

EMERGENCY ACTION PLAN

For the
Pogo RTP Dam (NID ID#AK00304)
Delta Junction, Alaska

Prepared by:



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Pogo RTP Dam EAP Revisions			
Revision #	Date	Change	By
Original	June 2011		Pogo
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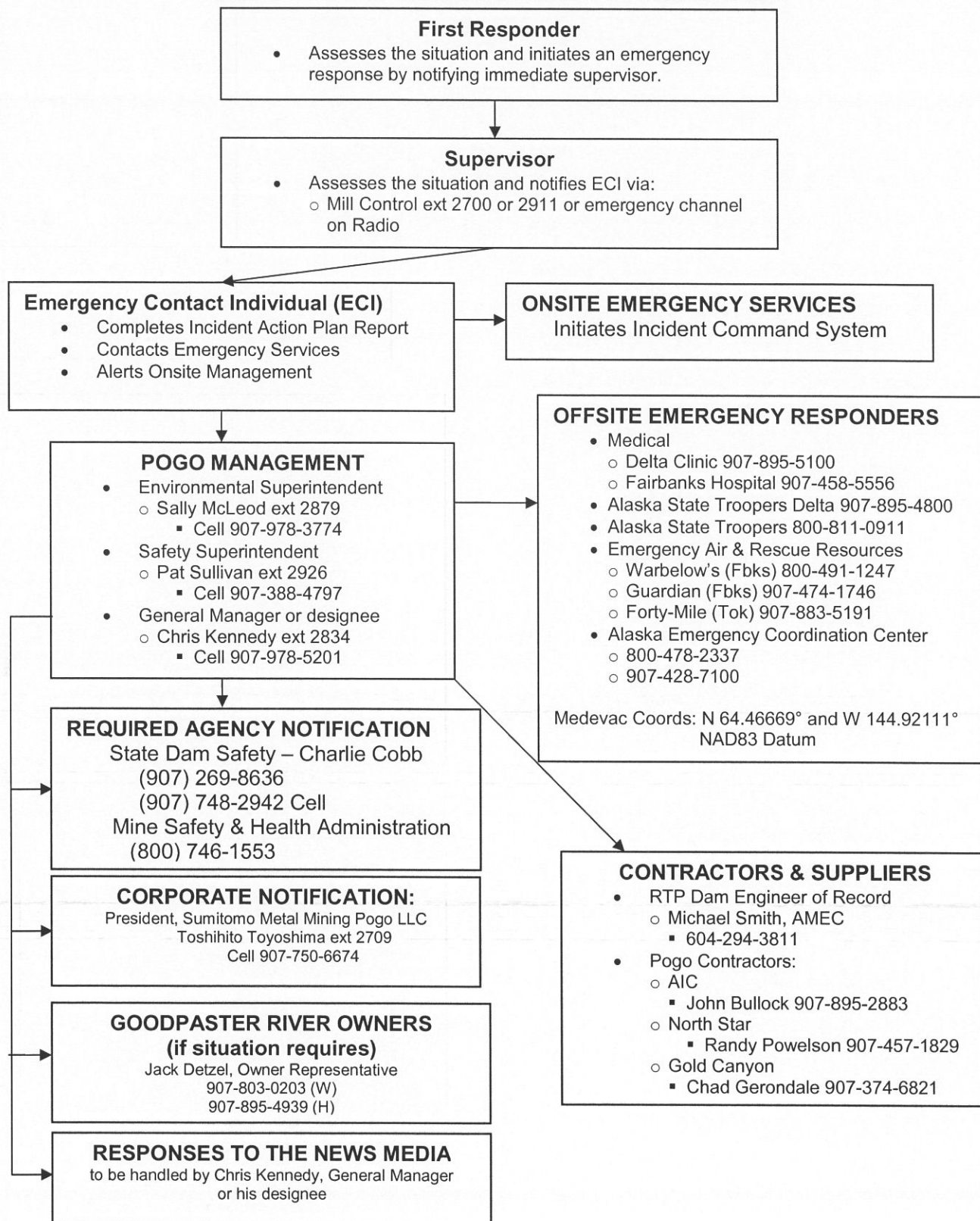
1.0 EMERGENCY NOTIFICATION FLOWCHART

The Notification Flowchart applies to all conditions. The primary goal of notification under Tier 1 conditions is to inform of an impending emergency to allow pre-failure planning. The primary goal of notification under Tier 2 conditions is to prevent loss of life.

The Notification Flowchart is intended as a guide to organize priorities in a response scenario. However, if one member of the emergency team is unavailable or cannot be reached, it is imperative that another response team member ensures the proper notifications are implemented.



EMERGENCY NOTIFICATION FLOWCHART





2.0 INTRODUCTION

Sumitomo Metal Mining Pogo LLC (Pogo) is the operator of the Pogo Gold Mine, located 38 miles northeast of Delta Junction, Alaska.

The Recycle Tailings Pond (RTP) Dam (NID ID#AK00304) was constructed in 2004/2005. The RTP Dam is a lined rockfill structure constructed to provide storage of seepage and runoff waters from Drystack Tailings Facility (DSTF), treated mine drainage, and surface runoff from other facilities. Water from the RTP reservoir is used in the mining and milling process or treated and discharged.

The RTP Dam was approved to operate as a Class II (significant) hazard potential dam as defined in 11 AAC 93.157 on May 25, 2006. The first Periodic Safety Inspection (PSI) was conducted in 2007 and the certificate of approval to operate a dam was renewed on December 31, 2007. During the second PSI in 2010, Alaska Department Natural Resources (ADNR) pointed out defects in the dam break analysis carried out in 2001/2002. It failed to evaluate the risk of inundation into the underground working area from the 1690 Portal and the influences to the Goodpaster River recreational cabins. Subsequently, ADNR decided to change the hazard potential class of RTP Dam from Class II to Class I (high). Pogo's certificate of approval to operate a dam was renewed on March 8, 2011.

