

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Aug 25 2014	LOCATION: 1810 Blanshard, Conf call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
 Rolly THORPE – Deputy Chief Inspector
 Haley KUPPERS – Provincial Health and Safety Specialist Inspector, Scribe
 George WARNOCK – Manager, Geotechnical Engineering
 Doug KILOH – Major Case Management Consultant
 Harvey MCLEOD – Geotechnical Engineering Consultant
 Diane HOWE – Deputy Chief Inspector of Permitting
 David MOREL – Assistant Deputy Minister
 Kim BELLEFONTAINE – Manager, Environmental Geoscience and Permitting
 Emmanuel PADLEY – Site Inspector
 Grant FELDINGER – Site Inspector

OVERVIEW:

- Travel from Victoria to Likely for fact finding purposes.
- Meeting all afternoon, planning the interview, questions and opening statements.
- Concern with company Lawyer wanting to be present in the interviews this week.

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- Company did not answer specific requests by HOFFMAN, they requested that written statement of objection to attendance of lawyer during interviews is presented to Lawyer on the morning of Tuesday, August 26th.
- MOREL suggests that if necessary, he will contact Mine Manager to discuss objectives of interviews, and presence of union or lawyer during the interview. Primary goal must be to protect the independent, objective approach and not to disseminate information
- PADLEY, WARNOCK, and HOFFMAN will attend the community meeting Tuesday evening.
- MOREL, Do not discuss details of investigation.
- Jennifer MCGUIRE from the Ministry of Environment will be attending the meeting.

FELDINGER

- On-going operations:
- Main dyke 80,000 tonnes, 18.27 metre advance, fewer trucks and less congestion, moving across one the arms (flows).
- Satellite dyke, 857 tonnes, no advancement
- On-going work at pump and sump relay system
- Breach sump expanded
- Water flowing into borrow sump, flow coming from tailings, going to breach sump, then pumped into perimeter pond, overflowing into breach sump, from there they are working on the pipeline from the borrow sump to long ditch sump.
- Putting fill crossing to support pipe crossing over breach area.
- Long ditch construction, they have pipeline to booster pump, from there it will go to springer pit.
- As of yesterday, Polley Lake was 1.4 metres above pre-breach level. Pumping is going well, 4 and a half pumps are working continuously. Drop in water level of 8cm in the past 3 days. Discharge at Hazeltine Creek is much clearer than yesterday. Long ditch flow appears to be less and it is cleaner.

FRYE:

- LIDAR on the plug, estimate 1-2 metres of fill from original ground level. Unknown how much scouring of ground level occurred before the tailings were deposited.
- Estimates of water and tailing level: 25 million cubic metres. George Warnock has detailed calculations. Approximately 10.6 million cubic metres of water, 13.8 million cubic metres of saturated tailings. George Warnock suggests that the site should distribute the updated calculations.

FELDINGER:

- Passed on List of salaried employees to KUPPERS.
- Entrance to mine, fewer vehicles ~2-3. No interferences reported from site.

BELLEFONTAINE:

- Site has limited storage capacity of borrow sump.
- Updates from conference calls, bulk of second pipeline is in place, still minor pieces need to be put in place, discharge is upstream of current discharge point to Hazeltine Creek. Developing plan for when discharging will occur, along with sampling plan for water sampling at Quesnel Lake.
- May have safe work procedures for working in Hazeltine creek as early as tomorrow.
- Weather, showers are in the forecast.
- Emergency Management BC has maintained a state of emergency in the area to prevent public access to restricted area.
- Interior Health has initiated a water quality advisory.

- Monitoring over weekend and today, company felt they were getting a good understanding of the plume in Quesnel Lake. They felt that the turbidity was less than it was yesterday. MoE is more in the loop for details of the water sampling.

MOREL:

- Is there any consideration into what geotechnical drilling will be taking place? WARNOCK, asked site if they could coordinate the locations of the drilling plan. MOREL will follow up with Kevin RICHTER, secretariat of the Independent Panel, and copy WARNOCK, suggest coordination of drilling and sharing of data, company needs to be in the mindset of open data sharing.

Role and Duty of the investigation is:

- Fact finding primary focus – this is unique to mines, company and Province therefore MEM investigation is looking for root cause, mitigation, prevention and sustainability. Prosecution only if necessary, no indication at this point.
- Investigation team planning on conducting interviews on site, travel to Likely.
- Interview panel includes Al HOFFMAN, Rolly THORPE, George WARNOCK, Harvey MCLEOD, Haley KUPPERS, Doug KILOH.

OLD BUSINESS

No items discussed.

NEW TASKING

- HOFFMAN will attend the community meeting Tuesday evening. PADLEY and WARNOCK to accompany.
- MOREL to follow up on possible coordination of drilling and sharing of data.
- KUPPERS to prepare interview opening and closing statements, questions, interviewee list, coordinate interview schedule.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm AUG26 via CONF CALL.

AUTHORED BY: Megan METCALFE, Haley KUPPERS

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: Aug 26 2014	LOCATION: 1810 Blanshard, Conf call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
 Rolly THORPE – Deputy Chief Inspector
 Haley KUPPERS – Provincial Health and Safety Specialist Inspector
 George WARNOCK – Manager, Geotechnical Engineering
 Doug KILOH – Major Case Management Consultant
 Harvey MCLEOD – Geotechnical Engineering Consultant
 Diane HOWE – Deputy Chief Inspector of Permitting
 David MOREL – Assistant Deputy Minister
 Kim BELLEFONTAINE – Manager, Environmental Geoscience and Permitting
 Caroline NAKATSUKA – Site Coordinator, Manager Occupational Health and Safety
 Emmanuel PADLEY – Site Inspector
 Grant FELDINGER – Site Inspector
 Megan METCALFE – Scribe

OVERVIEW:

KUPPERS

- HOFFMAN led investigation – 6 fact finding interviews completed, 7th to be held at 6:30pm.

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- ****Note:** keep information tightly held with regards to the interviews. Need to know basis.
- Transcriptions of the interviews will start August 27th
 - Interviewees are requesting copy of interview recording/transcript. Tracking contact information. Stated disclosure would be provided, not likely until investigation is concluded.

BELLEFONTAINE

- Position confirmed for Project Coordinator role starting Tuesday September 2nd.

THORPE

- We will complete a list of new interviews for next week within the next couple of days.

FELDINGER

- Main dyke 23.2 metres advancement
- Work on the relay sump system water from perimeter pond will go into borrow pit sump. Priority is to stop lines from falling near perimeter ditch.
- Routine day at Mount Polley Lake there was a 3cm drop. No rain today at mine site.
- Front of the mine there were 4 cars and 6 people. Dale REIMER informed HOFFMAN that there were people on ATV's trying to enter the mine site. REIMER needs enforcement from RCMP and they will need to get an injunction for a court order to be able to arrest people who are trespassing on mine property.

Investigation Panel had to cut meeting short due to the next interviewee arriving.

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm AUG27 via CONF CALL.

AUTHORED BY: Megan METCALFE

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: Aug 27 2014	LOCATION: 1810 Blanshard, Conf call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Provincial Health and Safety Specialist Inspector
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Harvey MCLEOD – Geotechnical Engineering Consultant
Diane HOWE – Deputy Chief Inspector of Permitting
Kim BELLEFONTAINE – Manager, Environmental Geoscience and Permitting
Emmanuel PADLEY – Site Inspector
Grant FELDINGER – Site Inspector
Megan METCALFE – Scribe

OVERVIEW:

- Investigation team interview panel had meetings all morning, and started interviews at 1pm and they will go through until 9pm at Mount Polley.
- Conducted 7 interviews with mine employees, no overt reasons for failure.
- Advancement 60,000 tonnes and 17.3 meters
- Satellite dyke 67,000 tonnes and 14 meters advancement
- Last Tuesday, sanded out sump, it had been overwhelmed with material due to estimated 2 mm of rain. Ended up flowing down Hazeltine Creek for approx. 6 hours. They are placing a 2nd 24" line at Polley Lake.
- Second line should be in place by Friday.
- New sump should be in by end of day Wednesday,
- Polley Lake didn't change still at 1.4 meters
- They re-built the dyke by 2pm, and are actively working on the pumps.
- Scheduled to get more rain tonight.
- BGC Greg WINER looking at plug at Polley Lake
- Developing safe work procedures for working below the breach.
- Mine entrance had 3 cars and 5 people today. And no further reports of ATV's on site. Blockade is planning to host a meeting at the entrance or "command post" Thursday August 29th

- Question: what is the Polley Lake level at now? 1.4 above pre breach level (same as yesterday) level is 923.06m now.
- Action: PADLEY/FELDINGER --Magnetite Level left on site? And are they still shipping Biosolids to the site?
- METCALFE to coordinate with Kate MUSGROVE: travel of Investigation Panel for Tuesday, including Naomi HEMPHILL who is replacing METCALFE.
- Exchanged contact with Golder. No further discussions with them.
- Town hall meeting tonight one topic will be filtration.
- Entered agreement with First Nations, they will schedule a conference call to organize site visit next week – Steve ROTHMAN and Laurie MEADE can coordinate.
- Independent Panel also to be at Mount Polley next week.
- Public meeting last night was approximately 20 minutes discussing mining, and then 1 hour 40 minutes discussing water quality. Representatives from the blockade also attended.
- Need factual briefing notes to show progression and evolution of investigation
 - Daily log or STAR report?
- Interview summaries required for key word search

OLD BUSINESS

- HOFFMAN attended public meeting.

NEW TASKING

- METCALFE to coordinate with MUSGROVE to organize travel
- ROTHMAN to schedule conference call to coordinate site visit next week with First Nations. MEADE to assist.
- PADLEY/FELDINGER to check Magnetite level left on site, and if they are still shipping biosolids to the site

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm AUG27 via CONF CALL.

AUTHORED BY: Megan METCALFE

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: Aug 28 2014	LOCATION: 1810 Blanshard, Conf call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
 Rolly THORPE – Deputy Chief Inspector
 Haley KUPPERS – Provincial Health and Safety Specialist Inspector
 Cheryl POCKLINGTON – Site Inspector
 George WARNOCK – Manager, Geotechnical Engineering
 Doug KILOH – Major Case Management Consultant
 Harvey MCLEOD – Geotechnical Engineering Consultant
 Tania DEMCHUK – Senior Environmental Geologist
 Caroline NAKATSUKA – Manager, Occupational Health
 Heather NARYNSKI – Senior Geotechnical Inspector
 David MOREL – Assistant Deputy Minister
 Megan METCALFE – Scribe
 Emmanuel PADLEY – Site Inspector
 Grant FELDINGER – Site Inspector

OVERVIEW:

- Interviewed 6 people of supervisory level and one summer student, no overt reasons for failure.
- Action item from yesterday: Magnetite – no one from company here today but there are 18 trucks leaving the site per__
- Drafted letter to consultants who constructed TSF with accordance of Section 7 of the Mines Act. Asking for Drawings and calculations
- We will be leaving Friday night and coming back to Mount Polley Tuesday morning.
- Imperial Metals counsel seems to be co-operating; however, giving employees guidance on what to say (eg: each employee is asking for the transcript of the interview). Some concern that counsel is influencing employees.
- Received the pictures from the designated shifter
- Advancement in main dyke 21 meters and 49,000 tonnes
- Advancement in satellite dyke 26 meters and 27,000 tonnes
- Steady rain in the night which resulted in the breach pump sanding out and material flowing into Hazeltine creek, still no pump in and water still flowing into the creek
- Tailings water is still cloudy in Polley Lake diversion. 4 pumps set up today.

- Second 24 inch pump flushing line should be running tomorrow
- Down 1cm out of Polley Lake
- They are currently in the process of checking pump relay long ditch to love sump overnight
- Biosolid storage no material spread but it is sitting there. There is a confirmed second pile of biosolid, but it has been there for a while (grass is growing out of it)
- Breach sump is most vulnerable to rain, they could make it larger in the future.
 - Action AI to speak to Dale Reimer tomorrow regarding the above bullet
- Pumping to springer pit, and digging up sump.
- Camp in front of entrance had 12-16 cars and a couple dozen people at approx.. 4:30
- White put pump sump not pumping from Polley to White Pit.
- MOE data release tomorrow – 2 samples to show arsenic level in tailings, comparing to contaminated site guidelines. Also showing Selenium, copper, silver, and zinc
- The levels are higher compared to the Mount Polley Data comparing the outside dam data
- Public concern will arise from the arsenic
- Working downstream from plug will help sediment from rushing into Quesnel Lake
- Need to prioritize flow coming from the dam.
- Site safety issues during repair remains a concern.

