

MEMORANDUM

TO:	George Warnock (MEM)	DATE:	November 25, 2014
FROM:	Mike Aziz	cc:	Andrew Witte (AMEC) Mike Jacobs (Goldcorp)
SUBJECT:	Test of Equity Emergency Preparedness and Response Plan		

The Equity Emergency Preparedness and Response Plan (EPRP) was tested on November 21, 2014. The test was a desktop exercise with the Equity care and maintenance crew (Jerry Veillette, Cody Meints, and Mike Aziz), Mike Jacobs (Goldcorp Manager of Tailings and Water -via phone) and the Andrew Witte (AMEC Engineer-of-Record – via phone).

With the recent completion of the Equity Dam Break Inundation Study, the Operation, Maintenance and Surveillance (OMS) Manual and associated EPRP were revised to incorporate the results from certain aspects of the study. The desktop review was designed to allow the crew to use the EPRP to guide them through one of the revised emergency procedures.

For the first hour of the EPRP test the OMS and EPRP were reviewed as a group. The function of the OMS and EPRP were discussed. Following the review of the revised documents, a test scenario was completed.

The test scenario provided was based on a small earthquake during the middle of summer that progresses from increased seepage to a potential dam failure. The test scenario was presented in stages as different aspects were observed at the site. After each set of observations the crew was given the opportunity to respond to what actions should be taken. The EPRP was referred to for the required action under the Emergency Condition and Response tables. Notification sequences and contact lists were also determined from the EPRP, but no calls were placed since this was an internal desktop test. Andrew Witte (AMEC) and Mike Jacobs (Goldcorp Corporate) were encouraged to participate after the crew had an opportunity to respond.

The scenario was presented as follows:

- Sunny, warm day during a dry month of July
- Sitting around the coffee table before work begins, at about 7:45 AM, the crew notices small objects start moving on the warehouse shelves and an odd feeling of loss of balance.
- This carries on for 30 seconds and then stops.
- One crew member asks “Was that an earthquake?”
- What should be done, if anything?

- At 9:00 AM: A crew member completes a site inspection after the small earthquake and does not find anything out of the ordinary. He notes on the pump sheet that one pump at the #1 Dam Seepage Pond is running.
- The next day: A crew member notices that the pump at #1 Dam seepage has run continuously since the previous day. The pond has dirty look to it.
- What actions should be taken?

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- At 3:00 PM on Day 2: A small depression develops mid dam on the downstream slope of #1 Dam. The seepage has become very turbid at this point.
- What actions should be taken?

After the scenario was concluded the EPRP was discussed for any discrepancies or areas for future improvement. The following were the main comments related to the EPRP:

- It was easy enough to determine that an earthquake had occurred, but the response table requires that the individual determine if the earthquake was major or minor and the responses change based on that.
 - Would be good to have descriptors of major and minor earthquakes.
 - Seismograph stations are too slow to respond and report magnitude of earthquake – need to assess site impacts before actual size of earthquake is determined.
 - Should contact geotechnical consultant for any earthquake that is felt at site regardless of the size or observed damage.
- As the severity of the event escalated it required that different response tables be utilized: earthquake (table 5.6), movement affecting structural integrity (table 5.1), and then freeboard control for tailings pond (table 5.2). Navigating the tables could be made easier.
 - Would be useful for tables to refer to other tables more clearly for more severe circumstances and observations i.e. if additional seepage signals a structural integrity issue then refer to the appropriate table.
 - Might be useful to outline certain crisis levels with specific responses (call lists) so that the lists do not have to be repeated in various tables.
 - Should index the tables and provide page numbers at the beginning of the Emergency Situations and Contingency Plan section for quicker access.
 - Should note that for evacuations RCMP would take the lead.

The OMS and EPRP will be revised to address these items by the end of March 2015.