Pogo conducted a new dam break analysis in April 2011 and it concluded that a hypothetical breach of the dam would lead to significant flooding in underground at the 1875 Portal and 1690 Portal. However, there is no expectation for inundation at the cabins along the Goodpaster River. This analysis endorsed the hazard potential Class I for the Pogo RTP Dam.

This Emergency Action Plan (EAP) has been developed in accordance with the requirement of Certificate of Approval to Operate a Dam issued on March 8, 2011. This EAP focuses on the notification and evacuation of people from the immediate vicinity of a potential flood wave and the underground mine in the event of a potential or actual dam failure situation. The plan includes facility information, discussion on potential failure scenarios, procedures for detection, evaluation and classification of an emergency, and procedures to end the emergency.

3.0 FACILITY DESCRIPTION

3.1 RTP Dam

Figure 1 shows the plan view of RTP Dam. The RTP Dam has a storage capacity of approximately 43.6 million gallons (Mgal). The Dam is permitted for a crest elevation of 2092 feet above mean sea level (amsl) which, as designed, resulted in a 40 Mgal capacity. The as-built configuration offers about 9% more storage capacity than the designed configuration.



The RTP Dam serves as the largest impoundment on the site where water can be stored prior to recycle or subsequent treatment and discharged to the environment. The RTP Dam impounds run off from the Drystack Tailings Facility (DSTF), captures natural flows from the catchment area below the limits of diversion ditches and the DSTF, and collects various plant site contact runoff water. The treated mine water may also be stored in cases when it cannot be discharged into the Goodpaster River as allowed by APDES Permit #AK0053341.

The dam is a membrane lined rockfill embankment with a hydraulic height of 67 feet. The dam crest is 35 feet wide and extends over a distance of 550 feet. The lined crest elevation is designed to be nominally 2,090 feet, however, it was confirmed that the actual line crest elevation ranged from 2,088.6 feet to 2,089.4 feet during the second PSI in 2010, by digging five holes at the crest of embankment.

The elevation of the sharp crested weir located in the spillway inlet is at elevation 2084.6 feet. The spillway has a maximum discharge capacity of 440 cfs. The spillway intake structure is constructed from reinforced concrete and discharges into a channel lined with corrugated steel pipe. The channel is approximately 600 feet long and subsequently discharges into a rip rap outfall located in a channel that would return flows to Liese Creek in the event of spillway operation. A grout curtain located beneath the upstream toe of a composite liner on the upstream face of the dam was installed to limit seepage through the embankment. During normal dam operations, RTP water is pumped from the reservoir via two HDPE pipes emptying into a head tank located near the abutment of the dam.

3.2 Downstream Facilities

The facilities along the Liese Creek downstream of the RTP Dam which may be affected in case of dam failure are 1875 Portal, the Upper Camp Bench Area, 1690 Portal, and Liese Creek Bridge (See Figure 2). In addition, a large number of recreational use cabins exist along the Goodpaster River downstream of the mine site. The nearest cabin exists near the confluence between Central Creek and Goodpaster River, about 6 miles downstream from Liese Creek. There is no expectation for inundation at the cabins along the Goodpaster River. Notification of the owners would be as a courtesy only.

1875 Portal

The 1875 Portal is the main access to the underground working areas for the underground workers and mining equipment and is used to haul the materials to the underground. Waste rock and ore from underground are hauled out via this portal by dump trucks. The portal connects to the 120 feet long horizontal drift then to the decline which has a gradient of 5%. This is also the intake route of the underground ventilation system.



The 1875 Portal exists at 1876 feet amsl, 20 feet above the Liese Creek. The access to the portal was constructed by filling the creek with an 8 foot diameter culvert set at the bottom of valley. The corrugated metal pipe (CMP) culvert will have an approximate 1200 cubic feet per second (cfs) flow rate at 88% capacity.

Upper Camp Bench Area

The Upper Camp Bench Area contains the Maintenance/Warehouse Complex/ Administration Building, Upper Camp Facility (Dorms, Kitchen, Dining area), Chateau (Mill Maintenance) and Mill Facility. It is expected that a maximum of two feet of water could impact this area. None the less, it may be evacuated as part of Tier 2 response. ,

1690 Portal

The 1690 Portal is the belt conveyor access which is used to transport the ore from underground ore bin to the mill, and is the exhaust route of the underground ventilation system. The Portal directly connects to the conveyor decline which has a gradient of 18%.

The 1690 Portal exists at 1689 feet amsl, 9 feet above the Liese Creek. The access to the portal was constructed by filling the creek with a culvert of 8 foot. diameter set at the bottom of valley. The CMP culvert will have an approximate 1200 cfs flow rate at 88% capacity.

Liese Creek Bridge

Liese Creek Bridge is an 88 foot long iron flange beam based one lane bridge, which connects the mine site road between the 1525 Portal area and the Liese Creek Valley area. The bridge exists at the elevation of 1,416 feet amsl, 24 feet above the Liese Creek.

4.0 EMERGENCY DETECTION AND EVALUATION

Pogo conducted a new dam break analysis in April 2011 using as-built survey data of the Liese Creek road crossing structures such as 1875 Portal and 1690 Portal in 2011. It concluded that a hypothetical breach of the dam would lead to significant flooding in underground at the 1875 and 1690 portals. However, there is no expectation for inundation at the cabins along the Goodpaster River. The April 2011 analysis endorsed the hazard potential Class I for the Pogo RTP Dam.

The emergency situations identified for the RTP Dam are:

- Stormwater overtopping the embankment and consequent incision of the embankment;



- Embankment mass failure due to unstable slope conditions (including rotational/sliding failure, piping failure, and liquefaction failure).

Potential emergencies will be detected by visual inspection during and after rain events and through monthly visual inspections of the RTP.