Will postpone Friday meeting due to travel time. Reconvene Saturday at 6pm.

OLD BUSINESS

- HOFFMAN attended public meeting.

NEW TASKING

- METCALFE to coordinate with MUSGROVE to organize travel
- ROTHMAN to schedule conference call to coordinate site visit next week with First Nations. MEADE to assist.
- HOFFMAN to speak with REIMER regarding breach sump vulnerability to rain
- WARNOCK to draft information request for engineering consultants including Knight Piesold, AMEC, and BGC. Review needs to be done by counsel, HOFFMAN, KUPPERS.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm AUG30 via CONF CALL.

AUTHORED BY: Megan METCALFE

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: SEP 02 2014	LOCATION: 1810 Blanshard, Conf call	START: 1805	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
 Rolly THORPE – Deputy Chief Inspector
 Haley KUPPERS – Provincial Health and Safety Specialist Inspector
 Tania DEMCHUK – Senior Environmental Geologist
 George WARNOCK – Manager, Geotechnical Engineering
 Doug KILOH – Major Case Management Consultant
 Harvey MCLEOD – Geotechnical Engineering Consultant
 David MOREL – Assistant Deputy Minister
 Steve ROTHMAN – Site Inspector
 Laurie MEADE – Site Inspector
 Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Investigation team interview panel travelled to Likely for fact finding today.
- Email from Keith ELWOOD, ready to go forward with final report, may begin forwarding background information on the mine to set context for the report.
- Ramping down on satellite dyke.
- Love Sump renamed Central Sump.
- Requested mine provides information on the capacity of Springer pit, estimated time until it becomes full.
- SafeWork procedure in progress for downstream Hazeltine Creek.
- Breach still overtopping – working on ways to capture water and stop uncontrolled discharge.
- Expert review panel arriving Thursday and Friday.
- First Nations a part of overseeing debris removal at the mouth of Hazeltine Creek.
- MOE providing water quality data and drinking water guidelines, highlighting bacteria and coliform in water, but not speculating on a connection to the tailings pond breach.
- Satellite dyke had a slough yesterday, under control today.
- Some concern from local First Nations seeking more information, wanting to know more on the role of the government currently at the mine site.

- On site safety still primary concern.
- Contractor took instructions to excavate toe berm from Luke MOGER or AMEC (?) (Brian SCHMAUTZ interview).
- Call with MPMP/MOE/MEM
 - Long ditch water being captured in the Central (Love) Sump and pumped to the Springer pit
 - Breach sump still over topping and challenging to manage. Process engineer tasked with sorting out pumps. Don PARSONS stated this is a priority.
 - Upstream berm has crossed a main discharge from the impoundment. Appears to be blocking some solids from escaping.
 - Safe Work Procedure for Hazeltine Creek expected today.
 - General update on Quesnel Lake surveys: side scan sonar, plume mapping, noted sockeye schools appear at ~30 m depth. Plume modelling to commence within a week.
 - Williams Lake Indian Band have assigned a co-ordinator to work with crews on arch assessments. Role sounds like it is still being fully defined.
 - Site is returning water quality results from local house intakes to residents. Not supplying interpretation.

OLD BUSINESS

Minutes from 2014-08-30 meeting captured in KUPPERS handwritten notes.

- 2nd pipe on flow, some tailings flushed out. 1 or 2 pumps on 2nd line, opposite site of berm 225m to go
- 6 vehicles at entrance to mine
- MOE released tailings sample results – Arsenic
- Started pumping from long ditch to mill, to springer. 9am started to pump, monitoring discharge at Hazeltine. Turbidity at mouth of Hazeltine Creek.

NEW TASKING

- Arranging a site visit for First Nations, seeking approval of the mine manager for a tour.
- Steve ROTHMAN to attend chief meetings.
- Interviewing Peterson Contracting employees, 5 interviews tomorrow (not yet confirmed), 4 for Thursday.
- Information requested – Organization chart of MPMC from Judith GAGNON.

NEXT MEETING SCHEDULED: 6pm SEP03 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL
REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi
HEMPHILL

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: SEP 03 2014	LOCATION: 1810 Blanshard, Conf call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
 Rolly THORPE – Deputy Chief Inspector
 Haley KUPPERS – Provincial Health and Safety Specialist Inspector
 George WARNOCK – Manager, Geotechnical Engineering
 Doug KILOH – Major Case Management Consultant
 Harvey MCLEOD – Geotechnical Engineering Consultant
 David MOREL – Assistant Deputy Minister
 Naomi HEMPHILL – Scribe
 Steve ROTHMAN – Site Inspector
 Laurie MEADE – Site Inspector
 Tania DEMCHUK – Senior Environmental Geologist

OVERVIEW:

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- Interviewed 5 employees from Peterson Contracting, mostly more junior employees
 - Interview identifying “always water at the toe”
 - Employee and contractor interviews suggest overall culture of operation/production over TSF
- To interview more senior Mt. Polley employees tomorrow (2014-09-04)
- Hope to start site investigations within the next few weeks
- Hoping for clearer definition of who is on site and when
- Sat in on meeting between Mine and MOE
- Testing today before submitting procedures – unsure about whether procedures should be submitted to the Ministry before or after testing
- Likely to get final copy of procedures soon
- Verbal confirmation that the Springer pit has 15 million cubic metres of storage for water
- Working on adding a sump internal to the breach area to help capture water
- Polley lake level is falling

- Flow has been reduced with advance of the berm, only location of uncontrolled discharge on the site (all else is being directed to springer pit)
- Some discussion with MOE that they should be sampling water where the water is flowing out of the berm
- Mapping plumes, beginning to get data on where the plume is
- Sampled 27 adult sockeye from the river, continuing sampling with trout next
- Indian Band looking to complete a historical site assessment around Hazeltine Creek, known sites around the delta
- Notification to MOE that a plume appeared around the mouth of Hazeltine Creek, unsure of cause (speculating that there may be slumping along the banks of Hazeltine Creek), may also be due to excess water
- MOE is concerned that the site is not doing everything possible to control the flow. Considering appropriate follow-up actions.
- Once the Safework procedure is in place, MOE is expecting erosion and sediment control plans for Hazeltine Creek
- Daily update call with MPMC/MOE/MEM
 - Discussed plans to add series of pumps to improve containment of breach discharge, and noted that existing pump was moved to a more central location on the flow.
 - Long ditch and SERD ditch captured in Central Sump and pumping to Springer Pit. The Springer Pit has 15 million cubic metres of capacity available.
 - Safe Work Plan is developed but not yet shared externally (we have not received it).
 - Lengthy discussion around ongoing unauthorized discharge and the need for site to be doing more to control and also get sediment and erosion control measures in place in Hazeltine (at mouth and in creek when safe work procedure is in place).
 - Ongoing work in Quesnel Lake: plume mapping, fish sampling, arch surveys.
 - Lee NIKL, with Golder, on lake to monitoring newly reported plume. Unclear about cause of this plume outside mouth of Hazeltine.
 - SNC soil sampling in Hazeltine will commence.
 - Planning for rock check dams in Hazeltine - will provide access and sediment control. Much discussion about having sediment and erosion control measures in place ahead of major construction activities. MOE requires 24 hrs notice prior to any work occurring in the creek.

Actions:

- Suggest that MOE come on site to evaluate the mine's efforts
- Ask about height/pressure table

Next week

- Investigation team in Victoria Monday and Tuesday, travelling back to Williams Lake Wednesday, more interviews Wednesday, Thursday, and Friday
- Robert ROSNER of WorkSafe BC may be coming on site, for mine development SafeWork procedures. Some questions about jurisdiction.

OLD BUSINESS

Rounding off tasks/No items discussed

NEW TASKING

No items discussed

HOUSEKEEPING

General items/No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 04 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

**Mt Polley TSF BREACH Investigation
BRIEFING MINUTES**

DATE: SEP 04 2014	LOCATION: 1810 Blanshard, Conf call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Provincial Health and Safety Specialist Inspector
George WARNOCK – Manager, Geotechnical Engineering
Harvey MCLEOD – Geotechnical Engineering Consultant
Doug KILOH – Major Case Management Consultant
Naomi HEMPHILL – Project Coordinator, Scribe
Steve ROTHMAN – Site Inspector
Laurie MEADE – Site Inspector
Tania DEMCHUK – Senior Environmental Geologist
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Cheryl POCKLINGTON – Senior Inspector of Mines, Ergonomics
David MOREL – Assistant Deputy Minister

OVERVIEW:

- Briefing conducted at end of each interview to identify key summary points.
- Interviewed five more senior mine employees: Luke MOGER, Ryan BROWN, Dave CARPENTER, Nicholas BERGERON, and Judith GAGNON, believed to have been spoken to by legal counsel before they came in
 - Received documents from BROWN and BERGERON
- Interviewing five tomorrow, Peterson contracting employees
- Interview points; HR advised no clear organization chart; no clear roles; some managers do their own hiring.
- Interview points GF: every trip to TSF by trucks takes 2.5 away from production; risk allotment reconciled quarterly not week to week; never saw design [specs, needs, understanding]; Luke is i/c water balance.
- Project Engineer – [Moger] not aware of official job description; does some TSF; water management; reclamation; first nations; permitting; documentation; 3 year plan to widen top again; “no one said the hole [toe excavation] a concern”; “not comfortable with questions” [from George]; TSF is AMEC [responsibility for QC]; comfortable with students capability.
- EIT’s supervise construction; compact testing; direction and planning for the week; lots of water in pond “overtopping into filter layer”; no risk assessment

done on dam; was told by lawyer not to speculate; not to give opinions; tell the truth

- P Eng not involved in TSF design. Started at pit. Didn't communicate with AMEC, "Luke" dealt with them. Not aware of toe excavation "heard people took photo's of it"
- Laurie HALLS from Environmental Protection Division visiting site tomorrow
- Panel is here today, did not interact. Steve ROTHMAN will be taking them around on Saturday before he leaves
- POCKLINGTON and Greg MCLEAN will be on site this weekend (in tomorrow), will be some crossover between POCKLINGTON and MEADE onsite.
- Next week, investigation team will be in the Victoria office Mon and Tues.
- Also to set up a meeting with Keith ELWOOD on the phone, Monday or Tuesday afternoon.
- Rory CUMMINGS and Al DAY coming onsite for next week. CUMMINGS will stay for an extra weekend, NAKATSUKA and Mike OLSEN will also be onsite. Trying to coordinate for the next few weeks.
- Balance need to interview some consulting employees (Knight Piesold and AMEC)
- Aim to send the interview request for next week
- Hopefully finish with Mt. Polley next week, may take a week off, then continue with interviews the week after that.
- Will attend open house next week: HOFFMAN, THORPE, WARNOCK
- Communications may be working on handout for next week's open house
- Likely to be some follow-up questions for the interview that WARNOCK and HOFFMAN did with the Vancouver Sun reporter.
- Site update call with MOE/MPMC/MEM:
 - MOE asking about how long it would take to increase the capacity of the breach sump (to further prevent overflow). MOE suggested they would issue a letter to request they do it.
 - These are conflicting priorities with health and safety in the area and completing the berm as quickly as possible. I suggested that MOE have a call with Steve Rothman to help them assess the situation.
 - Archeologist confirmed obsidian flakes found near mouth of Hazeltine Creek. May have implications for sediment and erosion control works going forward.
 - Data from transects on the Quesnel Lake is being received. Plume is deep.
 - Calls will continue over the weekend.
- Questions about current Safework plan in development for Hazeltine Creek remediation

- Will soon need a Safework plan for drilling below the breach area
- Call with EMBC
 - Polley Lake level at 922.96 (down 37 cm since breach).
 - Main dyke at 80% complete.
 - Polley Lake plug stability assessment submitted.
 - Clearing of debris at mouth of Hazeltine creek should be starting on Friday.
 - Safe work procedure shared with Steve Rothman and submitted to us late this afternoon.
 - Emergency management BC looking for ways to rescind Local State of Emergency order restricting public access.
- Senior officials forum meeting with two chiefs tomorrow and their advisors
- No understanding of mechanism of failure. Safety concerns still paramount.

