EMERGENCY RESPONSE PLAN

October 30, 2014

KLONDIKE SILVER CORPORATION

Emergency Response Plan (ERP) - Silvana Mine Tailings Management Facility

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1.0 INTRODUCTION

This document describes actions to be implemented in the event of an environmental emergency incident at the tailings management facility (TMF) at Silvana Mine. An Environmental Emergency is defined as a release of contaminants (water and/or tailings) to the environment without authorization. The document supports the Emergency Preparedness Plan (EPP) incorporated in the Operation, Maintenance and Surveillance manual for the TMF at Silvana Mine.

2.0 TAILINGS MANAGEMENT FACILITY DESCRIPTION

TMF consists of three separate ponds and embankments.

The dam or embankment for Pond 1 was developed in 1972 using coarse tailings to develop the dam shell. It is anticipated that the upstream construction was developed in a series of stages. The toe of the dam was set some 4 to 5m back from the creek bank. The dam or the embankment for Pond 2 was developed in 1975 and was set some 8 to 9 m back from the creek. There are no construction records and it is anticipated the dam was construction using an upstream dam technique.

The dam or embankment for Pond 3 was constructed using locally available borrow material and coarse mine waste existing at the footprint of the facility. The embankment does not include a low permeability layer to reduce seepage to the creek and it is anticipated that water from the tailings that is not collected in the downstream re-cycling tank would seep through the embankment. A filter layer was designed for the pond side slope of the dam. There is no record if the material was placed on the upstream face of the dam. The embankment was originally designed to achieve its final elevation through centreline construction. It is understood that no centreline raises have taken place and only the initial starter embankment has been constructed.

The dam was designed to maintain a crest width of 6 m throughout operations. The outer embankment slope was to be constructed at 2 horizontal to 1 vertical in its lower portion and at 1.5 horizontal to 1 vertical in its upper portion Figure 2). The upstream slopes of the dyke were to be constructed at 1.5 horizontal to 1 vertical. The inspections of July 2014 suggest the dam was constructed to the proposed configuration...

3.0 ALERT LEVELS AND WARNING SYSTEM

Table 1 lists the incidents that will require the implementation of this Emergency Response Procedure. Warning signs to be used to identify the incidents are also provided in Table 1. The incidents are divided according to alert levels, for which required actions and communications to address them are described in the following sections of this document. The alert levels are as follows:

- Normal operations: No incident identified, refer to the Silvana Mine OMS manual for normal operation, surveillance and maintenance activities;
- Level 1: Minor incidents requiring increase surveillance (Section 4);
- Level 2: Major incidents requiring mobilization of equipment and personnel for implementing mitigation measures (Section 5); and
- Level 3: Imminent loss of containment of water and/or tailings (Section 6).

Table 1: Emergency Incidents and Warnings

Alert Level	Incident	Warning
Normal operations	No incident.	No unusual observation during an inspection, readings of monitoring instrumentation below trigger level.
Level 1 (Section 4)	■ Minor tension cracks, sagging or bulging at the toe of a dam or dike; ■ Shallow sloughing of downstream face or movement of the dam (less than 0.15 m of dam crest); or ■ Low flow with slightly sediment-laden seepage.	■ Unusual observation during an inspection; ■ Major earthquake or rainfall event; ■ Exceedance of trigger levels in readings from instrumentation readings; ■ Light brown seepage (low flow).
Level 2 (Section 5)	■ Cracking near crest; ■ Major sloughing on downstream face, cracking or movement; or ■ High flow with heavily sediment-laden seepage.	■ Major earthquake or rainfall event, or progression of Level 1 incident, including; ■ Worsening of crack, sagging, bulging; ■ Dark brown seepage (high flow).
Level 3 (Section 6)	■ Breach of embankment; or ■ Uncontrolled discharge to the environment through a damaged pipeline.	Major earthquake or rainfall event, or progression of Level 2 incident; ■ Exceedance of freeboard in ponds; ■ Loss of pressure observed at the pumps.

4.0 RESPONSE PROCEDURE – LEVEL 1 ALERT

A Level 1 emergency incident does not entail a release of contaminant into the receiving environment; however progression to a higher alert level might ultimately lead to a release. Actions undertaken at this alert level are typically intended to identify the causes of the incident, and to establish corrective or mitigation measure to be implemented as soon as practical. The action plan is described in Table 2.

Table 2: Level 1 Alert Action

Person Responsible	Action Required	Urgency	Comments
Person finding the problem	Take appropriate action.	Immediate	Take steps to contain and minimize the impact on the environment, as needed and as practical.
	Notify Mine Manager	Immediate	Provide the following information: ■ Type of emergency. ■ Location of emergency. ■ Measures being taken with photos. ■ Time and date.
Mine Manager	Require frequency of instrument monitoring at the affected structure increased to daily.	Immediate	Return to normal frequency to be decided in consultation with the geotechnical Engineer. Monitoring to be undertaken only if safe to do so.
	Require inspection by the Geotechnical Engineer.	Immediate	Conduct field level hazard assessment prior to conduct the inspection.
	Decide on action necessary to mitigate.	As soon as practical	Identification of mitigation undertaken by both the Geotechnical Engineer and the Mine Manager.