Two pond levels have been identified as “trigger” levels for initiating emergency action procedures. The pond levels have been designated as Tier 1 and Tier 2 conditions and are described below.

Tier 1 Condition: High Water Levels

The Tier 1 condition is intended to provide a means of observing and evaluating the developing emergency in order to allow adequate pre-planning by all potentially involved parties. Tier 1 conditions are considered to exist if the pond elevation exceeds the elevation of spillway floor (2,080.5 feet; 38 million gallons) and Pogo is unable to control the rise in pond level due to precipitation intensity, and continued precipitation is likely. Pogo routinely manages the RTP pond at less than 25 million gallons. When the pond level reaches 30 million gallons, more RTP water may be treated and discharged.

Tier 2 Condition: Water Down the Spillway

The Tier 2 condition is intended to provide a trigger for declaring an emergency before failure occurs to allow sufficient time for evacuation. A Tier 2 evaluation starts when the pond elevation exceeds the elevation of spillway weir (2,084.6 feet; 43.6 million gallons) and the pond water runs down from the spillway. A Tier 2 evacuation will be triggered when the pond level rises to within a foot of over topping and/or there are visible signs of seeps or cracks in the dam face.

4.1 Overtopping Failure

The RTP Dam has been designed to be physically sound under Probable Maximum Flood (PMF) conditions. The spillway has been designed and constructed to pass the PMF and therefore, in theory, overtopping of the proposed RTP Dam should be impossible unless the spillway is blocked. Should overtopping occur, the basic integrity of the dam would not be impacted. Although some limited raveling may occur at the crest of the dam, it is known that rockfill dams can be overtopped and pass significant volume of water without significant damage.

Therefore, it is recognized that overtopping failure will require the occurrence of extreme precipitation and/or improper operation. Overtopping may also be exacerbated by spillway blockage, diversion ditch failure, or due to exceedances of spillway capacity during the flood conditions.



4.2 Embankment Mass Failure

A Stability Analysis of the embankment was completed under the following scenarios.

- 1) A fully saturated embankment foundation;
- 2) The same as the above, with a fully developed phreatic level modeled through the rockfill embankment.

Both scenarios, as described above, are modeled with steady-state conditions under both static and seismic loading. Seismic loads include the Operating Basis Earthquake (OBE) and Maximum Design Earthquake (MDE) ground accelerations of 0.1g and 0.2g, respectively. As suggested by Hynes-Griffin and Franklin (1984), the seismic coefficients applied to the stability model were equal to half the peak horizontal ground accelerations (PHGA).

As recommended by the USACE under EM 1110-2-1902, limit equilibrium analysis methods were used for the stability analysis of the RTP utilizing the computer program SLIDE by RocScience (2007) to calculate the factors of safety against sliding. Deep and shallow circular failures were modeled for the cross section under consideration. Critical failure surfaces were generated through the rockfill embankment only and through the rockfill embankment and underlying soil overburden. For a water-impoundment facility, which is the standard to which the RTP is designed, the industry standard desired minimum Factor of Safety (FOS) for static and seismic conditions is 1.5 and 1.0, respectively, as suggested by the U.S. Army Corps of Engineers (EM 1110-2-1902).

The results of the stability analyses for the two phreatic conditions modeled are summarized in the Table 1. The factor of safety exceeded the industry standard at all cases. There is a possibility that the embankment will be damaged by the earthquake, though the RTP Dam has been designed to be physically sound under Maximum Design Earthquake (MDE).

Table 1 Summary of Stability Analysis on RTP Dam Embankment

<i>Phreatic Scenario</i>	<i>Failure Type</i>	<i>Computed Static FOS</i>	<i>Required Static FOS (USACE)</i>	<i>Computed OBE FOS</i>	<i>Computed MDE FOS</i>	<i>Required Seismic FOS (USACE)</i>
<i>Saturated Foundation</i>	<i>Deep</i>	<i>2.1</i>	<i>1.5</i>	<i>1.8</i>	<i>1.6</i>	<i>1.0</i>
	<i>Shallow</i>	<i>2.3</i>	<i>1.5</i>	<i>2.1</i>	<i>1.9</i>	<i>1.0</i>
<i>Saturated Foundation and Fully Developed Phreatic Surface</i>	<i>Deep</i>	<i>1.6</i>	<i>1.5</i>	<i>1.4</i>	<i>1.3</i>	<i>1.0</i>
	<i>Shallow</i>	<i>2.2</i>	<i>1.5</i>	<i>1.9</i>	<i>1.7</i>	<i>1.0</i>



5.0 TIER 1 AND TIER 2 RESPONSES

As described under Section 3.0, there are two potential failure scenarios that would constitute an emergency situation for the RTP dam. They have been classified as Tier 1 (High Water Levels) and Tier 2 (Water Down the Spillway).

A Notification Flowchart is provided at the beginning of this EAP to use for contacting companies and agencies as part of the response action.

Tier 1 Response Actions:

- 1) Implement requirements in Notification Flowchart to appraise potentially involved parties of the current and developing situation;
- 2) Implement continuous (24-hour) monitoring of pond level and location (do not monitor from crest of dam);
- 3) Position underground pumps to dewater 1690 and 1875 portals. Position heavy equipment and/or sandbags in portals to restrict potential flow.
- 4) Prepare for underground and mill emergency operations shutdown.

Tier 1 response will be coordinated by Pogo's Environmental Superintendent. The Environmental Superintendent will also notify ADNR Dam Safety to inform them of the developing situation after the situation is under control.

When an appreciable earthquake (felt by site personnel) occurs, ERT Team or Environmental department personnel will investigate the RTP Dam. If any significant damage is found on the embankment, then Pogo will initiate Tier 1 notification until damage is assessed by qualified engineers.