OLD BUSINESS

Rounding off tasks/No items discussed

NEW TASKING

No items discussed

HOUSEKEEPING

General items/No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 6 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: SEP 08 2014	LOCATION: 1810 Blanshard, Conf call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Provincial Health and Safety Specialist Inspector
George WARNOCK – Manager, Geotechnical Engineering
William ARD – Electronic File Management Consultant
Doug KILOH – Major Case Management Consultant
Naomi HEMPHILL – Project Coordinator, Scribe
Cheryl POCKLINGTON – Site Inspector
Greg MCLEAN – Site Inspector
Tania DEMCHUK – Senior Environmental Geologist
David MOREL – Assistant Deputy Minister

OVERVIEW:

HOFFMAN

- Several discussions today about the legal aspects of the case
- ARD is on board to discuss how we maintain our records and information, looking into using a database system to organize information
 - Potential to pass on to crown counsel eventually
 - Exploratory phases for methods of data management
- Discussed interviews going forward, series of interviews Wed, Thurs, Fri this week, at the superintendent and mine manager levels
- John AHERN and Mike VAN CLAVEREN tomorrow for legal discussions
- Keith ELWOOD came in to begin helping with the eventual investigation report, and the Chief Inspector's formal report

DEMCHUK

- Daily call with MPMC/MOE/MEM
 - Discussion of safe work procedures (DEMCHUK missed this portion of the call).
 - Polley Lake level: 922.86 m; pumping rate between 9000 and 15,000 gpm.
 - Polley Lake shoreline and discharge sampling reduced to weekly.
 - No changes to water management in the breach sump area.

- No update on any construction of settling channels downstream of breach sump
- Woody debris still be removed from mouth of Hazeltine Creek. No indication of when silt fences will be installed. This is a change from the weekend when we heard they would be installed on today.
- MOE will be sending a letter to MPMC advising the company that abatement of the discharge in accordance with their pollution abatement order has not been completed. They are hoping this will assist with getting additional resources on site to address requirements for work downstream of the breach.
- Site intends to conduct heli-seeding of the Hazeltine Creek channel later this week (Wednesday?).
- Findings with physical inspections around the mine
 - Checked coffer dam, very little flow around the drain, pooling ~2x what it was the day before. Looking into plans to alleviate that pooling
 - 6-8 pumps running but there may have been some problems, the flow levels were lower than would be expected
 - No fish on the intakes this morning, a positive sign
 - On the discharge end, 22 workers downstream and 2 on Polley lake
 - Looking into whether pooling represents a risk, may be running into silting problems
 - Richard DOULLARD is the excavator operator that was excavating material from the toe of the dam
- Meeting with Charlie RUGER, OHSC co-chair regarding SafeWork plan regarding work in Hazeltine Creek
 - Took suggestions from MEM, have made the majority of changes but some issues outstanding.
 - Outstanding: names, not just numbers of people in the area, specific location information for samples,
 - WorkSafe coming onsite tomorrow, giving input on SafeWork procedure and would like to know if they have the authority and power to enforce sign in capability and the second is to see if they can enforce the JHAs
 - Would like to streamline the process a bit, maybe have a single inspector to be the main contact
 - Pressure from MOE to add more trucks but there is concern about safety and practicality
 - MOE has sent an advisory intended to encourage the mine to increase efforts to address sediment and erosion control efforts (e.g. installing a silt curtain)
 - Mine will be doing helicopter supported seeding of Hazeltine creek to help with stabilization and erosion control
 - Necessity of balancing environmental measures with safety concerns

- Necessity of following up on action items discussed in the 3 o'clock daily call between Mt. Polley and MOE
- Discussion of perceived conflicting direction from different ministries coming from Mt. Polley
 - Ensuring that we are properly documenting what is being done and what is being asked
 - Idea of one point of contact to facilitate communication and minimize confusion, may need to discuss with MOE
- Mine has indicated that BGC does not have a mandate for the SafeWork plan, in response to DEMCHUK's note that the site should send the SafeWork plan to BGC for comment.
- Found a place for a second spotter to have a better overview of the plug, this person could also watch the downstream side of the coffer dam if water is pooling. Such a spotter would need to be educated by BGC to be able to evaluate possible danger of failure
 - Looking to BGC for possible signs and symptoms of an imminent breach
- SafeWork expectation that there is equipment, plan, procedure available at short notice
- No change in the sump plan as discussed yesterday
- They did commit to a second spotter
- POCKLINGTON received Mine Emergency Response Plan today from Sal BAFARO
 - Dated 2014, but the interior of the document is dated 2005 – notable omissions include sections on underground facilities, impoundment failures
 - Sal noted that he was unsure about the date
 - Doesn't use incident command system
 - Names an "emergency control group" with action plans for each individual, but no designations for when these people are not on site. No action plan for employees or pit shifters, no indication of training. Named individuals do not work night shifts, weekends, or holidays.
- Building a bridge across Gavin Creek Road
- Cutting a road along the southeast side as part of the access, but will be cutting along near the creek bed to allow equipment
 - Asking for drawings and to remind them that MOE needs 24 hours' notice before equipment is working in Hazeltine Creek.

OLD BUSINESS

- 2014-09-05 interviewed 5 Peterson and MPMC employees. Received William MILLER written statement and control room/data collection of flow of seepage pond, and pump records from sumps to dam.
 - Statements identifying water at corner 1, corner always wet
 - Shifters saw water at top of corner 3 three weeks before
 - Saw seepage at dam
 - Always rock shortage, shifters production focussed
 - Shifter reprimanded (?) because he pushed to get rock to the TSF and took some from (?)

NEW TASKING

- Earlier this week:
 - Data for pumps
 - Organization of file
 - Photo compilation
 - Legal issues mandates
 - (??)
 - New statements
 - Develop précis/summaries of statements
 - RCMP PowerPoint

HOUSEKEEPING

General items/No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 9 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: SEP 09 2014	LOCATION: 1810 Blanshard, Conf call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
 Rolly THORPE – Deputy Chief Inspector
 Haley KUPPERS – Provincial Health and Safety Specialist Inspector
 William ARD – Electronic File Management Consultant
 Doug KILOH – Major Case Management Consultant
 Cheryl POCKLINGTON – Site inspector
 Greg MCLEAN – Site Inspector
 Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Spill of tailings line at Afton mine, minor spill but need to be cognizant of current media sensitivity
- Further conversations with Crown Counsel
- Continuing interviews this week, with lower level employees
- Reviewing emergency response plan
- Requested (?) documents?
- Observed the coffer dam pooling before 11am, still a concern, no rapid deployment plan for pumping in place as of this morning
 - 4x what was observed on Saturday
- Second spotter now in place on the mine side of the breach, on the old tailings dam (bermed off area), with a good overview of the plug
- Meeting and tour with 4 WorkSafe officers
 - Robert ROSENER (OHS officer out of Kamloops)
 - Bruce CLARKE (regional manager)
 - Lisa PHILLIPS (regional officer?)
 - George CHURCH (senior regional officer)
 - Working with managers rather than issuing orders, with orders as a second to last resort
 - Gavin Lake Road Bridge as a jurisdictional boundary
- Reviewed Safework Plan
 - Sal BAFARO, Charlie RUGER

- Some helpful suggestions and changes, but mine will need some more time to include these revisions
- Suggestion that they include estimates on how long it would take for material from a plug breach to reach work sites downstream
- Site tour to west side of the breach
- POCKLINGTON recovered 5 copies of the emergency response plan
 - Drafted an order on the emergency response plan
- Highlights from meeting with MPMC/MOE/MEM:
 - Polley Lake at 922.87 m (down 1 cm from last report)
 - Upstream berm is 77-78% complete. Construction has slowed as they are moving over tailings again. Work is under way to determine a way of measuring water building up behind the berm.
 - Satellite berm construction is complete for now as they have reached the edge of the channel cut by tailings. If they decide to extend this berm it will have to be built higher.
 - Debris clean up at the mouth of Hazeltine Creek is ongoing.
 - Quesnel Lake and River levels have dropped, monitoring equipment is being adjusted to reflect this.
 - Heli-seeding scheduled to take place Friday-Sunday. This may include seeding over the impoundment area if there is enough seed. Was also suggested they consider seeing the plug.
 - Detailed erosion and sediment control plan is forthcoming from SNC.
 - Site is waiting on arch. permits.
- No investigative findings to identify failure mechanism

OLD BUSINESS

- HOFFMAN as the Chief Inspector of Mines being tasked with other areas of MEM activity.
- MCM PowerPoint (?)
 - Tasking notes
 - Development
 - Briefing notes on STAR reports

NEW TASKING

No items discussed

ROUNDTABLE

- [Privileged] Phone call with Crown

NEXT MEETING SCHEDULED: 6pm Sep 10 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL
APPROVED BY:

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: SEP 10 2014	LOCATION: 1810 Blanshard, Conf call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
 Rolly THORPE – Deputy Chief Inspector
 Haley KUPPERS – Provincial Health and Safety Specialist Inspector
 George WARNOCK – Manager, Geotechnical Engineering
 Doug KILOH – Major Case Management Consultant
 Harvey MCLEOD – Geotechnical Engineering Consultant
 Greg MCLEAN – Site Inspector
 Cheryl POCKLINGTON – Site Inspector
 Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Conducted 3 interviews this morning
- One particular interviewee may be able to find some specific data about the possible heights of the sumps in the perimeter and main ponds immediately before the breach, have asked for him to retrieve this information for the interview panel
- Also may be able to get some electrical data with respect to when the power to the mill was shut off
- Decided to regroup next week and work on MCM system and prepare for interviews with more senior company members
- Greg MCLEAN and Cheryl POCKLINGTON onsite today
- Identified that safework plan in place is not being met – e.g. spotter was asked to leave his job, leaving worksite exposed, numbers of employees not specific, and spotter not fully appraised of duties, and were left with inadequate equipment. Dealt with by shifter on duty.
- Onsite health and safety inspectors not satisfied with briefing given to some employees today
- Worksafe got back to POCKLINGTON to Hazeltine Creek safe work plan
 - Some discussion of jurisdiction and cross jurisdictional issues
 - Tania DEMCHUK to follow up with Karen TANNAS

Highlights from EMBC call today:

- Update from Dale REIMER (MPMC)
 - Polley Lake at 922.83 m.
 - Aside: On August 9, prior to commissioning of pumping, lake level was 923.28 m.
 - Overall decrease of Polley Lake to date is 45 cm; goal is to lower by at least 170 cm.
 - 490 m of 620 m of the upstream dyke is constructed.
 - Turbid water is flowing through the dyke but being collected in the breach sump area. No tailings impoundment discharge is flowing to the environment.
 - Three pumps are located at the breach sump. Collected flow is pumped to the perimeter till borrow pit Central Sump Springer p
 - The Springer pit currently has remaining capacity of 14.5 million m³. Site has been asked to provide bi-weekly updates on capacity.
 - Fish tissue analyses show elevated mercury and selenium, but similar results are seen in previous studies and mercury levels are comparable to nearby lakes.
 - Silt curtain is expected to be installed at mouth of Hazeltine Creek this weekend.
 - Heli-seeding preparations are underway. We do not have confirmation that it has actually commenced. MOE has provided the go-ahead for this work.
 - Still working on getting the arch permit.

- Detailed erosion and sediment control plan is forthcoming from SNC – expected by MOE tomorrow.
- MOE is following up on reports of burning of small piles of debris on the north shore of Quesnel Lake. Likely Community Forests group was going to seek burn permits. Also reports of residents conducting burning on their property.
- Reports indicated that the open house was well received. There are plans to continue hosting an open house every 2 weeks in Likely.

