call your supervisor or safety coordinator and if needed first aid.
2. Supervisor or safety officer to notify mine manager.
3. Ensure that equipment involved is not moved and incident/accident scene is not disturbed.
4. In case of emergency allow personnel trained in first aid to take care of casualty victim as soon as possible until outside medical aid arrives.
5. Ensure that the casualty victim is not moved unless a greater and imminent danger will arise by leaving them in the original position and location.
6. If the site is remote and hard to locate, have someone go out to the roadway or access point to watch for the ambulance. Upon ambulance arrival, inform and assist medical personnel as required.
7. After assessment and statements have been taken, follow instructions from your supervisor, safety officer and/or manager.
8. All dangerous occurrences even those that do not involve injury or property damage must be reported to Occupational Health & Safety.

6.1.5 INVESTIGATION PROTOCOL

Once the victim/s and medical team has dispersed the safety coordinator and supervisor will continue to conduct an investigation. Determination regarding police intervention has been determined.

1. Photograph the scene, including all equipment and surrounding area.
2. Sketches should also be made with appropriate/accurate measurements.
3. Further interviews and statements taken if needed.
4. Accurate records are documented.
5. Written recommendations to prevent recurrence must be made and forwarded to mine manager and supervisors.
6. Immediate follow up on recommendations and implementation.
7. Review outcome of investigation with all participants.



7. SAFETY ENFORCEMENT POLICY

The management of Alexco Resource Corp. is committed to the safety excellence of our employees by providing an injury and accident free workplace. All employees are to abide by the regulations, safety rules, and the use of safe work practices and safe job procedures.

Safety violations will be handled in an objective but firm manner. The enforcement progression follows the following documentation at each stage

7.1 VERBAL WARNING

This includes discussion of the violation and a warning of more severe action, should the offence be repeated.

7.2 WRITTEN WARNING

This involves a discussion about the violation and a written record of the violation and reprimand. A copy is given to the employee and another is put on the employee's personal file. Warning of more severe action should the offence be repeated is given.

7.3 SUSPENSION WITHOUT PAY

This includes release from all job responsibilities without pay for a period of time determined by the severity of the substandard act. Suspensions will be documented in a letter to the employee and a copy of the letter will be placed in the employee's personal file. The employee is informed at this point that discharge will result if the substandard behavior is repeated.

7.4 TERMINATION

This will only be used when all other attempts to correct the substandard behavior have failed. Formal discharges will be documented in a letter to the employee. This will only be taken as a final step when sound judgment indicates no other alternative.

8. OCCUPATIONAL HEALTH AND HYGIENE

The Health and Safety Coordinator(s) are responsible for the occupational health and hygiene (OH&H) monitoring program and requirements. The OH&H program includes the following:

- A process to monitor and measure key operational characteristics like noise, dust, etc.;
- A process to monitor the controls implemented to manage risks;
- A process to develop targets and standards; and
- A means of maintaining the data collected.

Health screening will be conducted as per the medical Matrix below, the Health and Safety Coordinator(s) with assistance from Human Resources shall coordinate and determine specific responsibility breakdown to ensure the program is streamlined and implemented successfully.

PRE-EMPLOYMENT, PRE-PLACEMENT and EXIT OCCUPATIONAL EXAM MEDICAL REQUIREMENTS								
	D&A	Spirometry	Audiometry	Hepatitis B &	Hepatitis A Ab	ECG	Lead Blood	ERT Medical
New hires or contractors of more than 2 weeks	X	X	X				X	
Reasonable cause	X							
Existing Employees			X				X	
Food handlers	X			X	X			
Sanitation and cleaning staff	X	X	X	X	X			
ERT employees	X	X	X	X	X	X		X

The minesite respirable dust monitoring program is presented in Appendix A, while Appendix B outlines the Respiratory Equipment Fit test.

9. EMERGENCY RESPONSE

The Alexco Emergency Response Plan (ERP) (Appendix C) has been developed to ensure that clear, precise and effective guidelines are established for the personnel responsible for the management of emergency events, and to ensure that those persons are kept well informed and capable of performing those requirements. The plan shall provide an organizational and procedural framework for the management of emergency events and the subsequent recovery activities that might be required either at Flat Creek camp or within its surrounding environment. The Flame and Moth ERP for underground emergency procedure is included as Appendix D.

9.1 EMERGENCY RESPONSE TEAM

The Emergency Response Team (ERT) structure at Alexco shall be managed by the Mine Manager, with assistance and support from the on-site personnel to provide expertise, training, and leadership to a 2x2 shift roster that provides 24/7 emergency coverage for the site.

The Site ERT & Medical Response Team (MRT) will be a cross-trained function in order to combine resources, skill sets, and efficiency by providing multi-coverage capability in the event of an emergency. The goal is to have a fully functional underground ERT by the end of the third quarter of 2017, and a fully functional cross-trained surface and underground emergency response team by the end of first quarter of 2018.

The primary objective of the ERP is to:

- Prevent subsequent injury or loss of life;
- Minimize property loss, damage to equipment, and the environment;
- Provide a chain of command to ensure that there is a prompt and coordinated approach to emergency situations;
- Ensure all personnel are aware of their responsibilities in the event of an emergency;
- Establish an effective communications network that provides timely information to both internal site and external site stakeholders;
- Ensure the safety of personnel and equipment during an emergency, and to initiate search and rescue operations for missing personnel;
- Provide a methodology to facilitate improved decision making through the capture of relevant facts and information; and
- Facilitate the appropriate application of in-house technical expertise, personnel power and equipment to effectively deal with an emergency.

APPENDIX A.
Minesite Respirable Dust Monitoring Program

	SAFETY STANDARD	Document Number:	AKHM-0050
		Version Date:	Nov 2012
		Version:	1.0
		Approved by:	Tim Hall
MINESITE RESPIRABLE DUST MONITORING PROGRAM			

ALEXCO RESOURCE CORP.

Effective Date: Nov 2012

Implementation Date: Nov 2102

Revision No.: 1.0

Review Date: As Required

Prepared By: Paula Shemley

References:

Objectives

1. To ensure worker safety from exposure to work place respirable dust, total respirable dust and respirable combustible dust.
2. In accordance with Yukon Occupational Health and Safety Regulations the following areas will be monitored on a three times per annual basis for dust:
 - Active Underground Work Areas
 - Crusher Plant
 - Assay / Bucking Room
 - Surface Ore Handling
 - Mill Building
 - DSTF

Definition

Underground Work Areas:

1. On a three times per annual basis underground workings will be sampled for respirable dust, total respirable dust and respirable combustible dust.
2. Scoop operators, truck operators, stope miners and shot-crete applicators will be prime candidates for the monitoring devices.
3. Miners will receive instruction as to the required procedure[s] and will wear the sampling device for a complete shift.[11 hours]

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Crusher Plant:

1. On a three times per annual basis the crusher plant will be monitored for respirable dust and total dust.
2. The crusher operator will receive instruction as to the required procedure[s] and wear the sampling device for a complete shift. [12 hours]

Assay / Bucking Room:

1. On a three times per annual basis the bucking room will be monitored for respirable dust and total dust.
2. The sample bucker will receive instruction as to the required procedure and wear the sampling device for a complete shift. [12 hours]

Mill Building/Surface Ore Handling:

1. On a three times per annual basis the Mill Building and ore handling areas will be monitored for respirable dust and total dust.

Operators will receive instruction as to the required procedure and wear the sampling device for a complete 12 hr. shift.

Procedure:

Sample Procedure:

1. Pumps and cyclone arrangements will be set up in accordance to recommended procedure from ASL.
2. Sample pumps will be programmed to start in accordance of the shift hours worked.
3. Pumps c/w cyclone attachment will carried by personnel in areas to be tested throughout the testing period.
4. Pumps c/w cyclone attachment may be located in stationary and/or worn by a worker in the area being sampled.

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MINESITE RESPIRABLE DUST MONITORING PROGRAM			

Analysis:

1. A Gravi-metric dust sampling method utilizing Gilian Pumps and dust collecting cyclones will be employed.
2. Analysis of samples will be conducted by Maaxam Services Laboratories in Vancouver.
3. Pre weighted filters and cassettes will be supplied by and used from Sennsidyne.
4. Results will be distributed to District Inspector of Mines, Mine-site Departments, and the OHSC and posted.
5. A record of the report will be filed in the Safety Office for future reference.

Permissible Concentrations:

Permissible concentrations of respirable dust and respirable combustible dust are:

Agent	TLV/EL 8 Hour	Adjustment Category	11 hr TLV 3x3 or 2x2 wk shift
DPM	400 $\mu\text{g}/\text{m}^3$ (1)	III	236 $\mu\text{g}/\text{m}^3$
Lead	0.05 mg/m^3	III	0.03 mg/m^3
Particulate, respirable	3 mg/m^3	I	1.77 mg/m^3
Silica, crystalline, respirable	0.025 mg/m^3	III	0.015 mg/m^3

Additional Monitoring:

1. If any results exceed permissible concentrations the area[s] affected will be investigated to ascertain the cause[s] of the contamination.
2. The cause[s] will be immediately rectified and a sampling retest will be conducted.

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		Version:	1.0
		Approved by:	Tim Hall
MINESITE RESPIRABLE DUST MONITORING PROGRAM			

3. Sampling will be conducted immediately on a reported and/or recognized potential problem area not with standing the quarterly testing schedule.
4. Sampling will be conducted as a result of revisions to procedures and/or equipment not with standing the quarterly testing schedule.

	<h1 style="margin: 0;">SAFETY STANDARD</h1>	Document Number:	AKHM-0050
		Version Date:	Nov 2012
		Version:	1.0
		Approved by:	Tim Hall
MINESITE RESPIRABLE DUST MONITORING PROGRAM			

**Alexco Sampling Plan
Personal Sample Data Collection Form**

Work Area:			
Contaminant Sampled: _____			
Job Title: _____			
Employee Name: _____			
Date: _____			
Work Shift: _____		Hours of Operation: _____	
<input type="checkbox"/> Underground		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Above Ground - Outdoors			
<input type="checkbox"/> Mill			
Work Location: _____			
Sample Data:			
Filter Cassette No. _____		Sample No. _____	
Sample Type <input type="checkbox"/> Personal		<input type="checkbox"/> Field Blank <input type="checkbox"/> Lab Blank	
Pump No. _____		Calibrator No. _____	
Start Time (24 hr.): _____		Pre-Flow Rate: / / L/min	
Stop Time (24 hr.): _____		Post-Flow Rate: / / L/min	
Average Set Up Area Temperature: _____ °C		Set Up Area Pressure: _____ kPa	
Average Work Area Temperature: _____ °C		Work Area Pressure: _____ kPa	
Total Time: _____ min		Average Flow Rate: _____ L/min	
		Corrected Flow Rate: _____ L/min	
Total Volume: _____ L		Total Volume: _____ m ³	
Comments: _____			
Environmental Conditions:			
Please specify the outdoor environmental conditions during the sample period.			
<input type="checkbox"/> Cloudy <input type="checkbox"/> Raining <input type="checkbox"/> Snowing <input type="checkbox"/> Sunny			
Outside Ground Condition: _____			
Relative Humidity (%): _____			
Temperature (°C): _____			
Wind Speed (km/h): _____			
Wind Direction: <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W <input type="checkbox"/> Variable			

	<h1 style="margin: 0;">SAFETY STANDARD</h1>	Document Number:	AKHM-0050
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		Version:	1.0
		Approved by:	Tim Hall
MINESITE RESPIRABLE DUST MONITORING PROGRAM			

Alexco Sampling Plan
Personal Sample Data Collection Form

Determinants of Exposure:				
Area Worked:				
Please indicate the main areas where the employee worked, if they wore respirator protection, and if so what type of respirator and cartridges were used.				
Area Description	Time (Hrs.)	Respirator Usage	Respirator Information	
		<input type="checkbox"/> Yes <input type="checkbox"/> No		
		<input type="checkbox"/> Yes <input type="checkbox"/> No		
		<input type="checkbox"/> Yes <input type="checkbox"/> No		
		<input type="checkbox"/> Yes <input type="checkbox"/> No		
Activities Performed:				
Please indicate the main activities conducted by the worker during the sampling period, if they wore respiratory protection, and if so what type of respirator and cartridges were used.				
Activity Description	Time (Hrs.)	Respirator Usage	Respirator Information	
		<input type="checkbox"/> Yes <input type="checkbox"/> No		
		<input type="checkbox"/> Yes <input type="checkbox"/> No		
		<input type="checkbox"/> Yes <input type="checkbox"/> No		
		<input type="checkbox"/> Yes <input type="checkbox"/> No		
Other Sources of Contamination:				
Please specify other contaminants to which the worker may have been exposed:				
<input type="checkbox"/>	Environmental	Specify:	_____	
<input type="checkbox"/>	Work Activity	Specify:	_____	
Engineering Controls:				
Please specify what engineering controls the worker used / were in place in the areas where they worked.				
Control		Effectiveness		
		Good	Fair	Poor
<input type="checkbox"/>	Local Ventilation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Enclosure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Sprayer (water)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Other (specify):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<h1 style="margin: 0;">SAFETY STANDARD</h1>	Document Number:	AKHM-0050
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MINESITE RESPIRABLE DUST MONITORING PROGRAM			

Alexco Sampling Plan
Personal Sample Data Collection Form

House Keeping: Please comment on the housekeeping in the areas where the employee worked with respect to dust levels. <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor </div> Comment: _____		
Operating Condition: Please describe the operating conditions during the period the sample was collected: <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Routine <input type="checkbox"/> Non-Routine </div> Comment: _____		
Analyses: <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> NIOSH Sampling Method No. 7300, Issue 3, entitled "Metals by ICP" <input type="checkbox"/> NIOSH Sampling Method No. 0600, Issue 3, entitled "Particulates Not Otherwise Regulated, Respirable" <input type="checkbox"/> NIOSH Sampling Method No. 7500, Issue 4, entitled "Silica, Crystalline, by XRD" <input type="checkbox"/> NIOSH Sampling Method No 5040, Issue 3 (Interim), entitled "Elemental Carbon (Diesel Particulate)" </div>		
Sample Results:		
Analyte:	Concentration	Units
NIOSH Method 7300 (Lead by ICP)		Mg/m ³
NIOSH Method 0600 (Respirable Particulate, gravimetric)		Mg/m ³
NIOSH Method 7500 (Crystalline Silica by XRD)		Mg/m ³
NIOSH Method 5040 (Diesel Particulate by EC)		Ug/m ³
Comments: _____ _____		

APPENDIX B.
Respiratory Equipment Fit Test

	SAFETY STANDARD	Document Number:	AKHM-0051
		Version Date:	Mar 1, 2017
		Version:	1.0
		Approved by:	Tim Hall
RESPIRATORY EQUIPMENT FIT TEST			

ALEXCO RESOURCE CORP

Effective Date: Mar 1, 2013

Implementation Date: Mar 1, 2013

Revision No.: 1.0

Review Date: As Required

Prepared By: Paula Shemley

References:

Objectives:

1. To ensure that all employees requiring respiratory equipment are knowledgeable in the appropriate use of the equipment.
2. To ensure that employees are knowledgeable in the appropriate cartridge application[s].
3. To ensure that employees are properly sized and fit tested prior to use of the equipment.
4. To ensure that employees are knowledgeable in the hygienic requirements after use and storage of the equipment

Access to Equipment:

1. Employees will sign out the equipment from the warehouse.
2. Employees will then bring the equipment to the Safety Office.