Tier 2 Response Actions:

- 1) Implement requirements in Notification Flowchart (front of EAP) to appraise potentially involved parties of the imminent failure of the embankment; and
- 2) Restrict the access to the embankment;
- 3) Allocate security personnel to the Liese Creek Bridge to control the traffic; delineate danger zone.
- 4) Evacuate underground mine personnel in accordance with the "Underground Emergency Procedure" (Pogo SOP, Document number: Site Wide #0020);
- 5) Implement underground and mill emergency operations shutdown.

Tier 2 response will be managed by Pogo's General Manager or the coordinator of on-site Emergency Response Team (ERT). Upon determination of imminent failure, the General Manager or ERT Coordinator will notify the ADNR Dam



Safety to inform them of the developing situation after the situation is under control.

5.1 Emergency Stand Down

The General Manager will determine if and when an emergency condition no longer exists.

The General Manager may declare the end to a developing emergency situation if the pond level stabilizes and starts decreasing prior to reaching Tier 2 trigger levels, precipitation has ceased, and monitoring and evaluation indicate no stability risk.

An emergency situation resulting from an embankment failure will be declared over when failure flow ceases and a determination has been made that there is no potential for additional failure or flow from the impoundment.

5.2 Followup Procedures

Following emergency response and mitigation, the Pogo senior management team will conduct a Cause and Response Assessment meeting to review all conditions leading up to the emergency, response actions, and favorable and unfavorable results. The team will meet with all individuals that were directly involved with the emergency response, including local and state agencies. The product of the meeting will be a Cause and Response Assessment Report, which will describe the conditions that contributed to the emergency, how the emergency team reacted in terms of actions and timing, and recommendations for improving response procedures and response times. A post incident inspection of the RTP Dam will be conducted by a licensed P.E. or by the ADNR-State Dam Safety Engineer.

6.0 ACTIONS AND RESPONSIBILITIES

Specific responsibilities are assigned for both Tier 1 and Tier 2 responses as follows.

**Tier 1 Actions and Responsibilities:**

Responsibility	Action Required	Urgency	Remarks	To Be Completed:
Environmental Superintendent	If/when a Tier 1 trigger is reached, it is the responsibility of the Environmental Superintendent to:		As noted above, specific emergency detection, evaluation, and response measures are outlined in the referenced <i>Emergency Action Plan</i> .	
	1.) Implement immediate monitoring actions per the EAP;	Immediate		
	2.) Brief Mine Management on the developing situation;	Immediate		
	3.) Ensure that proper external notifications are made per the EAP.	As soon as possible		



Responsibility	Action Required	Urgency	Remarks	To Be Completed:
General Manager	<p>1.) Evaluate conditions as reported;</p> <p>2.) Consider preparing for and/or directing the movement of mobile and other "at risk" equipment, pumping/transfer of stored fuels, etc. that could be jeopardized in a subsequent Tier- 2 situation.</p>	<p>Immediate</p> <p>As soon as possible, if warranted</p>	<p>Note: Dam Break Analysis projections indicate a "worst-case" scenario of a 6-foot high wall of water reaching the 1875 Portal. While the majority of water will run into the Liese Greek gulch, (it's projected that Admin, KDR, and structures further north on the Mill Bench will remain unaffected) equipment and infrastructure in and around the Portal and Maintenance Shop may be at risk.</p>	

**Tier 2 Actions and Responsibilities:**

Responsibility	Action Required	Urgency	Remarks	To Be Completed:
General Manager/Incident Commander	Upon notification that a Tier-2 condition has been reached, (RTP exceeding spillway elevation of 2,084.6 ft, or substantial damage discovered after a seismic event) the General Manager shall activate Pogo Mine's Crisis Management Team and direct Tier 2 response activities.	Immediate		
	<p>ASSIGN POSITIONS & ORGANIZATIONAL RESPONSIBILITIES FOR THE ASSEMBLED CRISIS MANAGEMENT TEAM MEMBERS:</p> <p>1.) Operations Chief(s)- Suggest separate Ops positions for Mine, Mill, and Environmental</p>	As soon as possible	<p>Critical members of the CMT for assignment under this scenario will likely include:</p> <p>Mine Ops to ensure prompt evacuation of all underground personnel, per Pogo Site Wide SOP #0020 "<i>Underground Emergency Evacuation for RTP Dam Failure.</i>"</p> <p>Mill Ops to supervise the shut-down of Mill activities; work with Mine & Environmental on subsequent water-management issues.</p> <p>Environmental Ops to monitor conditions, implement notifications as directed, stage resources for post-event response & containment.</p>	



Responsibility	Action Required	Urgency	Remarks	To Be Completed:
G.M. (Cont.)	<p>(Assigning CMT positions, cont.)</p> <p>2.) Communications Officer</p> <p>3.) Health & Safety Officer</p> <p>4.) Planning Chief</p> <p>5.) Logistics Chief (s)- Suggest (1) HR assignment to handle personnel & transportation issues, and (1) Warehouse/Purchasing assignment to handle requests for materials.</p> <p>6.) PIO/Media Liaison</p>		<p>C.O. to work with Ops and EMS to quickly develop an incident communications plan</p> <p>H&S to direct road & bridge closures, safeguard onsite personnel, etc.</p> <p>Planning to assist Ops Chief(s) and UMRT/PMFR Commanders with development of a post-event response plan. (i.e., HazMat response/containment, personnel movement, etc.)</p> <p>Logistics to pursue requested resources as necessary</p> <p>PIO to prepare information for GM & Corporate review prior to media release; coordinate external communications</p>	