Highlights from the September 10 call with MPMC/MOE/MEM:

- Polley Lake at 922.82 m (down 5 cm from last report)
- Upstream berm is 80% complete. They have crossed the eastern gully and are approaching the south side of the breach.
- Water is flowing through the berm, appears to be at a more constant rate at the time of the update. Engineers have started discussions with survey crew on how to survey water behind the berm.
- Debris clean up at the mouth of Hazeltine Creek is ongoing. It is noted that this has prevented required sampling at the mouth of Hazeltine Creek for 2 days in a row. This is a key sampling location.

- Ongoing monitoring on Quesnel Lake. Samplers indicated constant turbidity of approx. 1.3 NTU observed. Also noted that the lake is a “glacial green colour” across the whole lake.
- Heli-seeding scheduled to take place Thurs through Saturday. A safety advisory was noted on the call. No people should be working below the load-bearing helicopter. Some concern raised from MOE science panel about metal uptake in vegetation.
- SRK on site yesterday/today conducting geochemical sampling.
- Detailed erosion and sediment control plan is forthcoming from SNC.
- Site clarified that they have not yet submitted the arch permit application but that it is ready to go. Will likely be filed tomorrow and they are waiting for letters from First Nations.
- The time of this call may change (later in the day or earlier) to work better for MPMC. It will still be daily.

From MOE/MEM call:

- Fish tissue data has been released today. This data indicates higher levels of Mercury. This is comparable to levels in fish from nearby lakes and also to levels in data from 2009/2010. Expect more to come from Interior Health on this issue (longer term discussion).
- MOE has confirmed they would like MEM assistance in reviewing geochemical characterization plans and work when they are received.
- MOE would like input from MEM on the detailed Erosion and Sediment Control Plan expected later this week.
- Safety and recovery focus

OLD BUSINESS

Rounding off tasks/No items discussed

NEW TASKING

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 11 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: SEP 11 2014	LOCATION: 1810 Blanshard, Conf call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Provincial Health and Safety Specialist Inspector
George WARNOCK – Manager, Geotechnical Engineering
Cheryl POCKLINGTON – Site Inspector
Greg MCLEAN – Site Inspector
Harvey MCLEOD – Geotechnical Consultant
Doug KILOH – Major Case Management Consultant
Naomi HEMPHILL – Scribe
David MOREL – Assistant Deputy Minister
Tania DEMCHUK – Senior Environmental Geologist
Al DAY – Site Inspector

OVERVIEW:

- Completed 3 MPMC employee interviews today, 2 more scheduled for the evening
- Continued planning for the investigation, no overt supported reason for failure.
- Beginning to use a new format for briefing to help facilitate briefing updates
- Next week will not be interviewing at the mine site, planning in office in Victoria
- WARNOCK drafting letters next week to send to engineering contractors for interviews, letters and documents
- Will continue interviews after next week, dependent on planning
- Interview panel acutely aware of regulatory and prosecutorial collection of information
- Attended a community open house meeting, a positive and informative experience
- Safework plan for the Hazeltine creek bed has now been signed off and will be distributed in the next day or so
- The rapid deployment plan will likely be distributed tomorrow
 - To address water accumulation behind the coffer dam
- The blue ribbon contract geotechs were onsite today, monitored intermittently by onsite health and safety inspection team
- Met with BGC

- Dale REIMER has received a message from Golder, looking for guidance on message received from Steve HOLMES
- Received draft TOR from Keith ELWOOD, will meet on Tuesday to discuss.
- No MPMC/MOE/MEM call took place this afternoon due to conflicting requirements for MPMC staff on site.

OLD BUSINESS

- WARNOCK drafting letters next week to send to engineering contractors for interviews, letters and documents (tasked 2014-08-28)

NEW TASKING

- POCKLINGTON received electronic records from Kerry BARON, electrical foreman. Documents and info include east seepage pond pump records and east seepage pond levels ranging from 2014-07-14 to 2014-08-04.
- KUPPERS requested information from Katie (Kathleen) MCMAHEN, spreadsheet on water balance.

HOUSEKEEPING

General items/No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 12 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: SEP 13 2014	LOCATION: 1810 Blanshard, Conf call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
 Rolly THORPE – Deputy Chief Inspector
 Haley KUPPERS – Provincial Health and Safety Specialist Inspector
 Tania DEMCHUK – Senior Environmental Geologist
 Cheryl POCKLINGTON – Site Inspector
 Al DAY – Site Inspector
 Naomi HEMPHILL – Project Coordinator, Scribe
 David MOREL – Assistant Deputy Minister

OVERVIEW:

- Completed over 40 interviews, no smoking gun but some things to follow up
- Have not spoken to executives
- Next week in office to strategize
- WARNOCK and Harvey MCLEOD will continue forward with forensic drilling, going to start the week after next
- Learning and adopting MCM structure, to ensure that we are not duplicating work, and when work is assigned we can follow up on it
 - Speed, flow, direction, collection, collation of information, decisions, facts, team investigative approach.
 - Continue to need two onsite inspectors for the foreseeable future, because they are still doing high risk onsite activities
- Greg WALTERS stated that he was able to contact the on call manager within half an hour of the breach – some discrepancy, MCM can help with this
- MPMC/MOE/MEM Call:
 - Polley Lake at 922.73 m.
 - Weather is good.
 - Upstream dyke is 90% constructed.
 - Next steps are ramping down of upstream face to construct platform for pumps to address water on upstream side, and
 - Sloping of downstream face to increase stability and provide safer work environment for the forensic investigation. Confirmed that this work needs to be complete before equipment will be able to move in. Currently engineers from Thurber have been accessing area by foot for surveying.
 - Water behind dyke is behaving as expected. Surveyors will be reporting first water survey information later today.

- Downstream of breach sump a channel and series of small settling basins have been constructed as emergency structures in case of pump failure or rain event. Site has been asked to address concerns related to sediment control from stockpiles created during excavation of this feature.
- Debris removal continues at mouth of Hazeltine Creek, no update on timing for installation of silt curtain.
- Heli-seeding is complete – covered Hazeltine channel, plug area and TSF.
- Detailed erosion and sediment control plan has been received. MOE has requested MEM's assistance to review.
- Anticipate commencing work to install bridge across Ditch Road sometime next week.
- Ongoing monitoring on Quesnel Lake. Water temp at Quesnel River research centre is getting colder. MOE has made similar observation.
- Have not confirmed or received drawings for the bridge planned
 - POCKLINGTON to send an email to Greg MCLEAN and Al DAY to follow up on this
- Starting the downstream modification to the dyke to reduce the angle of repose
- Established a new berm that has to go up before they start the modification, because it will take away the old berm
- There was a bottleneck of traffic caused by a berm , which has since been moved
- New sump that they will be pumping to is a two phase pump that they are constructing – some confusing on how they are planning the water flow, seems odd
- The actual dyke is very close to completion, started to look at selecting the type of rock to put in between the dyke and the dam, to ensure good percolation
 - You can see that water is passing through it well at this point
- Soil taken out for the new sump is going to a topsoil reclamation dump
- Phase 2 of the dyke: they will be adding phase 2 and phase 3 to the right (upstream) of the coffer dam
- Have not yet seen added emergency spillway pipe between dyke and dam, but have been going for coarser rock there
- No daily MOE/MEM/Site call tomorrow, agreed it is not necessary
- Interviews to date have only provided speculation of cause, unsupported information at this point.

OLD BUSINESS

2014-09-12:

- Completed 3 interviews of MPMC employees
- Received seepage data from Wendell OWEN. Inaccuracies in times logged up to 5 minutes.
- Copied operator shift reports for 2014-08-04 of Cramer BLACKWOOD and Dennis ERECK.

- Received Hazeltine Creek Report, monitoring station on Gavin Lake Road bridge

NEW TASKING

- Drawings for the Gavin Lake Road bridge
- Installation of spillway pipes at intersection of main dyke and existing dam
- Review transcripts of Don IBEY, to resolve discrepancy of timeline

HOUSEKEEPING

General items/No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 14 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Cheryl POCKLINGTON, Haley KUPPERS, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: SEP 15 2014	LOCATION: 1810 Blanshard, Conf call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Provincial Health and Safety Specialist Inspector
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Tania DEMCHUK – Mount Polley Project Manager
Cheryl POCKLINGTON – Site Inspector
Al DAY – Site Inspector
Rory CUMMINGS – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Greg requests the drawings for the bridge, and to check for activity at the bridge site
- Adopting a major case management structure and protocol, to be incorporated into the TOR
 - Designated people with designated responsibilities
- Keeping a checklist of assigned duties, and how we will do that
- Discussed data management, will meet with the RCMP on Wednesday
- Discussed managing information, to meet with David MOREL tomorrow to talk about how we will manage the amount of information, including FOIs
- Continue to have an onsite presence for at least 3-4 more weeks
- Will produce some formal documents on the above to send around
- Looking at the perimeter areas today – everything was secure that they saw, looked at drainage, nothing to report
- Hazeltine discharge: confirmed that they are watching their protocols correctly, no turbidity coming from the breach to the discharge
- Replumbing 24" line from the mouth of the breach to the pump, rerouting for more access to the breach area. Pictures sent to HOFFMAN for reference
- Downstream reslope ongoing
- Upstream stage 2 is progressing well
- MCLEAN spoke with BGC engineer, said that they will be putting in pumps once at the proper location and elevation
 - Water and slurry up near the coffer dam, 3.5m deep
- Main dyke is finished

- Spoke to Dale REIMER about Gavin Lake Road and Ditch bridge report, should have received at 4pm today.
 - Some discussion about jurisdiction
 - POCKLINGTON to speak with Ken VANDERBURG

OLD BUSINESS

- FOI taking people/time from investigation process
- MCM/investigative flow
- Chart to assist thought process (?)
- Process for inspections
- Self-assessment process – what we need and why.
 - Options for: FC, PI, record keeping, tasking, quality control, consistency

NEW TASKING

No items discussed

HOUSEKEEPING

General items/No items discussed

ROUNDTABLE

- Investigation development
 - Decision records
 - Consistent of thought
- Briefing up needed
- FOI issues
- CIM 1-3-5 year planning

ADDITIONAL INVESTIGATION STRATEGY

Meetings conducted earlier in the day:

- Discussion on operating Minds; Directors
 - REIMER, FRYE, Human Resources, HR, Engineer of Record
- Roles and Responsibilities
 - AMEC, KP, BGC, Students, EIT, contractor, MPMC
 - Quality assurance and quality control
- Org chart provided by MPMC unreliable
- HR inconsistencies
- Reporting lines unclear

- Accountability/Responsibility of staff unclear
- Direction of mine, TSF, record keeping all unclear
- Culture
 - Precise? Flexible? Unknown
- Luke MOGER
 - Does he actually have oversight? Who is in charge of quality control? What do records show? Documented interaction with AMEC/KP?
- Documentation: Decisions, approvals, HR records, plans – what exists?
- Dale REIMER
 - Weekly meetings, understanding of organization, TSF, roles, rock/production tension?
- Art FRYE
 - Similar to Dale, but indications of span of control dipped into other areas designed? Leader? Weak organization – is that a contributing factor?
- Themes including:
 - Poor management structure
 - Lack of responsibility for TSF
 - Lack of Emergency Response Plan
 - Inadequate freeboard, monitoring and surveillance
 - Inadequate supply to sand cells and of rock

Other Business:

- Communication use of STAR reports; PowerPoint for ADM, IT discussions (e-management) job description
- Proactive communications, simultaneous communication strategy (getting information out as soon as possible)
- Develop briefing structure
- IT structure: use of file tree
- Data integrity paramount
- Adoption of MCM principles to aid in resource management, organization, tasking, theory, Ling Jarvis structure, Communications, etc.
- Recognition of concurrent investigations, activities, appropriate sharing of information between Chief Inspector, Panel, Conservation Officers, APEGBC, Senior Officials Committee, and FOI

NEXT MEETING SCHEDULED: 6pm Sep 16 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 16 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Tania DEMCHUK – Mount Polley Project Manager
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Naomi Hemphill – Project Coordinator, Scribe
AI DAY – Site Inspector
Rory CUMMING – Site Inspector