Instructions:

Safety Representative:

1. Will ensure that the appropriate cartridges[s] have been issued.
2. Will ensure that proper size of mask has been issued.
3. Will conducted fit test as per 'Fit Test Procedure'.
4. Will instruct employee on the hygienic procedure of after use and storage care.
5. Will provide necessary appliances for hygienic care and storage of equipment

APPENDIX C.
Emergency Response Plan Jan 2018



EMERGENCY MANAGEMENT RESPONSE PLAN

KENO HILL DISTRICT OPERATIONS

January 2018

ALEXCO KENO HILL MINING CORP.



This controlled document will be regularly updated to reflect revisions.

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

Authorized Distribution / Location List:

Alexco Resource Corp. - Keno Hill Property:

- Elsa Exploration Office
- Bellekeno East Shifters Office
- Flame and Moth Shifters Office
- Bermingham Shifters Office
- Maintenance Shop
- First Aid Room(s)
- General/Site/Department Managers Workspace
- Kitchen Medical Station
- Mine Rescue Trailer – Bellekeno East
- Safety Manager/Coordinators Office
- Keno District Mill Office
- Keno District Mine Office

Alexco Resource Corp. :

- Alexco Environmental Group Whitehorse Office
- Alexco Resource Corp. Vancouver Office
- Alexco Resource Corp. Whitehorse Office

Community:

- Mayo Nursing Station
- Mayo RCMP Detachment
- Mayo Fire Department

Government:

- Occupational Health & Safety - YWCHSB



Primary Partners On-site Contractors:

- First Nation of Na-Cho Nyak Dun – Mayo
- NND Summit Camps - Catering Contractor
- Boart Longyear – Surface Exploration Contractor



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1 PURPOSE

This guide sets out the response protocol in the event of a “Serious Incident” 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 – in that order.

2 DEFINITIONS

2.1 “SERIOUS INCIDENT”

A “Serious Incident” 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 a hazardous product where there is potential for that product to enter a waterway,
5. Any hazardous product spill of reportable volume, as defined in Section 11.0.

2.2 “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:

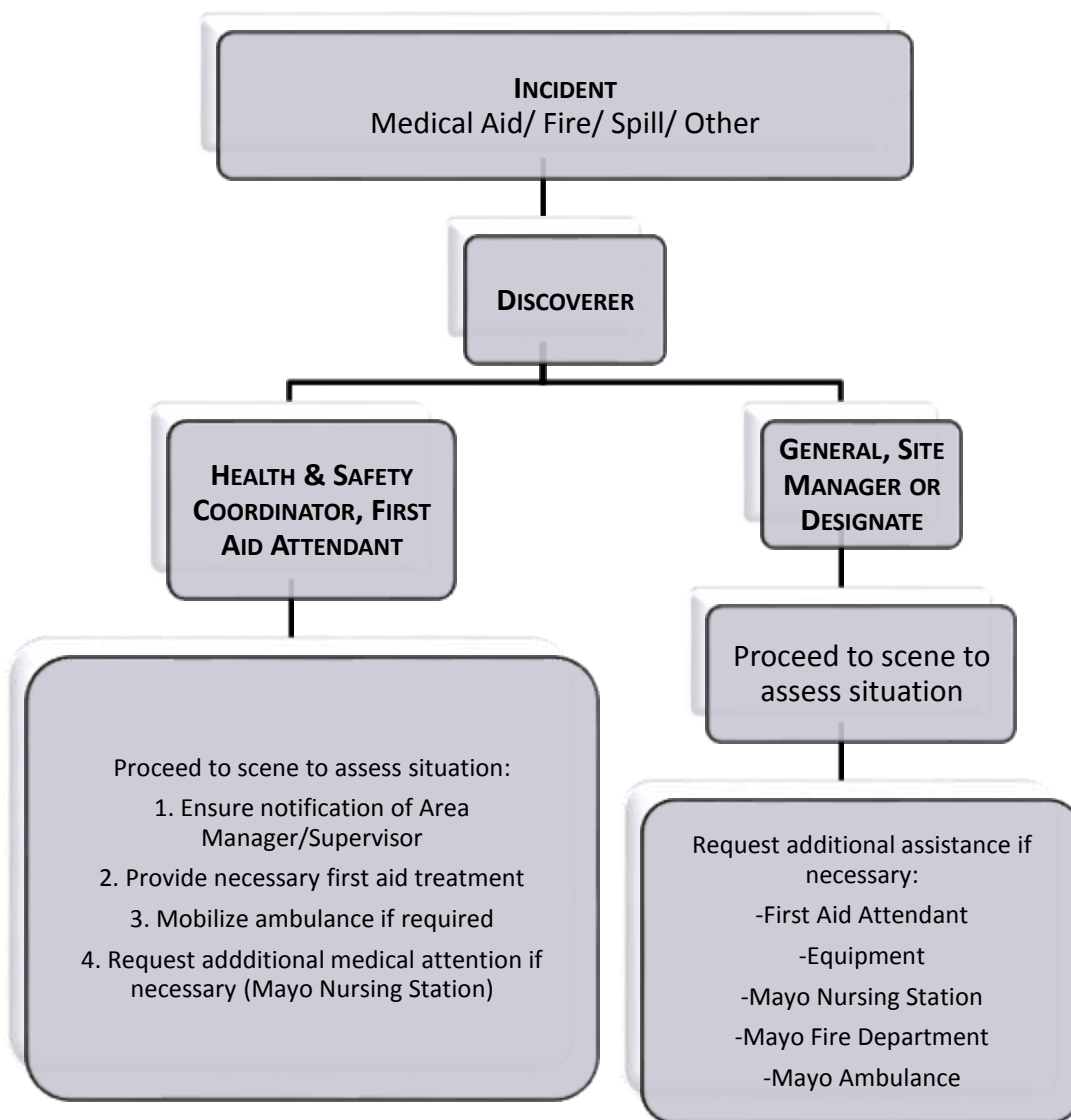
- a. *an uncontrolled explosion,*
- b. *failure of a safety device on a hoist, hoist mechanism, or hoist rope,*
- c. *collapse or upset of a crane*



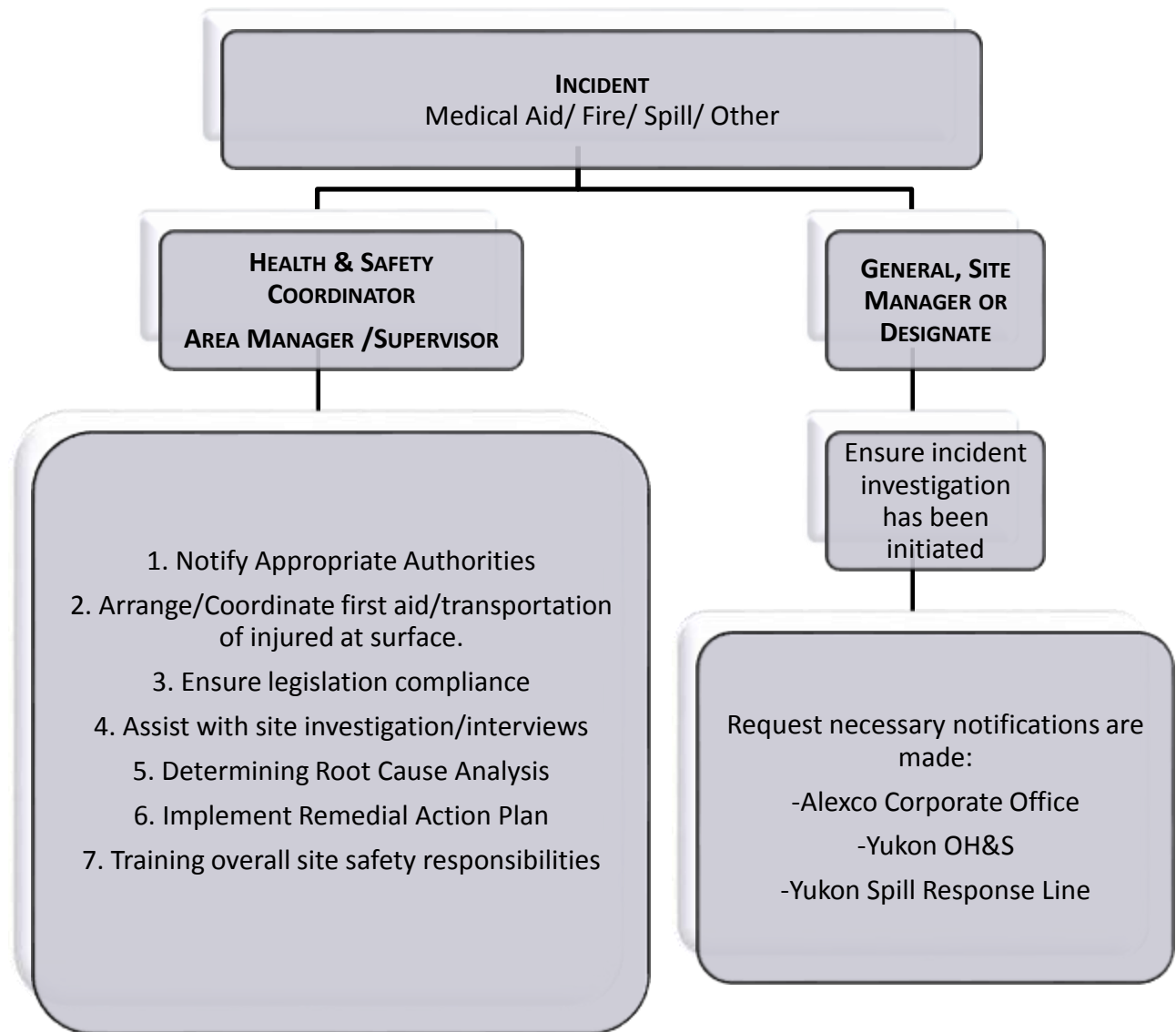
- d. collapse or failure of a load-bearing component of a building or structure regardless of whether the building or structure is complete or under construction,*
- e. collapse or failure of a temporary support structure,*
- f. an inrush of water in an underground working,*
- g. fire or explosion in 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. 199**

3 INITIAL RESPONSE TO SERIOUS INCIDENT – KENO HILL SILVER DISTRICT



4 FOLLOW UP TO SERIOUS INCIDENT – KENO HILL SILVER DISTRICT



5 SERIOUS INCIDENT RESPONSIBILITY MATRIX

See ERP 006 Medical Emergencies On-site

Position	Responsibilities
Area Manager/Supervisor	<ul style="list-style-type: none"> • Coordinate initial response • E.R.T. and specialized resources mobilization & consultation • Attend and coordinate response for all incidents involving “serious injury” and “serious accident”, as defined in Sec. 33, OHS Act • Initial scene control • Responsible for investigation – determine contributing causes and take immediate proactive action • Request additional external resources as necessary • Coordinate recovery and investigative activity • Notify Site Manager • Ensure all government reporting has been completed • Organize and conduct post-incident debriefings • Prepare Incident Report and make recommendations
First Aid Attendant	<ul style="list-style-type: none"> • Ensure area supervisor has been notified of incident • Provide first aid treatment if necessary • Mobilize ambulance to scene, if required • Stand by to assist as required by scene coordinator
General, Site Manager	<ul style="list-style-type: none"> • Designate on-call senior personnel during weekends • Receive briefings on incident details • Provide direction as required • Notify regulatory agencies, government and Alexco corporate office of incident • Review Incident Reports • Attend at all incidents involving “serious injury” and “serious accident”, as defined in Sec. 33, OHS Act • Verify compliance with standards and government regulatory requirements • Forward necessary reports to regulatory agencies • Fire Chief – assume responsibility for fire investigation
Health & Safety Coordinator	<ul style="list-style-type: none"> • Notify appropriate authorities • Arrange/Coordinate first aid/transportation of injured at surface • Ensure legislation compliance • Assist with site investigation/interviews • Determining Root Cause Analysis • Implement Remedial Action Plan • Training overall site safety responsibilities



6 SERIOUS INCIDENT CONTACTS FOR SITE PERSONNEL

KEY POSITIONS –KENO HILL DISTRICT OPERATIONS - CONTACT LIST				
Release information only as instructed by the Incident Controller.				
Alexco Resource Corp - Keno Hill Project PO BOX #7, Elsa, YT.,Y0B 1J0 Lat 63.54 N Long 135.29 W (Elsa)			Phone: LANDLINE 867 995-3113	
Alexco Site Position				Work Phone
General Manager			867-995-3113 ext. 5901	
Mine Manager			867-995-3113 ext. 7002	
Mine Superintendent			867-995-3113 ext. 7002	
Mill Manager			867-995-3113 ext. 7000	
Site Services Manager			867-995-3113 ext. 5919	
Environmental Manager			867-668-6463 ext. 233	
Health & Safety Manager			867-995-3113 ext. 5913	
Health and Safety Coordinator			867-995-3113 ext. 5911	
Care and Maintenance Supervisor			867-995-3113 ext. 5910	
SITE AREA – KENO HILL DISTRICT OPERATIONS – CONTACT LIST				
Site numbers and extensions 867-995-3113				
Bunk A 5925	House #1 5915	Exploration Office 5900	Mine Office 5900	
Bunk B 5920	House #2 5902	Kitchen 5927	Mill Office 5900	
Bunk C 5923	House #3 5916	Mechanics 5914		
Bunk D 6000	House #4 5917	First Aid 5921		
RADIO FREQUENCIES – KENO HILL DISTRICT OPERATIONS				
Alexco Channel	Channel Name	Receive TX	Transmit RX	Tone
Channel 1	First Aid Emergency First Aid Channel	160.73	165.73	RX & TX = C131.8
Channel 3	Repeater Routine On-site Radio Traffic	157.61	151.97	No Tone
Channel 4	Ladd 1 Routine On-site Radio Traffic	154.1	154.1	No Tone
Channel 5	Ladd 2	158.94	151.94	No Tone



7 EXTERNAL RESOURCE CONTACTS

With the exception of medical aid incidents, external resources will be authorized only by the Site Manager on site or his designate, or those with higher level of responsibility.