Responsibility	Action Required	Urgency	Remarks	To Be Completed:
G.M. (Cont.)	Ensure that initial notifications are made to mandated parties- i.e. State Dam Safety, MSHA, etc. per the EAP.	Immediate		
	Keep SMM Corporate personnel advised of ongoing impacts	Ongoing		
Mill Operations	Mill Controller to initiate Mine evacuation upon notification per SOP	Immediate	Announcement specifically notes RTP DAM failure; directing personnel to 1525 Portal	
	Mill Controller to tone-out all emergency response teams per SOP	Immediate		
	Mill Supervisory Staff to initiate shut-down of Mill Operations;	Immediate		
	Mill Ops to provide input to Planning Chief for post-incident IAP			
Mine Operations	Supervise evacuation of underground personnel; maintain communications with Redpath personnel on the 1525 side.	Immediate & ongoing	Note: Unlike other evacuations, potential flooding calls for evacuation via the 1525 Portal per SOP.	
	Provide input to Planning Chief for post-incident IAP.	Ongoing		



Responsibility	Action Required	Urgency	Remarks	To Be Completed:
Environmental Operations	Brief/Update GM with incoming information as necessary;	Immediate & ongoing		
	Initiate external agency notifications as directed by GM per the established EAP;	Ongoing		
	Stage Environmental personnel/resources to prepare to deal with post-inundation spills, containment, etc.	Ongoing	Developed post-incident IAP will likely have PMFR/UMRT working closely with Environmental on this.	
	Provide input to Planning Chief for post-incident IAP	Ongoing		
Safety Officer	Upon assignment in the CMT, ensure Safety & Security personnel have been assigned to block traffic at Liese Creek bridge, and restrict access to the RTP Dam embankment.	Immediate		
	Dependent upon flood & weather forecasts, consider closing access to Goodpaster bridge and/or Pogo Road altogether.	Dependent	Contact Front Gate at 895-1860 as necessary to close road traffic	
	Review all plans and ongoing practices with IC to ensure that all response-actions are being undertaken in a safe manner	Ongoing		
	Liaise with all operational supervisors on a regular basis to ensure that Safety remains in proper focus	Ongoing		



Responsibility	Action Required	Urgency	Remarks	To Be Completed:
Planning Chief	Work with Ops Chief(s) and Logistics to develop subsequent IAP's for post-inundation response and continued operations	Ongoing	There will likely be <i>multiple</i> plans developed to deal with specific areas/issues.	
Logistics Chief(s)	<p>HR/Logistics to work with ESS regarding emergency billeting issues</p> <p>HR/Logistics to work with Premier Bus Service to schedule extra transportation from Mine as necessary</p> <p>HR/Logistics to work with Ops Chiefs in managing crew-schedules, notifications of work cancellations if necessary, etc.</p> <p>Warehouse/Purchasing Logistics to work with Ops Chiefs in forecasting & ordering necessary supplies & equipment</p>	<p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>	<p>Underground personnel evacuating to 1525 may become "stranded" at lower-camp if upper-camp access is restricted.</p> <p>Subsequent long-term shutdown could necessitate calls to off-site employees advising not to report for work</p>	
Emergency Service Commanders (PMFR/UMRT)	<p>Respond to Emergency Bay when toned-out</p> <p>1.) Begin preparations for staging/moving equipment</p> <p>2.) Commanders report to ICP for input & direction on initial response plan.</p>	Immediate	Note: Emergency personnel may initially be needed to augment Security/Safety personnel in safeguarding access-points and dangerous areas. Immediate consideration will also need to be given regarding the present location and potential movement of emergency vehicles.	



Responsibility	Action Required	Urgency	Remarks	To Be Completed:
Public Information Officer (PIO)	Review information as it is received in the Incident Command Post	Immediate and ongoing	Note: the PIO roll may be held by the GM, or delegated to another	
	Work with the communications officer in establishing any desired call-in numbers, casualty hotlines, etc. for inclusion in the <i>Crisis Communications Plan</i> .	As soon as possible	H.R. personnel can be enlisted to assist with this function	
	Prepare any draft press releases for review by the IC and any other Site Senior Management as directed by the GM	Ongoing		
	Issue press-releases and media updates upon approval	Ongoing	All external releases should be in writing, reflecting IC review and approval	
	Liaise with any governmental agencies requiring updates; external releases should all receive IC approval	Ongoing		
	Keep IC apprised of priority media requests, anticipated outreach needs, etc.	Ongoing		