OVERVIEW:

- Double Fatality at Swansea quarry today
 - THORPE is enroute to lead that investigation
- Investigative Strategy
- Met with David MOREL
 - Discussion about FOI – already sent out same request to AMEC and KP for anything they have given government from 2009 to cross reference with what the government has from 2009, to identify if there was a threat apparent at that time.
 - Will send annual report as well as geotech report
- Ongoing planning MCM
- Scheduling senior management interviews in the next few weeks, have not confirmed yet
- Caroline NAKATSUKA to take on the role of a site level inspector next week, as well as managing onsite inspectors
- Working on defining roles and responsibilities for the investigation
- Coaching on information sharing
 - STAR reports
 - Disclosure of information guidelines
- Task lists and tracking, for organizing the investigation and ensuring that work is completed on time
- Highlights from 11:00 am EMBC call (from Kim BELLEFONTAINE):

- Weather today is sunny and warm. Cloudy tomorrow with rain Wednesday evening; 5-10mm expected overnight. Thursday scattered showers with 2-5mm expected. Return to sunny and warm conditions Friday through Monday next week.
- The main dyke is now 100% complete. They are monitoring the dyke and there have been no signs of instability and no rock falls.
- Work will begin tomorrow on a ramp on the upstream side to provide access to the sump.
- Geotech engineers have given a maximum 4m elevation of slurry in the upstream sump before it has to be pumped out. Current level is 3.6m, but is increasing gradually. They have the ability to drop in a pump if needed. New slurry pumps are expected to be on-site on Friday and should be in place in the upstream sump by early next week.
- All breach water is currently contained.
- Polley Lake is at elevation 922.69 (down 66 cm since the breach); pumping at a rate of 17,000 gpm. The sediment plug is stable.
- MPMC has engineered bridge drawings for Gavin Road. Hope to proceed soon.
- The silt curtain is in place at the mouth of Hazeltine Creek. The company continues to make progress with removing debris in this area.
- Sampling is occurring by MOE and company in Polley Lake. Company reports that elevated turbidity continues at depth in Quesnel Lake, and that they have seen some improvement yesterday.
- Company taking some residential intake sampling.
- Company has conducted grass seeding of the plug, Hazeltine Creek and TSF areas.
- MOE will have more results posted on its website later this week.
- The State of Local Emergency has been extended for another week.
- Highlights from 3:00 pm MPMC/MOE/MEM call (from DEMCHUK): (building on the above notes)
 - Polley Lake level at 922.66 m. (NOTE: clarification from DAY that one pipeline is currently in use as the site adjusts the alignment of the other)
 - Poned water on the upstream side of the main dyke increased approx 5 cm, however Greg (BGC) indicated this may be related to construction causing tailing to shift in the area.
 - When installed the pumps on the upstream side will convey water to an area between the satellite dyke and the main dyke where there is good flow through the main dyke.
 - The breach sump was not working for a period of time, however secondary pumps continued to pump water and there was no discharge to the receiving environment.
 - The piles of sediment beside the newly constructed channel will be "knocked down" and seeded.
 - 18 soil sampling transects at 500 m intervals have been completed by SNC and SRK. > 500 samples have been collected.

- Monitoring is ongoing. Noted that Quesnel Lake is appearing darker and clearer. Have added 3 new residential sampling sites.
- Work in the area of the TSF is being challenged by 3 bears (mom and 2 cubs). They have been around the area for a while, appear habituated. Site has been in contact with the conservation service. (note: these are the same 3 bears discussed in mid-August).
- ASIDE: Mount Polley gave notification to MEM that they will be submitting an application for permit amendment to install water treatment to discharge from the Springer pit to Bootjack Lake. Similar notice has been sent to MOE. They would like to have MEM and MOE approvals in place ahead of freshet to ensure there continues to be adequate storage capacity for site contact water in the Springer Pit.
- DEMCHUK to follow up on who is installing the silt curtain
- Air screen not yet working, needs compressor
- Two electric pumps are in place but still working on the generator set
- Only pumping into one line right now, 5 or 6 pumps running
- No activity on the downstream slope today, some impression that it might be complete
- Phase 3 for the coffer dam construction, some change in the shape of the coffer dam, DAY stopped the work on that due to safety concerns (narrow, steep, insufficient backing area)
- Harvey MCLEOD met today with imperial metals and Golder to discuss the drilling program, confirmed to start next Tuesday.
 - Geophysics studies have already begun.
- Privacy Act Bradley Weldon – requesting documents, they hired an engineer. Referred to previous case where there was a “smoking gun” [government withheld]. Did not see “any concern’ with being in middle of investigation [counter-intuitive to investigative process?].

OLD BUSINESS

- Task follow-up: Meeting with Bill ARD and John KUBAT tomorrow to discuss data management and database

NEW TASKING

- WARNOCK: Planning for geotechnical engineer interviews

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm SEP 17 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 17 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Tania DEMCHUCK – Mount Polley Project Manager
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Naomi Hemphill – Project Coordinator, Scribe
AI DAY – Site Inspector
Rory CUMMING – Site Inspector

OVERVIEW:

- Meeting this morning with the IT expert from the RCMP – John KUBAT and Bill ARD
 - Database system ER3 and alternative databases
 - Review of how databases work
 - Need further internal discussion before we decide
 - Will be able to get database itself and maybe some introductory training but unlikely to get further support
 - Will need to speak with Shared Services to determine if this is possible
 - Although it is a police database, our drive is the collection, coalition and output or information, and the relational database system seems to be the best suited for these purposes
- [Privileged] discussion with John AHERN
- Tomorrow there will be an unrelated internal tour (JTSI), and media tour onsite, unsupported to our onsite investigators and investigative team
 - Offer internal government media interview rather than at the mine site
- Preparing for the interviews of directing minds, possible strategies, need further discussion
- Review of MCM org chart, to ensure roles, responsibilities, and all tasks are captured appropriately and evaluated for information, evidence, and Ling-Jarvis - to discuss as a group later this week
- 4 of the diesel pumps down, 2 electric pumps not running, 1 line not in operation – total of 4 pumps pumping on one line from Polley Lake as of 3:30pm

- Putting silt curtain out into deeper water
- Trying to add 2 Electric pumps for Polley Lake
 - Wearing hip waders, may need wetsuits
- Upstream construction on coffer dam going ahead, pushing in a better direction than yesterday
- Upstream sump in, pumping towards the satellite dyke to settle out
- Highlights from the September 13 MPMC/MOE/MEM call:
 - Rain is expected tonight or tomorrow.
 - Polley Lake level: 922.64 m. Level was stable (no change) over night.
 - Report is that both pipelines are now functioning.
 - Main dyke: Work is ongoing to create pumping locations to address water accumulation.
 - Currently water height behind main dyke is 3.6 m. Emergency pumps in place to be turned on if 4 m height is reached.
 - Additional slurry pumps being shipped to site for installation.
 - Confirmed all water leaving the breach is still being contained on site.
 - Continuing work on Central Sump excavation
 - Getting ready to start work on Gavin Lake Rd Bridge. In communication with MOE and working with FLNRO.
 - MPMC has placed a memo related to E.Coli on their website.
 - MPMC met with First Nations today; they have a standing invitation to attend this 3:00 call (currently they are not)
 - MOE asked a series of questions regarding biosolids, contaminated soils and PAG rock on site. All related to release of Annual Reports on the MOE website (see below)
- Highlights from September 17 MEM/MOE meeting:
 - MOE is releasing Annual Environmental and Reclamation reports of the company that are publically accessible at the Likely Library tomorrow morning. They have produced a Q&A document of anticipated follow-up questions.
 - MEM may get follow-up requests as well.
 - There will be discussions next week regarding how MEM and MOE will handle the permit amendment applications that have been (or will be) submitted shortly.
 - Discussion that MEM (Tania) had not heard of any issues with the Safe Work Procedure for working downstream of the plug this week.
 - Depth readings behind the coffer dam questioned and discussed
 - Update calls (MEM, MOE, and Mt. Polley) calls now Mon/Wed/Fri
 - Criteria for emails on non-call days as needed developed: weather, health and safety, discharge, or compromises containment
- Fatality update: two employees fatally injured at Swansea Pit yesterday, may have been brake failure
- Transcription issues (resource, skills)
- IT software
- Senior Officials Committee share thoughts on “implied order”
- Safety issues still paramount at MPMC

Misc Business:

- Training needed for MCM, statements, interviews, notes
- Collection of information
- Decision documents by A.H. CIM
- Provide regular briefings to executives
- Develop regular check of Ling-Jarvis
- Need to look at every document person, etc... on what can be improved, changed, prevented as appropriate
- Examine all policy
- Overarching document of outcomes, progress, facts, outstanding issues
- Weekly STAR report – continue? Disregard? Move up/laterally?
- Briefing skills: concepts, command triangle
- Contingency plans for interviews

NEW TASKING

- Next Thursday/Friday for WARNOCK to visit Victoria office to review the geotechnical hard copy files

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 18th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 18 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Cheryl POCKLINGTON – File Coordinator
Doug KILOH – Major Case Management Consultant
Caroline NAKATSUKA – Manager, Health and Safety
Naomi Hemphill – Project Coordinator, Scribe
AI DAY – Site Inspector
Rory CUMMING – Site Inspector

OVERVIEW:

- Reviewed the TOR that Keith ELWOOD is producing
- Talked about the communications plan and the possibility of getting a full time communications specialist
- Recap of the to do list
- Talked about future interviews of senior management and consultants, interview strategy and questions
- Discussed public meeting coming up next week in Likely
- Will issue an email to staff on nondisclosure form for those involved in the investigation
- Polley pump scenario – down to 4 pumps for most of the day, up to the full 8 by the end of day with A and B lines running now
- Onsite safety inspectors have concerns about the amount of pressure being put on by the mine to pump regardless of other concerns – pumping as fast as possible, creating various safety hazards – DAY to send more pictures
 - Need to balance need for pumping with safety concerns, will be some further action to ensure work is happening safely – several days of warnings by onsite inspectors on conditions
 - Concerns about electrical safety, safety protocols not being followed, missing a lot of electrical staff today. Advised to be shutting things down if they are not safe.
- Couldn't work on downstream bridges today because the water upstream of the main dyke exceeded the 4m permissible limit
- DAY to leave site tomorrow, CUMMING and NAKATSUKA to be onsite this weekend
- Boom and air curtain now in place, but not running yet
 - Need to ensure that proper safety equipment is being used
- Follow-up with the survey team to ensure that they are taking measurements from true bottom.

- Difficulty getting clear answers, some indication from Ryan BROWN that they did a scan of the area when they did the flyover, and saw that there is a layer of heavy solid tailings underneath.
- DAY spoke with Greg from BCG, Luke MOGER, BROWN, seems to be no agreement on how they are measuring the height of water upstream of the main dyke.

OLD BUSINESS

No items discussed.

NEW TASKING

- Follow-up with the survey team to ensure that they are taking measurements from true bottom.