Key Persons – External Agency – Contact List			
Release information only as instructed by the Incident Controller.			
Alexco Whitehorse Office	867-633-4881	Roads Highways & Bridges	867-996-2232
Canutec	867-996-6666	Superior Propane	877-873-7467
Environment Spills	867-667-7224	Trans North Helicopter	867-668-2177
Fireweed Helicopter	867-668-5888	Whitehorse Hospital	867-393-8700
Forest Fire	888-798-3473	Wildlife Management	867-996-2162
Marine & Air Search & Rescue	800-567-5111	YEMS	867-667-3333
Mayo Fire Department	867-996-2222	Yukon Energy – Regular Hours	867-393-5355
Mayo Health Centre & Ambulance	867-996-4444	Yukon Energy – Emergency	800-676-2843
Minto Mine	604-759-0860	YK Chief Mines Safety Officer	867-667-8739
Poison Control	888-393-8700		
RCMP	867-996-5555		



8 REPORTABLE SPILL QUANTITIES

Should a spill of reportable quantity occur, under federal and territorial regulations, we are required to immediately notify the 24-hour Yukon Spill Report line: telephone number 867-667-7244.

For the purposes of the Water Use License:

1. Any quantity of spill is reportable.
2. The Site Manager, Environmental Manager, Care and Maintenance Supervisor or Manager On-Call are responsible for reporting spills.
3. Reportable spills require an Incident Investigation Report to be completed.

This guide will assist in determining what volume of product requires reporting to regulatory agencies.

If a spill is deemed to be of reportable quantity, the area supervisor will immediately notify the Site Manager or Environmental Manager who will in turn ensure that spill reporting is completed by designated personnel.

A log book will be maintained of all spills, including spills of less than reportable quantities. The log book will be available at the request of an inspector. The log book will include:

- a) date and time of the spill;
- b) substance spilt or discharged;
- c) approximate amount spilt or discharged;
- d) location of the spill;
- e) distance between the spill or discharge and the nearest Watercourse; and
- f) remedial measures taken to contain and clean-up the spill area or to cease the unauthorized discharge.

A summary of all spills will be reported as a part of the annual report.

Reportable Spill Quantities			
TDG Class	Substance for 24-Hour Spill Line	Typical Products on Site	Immediately Reportable Quantities
1	Explosives	ANFO	Any amount spilled outside of blast pattern
2.3 2.3 2.4 6.2 7.0 None	Toxic gas (compressed/non-compressed) Poisonous Gases Corrosive gas (compressed/non-compressed) Infectious substances Radioactive Unknown substance		Any amount
2.3	Non-poisonous Gases		>100 Litres



Reportable Spill Quantities			
TDG Class	Substance for 24-Hour Spill Line	Typical Products on Site	Immediately Reportable Quantities
2.1	Compressed gas (flammable)	Propane	Any amount of gas from containers with a capacity from a container > 100L
2.2	Compressed gas (non-corrosive, non-flammable)	Acetylene	
3.1 3.2 3.3	Flammable liquids	Diesel Gasoline Glycol Hydraulic &/ Engine Oil	>200 Litres From a container larger than 100L
4.1 4.2 4.3	Flammable Solids Spontaneously combustible solids Water reactant (dangerous when wet)		>25 kg
5.1 9.1	Oxidizing substances Miscellaneous products or substances excluding PCB mixtures	Sodium Hydroxide Lime Solution Sodium Nitrate Calcium Hypochlorite Ammonium Nitrate	>50 kg or 50 Litres
5.2 9.2	Organic Peroxides Environmentally hazardous		>1 Litre or 1 kg
6.1 6.2 8.0 9.3	Poisonous substances Infectious substances Corrosive substances Dangerous wastes (waste oil)	Hydrochloric / Muriatic Waste Oil	>5 Litres or 5 kg Any Amount
9.1	PCB Mixtures of 5 or more ppm	Transformer oil	>0.5 Litre or 0.5 kg
9.1	Miscellaneous dangerous goods		>50 kg
None	Other contaminants (eg crude oil, drilling fluid, produced water, waste or spent chemicals, used or waste oil, vehicle fluids, waste water, etc.)		>100 Litres or 100 kg
None	Sour natural gas (eg contains H ₂ S) Sweet natural gas		Uncontrolled release or sustained flow of >10 min

8.1 SPILL RESPONSE EQUIPMENT RESOURCES LIST

	Location	Contact
Spill Response Kit	<ul style="list-style-type: none"> Elsa Fuel Station Bellekeno East Fuel Tank Bellekeno East Shop Bellekeno 625 Adit Birmingham Portal Birmingham fuel tank Keno District Mill 	Area Manager/Supervisor



	Location	Contact
	<ul style="list-style-type: none">Lucky Queen Portal Pad ShopOnek 990 Portal PadBellekeno Haul Road Mine Support Facilities Bench	
Oil – Absorbent Pads	<ul style="list-style-type: none">In Spill Kits	Area Manager/Supervisor
Oil – Absorbent Booms	<ul style="list-style-type: none">In Spill Kits	Area Manager/Supervisor

Any contaminated soils will be removed to the land treatment facility in Mayo or a suitable permitted facility within the Keno Project area.

All vehicles carrying hazardous materials will be equipped with a spill kit and personnel will be trained in spill response measures.

See ERP 014 AKHM Spill Report Form



9 MISSING PERSONS ACTION PLAN

Potential exists where persons may become lost on the property. Such incidents can occur under the following circumstance:

- Alexco or Contractor personnel engaged in surface exploration or any other activities (i.e. care and maintenance) are overdue and cannot be located or contacted.

Upon notification that Alexco personnel, or Contractors are unaccounted for on the property you should:

1. Immediately advise the Area Manager/Supervisor and Site Manager who will:
 - 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 Keno Hill Silver District project employees to stand-by and assist the RCMP in search efforts as directed
2. Stand-by to provide further information and assistance as required.



10 EMERGENCY EQUIPMENT AND EQUIPMENT LOCATIONS

Emergency Equipment	Location	Use is Authorized by:
(MMTU) Mobile Medical Treatment Unit 4 x 4 Truck with Stretchers	Flat Creek Camp Mill/Mine Office	General Site Manager Area Manager/Supervisor Health & Safety Coordinator First Aid Attendant
AED Automatic External Defibrillator Use when CPR is required	Flat Creek Camp Kitchen MMTU Black and Neon ZOLL – AED Bellekeno E. First Aid Room Birmingham First Aid Room Keno District Mill First Aid Room	General Site Manager Area Manager/Supervisor Health & Safety Coordinator First Aid Attendant
Oxygen Airway Adjuncts (OPA)	MMTU First Aid Jump Kit Exploration First Aid Room Bellekeno E. First Aid Room Birmingham First Aid Room Keno District Mill First Aid Room	General Site Manager Area Manager/Supervisor Health & Safety Coordinator First Aid Attendant
Spinal Precautions Spine Boards & Head Blocks Stiff Collars Spyder Straps KED – Vehicle extrication device	MMTU Exploration First Aid Room Bellekeno E. First Aid Room Birmingham First Aid Room Keno District Mill First Aid Room	General Site Manager Area Manager/Supervisor Health & Safety Coordinator First Aid Attendant
Splints Vacuum Splints – Extremity breaks	Exploration First Aid Room Bellekeno E. First Aid Room Birmingham First Aid Room Keno District Mill First Aid Room	General Site Manager Area Manager/Supervisor Health & Safety Coordinator First Aid Attendant
Wound Management Burn Dressings Sterile Water Bandages & Dressings	MMTU Exploration First Aid Room First Aid Jump Kit Bellekeno E. First Aid Room Birmingham First Aid Room Keno District Mill First Aid Room	General Site Manager Area Manager/Supervisor Health & Safety Coordinator First Aid Attendant
EPI Pens Anaphylactic Shock / allergies	MMTU Exploration First Aid Room First Aid Jump Kit Bellekeno E. First Aid Room Birmingham First Aid Room Keno District Mill First Aid Room	General Site Manager Area Manager/Supervisor Health & Safety Coordinator First Aid Attendant



11 EMERGENCY FIRST AID PATIENT ASSESSMENT MODEL

See ERP 006 Medical Emergencies on Site

THE ROLE OF THE FIRST PERSON AT THE SCENE

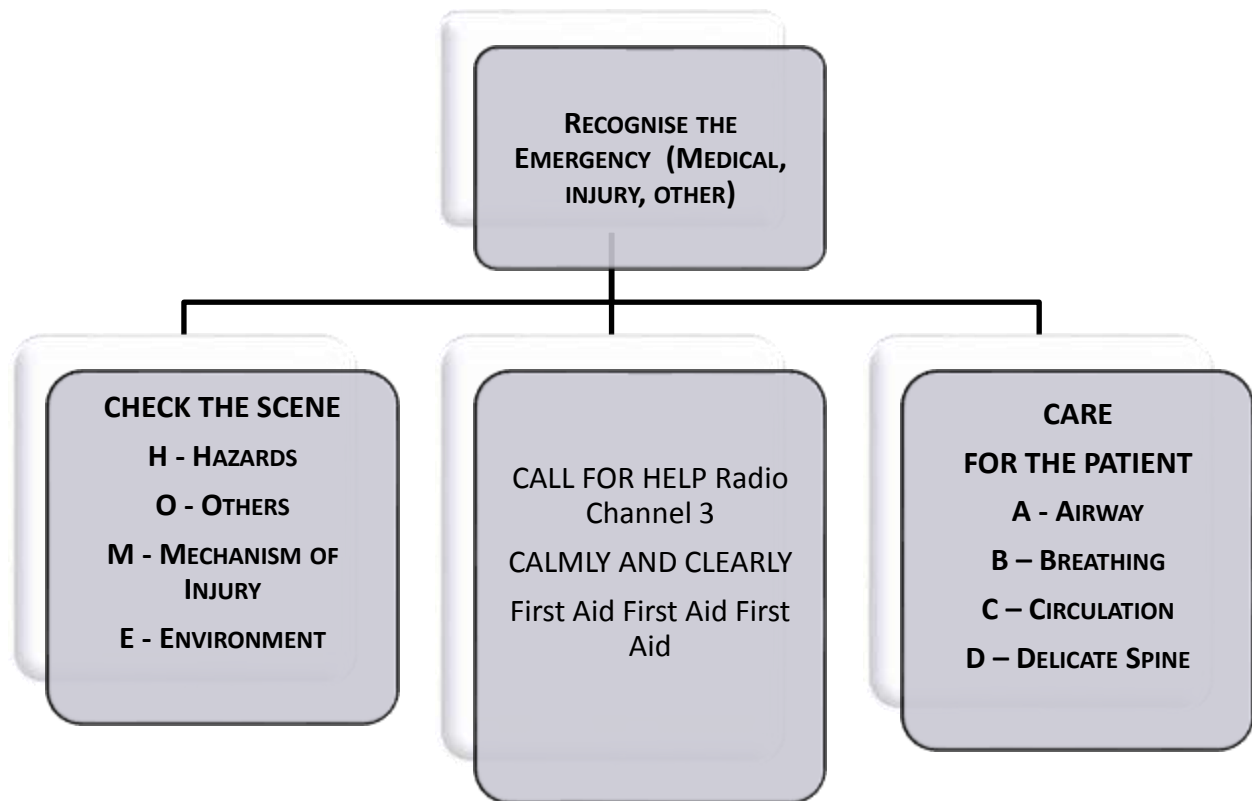
1. CHECK - Recognize the emergency
2. CALL – Activate medical services / first aid to attend the scene
3. CARE - Act according to your skills, knowledge and comfort level

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





12 EMERGENCY CONTACT INFORMATION

As this EMRP document is updated, only revised pages will be replaced.

In the event of a “SERIOUS” Incident, injury or accident you must notify:

1. Keno Hill District Operations Department Manager or Alternate
2. Member of the Health and Safety Department

12.1 KENO HILL DISTRICT OPERATIONS – EMERGENCY CONTACT NUMBERS

KEY POSITIONS –KENO HILL DISTRICT OPERATIONS - CONTACT LIST			
Release information only as instructed by the Incident Controller.			
Alexco Resource Corp - Keno Hill Project PO BOX #7, Elsa, YT.,Y0B 1J0 Lat 63.54 N Long 135.29 W (Elsa)		Phone: LANDLINE 867 995-3113	
Alexco Site Position			Work Phone
General Manager		867-995-3113 ext. 5901	
Mine Manager		867-995-3113 ext. 7002	
Mine Superintendent		867-995-3113 ext. 7002	
Mill Manager		867-995-3113 ext. 7000	
Site Services Manager		867-995-3113 ext. 5919	
Environmental Manager		867-668-6463 ext. 233	
Health & Safety Manager		867-995-3113 ext. 5913	
Health and Safety Coordinator		867-995-3113 ext. 5911	
Care and Maintenance Supervisor		867-995-3113 ext. 5910	
SITE AREA – KENO HILL DISTRICT OPERATIONS – CONTACT LIST			
Site numbers and extensions 867-995-3113			
Bunk A 5925	House #1 5915	Exploration Office 5900	Mine Office 5900
Bunk B 5920	House #2 5902	Kitchen 5927	Mill Office 5900
Bunk C 5923	House #3 5916	Mechanics 5914	
Bunk D 6000	House #4 5917	First Aid 5921	



RADIO FREQUENCIES – KENO HILL DISTRICT OPERATIONS				
Alexco Channel	Channel Name	Receive TX	Transmit RX	Tone
Channel 1	First Aid Emergency First Aid Channel	160.73	165.73	RX & TX = C131.8
Channel 3	Repeater Routine On-site Radio Traffic	157.61	151.97	No Tone
Channel 4	Ladd 1 Routine On-site Radio Traffic	154.1	154.1	No Tone
Channel 5	Ladd 2	158.94	151.94	No Tone





12.2 CO-OPERATIVE MINE RESCUE (CMR) ASSISTANCE

Agency	Name	Home (other)	Other
YT OH&S Mine Inspector	1-800-661-0443		
Minto Mine	David Crottey	604-759-4641	davidc@mintomine.com

12.3 TERRITORIAL AND FEDERAL CONTACT NUMBERS

Name	Office	
Mayo Ambulance	867-996-4444	Mayo (Volunteer Responders)
Mayo Fire & Rescue	867-996-2222	Mayo (Volunteer Responders)
RCMP	867-996-5555	Mayo
Whitehorse Regional Hospital	867-393-8700	Emergency
Whitehorse Regional Hospital	867-393-8700	Admissions
Yukon Coroner	867-667-5317	Whitehorse
Yukon Dept. of Conservation	867-667-5317	Whitehorse
Yukon Dept. of Fish & Game	867-393-6722	Whitehorse
Yukon Energy	867-996-2387	Mayo
Yukon Energy	1-800-676-2843	After hours Whitehorse
Yukon Occupational Health & Safety	1-800-661-0443	Mine Inspector

 ALEXCO	SAFETY STANDARD	Document Number:	ERP-002
		Version Date:	03/28/12
		Version:	02
		Approved by:	
Management ERT Duties – Fire in Camp			

ALEXCO RESOURCE CORP

Effective Date: 03/28/12

Implementation Date: 04/30/12

Revision No.: 02

Review Date: 01/15/13

Prepared By: Neil Bottrell, Revised by Alexco Management/Safety

References: Yukon Occupational Health and Safety Regulations

PURPOSE

To ensure a safe evacuation and accounting of all personnel at site during a fire at all Camp Accommodations in the Silver Hill Silver District.