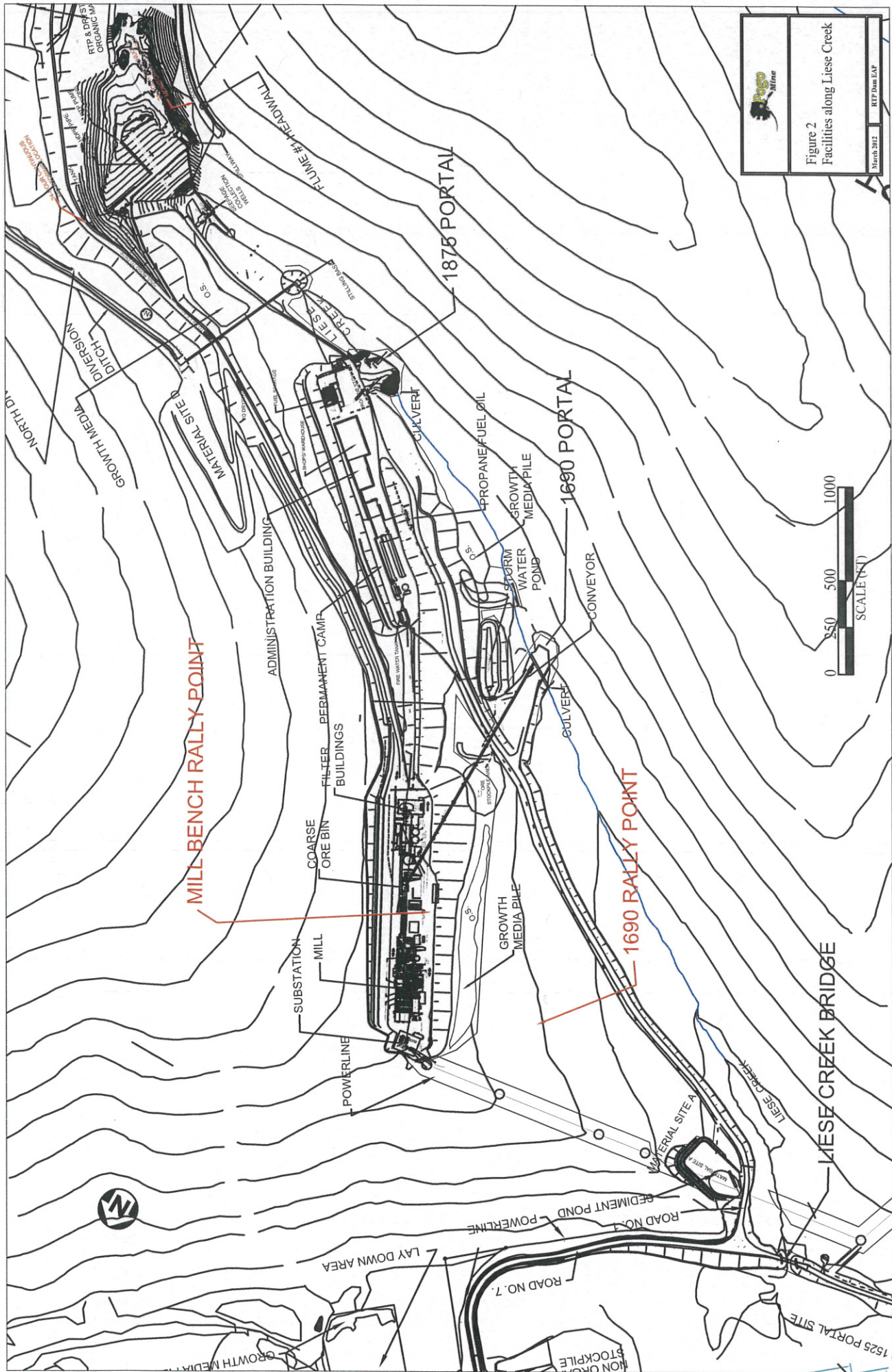


7.0 REFERENCES

- ADNR, 2005, Guidelines for Cooperation with the Alaska Dam Safety Program.
- AMEC, 2004, RTP Dam Design Report.
- AMEC, 2006, RTP Dam 2004-2005 As-built Report.
- AMEC, 2011, Pogo RTP Dam Second Periodic Safety Inspection Report.
- SRK, 2008, Emergency Action Plan for the Giroux Wash Tailings Impoundment.
- SRK, 2011, Pogo Mine RTP Dam Break Analysis.