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 19th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 19 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
 Cheryl POCKLINGTON – File Coordinator
 George WARNOCK – Manager, Geotechnical Engineering
 Tania DEMCHUK – Communications
 Doug KILOH – Major Case Management Consultant
 Naomi Hemphill – Project Coordinator, Scribe
 Caroline NAKATSUKA – Manager, Occupational Health and Safety
 Rory CUMMING – Onsite Inspector

OVERVIEW:

- In office today, catching up on assigned tasks
- Concluded or almost concluded investigation at Swansea Quarry, RCMP may do some forensic mechanical work.
 - HOFFMAN to discuss with KILOH
- Went over the task list, confirming what was on the task list
- Letter to WorkSafe for NAKATSUKA and CUMMING, to review and ensure that the working procedure for below the breach is done safely
- Tomorrow, no daily call, NAKATSUKA to take onsite notes to deliver Sunday
 - Any issues, call WARNOCK or HOFFMAN
 - HOFFMAN & HEMPHILL to call in to speak with site
- MOE meeting notes
 - As of 3:00, Dale REIMER confirmed that there is still no work allowed downstream of the dam because of water levels
 - NAKATSUKA to followup and check on the status (work or no work downstream of Hazeltine Creek)
- Damaged cable on pump that we were concerned about yesterday – bare copper exposed, did not trip the breaker as it is supposed to do. No information on how it was damaged. Met this morning to discuss with the mine site, emphasize not acceptable.
 - No steps seem to have been taken in response to our concerns yesterday.
- Installed a culvert, with a water truck parked up on the dyke, pumping water into the culvert to keep the slurry moving. Slurry is quite thick, making it difficult to pump
 - Upstream 1, stated 4.1 meters deep (compared to flyover information)

- Still looking to follow up with survey department directly
- Down at Polley pumps, plan was for 6 pumps running at 50 PSI by tonight, 4 running last seen by CUMMING
- Boom installed out today, did not confirm wetsuits
 - Good progress at the mouth of Hazeltine today
- Concerns about the mine site following up with directions and concerns of the onsite inspectors (e.g. wetsuits)
 - Lack of management and clear instruction/oversight
- Concerns about safety – very low reported safety incidents, may look into how incidents are reported
- Development of main dyke slowed, concentrating on pushing up towards Satellite dyke 2
- Did not see any more work on downstream resloping – AI DAY to confirm
- Need to confirm onsite who is in charge each day (to confirm with several people, as answers have been inconsistent)

Highlights from MPMC/MOE/MEM 3:00 pm phone call September 19, 2014:

- Weather: nice today, no rain expected over weekend.
- Polley Lake level: 922.62 m above sea level (continuing to drop slowly)
- Temporary dyke construction:
 - Started constructing a second satellite dyke today to help form the upstream 1 sump (between the satellite dyke and main dyke).
 - Water levels are still above 4 m cutoff. No work allowed downstream of the main dyke in Hazeltine Creek
 - Dale R. noted that he expects workers to be able to go back in tomorrow.
 - Additional pumps arrived on site today (2) with more expected early next week. These will be used as replacements and to support water management within the TSF.
- Breach sump functioned as expected during rain and kept up with pumping requirements.
- Quesnel Lake has returned to normal colour following turnover.
 - Sampling ongoing
 - They will be removing more debris from western end of the lake.
 - Silt curtain at mouth of Hazeltine in place and functioning correctly.
-

NOTE: MOE is also taking formal minutes of these meetings now and will be sharing those with MEM. Next call: Monday September 22 at 3:00 pm.

OLD BUSINESS

No items discussed.

NEW TASKING

- Need to pull out themes from daily notes, similar to interview debriefs
- Pull out all safety and organization issues identified by inspectors. Examine behaviours, action, and reaction in context of situation, determine options for Chief Inspector

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 20th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVEIWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 20 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Doug KILOH – Major Case Management Consultant
Naomi Hemphill – Project Coordinator, Scribe
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Rory CUMMING – Site Inspector

OVERVIEW:

- NAKATSUKA familiarizing with the site today
- Levels at Upstream 2 (between satellite dyke and main dyke) 4.4m this afternoon
 - Spoke with surveyor (mine tech taking survey measurements) uses LIDAR survey as baseline – goes down where he gets access and takes GPS reading at top of the slurry. Base elevation likely includes some tailings.
 - Steve and Caroline getting daily email updates
- Still shut down below the breach and downstream on Hazeltine creek because the water level is still above 4m
- 938.9 – 4.9m above baseline. Went down 0.5m in a few hours (938.4 later that day)
- 8 pumps at Polley lake intake are running – two lines are full. Electric pumps not running, likely flowing as much as it can.
- Made some headway on electrical stuff – electrical supervisor was there today, difficult to get clear answers to questions, lacking basic knowledge, but have started to work on some of the directions given by onsite inspectors in the previous days.
- Not able to talk to electrical superintendent yet.
- Will be onsite tomorrow
- Trying to build up a map with the road names and area names for site inspectors
- Had a blast today onsite – was a misfire and they are investigating it.

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 21st via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 21 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Doug KILOH – Major Case Management Consultant
Tania DEMCHUK – Mount Polley Project Manager
Diane HOWE – Deputy Chief Inspector of Permitting
Naomi Hemphill – Project Coordinator, Scribe
Mike OLSEN – Site Inspector

OVERVIEW:

- Caroline NAKATSUKA and Rory CUMMING did not attend – call cancelled
- Prepare for interviews
- Number of small tasks
- Email to all staff – standards of conduct requirements for confidentiality
- Update meeting Thursday morning 9:00am update staff on Mt. Polley
- To review Mon morn.
- AI contacted site later that evening.

Update notes from NAKATSUKA, email 2014-09-21 at 6:45pm

- Below are the surveyors measurements from Mount Polley today. I heard from the pit shifter that the upstream 2 sump was lowered to 1.9m this afternoon.
- As the levels are below 4m the BCG engineer Greg HUNCHUK did an inspection of the breach area and Polley plug and determined that the area below the breach in Hazeltine Creek would be safe to work in.
- CUMMING has left the site and OLSEN is now doing a shift of health and safety coverage. Before he left CUMMING had a meeting with Dale REIMER and made clear that the electrical supervisor Lindsey BAUER was not capable of fulfilling his responsibilities. CUMMING will be submitting a report to us and the mine manager regarding the electrical deficiencies and his associated findings.
- Main Dyke
 - Volume = 11,286.684 cubic meters
 - Tonnage = 22,573.369 tonnes
- Sat Dyke

- No Development
- Polley Lake Water Elevation (7:05am)
 - Current = 922.54
 - 24-Hour Change = -.030m
 - Cumulative Change = -.760m
 - Slurry Elevation at Main Dyke 7:05am = 937.5m (3.5m above baseline)
 - Slurry Elevation upstream of plug 7:05am = 940.76m

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 22nd via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 22 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Tania DEMCHUK – Mount Polley Project Manager
Naomi Hemphill – Project Coordinator, Scribe
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Mike OLSEN – Site Inspector

OVERVIEW:

- Met this morning to review the task list, to help set priorities this week
- NAKATSUKA and OLSEN to attend town meeting on Thursday, DEMCHUK to send updated materials
- Investigative team to review newest draft TOR, to discuss tomorrow morning
- Meetings held this afternoon regarding Western Regional Mine Safety Competition and Swansea Quarry fatalities investigation

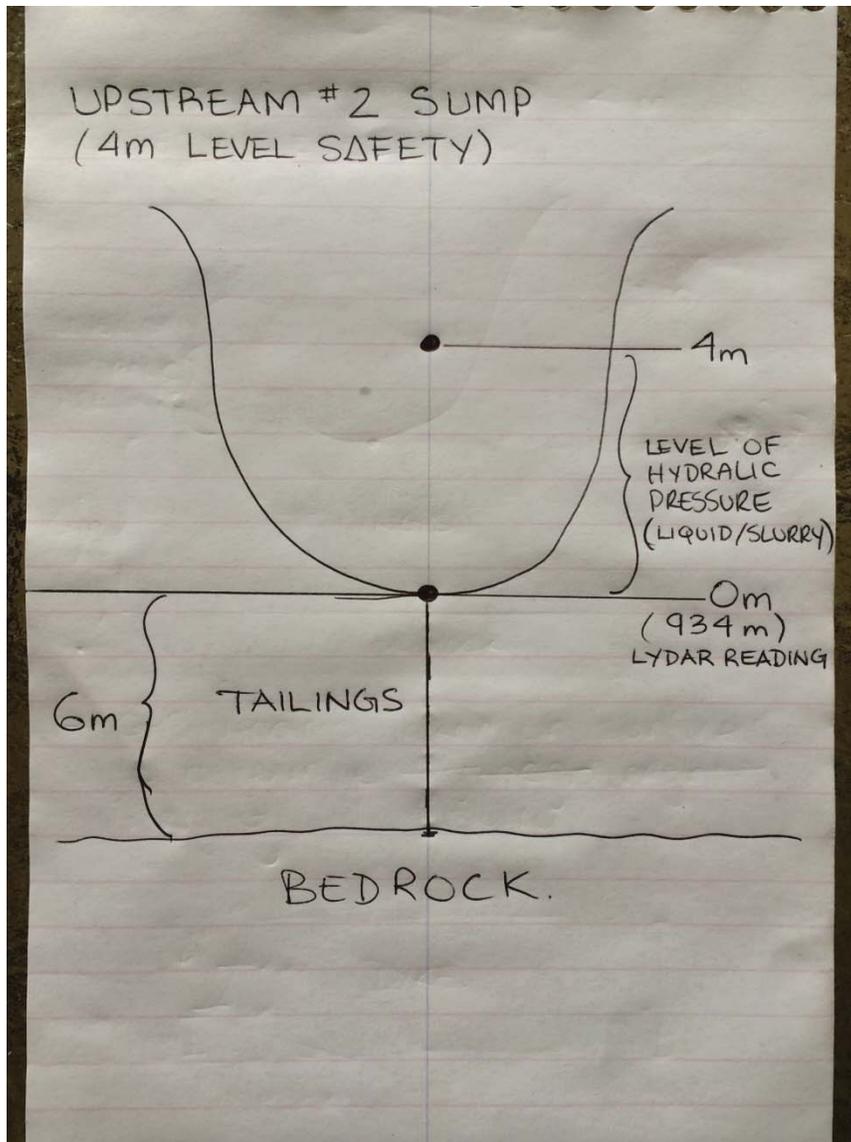
Highlights from MPMC/MOE/MEM 3:00 pm phone call September 22, 2014:

- Weather: nice today, possible rain later this week.
- Polley Lake level: 922.51 m above sea level (total of 79cm drop so far).
- Site was asked to provide an update on design of the Polley Lake discharge channel at the Wednesday meeting – when it will be complete and timing for construction. This is under the purview of SNC.
- Temporary dyke: work was conducted over the weekend to reduce the height of water behind the dyke. Update received by email this morning that safe work levels were achieved around 5:00 pm on Sunday evening. Slurry/muck was removed by equipment as there was not enough water for the pump to work effectively.

- Currently there is no pump in place in the sump.
- Additional slurry pumps are scheduled to arrive on site Wednesday.
- Quesnel Lake monitoring is ongoing but has been challenged by weather (wind). Colour is good right now, high turbidity at depth of ~50 m.
- Silt curtain was installed by contractors looking, was set to be 2 m above the lake bottom, although this will be changing now as the lake level drops.
- Grasses from heli-seeding is starting to germinate in the Hazeltine Creek channel.
- Williams Lake Indian Band representatives are also attending this call now.
- Permits from FLNRO are in place for bridge replacements. Expecting additional permits from FLNRO for other work in Hazeltine Creek area in next few days.

Highlights from MEM/MOE 4:00 pm phone call:

- Discussion of safety
 - MOE noted that on Thursday last week they were doing radio check-ins as per safe work procedure and receiving no response from the spotter. They remained on the lake only because they were out with a Mount Polley boat who was in contact with the spotter.
 - MOE also interested in design for Polley Lake channel.
- Difficulty contacting the spotters required by the SafeWork procedure, working near the mouth of Hazeltine Creek
- Discussion with regards to upstream sump, where the 4m guideline came from and how the 0m base is determined: we have now learned that 0m is sitting on approx 6m of tailings, with the 4m given as a conservative number. In the near future they would like to put some prisms and piezometers in that area to get a better idea of water and sediment movement.
 - Drawing provided to George to clarify
- Upstream 2 now trucking out of the area because material was too solid for effective pumping. Trucking from sump area to the east side of the dyke.
- Pumps running from Polley lake today
- No update from surveyor, on Polley lake all day
- Work allowed to continue downstream, from Hazeltine creek
 - 4 crews working downstream
- POCKLINGTON contact from FLNRO confirmed that they are actually lending two bridges to the mine, with more permanent plans to come in later. Have issued 3 permits for work in the area concerning tree cutting to enable cleanup in the area.



OLD BUSINESS

No items discussed.

NEW TASKING

- NAKATSUKA and OLSEN to attend town meeting on Thursday, DEMCHUK to send updated materials
- KCB to review documentation, MP files ledger, screen and summarize information.