5.0 RESPONSE PROCEDURE – LEVEL 2 ALERT

A Level 2 emergency incident will typically be a worsening condition of a Level 1 emergency incident or be identified following an event-driven inspection after a major earthquake or rainfall event. Actions undertaken at this alert level are intended to identify the causes of the incident, if not already done at the Level 1 alert, and to establish corrective or mitigation measure to be implemented immediately. The action plan is described in Table 3.

Table 3: Level 2 Alert Action Plan

Person Responsible	Action Required	Urgency	Comments
Person finding the problem	Take appropriate action.	Immediate	If not already applied at the level 1 alert. Take steps to contain and minimize the impact on the environment, as needed and as practical.
	Notify Mine Manager	Immediate	If not already applied at the level 1 alert. Provide the following information: ■ Type of emergency. ■ Location of emergency. ■ Measures being taken with photos of problem. ■ Time and date.
Mine Manager	Continuous monitoring at the affected structure	Immediate	If not already applied at the level 1 alert. Monitoring to be undertaken only if safe to do so. Return to normal monitoring frequency to be decided in consultation with the geotechnical Engineer.
	Require inspection by the Geotechnical Engineer	Immediate	If not already applied at the level 1 alert. Conduct field level hazard assessment prior to conduct the inspection.
	Decide on action necessary to mitigate	Immediate	Identification of mitigation undertaken by both the Geotechnical Engineer and the Mine Manager.
	Notify appropriate Regulatory Agencies.	As needed	The agency notified will be as per legal requirements for the type of emergency involved (i.e., PEP, BC MOE and BC MEM) [(a)]

(a) Provincial Emergency Program (PEP)
British Columbia Ministry of Environment (BC MOE)
British Columbia Ministry of Energy and Mines (BC MEM)

The Mine Manager will report the event to the appropriate regulatory authority as needed. At this level the discharge is not occurring or extends off site; therefore, communication with regulatory authorities is only intended as a forewarning. The following is the list of information to be provided to the regulatory Authority:

- the site name, permit number, mine manager or assistant and the reporting person's name and telephone number;
- the location of the possible discharge off site;
- the possible type and quantity of the substance discharge;
- the potential cause of the discharge;
- actions taken to stop, contain and minimize the effects of the possible discharge;
- a description with photos of the possible discharge location and of the area surrounding the discharge (i.e., location relative to watercourses);
- the names of the agencies on the scene, if any; and
- the names of the other persons or agencies advised concerning the event and possible discharge.

Information reported to PEP, BC MOE and BC MEM shall be recorded. Collect samples that parallel those taken by the Environmental Protection Officer/Conservation Officer, if they do so.

6.0 RESPONSE PROCEDURE – LEVEL 3 ALERT

This alert level applies when discharge (water and/or tailings) off site or to environment occurs. Communication and coordination of effort with regulatory authorities will be required. The action plan for this alert level is described in Table 4.

Table 4: Level 3 Alert Action Plan

Person Responsible	Action Required	Urgency	Comments
Person finding the problem.	Take appropriate action.	Immediate	If not already applied at the level 2 alert. Take steps to contain and minimize the impact on the environment, as needed.
	Notify Mine Manager	Immediate	If not already applied at the level 2 alert. Provide the following information: ■ Type of emergency. ■ Location of emergency. ■ Measures being taken with summary of actions at Level 1 and 2. ■ Time and date.
Mine Manager	Require inspection by the Geotechnical Engineer	Immediate	If not already applied at the level 2 alert. Conduct field level hazard assessment prior to conduct the inspection.
	Implementation of the flood management plan	Immediate	
	Notify appropriate Regulatory Agencies.	Immediate	The agency notified will be as per legal requirements for the type of emergency involved (i.e., PEP, BC MOE and BC MEM) [(a)]

(a) Provincial Emergency Program (PEP)
British Columbia Ministry of Environment (BC MOE)
British Columbia Ministry of Energy and Mines (BC MEM)

The Mine Manager will report the event to the appropriate regulatory authority. The following is the list of information is to be provided to the regulatory Authority:

- the site, mine permit number, mine manager or acting mine manager and reporting person's name and telephone number;
- the location and time of the discharge off site;
- the type and quantity of the substance discharge;
- the cause of the discharge;
- actions taken to stop, contain and minimize the effects of the discharge;
- the time the discharge is contained and stopped;

- a description of the discharge location and of the area surrounding the discharge (i.e., location relative to watercourses);
- the names of the agencies on the scene, if any; and
- the names of the other persons or agencies advised concerning the event and discharge.

Information reported to PEP, BC MOE and BC MEM shall be recorded. Collect samples that parallel those taken by the Environmental Protection Officer/Conservation Officer, if they do so.

7.0 REPORTING RESPONSIBILITIES

Roles of mine staff are presented below.

In the event of an emergency, Len Palmer will be responsible for implementing the emergency response plan (ERP), and making any outside arrangements and assigning tasks.

Len Palmer will be assigned to send out the required notifications to the Regional Manager, BC Ministry of Energy, Mines, and Petroleum Resources, Cranbrook Office. Tel. 250-426-1557.

If the need arises that a backup mine rescue team is needed, mine staff will call New Gold Inc. Afton Mine, Kamloops to assist (Phone number: 1-250-377-2709).

Search and Rescue can be reached by calling 911 via RCMP.

Most staff on site will have a Level 1 with transportation first aid ticket. There would be a Level 3 attendant on duty at all times and could be reached by phone at 250-358-2723 or channel 3 (154.77 MHz) on radios.