APPENDIX A

FIGURES






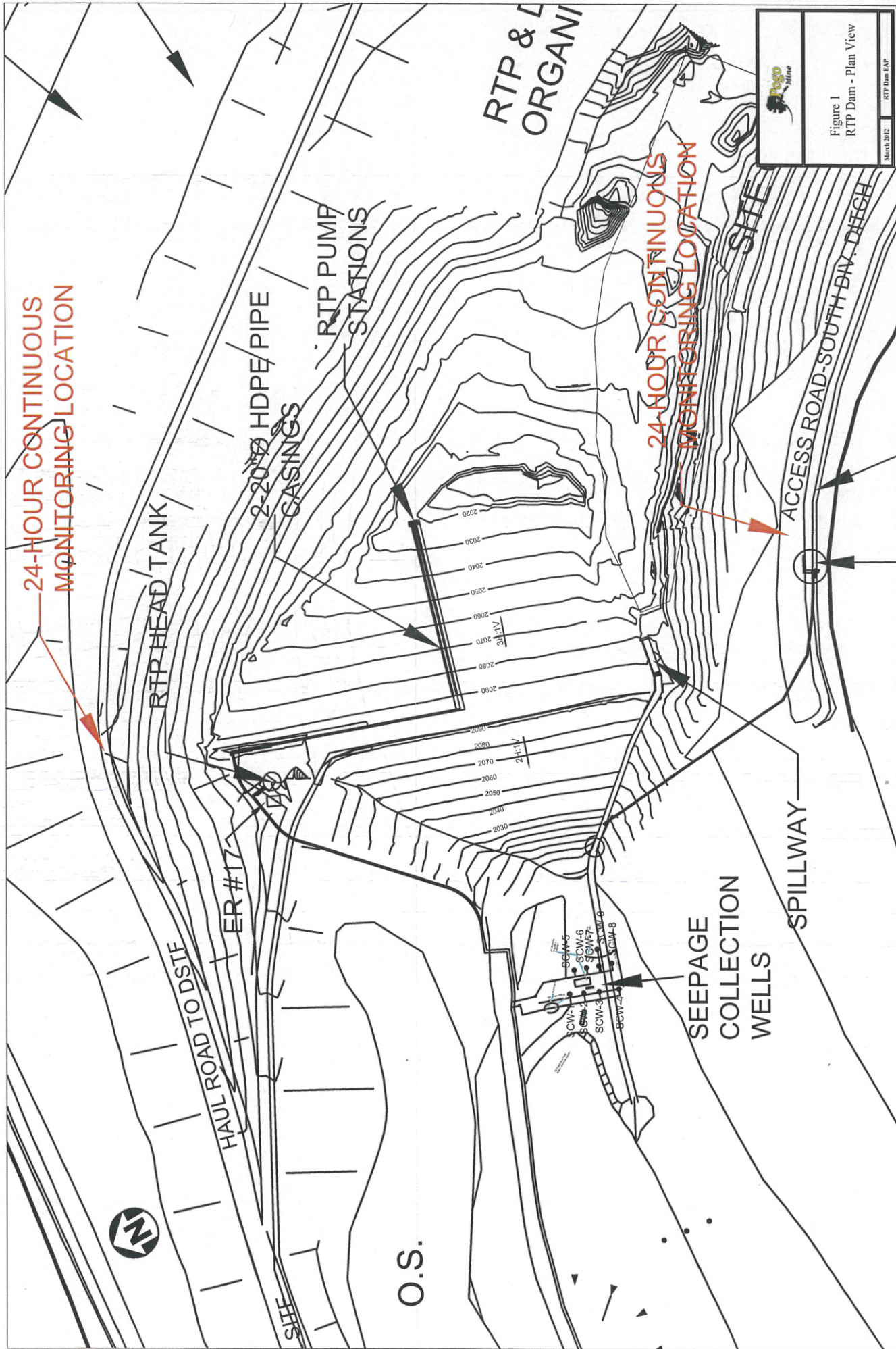
 Figure 2

 Facilities along Liese Creek

 March 2012

 RTP Dam EAP





APPENDIX B

UNDERGROUND EMERGENCY EVACUATION PROCEDURE

Underground Emergency Evacuation Procedure

Document Number: Site Wide # 0020

Authority: Chris Kennedy, General Manager	Custodian: Safety, Health and Loss Control Superintendent
Scope: Underground emergency evacuation	Control Tier: Safety, Health and Loss Control
Issue Date: 11/18/2009, Revised 04/04/2012	Issuing Dept: HSLC

Purpose and Scope:

The purpose and scope of this document is to provide guidance for the safe evacuation of all personnel underground during a mine emergency.

Procedure:

In the event of an underground emergency, contact the mill control room and or the Supervisor using either the leaky feeder radio or the page phones and advise them of the nature of the emergency. This emergency protocol will go into effect immediately.

Underground Emergency Procedures:

In the event of an underground emergency, stench will be released into both the ventilation at the 1875 and 1525 Portals and the compressed air system at the 1525 Portal.

- **If you smell stench gas:**

- a) Get to a radio or page phone and listen for information about the nature and location of the emergency. If after 2 minutes you don't receive information about the emergency, proceed by primary escapeways until you can get more information.
- b) After receiving instructions from Mill Control or your Supervisor, start your evacuation using either your primary escape way, secondary escape way, or refuge chamber, depending on the nature and location of the emergency information received from your Supervisor or Mill Control.
- c) During the evacuation all heavy equipment must be parked off of the main haulage; only light vehicles (pickups, tractors, club cars, etc.) can be used to get people out of the mine. If you encounter smoke, park the vehicle and proceed on foot to fresh air.
- d) Upon exiting the mine all personnel will immediately report to the brass board for further instruction.
 - (1) If you are the first person to reach the brass board you must take charge of the brass board until relieved by a Supervisor or someone more qualified.
 - (2) Document names, locations, and times that they smelt stench.
 - (3) Designate someone to man the page phone in the Mine Supervisor Wicket.
 - (4) Designate someone to prepare two tractors for the mine rescue team.
 - (5) Designate people to guard the 1875, 1690, and 1525 portals to ensure no one enters the mine.

- **If you discover a fire:**
 - a) Attempt to extinguish the fire if it can be done safely.
 - b) If you cannot put it out quickly, contact the mill control room and inform them of the nature and location of the emergency and request that stench be released.
 - c) Proceed to surface or a refuge chamber whichever is safest for you to reach.
- **If you encounter smoke or if there is a possibility of encountering Carbon Monoxide:**
 - a) Put on your self- rescuer.
 - b) Continue evacuating to either the surface or a refuge chamber.
- **If access to the surface or a refuge chamber is blocked:**
 - a) Retreat to a dead end drift.
 - b) If reasonable shut off the fan.
 - c) Seal in as well as possible using available materials.
 - d) Since sealing off an entire drift is not very probable other options would be to:
 - (1) Put a jacket over your head and have compressed air blowing on your face.
 - (2) Crawl inside a piece of vent bag with the compressed air line and close off both ends as well as possible.
 - (3) Blow compressed air gently across your face.
 - e) Leave information outside of the sealed area as to who is inside of the sealed area and any injuries.
 - f) Crack open a compressed airline if possible.
 - g) Conserve your light and energy.
 - h) Wait for help to arrive.
- **Potential Failure of the RTP Dam:**
 - a) Notification will be made to the mill control room operator by way of radio or telephone.
 - b) The mill control operator will tone out both mine rescue and fire rescue teams
 - c) The mill control room operator will direct underground personnel to evacuate to the 1525 Portal using secondary escapeways. The mill control operator will remind personnel not to evacuate to the 1875 or 1690 Portals due to the possibility of water flooding those areas. This announcement will be repeated every three minutes.
 - d) Underground personnel will evacuate to the 1525 Portal by way of the secondary escapeways.
 - e) Personnel on surface who are tagged in must report to the tag board, if safe to do so, to remove their tag and await further instruction.
 - f) Redpath will designate a responsible person to take charge of the brass board, guard the 1525 Portal, and man the page phone.
 - g) Pogo supervision will designate a responsible person to take charge of the 1875 tag board and man the page phone in the Mine Supervisor Wicket area.
 - h) All underground personnel will report to the 1525 brass board and give their information to the Redpath designate.
 - i) The Redpath responsible person will designate a waiting area for all personnel.
 - j) All personnel will remain at the 1525 Portal area until the incident command team gives further instruction.
 - k) Surface personnel will barricade the 1690 and 1875 Portals to prevent entry.
 - l) Refer to the Surface Emergency Evacuation Procedure for further details.