SCOPE

These procedures apply to all employees including independent contractors, working at Alexco's Keno Hill Mining District.

RESPONSIBILITY

General Manager or designate is responsible for:

- Ensuring this procedure is implemented and maintained.
- Ensuring personnel receive appropriate training.
- Reporting to the Emergency Control Centre (ECC) located at the Administration Office conference room and setting up the Emergency Management Team.
- Serving as a member of the Emergency Management Team to manage the fire emergency in conjunction with the Emergency Response Team Coordinator.
- Ensuring that a radio and camp master keys are available in the Emergency Control Centre (ECC).
- Advising the Camp Monitors or designate the names of the personnel who are present at the ECC.
- Advising the Emergency Response Team Coordinator (ERTC) that the Emergency Management Team is in place at the ECC.
- Consulting with the ERTC and other Emergency Management Team members before declaring the "All-Clear" and authorizing re-entry to the camp complex or certain portions of the camp complex.
- Contacting off-site Alexco personnel and regulatory agencies (as required by the Alexco Resource Corp. – Keno Hill Mining District Crisis Management Plan) of the situation.

 ALEXCO	SAFETY STANDARD	Document Number:	ERP-002
		Version Date:	03/28/12
		Version:	02
		Approved by:	
Management ERT Duties – Fire in Camp			

First Aid Personnel / Emergency Response Team (ERT) are responsible for:

- Monitoring Alexco Repeater (Channel 3) on a 24-hour basis and obtaining all First Aid and Emergency details from any person announcing the emergency.
- Respond accordingly to any and all First Aid or Emergency situations
- Gathering emergency equipment/supplies if conditions permit (enlist assistance from others leaving the building if necessary) and load equipment/supplies into the mobile Treatment Centre and report to the muster station for roll call.
- Being available at the muster station to treat any medical emergencies.

Alexco Camp Monitor or designate is responsible for:

- Wearing a high visibility vest for identification
- Reporting to the muster area via the closest emergency exit with radio and camp accommodations list
- Taking charge and doing a roll call at the muster area and notifying the Emergency Management Team of persons unaccounted for.
- Ensuring personnel remain at the muster area unless the Emergency Management Team has requested their release for other duties.
- Sending the camp vans with mustered personnel to the Alexco Administration Building.
- Instructing the van driver to return to the muster area as soon as personnel are delivered and continuing the roll call.

Safety Manager or designate is responsible for:



- Monitoring the implementation of this procedure.
- Reporting to the ECC to serve as a member of the Emergency Management Team.

Each Area Manager or Designate is responsible for (in their respective areas):

- Providing ECC a list of available ERT personnel in addition to an accurate headcount of all onsite personnel and their locations.
- Providing ECC with a status update of any available equipment which may be of use in responding to the emergency.

Emergency Response Coordinator (ERC) is responsible for:

- Radioing the names of Emergency Response Team (ERT) personnel present at the scene to the ECC to complete the roll call.
- Managing the fire emergency in conjunction with the General Manager and the Emergency Management Team in a safe manner and in accordance with the ERT Safe Work Guidelines.

 ALEXCO	SAFETY STANDARD	Document Number:	ERP-002
		Version Date:	03/28/12
		Version:	02
		Approved by:	
Management ERT Duties – Fire in Camp			

ERT Members are responsible for:

- Radioing their location to the ERC and reporting to the emergency location to prepare to control/contain the fire as per direction from the ECC.
- Understanding and working in accordance with the ERT/Mine Rescue protocol.

All personnel at the Keno Hill Mining District are responsible for:

- Understanding the requirements of this procedure.
- Complying with this procedure.

EMERGENCY RESPONSE PROCEDURE

ERC will:

- Ensure that all ERT members on site have been contacted and are reporting to the location as per the direction of the ECC.
- Ensure that the ERT members are preparing the Fire Fighting equipment and instruct them to standby for further instructions.
- Have ERT members mobilize all gear and equipment available as per the direction of the ECC.
- Ensure all information regarding the known fire conditions are passed on to the ECC.
- Manage the fire emergency in conjunction with the ECC in a safe and timely manner.

Emergency Control Centre Members will:

- Meet in the ECC room to manage the fire emergency in conjunction with the ERC.
- Manage the fire emergency in conjunction with the ERC in a safe manner.
- The ECC will contact off-site Alexco personnel and regulatory agencies (as required by the Alexco Resource Corp. – Keno Hill Mining District - Crisis Management Plan) of the situation.
- Hold a de-briefing session with all involved participants after the fire emergency is over to determine the effectiveness of this procedure and what revisions should be made.

All Clear Message

- The ERC in consultation with the ECC will determine when the camp complex is safe to re-enter.
- The General Manager or designate will authorize the “ALL-CLEAR” message for return to the building.

 ALEXCO	SAFETY STANDARD	Document Number:	ERP 003
		Version Date:	03/28/12
		Version:	03
		Approved by:	
RESIDENCE/KITCHEN/RECREATION EMERGENCY EVACUATION			

ALEXCO RESOURCE CORP

Effective Date: 03/31/12

Implementation Date: 04/30/12

Revision No.: 03

Review Date: 03/28/13

Prepared By: Neil Bottrell, Revised by Alexco Management/Safety

References: Yukon Occupational Health and Safety Regulations

PURPOSE

To ensure a safe evacuation and accounting of all camp occupants during an emergency evacuation of the main camp complex.

SCOPE

These procedures apply to all employees including independent contractors, working at the Keno Hill Mining District and designated sites.

RESPONSIBILITY

General Manager or designate is responsible for:

- Ensuring this procedure is implemented and maintained.
- Ensuring personnel receive appropriate training.
- Reporting to the Emergency Control Centre or ECC (Administration Office conference room) and setting up the Emergency Control Centre Members.
- Serving as a member of the Emergency Control Centre to manage the fire emergency in conjunction with the Emergency Response Coordinator.

Emergency Response Coordinator (ERC) is responsible for:

- Coordinating the ERT and notifying the ECC those members who have responded as ERT personnel.

ERT Members are responsible for:

- Maintaining radio communication after notification of an emergency
- Radioing their location to the ERC and report to the muster area as directed by the ECC.

Safety Manager or designate is responsible for:

- Monitoring the implementation of this procedure.
- Reporting to and serve as a member of the ECC.

Area Managers or Designates are responsible for:

- Doing a roll call of their employees at the worksite and reporting this to the ECC.
- Ensuring a stand down of all non-essential work affected by the emergency until the emergency is declared over.

 ALEXCO	SAFETY STANDARD	Document Number:	ERP 003
		Version Date:	03/28/12
		Version:	03
		Approved by:	
RESIDENCE/KITCHEN/RECREATION EMERGENCY EVACUATION			

Appointed Camp Monitor is responsible for:

- Wearing a high visibility vest for identification
- Performing the roll call in the Admin building Muster Area and notifying the ECC of persons unaccounted for.
- Ensuring personnel remain in the Muster Area unless the ECC has requested their release for other duties.

Site First Aid Attendant is responsible for:

- Moving the mobile Treatment Centre and supplies to the muster station and reporting for roll call.
- Being available to provide emergency medical services as required.

All personnel at Alexco's Keno Hill Mining District are responsible for:

- Understanding the requirements of this procedure.
- Complying with this procedure.

PROCEDURE

In case of fire, sounding of the fire alarm or any other emergency in the main camp complex requiring evacuation, the following procedures must be followed if you are in the main camp complex:

- **In the event that a fire is detected**, attempt to extinguish the fire if it is accessible and safe to do so (fire extinguishers are mounted at intervals in the hallways). If unable to extinguish the fire, immediately activate one of the fire pull alarm stations located throughout the camp complex. If alarm is unavailable yell "**Fire, Fire, Fire,**" to warn others and announce by radio on channel three (3) "**Fire, Fire, Fire,**" notify answering personnel of the location of the fire.
- **REMEMBER** – PROTECTION OF HUMAN LIFE IS THE FIRST PRIORITY! Do not put yourself at risk to fight a fire.
- **Upon hearing the alarm** immediately evacuate the main camp complex by the closest available exit, shouting fire and knocking on doors as you do so (do not wait for a response to the knocking). Outerwear suitable for winter conditions must be readily available in your room.
- **Report to the Main Laydown Area across from Flat Creek Camp.** A roll call will be done to determine the location of all personnel by the Camp Monitor. Remain there until directed otherwise. People may be moved to the Alexco Administration building. If you are taken there remain there until directed otherwise.
- **Under no circumstances** should you re-enter the main camp complex until a senior Alexco representative has given the "ALL-CLEAR" message. Report any information concerning the fire or other concerns to a Senior Alexco or JH&S representative.

 ALEXCO	SAFETY STANDARD	Document Number:	ERP 003
		Version Date:	03/28/12
		Version:	03
		Approved by:	
RESIDENCE/KITCHEN/RECREATION EMERGENCY EVACUATION			

Personnel Not in the Main Camp Complex During a Fire in the Main Camp Complex

- **ALL PERSONNEL WILL “STAND DOWN” UNTIL NOTIFIED OTHERWISE BY THE EMERGENCY MANAGEMENT TEAM.**
- **Shut down of the District Mill** will only be performed if absolutely required. Mill operations will continue in an emergency with the minimum number of crew members until the all clear is given.
- **All personnel, company and contractors, working on surface at any Alexco Keno Hill Mining District Underground Operation** will report to their respective surface muster areas where the senior person will perform a roll call of all personnel present and relay this information to the ECC by radio on channel three (3). They will stay at their respective surface muster area until advised otherwise. Underground personnel will be notified to stand down and report to the nearest Refuge Station until notified.
- **All personnel, company and contractors, on shift at the District Mill** will remain at the Mill and report to the Mill Office lunch room Muster area. The Mill Manager or designate will perform a roll call of all Mill personnel and additional workers and relay this information to the ECC by radio on channel three (3). Mill personnel will remain at the Mill and continue operations with a minimum crew required until notified otherwise by the ECC.
- **All personnel, company and contractors, working for Site Services, Exploration or Administration that are in the Elsa the immediate area** will report to the Core Shack for roll call. **If out travelling on the site** they will pull vehicles over where they are (without blocking traffic flows) and park until notified otherwise by the ECC. Equipment operators must stay with their vehicles in case their piece of equipment is requested by the ECC.
- **All other personnel, company and contractors,** will muster at their work site and their supervisors will do a roll call and report roll call results to the ECC.

REFERENCES AND RELATED DOCUMENTS

ERP-002 – Management ERT duties fire in camp

APPENDICES

See one page “Appendices I” for Posting in Rooms and Bulletin Boards, “Fire Evacuation Procedure for the Flat Creek Camp Complex” and “Fire Evacuation Procedure for Bunkhouse D”.

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		Version:	03
		Approved by:	
RESIDENCE/KITCHEN/RECREATION EMERGENCY EVACUATION			

Appendices I - For Posting in Rooms and Bulletin Boards

EVACUATION PROCEDURE FOR THE FLAT CREEK CAMP COMPLEX

In case of fire, sounding of the fire alarm or any other emergency in the main camp complex requiring evacuation, the following procedures must be followed if you are in the main camp complex:

- **In the event that a fire is detected**, attempt to extinguish the fire if it is accessible and safe to do so (fire extinguishers are mounted at intervals in the hallways). If unable to extinguish the fire, immediately activate one of the fire pull alarm stations located throughout the camp complex. If alarm is unavailable yell “**Fire, Fire, Fire,**” to warn others and announce by radio on channel three (3) “**Fire, Fire, Fire,**” notify answering personnel of the location of the fire.
- **REMEMBER** – PROTECTION OF HUMAN LIFE IS THE FIRST PRIORITY! Do not put yourself at risk to fight a fire.
- **Upon hearing the alarm** immediately evacuate the main camp complex by the closest available exit, shouting fire and knocking on doors as you do so (do not wait for a response to the knocking). Outerwear suitable for winter conditions must be readily available in your room.
- **Report to the Main Laydown Area across from Flat Creek Camp.** A roll call will be done to determine the location of all personnel by the Camp Monitor. Remain there until directed otherwise. People may be moved to the Alexco Administration building. If you are taken there remain there until directed otherwise.
- **Under no circumstances** should you re-enter the main camp complex until a senior Alexco representative has given the “ALL-CLEAR” message. Report any information concerning the fire or other concerns to a Senior Alexco or JH&S representative.