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 23rd via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 23 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
 Rolly THORPE – Deputy Chief Inspector
 Haley KUPPERS – Primary Investigator
 Cheryl POCKLINGTON – File Coordinator
 George WARNOCK – Manager, Geotechnical Engineering
 Doug KILOH – Major Case Management Consultant
 Tania DEMCHUK – Mount Polley Project Manager
 Naomi Hemphill – Project Coordinator, Scribe
 Caroline NAKATSUKA – Manager, Occupational Health and Safety
 Mike OLSEN – Site Inspector

OVERVIEW:

- Reviewed task list, identified priorities
- Discussed strategy of investigation
- Reviewed TOR V 0.3
- Reviewed Ling-Jarvis questions, determined that we have not crossed the Rubicon
- [Privileged] Received legal advice from Karen TANNAS on letters to engineering consultants for interviews
- Followed up on MOE difficulty checking in with spotter on 18th of Sept. Checked logbooks, did not have the two MOE persons noted in his logbook, noted 3 groups of people who did check in but did not note names. Shifter being more diligent to get names and companies from those working downstream. Some concern about radio signal strength, put in a repeater to improve service downstream.
- Need to ensure that they have the most current SafeWork procedure
- OLSEN trying to work out water system, will hopefully get confirmation tomorrow from a shifter and send out a quick drawing showing the collection systems currently being implemented and potential future.
 - Colleen HUGHES has a recent aerial photograph that may help with this
- OLSEN was unable to follow-up with piezometers today, will try again tomorrow
- Polley lake pumps up and running, tested electric pumps but they do not have enough power to overcome pressure from diesel pumps, so they will serve as backups but they are serviceable

- DEMCHUK has sent updated pictures, fact sheets, and FAQs for the public open house on Thursday, as well as internal-only briefing to be sent tomorrow.
- Shift change rotation tomorrow on site
 - Poor information transfer between old and new shifts, need to ensure spotters and other fresh staff are up to date on roles and responsibilities
- Did view a blast this afternoon, went very well. No full determination on what went wrong with the misfires last week, but they believe it might be the product.
- Spoke to Dale REIMER, indicated that either he or Art FRYE would be onsite as mine manager at all times, 7 days a week.
- Develop a communication plan/strategy
- Develop an exhibit policy
- Interview development (“exercise” each person – what can they or would they say; strategy)
- Ling-Jarvis
 - Perishable evidence/memory loss
 - Start at lower level employees
 - No path to prosecution at this point
 - Chart out points specific to fact (fact speaks for itself)
- Critical Thinking
 - Consider exercise to get investigations to think big (?) to thoughts
- OMS
 - Was it ignored?
 - Does it fall to MOGER?
 - Parallel responsibility to AMEC/KP
- Build factual even chronology (Documents, engineers, ministry, etc)
- Interview chronology
 - Beware of uncorroborated facts
- Administrative Chronology
 - Mine, applications, permits

Highlights from MPMC/MOE/MEM 3:00 pm phone call September 23, 2014:

- Weather: rain from 2:00 am to approximately 7:30 am this morning.
- Polley Lake level: 922.45 m above sea level (total of 85 cm drop so far).
- Environment Department had a 1.5 hour safety meeting with safety department this morning. Discussions included winter work – PPE requirements, frosty conditions, limited daylight, etc.
- Site was asked to provide an update on design of the Polley Lake discharge channel for today’s meeting. This was not prepared, and the request for this information or a timeline for when it would be available was reiterated.
- Temporary dyke: no water build-up behind the dyke due to the rain event.
 - Expecting to install pumps powered by a diesel generator later this week (?). It was unclear if these pumps had arrived on site. This will be followed up on Friday.

- There are plans to construct a road access into the area between the breach sump and the Polley Lake plug. This will be followed by construction of a large sump/settling pond to act as back-up in the case of an event that overwhelms the breach sump.
 - MEM has requested that a notice of work for this construction be submitted to MEM and MOE. MOE would like clarification of
- Springer Pit capacity available is 14.4 million m³.
- Gavin Lake bridge construction under way. Expect to be placing decking tomorrow.
- Quesnel Lake monitoring is ongoing.
- Grasses from heli-seeding is starting to germinate in the Hazeltine Creek channel, some are now 2 inches high.

Highlights from MEM/MOE 4:00 pm phone call:

- Discussion of safety
 - MOE is following safe work procedure as per previous work.
 - Discussions around permit application review and consultation approach.

Summary of Site Investigation Meeting – September 23, 2014 @9:30AM

Attendees: Hector Barriga (KCB), Howard Plewes (KCB), Ben Casey (on-site KCB), Jim Olson (on-site KCB), Don Parsons (Imperial Metals), Luke Moger (MPMC), Terry Eldridge (Golder), George Warnock (MEM), Dirk van Zyl (Expert Panel – Observer)

- Mud Bay is on-site and will be starting drilling today on a hole outside of the failure zone.
- Daily reports will be generated and circulated.
- Logs will be provided to MPMC, MEM, and the Expert Panel as they are developed
- ConeTec will mobilize to the site next week to begin Cone Penetration Testing
- Geophysics is well underway. The DC Resistivity should be complete by Wednesday, with seismic to start shortly thereafter.
- Dirk van Zyl indicated that the Expert Panel is only an “Observer” and does not wish to review the investigation details
- Thurber will be logging the core on behalf of the Expert Panel (in addition to KCB’s logs)
- Golder will be on-site periodically, but does not plan to log each hole.
- Test pitting and trenching will follow drilling
- Thurber has conducted surface mapping on behalf of the Panel and this will be shared with the rest of the parties once the panel has conferred with legal (ie. What can be shared that is not interpretative)
- T. Eldridge had questions surrounding the need for drilling (or CPT?) in the core to evaluate the pore pressure condition. KCB indicated that this question needed

to be answered and that the pre-breach condition should be defined to the extent possible.

- G Warnock confirmed that MEM is OK with KCB sharing all factual information including logging protocols, preliminary logs, etc. Shared information to be free of interpretation. This is in keeping with the spirit of the agreement to coordinate the site investigation between all parties, without compromising the integrity of the investigation.

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 24th via CONF CALL.

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 24 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Tania DEMCHUK – Mount Polley Project Manager
Doug KILOH – Major Case Management Consultant
Naomi Hemphill – Project Coordinator, Scribe
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Mike OLSEN – Site Inspector
Steve ROTHMAN – Site Inspector

OVERVIEW:

- Met about Swansea quarry fatalities
- Completed the TOR
- Completed the briefing PowerPoint to present to David MOREL on Friday
- Sent out letters to engineering consultants requesting interviews – AMEC, BGC, KP, and some individuals, sent by registered mail.
 - KILOH discussed with legal today
- Reviewed Ling-Jarvis questions, determined that we have not crossed the Rubicon
- Had a MOE boat arrive on Polley Lake, no radio communications and without permission. Came through the gate on Horsefly Road. Earlier this week, MOE brought a helicopter into the breach area, mine to submit dangerous occurrence report. Steve to confirm the date.
 - DEMCHUK to follow up with Hubert tomorrow
 - Not in compliance with the safe work procedure
- DEMCHUK and POCKLINGTON discussed file organization, with reference to Bill ARD's recommendations
 - In the process of structuring file systems and business rules
- KUPPERS prioritized interviews for transcription, started proofing transcriptions and putting together timelines.

- Mtpolleyinvestigation@gov.bc.ca email is now active and available
- Questions from the Mine Manager as to when the Investigation Panel would be coming back to the mine site – team to send notice when appropriate
 - KUPPERS to follow up with Dale REIMER
- KCB only have two people logging cores, so it will likely be a very slow process
- Geophysics group will likely be doing seismic work soon, another group coming next week to do seismic drilling.
- All 8 pumps working on Polley Lake
- Air curtain working
- Discharge – 1 full, 1 7/8ths full
- Long range plan is a bigger sump downstream from the breach sump – ROTHMAN to email drawing tomorrow.
- Majority of silt neat air curtain at the mouth of the creek is till sediment, rather than tailings sediment, based on a visual review (brown till silt rather than white tailings sand, to confirm with sampling). Will be tailings outside the channel.
- Spoke with BGC regarding the monitoring of the lower tailings discussed yesterday. Waiting for construction to be completed in the area upstream of the breach – surveying and monitoring instruments
- Received map and flows from NAKATSUKA today (attach below)
- Transfer of information on crossover shifts – night shift to new day shift, good exchange of information, felt that the cross shift was getting fully briefed by the senior shift boss leaving shift to senior shift boss coming on shift.
- Looking at putting in a dispatcher to log calls and ensure that everyone who has gone into restricted areas is logged coming out of the restricted areas at the end of the day
- New shift bosses coming in due to staff turnover (citing uncertainty for the future)
- Phase 4 main dyke 12066 cubic metres, tonnage 24133 tonnes 17.76m advancement
- Phase 5 volume 5421 cubic m 10843 tonnes, 12.1m
- Reminder of Public Meeting Thursday (tomorrow), poster and information has been sent.
- SOC meeting Monday the 29th, Minister Friday and Saturday
- Communication – who needs to know, and when do they need to know? (ADM, DM, Public, etc.)
- We need to document – when did we know, what did we do about it, are we safe (BC?) Educate public, media. Project/show work ethic, effort, and truth (?)
- Get website up to date (MEM)

OLD BUSINESS

- Sent out letters to engineering consultants requesting interviews – AMEC, BGC, KP, and some individuals, sent by registered mail.
- Completed TOR

NEW TASKING

- ROTHMAN to email pictures of breach sump 2014-09-25

HOUSEKEEPING

No items discussed

ROUNDTABLE

Pictures below provided by OLSEN

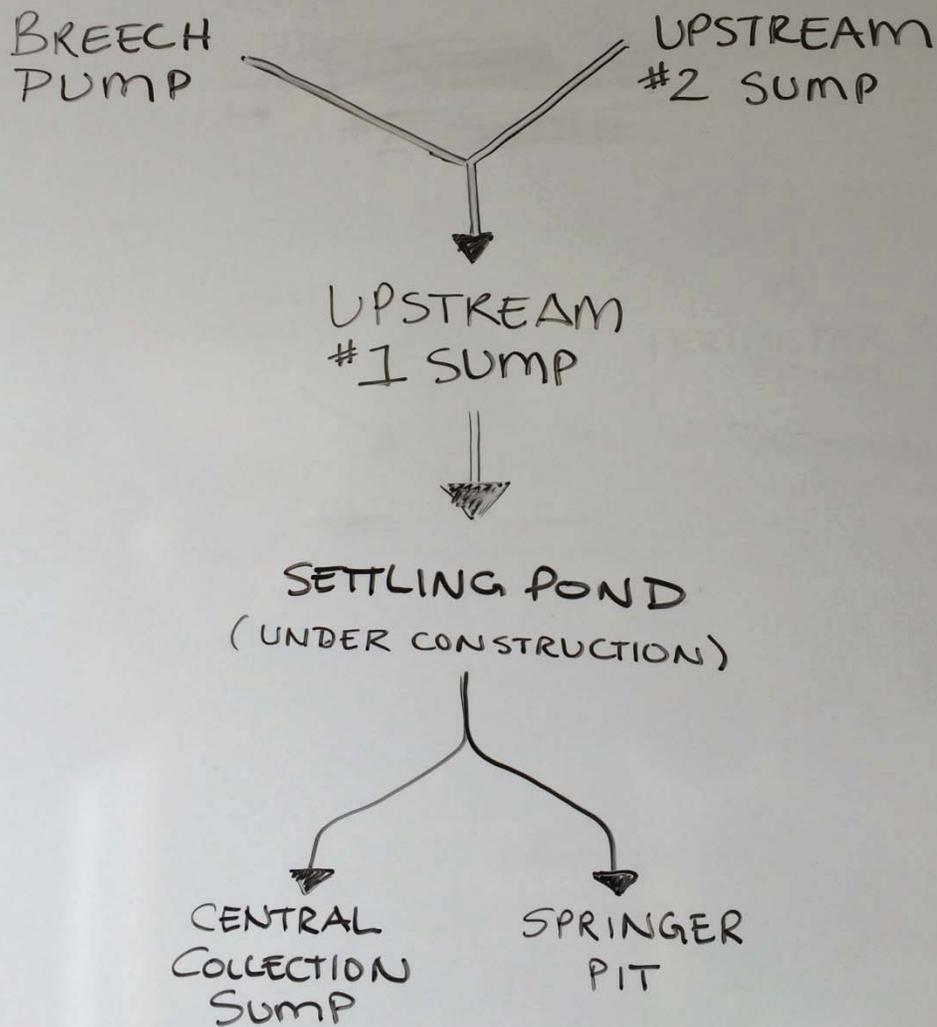
NEXT MEETING SCHEDULED: 6pm Sep 25th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