Refuge chamber procedures:

- Refuge chambers are a last resort. If you are unable to reach the surface because of smoke, fire, ground fall, flood or distance from the surface you will need to proceed to the nearest refuge chamber.
- Refuge chamber locations:
 - a) 1600
 - b) 1422
 - c) 1250
 - d) 1300 Exp
- Entering the refuge chamber:
 - a) Seal the outer door and open the air valve to pressurize and flush out the outer chamber.
 - b) Close the valve and enter the inner chamber.
 - c) Upon entering the inner chamber, seal the door and adjust the compressed air valve for the appropriate number of people.
 - (1) If the compressed air is not working, set up the regulator for the oxygen bottles.
 - (2) If using the oxygen bottles, hang CO₂ blankets per the instructions in the refuge chamber.
 - d) Contact Mill Control or the Supervisor using either the leaky feeder radio or the page phone. Provide them with the following information.
 - (1) What your location is and how many are with you.
 - (2) Are there any injuries?
 - (3) Did you encounter smoke or fire and where?
 - (4) Stay in contact until all questions have been answered and all information has been given.
 - e) Assign someone to man the radio and the phone.
 - f) Conserve mine lights and ration food and water in the chamber.
 - g) Follow all instructions that are posted on the wall inside the refuge chamber.
 - h) Once sealed into a refuge chamber do not attempt to leave. There may be toxic gases outside the chamber. The mine rescue team will clear the area and escort you to surface as soon as it is safe to do so.

Departure from Procedure

Failure to follow this procedure could result in unsafe practices or conditions contributing to an incident. In some instances, particular requirements will dictate variances from this procedure. However, any variance must be viewed with caution and possible contingencies accounted for at all times. A variance shall only be given through management only.

APPENDIX C

INCIDENT ACTION PLAN REPORT FORMS



INCIDENT ACTION PLAN

Incident Title:	Date/Time of Incident	Location on Pogo Property:
<p>PROPERTY DESCRIPTION/LOCATION FOR POGO MINE: Pogo Mine operates as an underground precious-metals mine, located approximately 40 air-miles northwest of Delta Junction, Alaska. The Mine lies outside the southern boundary of the Fairbanks North Star Borough, and is located in an unincorporated jurisdiction. In addition to the underground Mine, the site hosts an ore-processing mill, kitchen and dormitory facilities for approximately 300 camp residents, and associated infrastructure. Pogo Mine can be accessed via a 50 mile controlled-access industrial roadway that departs from Milepost 287 on the Richardson Highway. The Mine also hosts a 3000' useable-length airstrip, elevation 1,468 feet ASL, located at: N 64.4669/W 144.921111 (NAD83 datum in decimal-degrees). Airstrip is <u>not</u> lit or beacons for IFR or night-time approaches, and is designed for daylight/VFR operations.</p> <p>Mine name: Pogo Mine Mine owner: Sumitomo Metal Mining Pogo LLC Mine I.D. #: 50-01642 Mine Mailing Address: P.O.Box 145, Delta Junction, AK 99737 County/Borough: None; property in unincorporated area Emergency Contact #: 907-895-2700, or additional #(s) as supplied by the Incident Command Post</p>		
<p>INFORMATION NEEDED BY MSHA: What type of incident is Pogo Mine responding to? (Check all that apply)</p> <p><input type="checkbox"/> Death of an individual at the Mine <input type="checkbox"/> Injury which has reasonable potential to cause death</p> <p><input type="checkbox"/> Unplanned inundation by liquid/gas <input type="checkbox"/> Entrapment of 30+ minutes; reasonable potential for death</p> <p><input type="checkbox"/> Unplanned ignition/explosion of gas/dust <input type="checkbox"/> Unplanned ignition/explosion of blasting agent</p> <p><input type="checkbox"/> Underground unplanned fire not extinguished within 10 minutes of discovery, or in surface areas an unplanned fire not extinguished within 30 minutes of discovery.</p> <p><input type="checkbox"/> Unplanned roof fall at or above anchorage zone in active headings, or an unplanned roof or rib-fall in active headings that impairs ventilation or impedes passage.</p> <p><input type="checkbox"/> A rock outburst that causes withdrawal of miners or disrupts regular mining activity for more than 1 hour</p> <p><input type="checkbox"/> An unstable condition at an impoundment or refuse pile which requires emergency action in order to prevent failure, or which causes personnel evacuation, or failure in the above areas.</p> <p><input type="checkbox"/> Damage to hoisting equipment in a shaft or slope which endangers an individual or which interferes with the use of the equipment for more than 30 minutes.</p> <p><input type="checkbox"/> An event at a mine which causes death or bodily injury to an individual not at the mine at the time the event occurs.</p>		



SITUATION NARRATIVE: [include synopsis of event(s) leading to current conditions; include information on the status of any trapped personnel, injuries, or fatalities]

PRIMARY HAZARDS & SAFETY CONCERNS TO BE ADDRESSED IN THIS PLAN: [Unstable Ground; potential for fire/explosion, presence of hazardous chemicals, etc.]

WEATHER FORECAST FOR THIS OPERATIONAL PERIOD: [Are weather factors present that will impair operations, and/or potentially interfere with the arrival of any requested mutual-aid?]

**PLAN OPERATIONAL PERIOD:**

_____ HRS, _____ TO _____ HRS, _____
TIME DATE TIME DATE

MUTUAL AID TEAM(S) REQUESTED:

Resource #1: _____ From: _____ ETA @ Pogo: _____

Resource #2: _____ From: _____ ETA @ Pogo: _____

Resource #3: _____ From: _____ ETA @ Pogo: _____

Resource #4: _____ From: _____ ETA @ Pogo: _____

Misc./Additional information:

INCIDENT OBJECTIVES FOR THIS OPERATIONAL PERIOD:

A.

B.

C.

D.



PLANNED SEQUENCE OF RESPONSE ACTIONS: [Attach additional blank pages as necessary]

1.

2.

3.

4.

5.

6.

7.

[Attach additional pages as necessary]

ATTACHMENTS (Check all that apply)

☐ Pogo CMT Org-Chart

☐ Medical Plan

☐ _____

☐ Assignment List

☐ Incident Map/Diagram

☐ _____

☐ Communications Plan

☐ Traffic Plan

☐ _____

PLAN PREPARED BY (PLANNING SECTION CHIEF)

APPROVED BY (INCIDENT COMMANDER)