 ALEXCO	SAFETY STANDARD	Document Number:	ERP 003
		Version Date:	03/28/12
		Version:	03
		Approved by:	
RESIDENCE/KITCHEN/RECREATION EMERGENCY EVACUATION			

Personnel Not in the Main Camp Complex During a Fire in the Main Camp Complex

- **ALL PERSONNEL WILL “STAND DOWN” UNTIL NOTIFIED OTHERWISE BY THE EMERGENCY MANAGEMENT TEAM.**
- **Shut down of the District Mill** will only be performed if absolutely required. Mill operations will continue in an emergency with the minimum number of crew members until the all clear is given.
- **All personnel, company and contractors, working on surface at any Alexco Keno Hill Mining District Underground Operation** will report to their respective surface muster areas where the senior person will perform a roll call of all personnel present and relay this information to the ECC by radio on channel three (3). They will stay at their respective surface muster area until advised otherwise. Underground personnel will be notified to stand down and report to the nearest Refuge Station until notified.
- **All personnel, company and contractors, on shift at the District Mill** will remain at the Mill and report to the Mill Office lunch room Muster area. The Mill Manager or designate will perform a roll call of all Mill personnel and additional workers and relay this information to the ECC by radio on channel three (3). Mill personnel will remain at the Mill and continue operations with a minimum crew required until notified otherwise by the ECC.
- **All personnel, company and contractors, working for Site Services in the Elsa Shop, offices or the immediate area** will report to the Core Shack for roll call. **If out travelling on the site** they will pull vehicles over where they are (without blocking traffic flows) and park until notified otherwise by the ECC. Equipment operators must stay with their vehicles in case their piece of equipment is requested by the ECC.
- **All other personnel, company and contractors,** will muster at their work site and their supervisors will do a roll call and report roll call results to the ECC.

 ALEXCO	SAFETY STANDARD	Document Number:	ERP 003
		Version Date:	03/28/12
		Version:	03
		Approved by:	
RESIDENCE/KITCHEN/RECREATION EMERGENCY EVACUATION			

Appendices I - For Posting in Rooms and Bulletin Boards in the Bunkhouse D

FIRE EVACUATION PROCEDURE FOR THE BUNKHOUSE "D"

In case of fire, sounding of the fire alarm or any other emergency in the main camp complex requiring evacuation, the following procedures must be followed if you are in the main camp complex:

- In the event that a fire is detected**, attempt to extinguish the fire if it is accessible and safe to do so (fire extinguishers are mounted at intervals in the hallways). If unable to extinguish the fire, immediately activate one of the fire pull alarm stations located throughout the camp complex. If alarm is unavailable yell "**Fire, Fire, Fire,**" to warn others and announce by radio on channel three (3) "**Fire, Fire, Fire,**" notify answering personnel of the location of the fire.
- REMEMBER – PROTECTION OF HUMAN LIFE IS THE FIRST PRIORITY!** Do not put yourself at risk to fight a fire.
- Upon hearing the alarm** immediately evacuate the main camp complex by the closest available exit, shouting fire and knocking on doors as you do so (do not wait for a response to the knocking). Outerwear suitable for winter conditions must be readily available in your room.
- Report to the muster area in front of house 4.** A roll call will be done to determine the location of all personnel by the Camp Monitor. Remain there until directed otherwise. People may be moved to the Alexco Administration building. If you are taken there remain there until directed otherwise.
- Under no circumstances** should you re-enter Bunkhouse D complex until a senior Alexco representative has given the "ALL-CLEAR" message. Report any information concerning the fire or other concerns to a Senior Alexco or JH&S representative.

 ALEXCO	SAFETY STANDARD	Document Number:	ERP-005
		Version Date:	01/08/2012
		Version:	01
		Approved by:	
Emergency Radio Communication			

Site Administrative Personnel are responsible for:

- Recording all radio transmissions on channel 3 (repeater) for the duration of the Emergency

Site Safety Personnel is responsible for:

- Radioing the names of Emergency Response Team (ERT) personnel present on site to the Emergency Management Team.

ERT Members are responsible for:

- Monitoring radio channel 3 (repeater) after notification of an emergency
- Radioing their location to the ECC, and reporting to the location as advised by the ECC to prepare for the emergency.

Site First Aid Attendant is responsible for:

- Monitoring channel 3 (repeater) - 24 hours a day
- Gathering emergency equipment/supplies that may be required for the emergency, including ETV.
- Being available to treat any medical emergencies.

All Personnel at Alexco Resource Corp properties are responsible for:

- Understanding the requirements of this procedure and complying with this procedure.

PROCEDURE

- In the event of an occurrence requiring emergency response from the Alexco ERT the individual requiring assistance must report the Emergency (details as noted below) on channel 3 (repeater).
- All Alexco Management monitor channel 3 (repeater) at night or during off work hours.
- All essential radio traffic is switched to channel 4 (LADD 1) during the night shift hours. Channel 3 (repeater) will remain the emergency channel during this time.
- When reporting an emergency the following information shall be provided over the radio:
 - “FIRE, FIRE, FIRE” or “FIRST AID, FIRST AID, FIRST AID” (3 times)
 - If the emergency is of a medical/injury nature, follow the three “FIRST AID” calls with the appropriate colour code as outlined below:
 - “CODE RED” – Serious incident requiring medical assistance immediately.
 - “CODE YELLOW” – Incident requiring medical assistance, but there is no risk of death/serious complications (minor cut, abrasion, etc).
 - “CODE GREEN” – Minor incident requiring medical assistance more

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		Version:	01
		Approved by:	
Emergency Radio Communication			

in a consolatory nature (mild illness, soreness from pre-existing condition, etc).

- STATE YOUR NAME.
- ADVISE THE NATURE OF THE EMERGENCY (injury, fire, accidents, uncontrolled release, etc.)
- NUMBER OF PEOPLE INVOLVED.
- LOCATION OF THE EMERGENCY.
- WHERE THE ERT CAN BE MET BY SOMEONE IF THEY NEED GUIDANCE TO THE LOCATION.
- NOTE!! When phoning or radioing in an emergency it is important that you are the last to hang-up. This allows the party receiving the call to ask for more information if required.

NOTE: All personnel other than those involved in the emergency and Emergency Response Team (ERT) members will “Stand Down” upon hearing a Emergency Call, and remain as Stand Down until notified otherwise.

Radio silence by all non involved personnel must be observed until the all clear is given. If you are on a radio controlled road, pull your vehicle over and wait for the “All Clear” before resuming.

	SAFETY STANDARD	Document Number:	ERP-006
		Version Date:	01/16/2012
		Version:	01
		Approved by:	
Medical Emergencies on Site - Surface and Underground			

ALEXCO RESOURCE CORP

Effective Date: 01/16/12

Implementation Date: 04/30/12

Revision No.: 01

Review Date: 01/15/13

Prepared By: Neil Bottrell

References: Yukon Occupational Health and Safety Regulations

PURPOSE

Is to provide an Emergency Response Plan for all Alexco Resource Properties and designated sites in the event of a medical emergency on site.

SCOPE

These procedures apply to all employees including independent contractors, working at all Alexco Resource Properties and designated sites.

RESPONSIBILITY

General Manager or designate is responsible for:

- Ensuring this procedure is implemented and maintained.
- Ensuring personnel receive appropriate training.
- Reporting to the Emergency Control Centre (ECC – Alexco Administration Office conference room) and setting up the Emergency Management Team (if required).
- Serving as a member of the Emergency Management Team to manage the emergency in conjunction with the Emergency Response Team Coordinator (ERTC) (if required).
- Communicating management decisions to the ERTC. The senior Alexco Management member of the Emergency Management Team is in charge of the Emergency Management Team.
- Holding a de-briefing session with all involved participants after the medical emergency is over to determine the effectiveness of this procedure and what revisions should be made.

Site First Aid Attendant, Emergency Response Team (ERT) Receiving Medical Emergency is responsible for:

- Obtaining all Medical Emergency details from any person announcing the emergency. Asking the person calling in the emergency for all details of the emergency such as:
 - Name of person calling
 - Exact location of the emergency
 - The details of the medical emergency

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		Version:	01
		Approved by:	
Medical Emergencies on Site - Surface and Underground			

- Type of medical emergency
- How the medical emergency occurred
- Announcing the Medical Emergency and all pertinent details over Channel 3 (repeater)

ERT Coordinator (ERTC) is responsible for:

- Advising ERT personnel on Channel 3 (repeater) how to respond to the emergency.
- Managing the medical emergency in conjunction with the senior Alexco Management member of the Emergency Management Team (if assembled) in a safe manner and in accordance with the ERT Safe Work Guidelines.

ERT Members are responsible for:

- Changing to radio Channel 3 (repeater) after notification of a “Code Red” emergency (as defined in ERP-005 Emergency Radio Communication).
- Understanding and working in accordance with the ERT Safe Work Guidelines and Alexco - 019 Infectious Diseases.
- Providing whatever assistance is required at the scene under the direction of the ERTC or the Primary First Aid Attendant.

Health and Safety Manager or designate is responsible for:

- Monitoring the implementation of this procedure.
- Reporting to the ECC to serve as a member of the Emergency Management Team (if required).
- Provide backup assistance to the Site First Aid Attendant (if required).

Site First Aid Attendant is responsible for:

- Mobilizing the site mobile Treatment Centre to the accident scene to treat the medical emergency.
- Understanding and working in accordance with the ERT Safe Work Guidelines and Alexco -019 Infectious Diseases.

All Site Personnel are responsible for:

- Standing down when they hear a Medical Emergency as per ERP-005-Emergency Radio Communication (unless involved with the emergency) to allow the Site First Aid Attendant and ERT to respond

PROCEDURE

The Site First Aid Attendant and the ERTC will review all information and develop an immediate response plan.

- Any outside medical assistance required will be coordinated on site by the Site First

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		Approved by:	
Medical Emergencies on Site - Surface and Underground			

Aid Attendant and/or the ERTC.

- Upon completion of response to the medical emergency all equipment will be placed in the “Ready Position” and all checks completed.

Underground Medical Emergencies

Underground medical emergencies may require members of the ERT to go underground to respond.

- All underground travel will be coordinated by the Mine Manager or designate.
- The ERT will wear all normal underground PPE and follow all contractor underground procedures as required.
- The Mine Manager or designate will act as a guide for the ERT.

REFERENCES AND RELATED DOCUMENTS

- Alexco 0019 - Infectious Diseases
- Alexco 0009 - Personal Protective Equipment
- ERP-005 Emergency Radio Communication
- ERP-006 Alexco Emergency Contact List
- ERT Safe Work Guidelines
- Alexco - Crisis Management Plan (Corporate Document in development)

 ALEXCO	SAFETY STANDARD	Document Number:	ERP-007
		Version Date:	01/16/2012
		Version:	01
		Approved by:	
Aircraft Incident			

ALEXCO RESOURCE CORP

Effective Date: 01/16/12

Implementation Date: 04/30/12

Revision No.: 01

Review Date: 01/15/13

Prepared By: Neil Bottrell

References: Yukon Occupational Health and Safety Regulations

PURPOSE

To ensure that an aircraft or helicopter crash at site is dealt with in an expedient and safe manner that does not jeopardise the safety of Emergency Response Team (ERT) members or other site personnel.

SCOPE

These procedures apply to all employees including independent contractors, working at all Alexco Resource Properties and designated sites.

RESPONSIBILITY

An aircraft or helicopter crash at site has the potential for serious injury and property damage. Although highly unlikely to occur at our sites it is better to be prepared to handle a situation like this than not. Certain responsibilities are assigned to various personnel and are outlined below.

Person witnessing an aircraft or helicopter crash is responsible for:

- Reporting the Emergency and all details by radio as quickly as possible
- Relaying all information as quickly as possible so that the ERT is fully informed of the situation.
 - Exact location of the crash scene and distance from site.
 - The approximate size of the fire if any.

Person receiving a radio call from a person witnessing an aircraft or helicopter crash is responsible for:

- Announcing the Emergency and all details over radio Channel 3 (repeater).
- Reporting the information received to the General Manager or designate or the Health and Safety Manager or designate.

General Manager or designate is responsible for:

- Ensuring this procedure is implemented and maintained.
- Ensuring personnel receive appropriate training.
- Contacting the local authorities and informing them of the crash and its location.
- Assembling the Emergency Management Team in the Emergency Control Centre

 ALEXCO	SAFETY STANDARD	Document Number:	ERP-007
		Version Date:	01/16/2012
		Version:	01
		Approved by:	
Aircraft Incident			

(location to be determined by the General Manager or Designate) for a briefing when information is received.

- Communicating management decisions to the ERTC. The Senior Alexco Management member of the Emergency Management Team is in charge of the Emergency Management Team.
- Contacting the affected air carrier to apprise them of the situation. (See phone numbers under References and Related Documents)
- Contacting off-site Alexco personnel and regulatory agencies (as required by the Alexco Resource Corp - Crisis Management Plan) of the situation
- Monitoring the implementation of this procedure.
- Hold a de-briefing session with all involved participants after the crash emergency is over to determine the effectiveness of this procedure and what revisions should be made.

Emergency Management Team will:

- Coordinate with local authorities and assist in rescue or fire fighting duties.
- Manage the crash emergency in conjunction with the ERTC in a safe manner.
- Ensuring that the ERT has whatever additional resources they need to deal with the crash emergency.
- Determine the direction of any smoke – if smoke is blowing in the general direction (east) of the mine ventilation raise instruct the Mine Manager or designate to have the stench gas injected and implement the mine evacuation procedure.

Health and Safety Manager or designate is responsible for:

- Reporting to the ECC to serve as a member of the Emergency Management Team.
- Ensuring Logistics personnel contact aircraft operating in the area and request them to check the fire and report the distance from site, approximate size, and direction that the fire is burning. Any new information received should be relayed to local authorities.

Mine Manager or designate (in the event of smoke entering the ventilation system) is responsible for:

- Ensuring the stench is injected, and the mine is evacuated. Underground personnel may be assigned to work on surface if the fire does not pose a threat to site personnel of the site.

Mill Manager or designate is responsible for:

- Ensuring a timely plant evacuation **if required** and ensuring that all plant personnel report to the camp complex.

ERTC is responsible for:

- Managing the emergency in conjunction with the senior Alexco Management

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		Version:	01
		Approved by:	
Aircraft Incident			

member of the Emergency Management Team in a safe manner and in accordance with the ERT Safe Work Guidelines.

ERT members are responsible for:

- Mobilizing gear, equipment and supplies as instructed by the ERTC and local authorities.
- Understanding and working in accordance with the ERT Safe Work Guidelines.

Site First Aid Attendant is responsible for:

- Ensuring that the Mobile Treatment Centre is loaded and ready for immediate action.
- Being available at the Alexco Admin building First Aid Station to treat any medical emergencies that may occur as a result of the crash or the emergency response.

All management and ERT personnel at the Alexco Resource Corp properties are responsible for:

- Understanding the requirements of this procedure.
- Complying with this procedure and ERT Safe Work Guidelines.

PROCEDURE

This procedure relies heavily on the person witnessing or reporting an aircraft or helicopter crash giving concise and full information so that the Emergency Management Team and the Emergency Response Team are fully informed. The person receiving a call (radio or phone) must ensure that all information is passed on to the Emergency Management Team. The Emergency Management Team in conjunction with the Emergency Response Team Coordinator will determine what action is appropriate.

REFERENCES AND RELATED DOCUMENTS

- ERP-001 – Emergency Contact List
- ERT Safe Work Guidelines)
- Alexco Resource Corp. - Crisis Management Plan (Corporate Document to be developed)

Carrier	Address	Contact
Air North		
Alcan Air		

 ALEXCO	SAFETY STANDARD	Document Number:	ERP-008
		Version Date:	01/08/2012
		Version:	01
		Approved by:	
Medevac Protocols			

ALEXCO RESOURCE CORP

Effective Date: 11/08/11

Implementation Date: 04/30/12

Revision No.: 01

Review Date: 01/15/13

Prepared By: Neil Bottrell

References: Yukon Occupational Health and Safety Regulations

PURPOSE

The purpose of the medevac (medical evacuation) procedure is to provide guidelines to all parties involved in making arrangements to evacuate personnel with life threatening injury or serious illness from Alexco's Keno Hill Mining District to Whitehorse General Hospital in Whitehorse, YT for further treatment.

SCOPE

This procedure covers all medevac cases from the Keno Hill Mining District to Whitehorse General Hospital in Whitehorse, YT in the event that the requirement for urgent medical care beyond the Mayo Health Clinic facility.

RESPONSIBILITY

Site First Aid Attendant is responsible for:

- Liaising with the Mayo Health Clinic to establish the requirements surrounding the medevac evacuation and requesting support from the clinic as required.
- Mayo Health Clinic to confirm the need and make arrangements for a medevac.

Alexco Physician is responsible for:

- Liaising with medical travel staff at Whitehorse General Hospital in Whitehorse, YT and the Mayo Health Clinic.

General Manager or designate is responsible for:

- Ensuring this procedure is implemented and maintained.
- Contacting off-site Alexco personnel and regulatory agencies (as required by the Alexco Resource Corp. - Crisis Management Plan) of the situation.

Site Services Manager or designate is responsible for:

- Providing current site weather report and Landing Zone coordinates to the Mayo Health Clinic .

Health and Safety Manager or designate is responsible for:

- Ensuring that any assistance that the Site First Aid Attendant may require is provided in a timely manner.
- Monitoring the implementation of this procedure.

 ALEXCO	SAFETY STANDARD	Document Number:	ERP-008
		Version Date:	01/08/2012
		Version:	01
		Approved by:	
Medevac Protocols			

PROCEDURE

When a person is injured or seriously ill at Alexco's Keno Hill Mining District and the condition is beyond the medical care of the site First Aid Attendant and the Mayo Health Clinic, Medevac may be required.

The Medevac will be authorized and arranged by the Mayo Health Clinic to the Whitehorse General Hospital.

The Mayo Health Clinic will be in contact with the Health and Safety Manager and liaise with the following people to initiate a medevac.

- **Alexco Physician** – Dr. Ian Seal – Whitehorse General Hospital

Office: (867)-???-????

Cell: (867)-???-????

The Health and Safety Manager should have the following Information available for the Mayo Health Clinic:

- 1. Name of Injured:**
- 2. Provincial Health Care #/ Treaty #:**
- 3. Age and Date of Birth:**
- 4. Gender:**
- 5. How the injury occurred:**
- 6. Nature of Injuries:**
- 7. Clinical Examination:**
- 8. Provisional Diagnoses:**
- 9. Medication Administered:**
- 10. Contact Telephone Number:**

 ALEXCO	SAFETY STANDARD	Document Number:	ERP-008
		Version Date:	01/08/2012
		Version:	01
		Approved by:	
Medevac Protocols			

The Mayo Health Clinic will phone Whitehorse General Hospital - Medical Travel at **(867) 393-8700**, who will arrange dispatch of a medevac team to the site. They will keep the Health and Safety Manager informed of the time frame that will be required to have the medevac team on site.

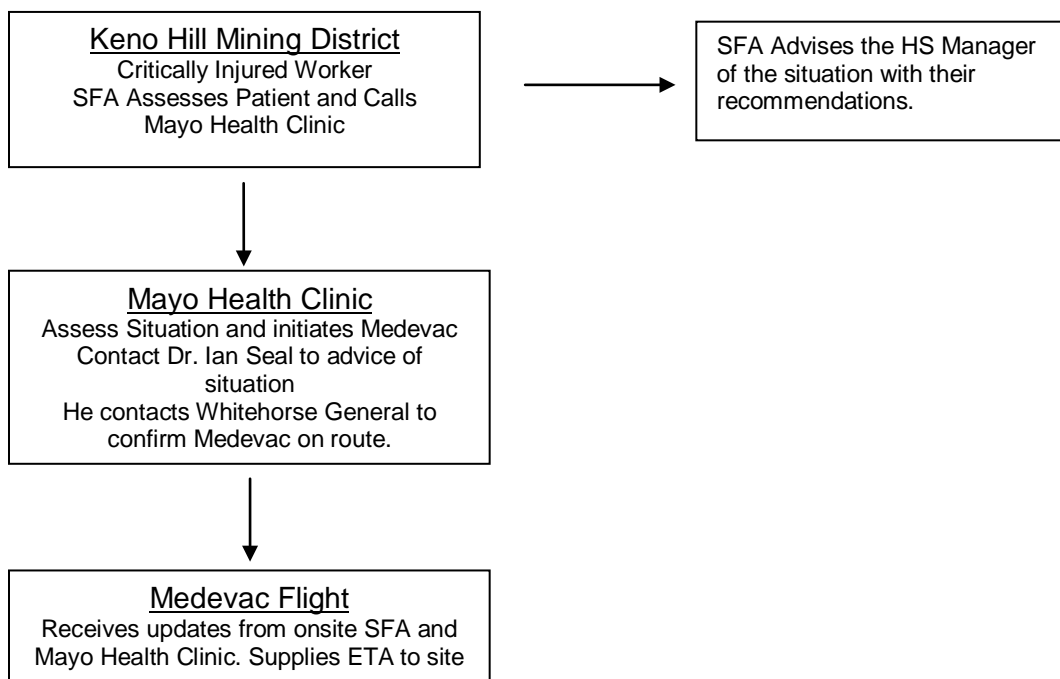
When Whitehorse General Hospital - Medical Travel gets the statistical information on the patient and the presenting diagnosis, they will contact the onsite Health and Safety Manager and get a clinical report on the patient

Note

Site Service Manager should ensure that the site weather reports are accurate and supplies the Air Carrier with a current weather report, and location.

- Mayo Health Clinic (867) - 996 - 4444
- Whitehorse General Hospital (867) 393-8700
- Dr. Ian Seal (867) 667-6421 Office, (867) 667-7933 Home
dseal@hotmail.com

KENO HILL MINING DISTRICT'S MEDEVAC FLOW CHART



 ALEXCO	SAFETY STANDARD	Document Number:	ERP-008
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		Version:	01
		Approved by:	
Medevac Protocols			

When the Site Services Manager or designate sends the weather conditions to Mayo Health Clinic it is important that the landing zone has been determined and the following information must also be relayed:

Location of Elsa: (Shop / Transport area)

Latitude - 63° 54 min North
Longitude -135° 29 min West

Location of the District Mill: (Mill Yard)

Latitude – 63° 54 min North
Longitude – 135° 19 min West

Location of Bellekeno East: (Upper Lay down Area)

Latitude - 63°54 min North
Longitude - 135°15 min West

Location of Lucky Queen: (Black Cap Waste Dump)

Latitude -63° 56 min North
Longitude -135° 16 min West

Location of Onek Portal:

Latitude -63° 54 min North
Longitude -135° 17 min West

REFERENCES AND RELATED DOCUMENTS

- Not yet created

APPENDICES

N/A

	<h1 style="margin: 0;">SAFETY STANDARD</h1>		Document Number:	ERP-009
			Version Date:	03/26/2012
			Version:	02
			Approved by:	<i>Neil Bottrell</i>

ALEXCO RESOURCE CORP

Effective Date: 01/08/12

Implementation Date: 01/08/12

Version No.: 02

Review Date: 03/26/2012

Prepared By: Neil Bottrell, Revised by Alexco Management/Safety

References: Yukon Occupational Health and Safety Regulations

Purpose

To establish a minimum standard for the Mine Rescue Standards on all Alexco Resource Corporation projects, and operations

Scope

These procedures apply to all employees including independent contractors working at Alexco's Keno Hill Mining District.

Responsibilities

Site Manager and Department Managers are responsible for ensuring these procedures are implemented and maintained.

Designated Supervisors and Department Managers are responsible for implementing these procedures.

Health and Safety Manager is responsible for monitoring the implementation of these procedures.

Objectives

To establish mandatory requirements for safe and responsible working standards, for using all mine rescue equipment and training as per the British Columbia Mine Rescue Manual and the Yukon Occupational Health and Safety Regulations for Alexco's Keno Hill Mining District.

Personal Protective Equipment

All employees shall comply with site safety policies and government regulations.

Tools and Equipment

Draeger BG4 PSS II SCBA's, firefighting equipment, atmospheric testing equipment and all necessary equipment if required at mine site.

Other Equipment or Material

Scaling bars proper length and in good condition, required PPE.

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			Version:	02
			Approved by:	<i>Am. Rudge</i>

Mine Rescue

Procon Mining and Tunneling will provide all aspects of mine rescue components to ensure the safety of underground workers and the property itself.

Procon, if required, will supply the following but not be limited to:

- Creation of mine rescue programs, policies and protocols;
- Suitable mine rescue apparatus to fit the needs of the client/contract;
- Training on the apparatus and equipment;
- Training in the relevant provincial, territorial and or national mine rescue standards; and
- Periodic testing and audits of the mine rescue program to ensure effectiveness.

Mine Rescue Personnel

Procon and Alexco will ensure that an adequate number of personnel holding certificates of competence in underground Mine Rescue valid in British Columbia or other similar certification (Procon Certification as Dragerman) will be present at site at all times.

Training

Procon will supply site specific mine rescue training for all personnel working at the Bellekeno and Lucky Queen operations. Training will be held for all available mine rescue personnel every 30 days. This training will be focused on the site in which the employee will be working and will cover but not be limited to:

- O2 Therapy
- Electrical Safety
- Ropes, Knots and Rigging
- Fire Fighting
- Drager BG4
- Mine Ventilation
- Mine Gases
- Team Procedures
- U/G Emergencies
- Mine Rescue Operations
- Survival Mine Rescue
- Trainer's Choice (The trainer can pick something they want to go over or add something site specific – Confined space, mill evacuation, vehicle extraction, first aid etc...)

Mine Rescue List

The Procon Project Superintendent shall ensure that a list of names and location of all Mine Rescue Personnel is created and posted in a conspicuous location for quick reference. This list must be updated

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			Approved by:	<i>Am. Paege</i>

weekly to ensure the mine rescue personnel are on site and available for a rescue operation. In addition, each fully trained Mine Rescue member will have a colour coded (blue) tag on the tag board for each underground operation in Alexco's Keno Hill Mining District.

Roles and Responsibilities

Incident Controller

The Incident Controller will be a senior company or contractor official familiar with the Emergency Response Procedures and daily operations and resources of the operation and its location. The Incident Controller will report directly to Senior Management on the rescue operation and will be the only contact with the Emergency Response Coordinator in regards to the coordination of the emergency. This individual will be responsible to contact the Yukon Worker Compensation Health and Safety Board (YWCHSB) to report the occurrence and coordinate any assistance required from the YWCHSB or mines included in the mutual assistance agreement. The Incident Controller will be located in the designated Control Center.

Emergency Response Coordinator

The Emergency Response Coordinator must have mine rescue experience and will be stationed at the Fresh Air Base. The Coordinator must have direct communication with the team in the mine as well as with the Incident Controller in the Control Center.

The Coordinator will report directly to the Incident Controller and acts on his orders or advice. He should also be in a position to inform the Team captain of all relevant data and give instructions on the work to be done. The progress and actions of the team will be accurately marked / documented on a mine plan and all relevant details shall be logged.

Team Captain

The Team Captain leads and directs the team members and is responsible for discipline, general safety and the work the team performs. The Team Captain reports to the Emergency Response Coordinator and is under his/her direction. However when the team is on a mission the Captain is the chief decision maker. It is vital that the Captain be knowledgeable in all facets of mine rescue theory and procedures so that he/she can make correct and timely decisions as circumstances dictate. Mostly the Captain will be a leader, using each team members individual or group skills to the fullest to ensure the safety of the team.

Vice-Captain

The Vice-Captain will have similar qualifications to that of the Captain. The Vice Captains main responsibility is to watch over the team and warn the Captain if any Team member shows any signs of distress. It is common practice to have the Vice-Captain assist the Captain in updating the mine plans and taking gas and ventilation tests. He also makes close checks of team members during rest breaks and assists the Captain with routine duties. The Vice-Captain must be kept informed of the Captain's findings, the work done and the work still to do. The Vice-Captain will have the skills and the knowledge to step into the role of Captain if required.

Team Members

Team Members will be well trained in such duties as: firefighting, first aid, air sampling, and erecting seals. As Mine Rescue Teams are assembled, consideration will be given to the special skills that may be

	<h1 style="text-align: center; background-color: #008000; color: black; padding: 10px;">SAFETY STANDARD</h1>	Document Number:	ERP-009
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		Approved by:	<i>Am. Ruffe</i>

required. Team members should be chosen with all these factors in mind. Emergencies in mines require the special skills of a fully trained mine rescue worker.

Procedure

In the event of an emergency where the onsite mine rescue teams are activated, the following steps must be followed:

1. Upon notification of an emergency underground the Site Superintendent or Supervisor will initiate the emergency warning system (e.g. stench gas) to warn all underground personnel. The individual in charge will then contact all mine rescue personnel on site or in camp to respond.
2. Alexco and Procon management will be contacted and notified of the situation.
3. Alexco and Procon Management will contact the local authorities and appropriate personnel as per the site Emergency Response Plan.
4. The Mine Rescue operation must be carried out in accordance to the British Columbia Mine Rescue Manual and the Yukon Occupational Health and Safety Regulations.
5. Teams responding will be briefed on the potential situation effecting the underground by the designated Emergency Response Coordinator.
6. The teams responding will prepare for the emergency as required with the appropriate equipment relevant to the occurrence (e.g. SCBA's or First Aid equipment).
7. Teams will proceed on the mission as required. No one team will proceed on a mission without the backup of another team present unless authorized by senior management and/or Yukon Workers Compensation Health and Safety Board
8. Safety of the Mine Rescue Team will not be compromised.
9. The team shall ensure the safety of trapped workers and casualties. Proper first aid will be administered and the workers and/or casualties will be transported to surface accordingly.
10. The team will ensure the protection of Mine Property.
11. The team will assist in the rehabilitation of the mine/tunnel back to safe operational conditions.
12. Teams will not be required to respond in apparatus for more than two hours on a mission without an adequate rest period (e.g. 4 hours)
13. Teams returning from a mission will be debriefed and the information shared shall be supplied to the next responding team.
14. Teams from neighboring sites will be contacted and requested to respond as per any Mutual Assistance agreements that have been established.
15. Upon completion of the operation a thorough investigation of the incident and audit of the response will be conducted by Alexco and Procon personnel.

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			Approved by:	<i>Tom Fudge</i>

Contacts


Alexco Management

Contact	Position	Office	Cell
Tom Fudge	Senior VP – Eng & Dev	867 996 2330 ext 5907	604 340 5855
Tim Hall	VP & General Manager	867 996 2330 ext 5901	604 340 5832
Scott Smith	Mine Manager	778 327 2687	778 384 9607
TBD	Safety Manager	867 996 2330 ext 5913	

Procon Management

Contact	Position	Office	Cell
Jim Dales	Vice President	604 291 8292	
Colin Wilson	Area Manager	604 296 3369	778 772 1076
John Scott	Director of HR&S	604 291 8292	
Jon Miller	Corporate Safety	604 291 8292	604 341 1449

All government mine regulations and company standards must be followed.

	SAFETY STANDARD WILD LIFE ENCOUNTERS	Document Number:	ERP-011
		Version Date:	03/31/12
		Version:	01
		Approved by:	Tim Hall

ALEXCO RESOURCE CORP

Effective Date: 03/31/12 Review Date: 09/25/12

Implementation Date:

Revision No.: 01

Review Date: 09/25/12

Prepared By: Neil Bottrell

References: Yukon Occupational Health and Safety Regulations

PURPOSE

To ensure all Alexco Resource Corporation personnel and independent contractors are aware of proper procedures when encountering wildlife on or around the site.

SCOPE

These procedures apply to all employees including independent contractors, working at the Bell Keno Mines and designated sites.

RESPONSIBILITY

Site Manager and Department Managers are responsible for:

- Ensuring sightings that require reporting are reported to the Regional Conservation Officers.

Safety and Health Manager is responsible for:

- Implementing the provisions of this procedure and ensuring that all precautions are taken.

Every individual is responsible for:

- Recording the sighting on the Wildlife Management Log.
- Reporting the sighting to their supervisor.


PROCEDURE

1. IMPACT ON WILDLIFE

The project area provides both year-round and seasonal habitat for wildlife species. Wildlife may be impacted by the loss or modification of habitat and disturbance from vehicles and equipment during sensitive life-cycle periods (e.g., breeding and rearing). The environmental awareness and orientation sessions provide some insight into wildlife encounters.

2. VEHICLE AND EQUIPMENT USE


- Drivers will maintain a safe and appropriate speed on the road and drivers will not chase animals down roads. Instead, drivers will stop and turn off their headlights to allow stressed animals to disperse.

 ALEXCO	SAFETY STANDARD WILD LIFE ENCOUNTERS	Document Number:	ERP-011
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		Version:	01
		Approved by:	Tim Hall

- Hunting and firearm use is not permitted on site unless prior authorisation is obtained from the site manager.
- When encountering wildlife, remember they have the right of way.
Never feed wildlife! Feeding wildlife may cause them to stay at the site and become habituated to human contact. The consequences of feeding may result in serious harm to humans, and/or the animal being relocated or destroyed.
- If encountering wildlife on the road, stop the vehicle and allow wildlife to pass. Be sure to:
 - Remain in the vehicle.
 - Avoid using the horn.
 - Avoid provoking the animals.
 - Wait for the animal(s) to pass before continuing.
- If you encounter a fox, wolf, wolverine, bear or moose on foot:
 - Back away slowly and do not make direct eye contact.
 - Do not make sudden movements.
 - Call in the sighting by radio as soon as possible without alarming the animal.
 - Stay in radio contact until you are at a safe distance and return to a safe area (e.g., inside a vehicle) as soon as possible.
- Call in wildlife sightings of foxes, wolves, wolverines, bears or moose to your supervisor, and when returning to the camp, fill out the Wildlife Management Log.

RELATED DOCUMENTS

- 0023 - Pedestrian Traffic
- 0006 – Alexco Vehicles and Driving

	SAFETY STANDARD BEAR SIGHTING / CONTACT	Document Number:	ERP-012
		Version Date:	09/25/11
		Version:	01
		Approved by:	Tim Hall

ALEXCO RESOURCE CORP

Effective Date: 09/25/11 Review Date: 09/25/12

Implementation Date:

Revision No.: 01

Review Date: 09/25/12

Prepared By: Neil Bottrell

References: Yukon Occupational Health and Safety Regulations

PURPOSE

To ensure all personnel are aware of the procedure for reporting the sighting of bears and bear/human encounters.

SCOPE

These procedures apply to all employees Alexco Resource Corporation including independent contractors, working at the Bell Keno Mines and designated sites.

RESPONSIBILITY

Site Manager and Department Managers are responsible for:

- Ensuring that this procedure is implemented and maintained.

Supervisors are responsible for:


- Implementing this procedure and educating his/her workforce in this procedure.

Health and Safety Manager or Environmental Technician is responsible for:

- Attending the scene of the sighting with the responding ERT members to help evaluate the situation and determine the appropriate course of action.
- In conjunction with the ERT issue appropriate directives to other personnel on the site (i.e. "bear alert" and all personnel to stay indoors) as required.
- Reporting the bear encounter to the Yukon Conservation Officer.

Every individual is responsible for:

- Reporting the sighting or encounter to the Safety Manager or Environmental Manager or Designates.
- Recording the sighting or encounter in the Wildlife Management Log.
- Ensuring that he / she and others are not at risk

	SAFETY STANDARD BEAR SIGHTING / CONTACT	Document Number:	ERP-012
		Version Date:	09/25/11
		Version:	01
		Approved by:	Tim Hall

OVERVIEW

Black bears and grizzly bears may be active in the area from early May to late October. Due to the potential risk that a bear poses to human safety, it is important that all sightings or encounters with bears be reported immediately. Early detection of bears allows camp personnel time to take appropriate action.

For the purposes of determining the Emergency Response Team (ERT) response, the following definitions are used:

DEFINITIONS

Sighting:

The bear is seen further than 1 km from the camp perimeter, and further than 100 m from any area of human activity.

Encounter:

The bear is seen closer than 1 km to the camp perimeter, and within 100 m to any area of human activity.


WHAT TO DO

SIGHTING

Bears are a common site in and around remote mining facilities. The smell associated with a camp, mine and mill facilities and refuse dumps are very inviting to these large sometimes dangerous animals.

When a bear is spotted outside of 1 kilometer radius from camp or further than 100 meters from human activity:

- Do not approach the bear.
- Alert the site Safety Department or Site Services Supervisor via radio if possible, if you do not have a radio go to the nearest office or occupied building and utilize the radio available there.
- Note the location of the Bear and its direction of travel.
- Warn any other persons in the area of the bear's presence.
- Record the sighting in the wildlife management log.

	SAFETY STANDARD BEAR SIGHTING / CONTACT	Document Number:	ERP-012
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		Version:	01
		Approved by:	Tim Hall

ENCOUNTER

HOW TO PREVENT BEAR ENCOUNTERS

- Be alert at all times.
- Respect all bears – they can be dangerous.
- Never approach a bear for any reason.
- Never feed bears or other wildlife.
- If leaving the camp ensure someone knows where you are going and when you plan to return. Always carry a portable radio or other communication device to contact the camp.

WHAT TO DO IN THE EVENT OF AN ENCOUNTER

There is always a possibility that you may surprise a bear at close range, or encounter a bear unafraid of people. Though there is no guaranteed formula for reacting to a bear encounter, each one being unique, the following tips may help:

- Stop, stand still and stay calm.
- Assess the situation.
- Slowly back away while keeping your eye on the bear. Do not run.
- If the bear is aware of you, help the bear identify you as human by talking in a low voice and slowly waving your arms. Moving upwind will help the bear get your scent.
- If possible, go to a safe location, e.g., inside a building or vehicle.
- Immediately alert the Safety Department or designate of your situation (by radio if possible) if this individual is not available inform anyone within radio contact.



SAFETY STANDARD

BEAR SIGHTING / CONTACT

Document Number:	ERP-012
Version Date:	09/25/11
Version:	01
Approved by:	Tim Hall

PROCEDURE

SIGHTING

Bear **further than 1 km** from camp perimeter or **further than 100 m** from area of human activity

- ✓ Notify others in the area of the bear's location.
- ✓ Ensure that you and others are in a safe location and not at risk.
- ✓ Take note of the bear's location, general description and direction the bear is heading.
- ✓ Use your radio to notify the Exploration Manager or Site Supervisor of the bear sighting.
- ✓ If you do not have a radio and it is *safe to do so, quickly go to the nearest phone*.
- ✓ After normal working hours call the site First Aid Attendant on Channel 3 or wake him/her if necessary (room numbers posted on main entrance bulletin board).
- ✓ If it is safe to do (e.g., you are indoors or in a vehicle) monitor the movement of the bear.
- ✓ Stay indoors or inside a vehicle –

DO NOT APPROACH THE BEAR!

ENCOUNTER

Bear **closer than 1 km** to camp perimeter or within **100 m** area of human activity.

Alert Safety
Department and/or
Site Services Super

- ✓ Record the Encounter in the Wildlife Management Log.
- ✓ Site Supervisor to complete a Wildlife Deterrent Report.
- ✓ Safety Manager and Site Manager to submit completed report to Wildlife Officer as soon as possible.

- ✓ Record the sighting in the Wildlife Management Log.



Alexco Keno Hill Mining, Bellekeno Minesite

Spill Report Form

1	DATE OF SPILL:	TIME OF SPILL:	SPILL REPORT #:
2	LOCATION OF SPILL:	SITE CONDITIONS (TEMPERATURE, WIND, GROUND PERMEABILITY ETC.):	
3	SAFETY HAZARDS (FIRE, FUMES, EXPLOSIVE SUBSTANCE, ETC):		
4	TYPE OF PRODUCT SPILLED: OIL () GASOLINE () DIESEL () OTHER () _____ QUANTITY RELEASED (IN LITRES):		
5	CAUSE OF THE SPILL (E.G., BROKEN HOSE, VEHICLE ACCIDENT, EQUIPMENT FAILURE, POLICY AWARENESS) Incident Report # _____ (if applicable)		
6	ENVIRONMENTAL CONTAINMENT FACTORS (E.G., NATURAL DEPRESSION/BERM, SNOW)		
7	ACTIONS TAKEN TO DATE TO CONTAIN, RECOVER OR DISPOSE OF THE SPILLED PRODUCT AND CONTAMINATED MATERIALS:		



8	ENVIRONMENTAL RISK (DESCRIBE DISTANCE TO NEAREST WATER BODY, SENSITIVE HABITAT, WAS IT A SPILL TO GROUND OR WATER ETC.): LOW () MEDIUM () HIGH ()	
9	SAMPLES TAKEN (DESCRIBE NATURE OF SAMPLES, LOCATION, INTENDED ANALYSIS):	
10	SUBSEQUENT ACTIONS REQUIRED TO CONTAIN, RECOVER OR DISPOSE OF THE SPILLED PRODUCT AND CONTAMINATED MATERIALS:	
11	RECOMMENATIONS FOR IMPROVEMENTS AND PREVENTATIVE MEASURES	
12	COMPANY / CONTRACTOR INVOLVED:	
13	NAME OF AKHM ONSITE SUPERVISOR(S) AT THE TIME OF SPILL:	DEPARTMENT SUPERVISOR INVOLVED
14	IS THE SPILL REPORTABLE AS PER TABLE 1.0 REPORTABLE SPILL VOLUMES (BELOW)? YES () NO () If YES then complete form to the end of section 17 and contact 24-Emergency Spill Line If NO then complete form to the end of section 16	
15	HAVE ADDITIONAL LICENCE / PERMIT REPORTING REQUIREMENTS BEEN TRIGGERED BY THIS SPILL? (E.G., MLU LQ00240, WUL QZ09-092, QML-0009) YES () NO () IF YES, NAME LICENCE / PERMIT _____	



16	INTERNAL REPORTING SEQUENCE FIRST OBSERVER: <table border="1"> <tr> <td>NAME</td> <td>COMPANY</td> <td>Department/Position</td> </tr> </table> REPORTED TO: <table border="1"> <tr> <td>NAME</td> <td>COMPANY</td> <td>Department/Position</td> </tr> </table> REPORTED TO ENVIRONMENTAL DEPARTMENT: <table border="1"> <tr> <td>TO WHO</td> <td>BY WHOM</td> <td>DATE/TIME</td> </tr> </table> REPORTED TO AKHM MANAGEMENT: <table border="1"> <tr> <td>TO WHO</td> <td>BY WHOM</td> <td>DATE/TIME</td> </tr> </table>	NAME	COMPANY	Department/Position	NAME	COMPANY	Department/Position	TO WHO	BY WHOM	DATE/TIME	TO WHO	BY WHOM	DATE/TIME
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TO WHO	BY WHOM	DATE/TIME											
17	EXTERNAL REPORTING SEQUENCE REPORTED TO 24-HOUR YUKON SPILL HOTLINE (867) 536-2912: <table border="1"> <tr> <td>TO WHO</td> <td>BY WHOM</td> <td>DATE/TIME</td> </tr> </table> DETAILED WRITTEN REPORT TO YWB, EMR, ENVIRONMENT CANADA, AND NND (REQUIRED WITHIN 10 DAYS OF SPILL): <table border="1"> <tr> <td>DATE SUBMITTED</td> <td>BY WHOM</td> </tr> </table>	TO WHO	BY WHOM	DATE/TIME	DATE SUBMITTED	BY WHOM							
TO WHO	BY WHOM	DATE/TIME											
DATE SUBMITTED	BY WHOM												

NOTE: If needed, contact CANUTEC (national advisory centre offering advice on dangerous goods emergencies) at (613) 996-6666 or (613) 992-4624



Table 1.0 Reportable spill quantities

TDG Class	Substance for 24-Hour Spill Line	Typical Products on Site	Immediately Reportable Quantities
1	Explosives	ANFO	Any amount spilled outside of blast pattern
2.3 2.3 2.4 6.2 7.0 None	Toxic gas (compressed/non-compressed) Poisonous Gases Corrosive gas (compressed/non-compressed) Infectious substances Radioactive Unknown substance		Any amount
2.3	Non-poisonous Gases		>100 Litres
2.1 2.2	Compressed gas (flammable) Compressed gas (non-corrosive, non flammable)	Propane Acetylene	Any amount of gas from containers with a capacity >100 Litres
3.1 3.2 3.3	Flammable liquids	Diesel Gasoline Glycol Hydraulic &/ Engine Oil	>200 Litres
4.1 4.2 4.3	Flammable Solids Spontaneously combustible solids Water reactant (dangerous when wet)		>25 kg
5.1 9.1	Oxidizing substances Miscellaneous products or substances excluding PCB mixtures	Sodium Hydroxide Lime Solution Sodium Nitrate Calcium Hypochlorite Ammonium Nitrate	>50 kg or 50 Litres
5.2 9.2	Organic Peroxides Environmentally hazardous		>1 Litre or 1 kg
6.1 8.0 9.3	Poisonous substances Corrosive substances Dangerous wastes (waste oil)	Hydrochloric / Muriatic Waste Oil	>5 Litres or 5 kg
9.1	PCB Mixtures of 5 or more ppm	Transformer oil	>0.5 Litre or 0.5 kg
9.1	Miscellaneous dangerous goods		>50 kg
None	Other contaminants (eg crude oil, drilling fluid, produced water, waste or spent chemicals, used or waste oil, vehicle fluids, waste water, etc.)		>100 Litres or 100 kg
None	Sour natural gas (eg contains H ₂ S) Sweet natural gas		Uncontrolled release or sustained flow of >10 min

APPENDIX D.
ERP Flame and Moth QML UG Emergency Procedure

	SAFETY STANDARD	Document Number:	ERP-004
		Version Date:	05-Sep-2017
		Version:	01
		Approved by:	
UNDERGROUND EMERGENCY RESPONSE PROCEDURE			

ALEXCO RESOURCE CORP.

Revision No.: 01

Revision Date: 05/Sep/17

References: Yukon Occupational Health and Safety Regulations

PURPOSE

To ensure a safe evacuation and accounting of all personnel working underground in the event of an underground emergency.

SCOPE

These procedures apply to all Alexco underground employees and contractors working at the Bellekeno, Flame and Moth and Bermingham mines. This safety standard is to be updated as necessary when underground conditions and status change.

RESPONSIBILITY

Mine Manager or designate is responsible for:

- Ensuring this procedure is implemented and maintained.
- Ensuring personnel receive appropriate training.
- Reporting to the Mine Rescue Coordination Centre (MRCC)
- Serving as a member of the Emergency Management Team (EMT) to manage the underground (U/G) emergency in conjunction with the Mine Rescue Team Coordinator (MRTC).
- Contacting off-site Alexco personnel and regulatory agencies of the situation.

Mine Superintendent or designate is responsible for:

- Monitoring the implementation of this procedure.
- Keeping a detailed minute-by-minute log of the events and activities.
- Reporting to the MRCC to serve as a member of the Emergency Management Team
- Reporting as a member of the Emergency Management team at the MRCC.

Alexco Health and Safety Coordinator or designate is responsible for:

- Serving as the Mine Rescue Team Coordinator (MRTC)
- Managing the fire emergency in conjunction with the Emergency Management Team in a

	SAFETY STANDARD	Document Number:	ERP-004
		Version Date:	05-Sep-2017
		Version:	01
		Approved by:	
UNDERGROUND EMERGENCY RESPONSE PROCEDURE			

safe manner and in accordance with mine rescue best management practices.

Alexco Personnel located on Surface are responsible for:

- Reporting to the nearest muster area where the senior person will perform a roll call of all Alexco personnel present.
- Staying at the mine office/dry lunchroom muster area until advised otherwise by the Mine Manager or designate.

Area First Aid Attendant is responsible for:

- Being readily available to assist and treat any medical emergencies.

Administrative Assistant is responsible for:

- Remaining on standby by the phones and radio.

All Underground and Technical Services personnel are responsible for:

- Knowing and understanding this procedure.

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EMERGENCY PREPAREDNESS AND RESPONSE PROCEDURE (EPRP)

General Information

Make sure that you fully understand this procedure and your role in it. A fire or other life threatening condition in the mine calls for immediate initiation of the entire underground emergency procedure. If there is any doubt as to the details of the situation, we must err on the side of safety. Serious risks to personnel may result from indecision or hesitation.

This procedure is intended to provide a guide in the event of a fire or other emergency reported in the underground workings. The areas of responsibility and duties of the various people who will be directly involved are outlined to eliminate doubt as to what each person should be doing at the time of an emergency. It should be noted that not all conditions can be foreseen, thus this procedure can only serve as a guide in establishing a proper organization at the time of an emergency situation. The detailed response to any situation must be considered by the Emergency Management Team based on the information available at the time of the emergency.

All Underground Supervisors on site will review this emergency procedure with their respective crews every three months.

Emergency

An emergency is an unforeseen or sudden occurrence of a danger demanding immediate remedy or action. This may involve management and trained first aid, fire and rescue personnel.

Emergencies may include but are not limited to:

- Injury to people or people requiring rescue
- Loss of life
- Fire in the Surface Shop, Office/Dry complex or Fire underground
- Fire on a piece of underground equipment
- Major inflow of water
- Occurrence of flammable, noxious or toxic gas in the underground workings
- Major uncontrolled fall of ground

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GENERAL UNDERGROUND EMERGENCY PREPAREDNESS AND RESPONSE PROCEDURE

Initial Notification:

The person or persons discovering the emergency shall:

- **If you have a radio** announce the Emergency on radio U/G Channel 3 and stay on this channel until you receive confirmation that your notification was received by the U/G Supervisor or surface personnel. Make sure you pass on all details of the Emergency:
 - Your name and location of the emergency
 - Requirements for handling the emergency (i.e. first aid, rescue team, ambulance)
 - Number of injuries
 - Using your radio announce the emergency on all underground channels to advise other workers of the emergency if required
- **If you do not have a radio** go to the nearest phone and call your supervisor or the surface shops / offices and pass on all details (see above) of the emergency and have them relay the Emergency on the radio channel (to be announced).
- Warn all personnel in the area and warn the underground employees by requesting that the Stench Gas be injected into the airline and ventilation systems **if required**.

Stench is normally injected for emergencies requiring mine evacuation or refuge such as fires.

All Persons Shall:

- Evacuate to a safe area where communication can be maintained unless immediately requested to assist
- Evacuate to a designated assembly area for a head count or further instruction
- Not leave the assembly areas or go back into the area until authorized
- Not make any off-site phone calls with details of the emergency
- If underground, proceed to surface immediately

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ACCIDENT INVOLVING SERIOUS INJURY

- **If you have a radio** announce the Emergency on radio U/G Channel 3 and stay on that channel until you receive confirmation that your notification was received by the Supervisor or surface personnel. Make sure you pass on all details of the Emergency
 - Nature of Accident (i.e. struck by loose, caught between, fell from a height, etc.)
 - Number of people injured and description of the injuries
 - Equipment or additional personnel required such as:
 - Oxygen therapy kit
 - Stretcher
 - Any special tools such as lifting tools
 - First Aid Kit
 - Transport Vehicle
 - Additional rescue personnel
- Render First Aid – remember to use C-Spine Control if there is a suspected back or neck injury and do not move him/her unless in danger of additional injury
- The EMT will proceed to the portal area, be prepared to go underground if required and have the Emergency Transport Vehicle (EVT) ready to receive the injured person
- Underground workers will normally bring the injured person to surface.
- Stretcher and First Aid Kits are located at the Mine Dry, the ETV, Mobile Treatment Centre and at all active areas throughout the site.
- **If you do not have a radio** go to the nearest phone and call your supervisor or the surface shops / offices and pass on all details (see above) of the emergency and have them relay the Emergency on U/G Channel 3.

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MAJOR INRUSH OF WATER REQUIRING MINE EVACUATION

The person or persons discovering the emergency shall:

- **If you have a radio** announce the Emergency on radio U/G Channel 3 and stay on that channel until you receive confirmation that your notification was received by the supervisor or surface personnel. Make sure you pass on all details of the Emergency and request that the stench gas be injected.
 - Your name and location of the emergency
 - Requirements for handling the emergency (i.e. first aid, rescue team, ambulance)
 - Number of injuries
 - Using your radio announce the emergency on all underground channels to advise other workers of the emergency
 - Immediately evacuate the mine by the closest route
 - Warn all other people you encounter while leaving the mine.
 - When on surface report immediately to the shifters wicket to tag out
 - Those people who learn of the emergency because they smell the stench will report to the refuge station where they will be instructed by the Emergency Management Team to evacuate the mine
- **If you do not have a radio** go to the nearest phone and call your supervisor or the surface shops / offices and pass on all details (see above) of the emergency and have them relay the Emergency on U/G Channel 3 and request that the stench gas be injected.
 - Immediately evacuate the mine by the closest route
 - Warn all other people you encounter while leaving the mine.
 - When on surface report immediately to the shifters wicket to tag out

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UNDERGROUND FIRE

Person Discovering a Fire:

In the event you discover a fire in the underground mine workings:

- Assess the size of the fire and yell to your partner(s) for help
- Attempt to extinguish the fire with whatever is available (i.e. fire extinguishers or water if it is not an electrical fire). **NEVER USE WATER ON BURNING ELECTRICAL EQUIPMENT**
- Do not endanger yourself while attempting to fight the fire
- If successful in extinguishing the fire, report it at once
- **If the fire is too large or difficult to extinguish immediately and you have a radio** announce the Emergency on radio U/G Channel 3 and stay on that channel until you receive confirmation that your notification was received by the supervisor or surface personnel. Make sure you pass on all details of the Emergency and ask for the stench to be injected
 - Your name and location of the emergency
 - The precise location, nature of the fire and what is burning
 - The size of the fire
 - Your planned destination after the call
 - Using your radio announce the emergency on all underground channels to advise other workers of the emergency
 - Put on your self-rescuer and proceed to the nearest refuge station or place of safety and await further instructions
- **If the fire is too large or difficult to extinguish immediately and you do not have a radio** go to the nearest phone and call your supervisor or the surface shops / offices and pass on all details (see above) of the emergency and have them relay the Emergency on U/G Channel 3
 - Put on your self-rescuer and proceed to the nearest refuge station or place of safety and await further instructions

Person Encountering Smoke:

If you encounter smoke anywhere in the underground mine workings:

- Assess the type of smoke you have encountered. Is this blasting smoke, diesel smoke or possible smoke from a fire? You will have to use your sense of smell and judgement to distinguish between the different types of smoke.
- **If you suspect the smoke is from a fire, and you have a radio** announce the

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Emergency on radio channel U/G Channel 3 and stay on that channel until you receive confirmation that your notification was received by the Supervisor or Surface personnel. Make sure you pass on all details of the Emergency and ask for the stench gas to be injected.

- Your name and location of the emergency
- The precise location, nature of the fire and what is burning
- The size of the fire
- Your planned destination after the call
- Using your radio announce the emergency on all underground channels to advise other workers of the emergency
- Put on your self-rescuer and proceed to surface.
- If your passage to surface or place of safety is blocked proceed to the nearest dead end drift that has air and water available and seal yourself in using any available materials. Use your jacket, oiler jacket or shirt to make a tent over your head and the air header and crack open the airline and wait for help
- Do not panic and enter smoke – trained rescue personnel will get you out
- Occasionally beat on a pipe in a series of three taps to indicate your location

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FIRE ON A PIECE OF EQUIPMENT

If there is a fire on a piece of equipment in the underground mine workings:

- Stop the piece of equipment and shut down the engine
- Turn off the master switch
- Extinguish the fire using the hand held fire extinguisher from the piece of equipment first. If you are unsuccessful activate the fire suppression system from one of the two activation points located on most pieces of underground equipment
- Do not expose yourself to smoke or gases
- Even if you succeed in extinguishing the fire do not delay in announcing an emergency – **if you have a radio** announce the Emergency on radio U/G Channel 3 and stay on that channel until you receive confirmation that the emergency was received by the Supervisor or Surface personnel. Make sure you pass on all details of the Emergency and ask for the stench to be injected
 - Your name and location of the emergency
 - The precise location of the burning piece of equipment
 - The size of the fire
 - Your planned destination after the call
 - Using your radio announce the emergency on all underground channels to advise other workers of the emergency
 - Put on yourself rescuer and proceed to surface

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PROCEDURE FOR STENCH GAS INJECTION

The stench gas injection locations are at the main airline inside the surface compressor and at the main surface fan. All surface maintenance personnel and Alexco technical staff are trained to inject the stench gas.

The Underground Supervisor, the Mine Manager or the Mine Superintendent will authorize the injection of stench gas into the underground workings. If these people are all underground, the most senior person on surface may authorize the injection of the stench.

Person Encountering Stench Gas:

If you smell stench gas (propane smell) anywhere in the mine:

- Stop working immediately and make sure others in the area are aware of the emergency
- Shut down and secure any equipment you have been using. Turn off the master switch and make sure it is not parked blocking the roadway or access to emergency or electrical equipment
- Proceed to surface immediately. Travel quickly but calmly and do not run. Take any available tools with you. If there is any indication of the smell of smoke put on yourself rescuer
- Always stay on the fresh air side; never travel in air containing smoke
- Warn anyone you meet along the way of the emergency