• SEPT 29/

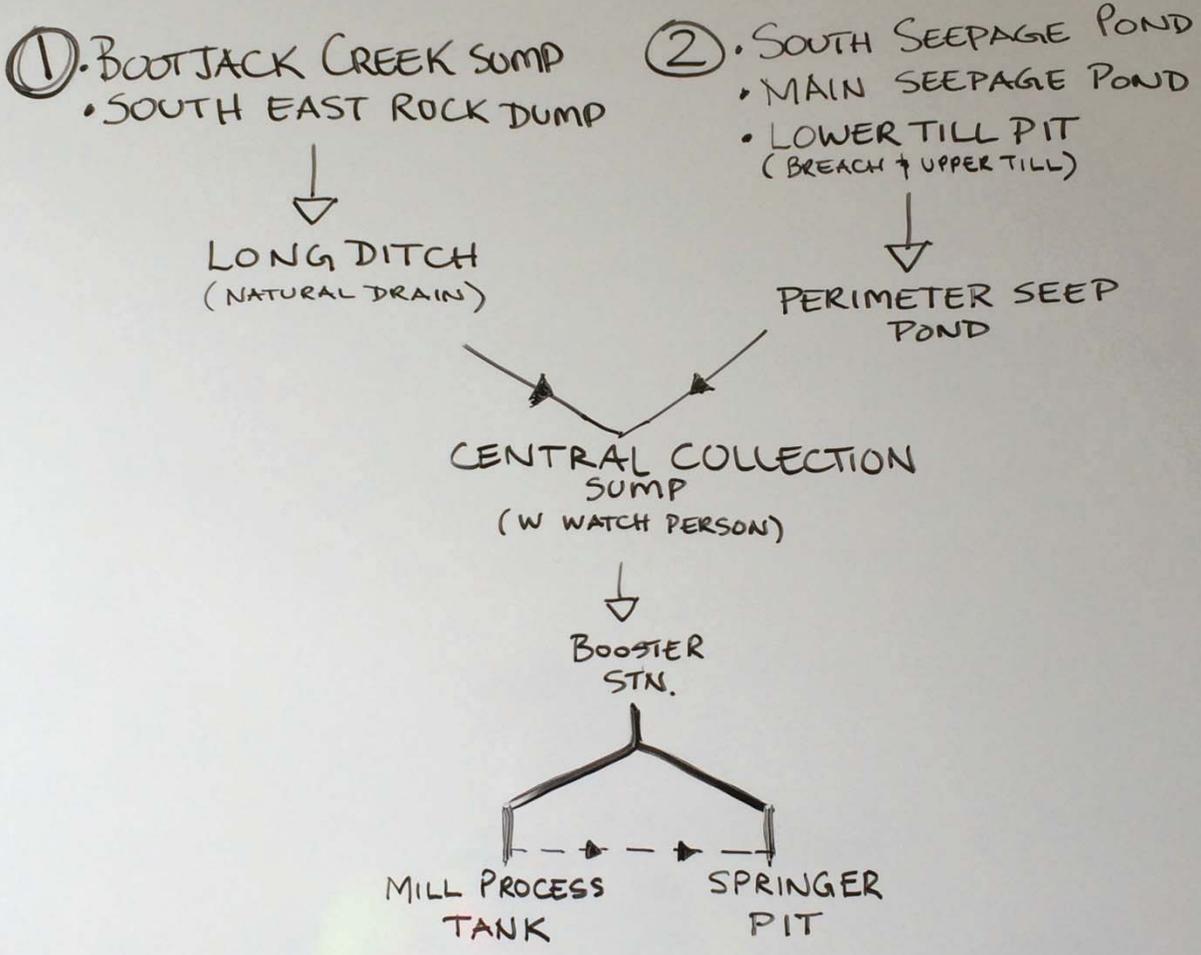
WATER COLLECTION SYSTEM - MT POLLEY (FUTURE)





SEPT 24/14

WATER COLLECTION SYSTEM (MT. POLLEY)



Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 25 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Tania DEMCHUK – Mount Polley Project Manager
George Warnock – Manager, Geotechnical Engineering
Harvey MCLEOD – Geotechnical Engineering Consultant
Doug KILOH – Major Case Management Consultant
Naomi Hemphill – Project Coordinator, Scribe
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Mike OLSEN – Site Inspector
Steve ROTHMAN – Site Inspector

OVERVIEW:

- Discussed Jarvis questions, determined that we have not crossed the Rubicon.
- Working on file management plan, relevance of information and filing systems
- Working on communications plan and responding to communications requests, FOI and MOE
- Reviewing historical geotechnical documents today and tomorrow
 - 3 of 6 boxes, reviewing documents including design and inspections through time
- No formal update calls, phone conversation with MOE to follow-up on ensuring staff are following SafeWork procedures, and report of helicopter on same day of blast
 - MOE confirms that it was not their helicopter, but DFO may have been in the area at the time.
 - Need to confirm whose helicopter it was, and if site issues warnings to helicopter companies when they are blasting
 - MOE has sent out information to ensure that the SafeWork procedures are being followed

- Onsite to follow-up with site to check if they have procedures in place
- Nothing changed since yesterday onsite
- 2 full pipes discharging from Polley lake
- Drilling at the toe of the dam, sample contaminated so they needed to redrill the hole, did not hit bedrock
- Created two new drill paths to move forward, hopefully using tomorrow
- Breach sump working fine, pumping in behind the satellite dyke and the main dyke, finishing line to pump the rest of the way up the hill to pump into the settling pond
- No rain today, some rain yesterday
- Main dyke, 9386 tonnes
- Phase 5, 26909 tonnes
- 0.89m drop in Polley Lake level
- Confirmed Sunday they do have wetsuits, NAKATSUKA saw them Monday, but they no longer have any reason to go into the water.
- Helicopter in breach area

OLD BUSINESS

FOI – prepare for meeting with Chris GHAG (?) Review to ensure separate for COS and doesn't affect this investigation.

NEW TASKING

- Working on file management plan, relevance of information and filing systems
- Working on communications plan and responding to communications requests, FOI and MOE
- Reviewing historical geotechnical documents today and tomorrow

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 26th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 26 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Tania DEMCHUK – Mount Polley Project Manager
Doug KILOH – Major Case Management Consultant
Naomi Hemphill – Project Coordinator, Scribe
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Mike OLSEN – Site Inspector
Steve ROTHMAN – Site Inspector

OVERVIEW:

- Terry ALDRIDGE on site today
- Mine site expressed that they want a buttress around the perimeter of the dam, starting to build around the breach to corner 4.
 - Would like to start talking about permitting and long term remediation
 - Discussing excavation of formation to get to foundation (prestripping), but they are not to start work before they are permitted and will need to go through the permitting process (consulting, etc.)
- Going for drill hole at the toe of the buttress for the investigation
 - Putting a culvert in the east side of the dam to give the drill access
- Question of moving the breach sump – ROTHMAN to check
- Building the pads
- NAKATSUKA to bring two digital maps on her computer to Victoria for Victoria staff to view.
- Community meeting (insert OLSEN notes)
- Mine site showed plan for remediation of Hazeltine Creek
- Colleen HUGHES (onsite) said that someone had complained about how the grass is growing, and said that he had walked over the “entirety of the impact area”

- Pumps dewatering well, getting a couple centimetres a day
- DEMCHUK's meeting notes:
- Lake level 922.39 (down 91cm in total)
- Weather forecast is good for the weekend, may rain Monday
- Planning to get work plan for big sump to MEM and MOE next week, DEMCHUK requested that they send to FN as well
- Sampling continues
- Seem to be pretty much complete Gavin Lake Road bridge,
- Working on buttresses for Ditch lake road bridge
- Environmental contractor for sedimentation and erosion control
- Chris SWAN to do sampling this coming week on impacted area
- MOE to send letter to the site asking them to integrate plans that they have put together to date (for the short term, i.e. between now and spring freshet, 2015)
 - If not today, Monday
- MOE continuing to encourage company to keep Mt. Polley website up to date with information and monitoring work onsite right now
- Discussion tasked to SNC for plans on the diversion ditch, plan to need Water Act Approval (off the mine site, we will request a copy as well)
- Sept 16th, yellow helicopter, not MOE – ROTHMAN to continue looking into it
 - Highland Helicopters
 - Broader issue of no fly times
- Dale is onsite this weekend
- Mike OLSEN and Grant FELDINGER onsite inspectors this weekend
- Prepare for briefing ADM
 - Accountability
 - OMS
 - Reporting
 - Deep seated failure
 - Communication
 - Expectation of management
 - Changes to Code, Act, Regulations
 - Strengthening mining
 - Public/environmental safety

OLD BUSINESS

- 20 years of material (in paper form), data that complicates the left reviews?
- Is there appropriate critical thinking?
- Can ministry 'Legislate' critical thinking/oversight by 3rd party?
- MCM methodology, speed, flow, direction, needs to be recorded.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 28th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 28 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Tania DEMCHUK – Mount Polley Project Manager
Doug KILOH – Major Case Management Consultant
Naomi HEMPHILL – Project Coordinator, Scribe
Mike OLSEN – Site Inspector
Steve ROTHMAN – Site Inspector

OVERVIEW:

- Polley Lake pumps taking 4 pumps off to do service, using electric pumps to make up extra water
- Morning running 2 pumps
- Drillers not working today, plotted 3 more holes and made paths to three more holes. Putting in a culvert in the toe where the third hole is
- About 15 people working downstream
- Also working on the lower bridge on the ditch road
- Keeping good communications with the spotter, have a first aid attendant halfway between the work and the site.
- FN coming onsite to do a tour tomorrow, ROTHMAN to attend at around 11am
- OLSEN to leave site tomorrow, being replaced onsite by Grant FELDINGER
- Decision to have a manager under the Mines Act onsite at all times - Dave CARPENTER (MPMC) was assigned onsite manager for Sunday. ROTHMAN had a conversation with Art FRYE (MPMC) before he left on Saturday to ask who would be the onsite manager under the Mines Act.

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

- OLSEN and Caroline NAKATSUKA able to touch base with FLNRO to reaffirm that the truck can continue to stay on site.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 29th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 29 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

Rolly THORPE – Deputy Chief Inspector
 Haley KUPPERS – Primary Investigator
 Cheryl POCKLINGTON – File Coordinator
 Tania DEMCHUK – Mount Polley Project Manager
 George WARNOCK – Manager, Geotechnical Engineering
 Doug KILOH – Major Case Management Consultant
 Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Email from Harvey MCLEOD (KCB) yesterday including picture of lacustrine clays with varves in drill holes
- Testing: 21 sonic, 7 mud rotary, 14 cone penetration testing, 7 lines of geophysical work. In and near the breach and failure area.
- None in the area of the tension crack, but the crack was 800m away from the breach area.
 - Station 3+400, breach is 4+200
 - Will put together some information to brief the minister on the issue.
 - There was nobody in Geotech when that report came in, the volume would have made it impractical or impossible to review historical reports.
- Planning a road right below the breach, Klohn not concerned about the location of the road.
- Asked for more information on the downstream sump – plans must be submitted before the commencement of any works in the impact area.
 - Might accept an as-work with such a small procedure, DEMCHUK to follow up
- Some discussion on turning the dyke from a free flow structure to a water retention structure – turning the dyke into a dam
 - Will need to be very conservative because they did not do the necessary surveys for the areas below the dyke

- Looking at 950 elevation as a maximum fill, rather than 970, greater factors of safety
 - Will need to do some drilling, and the amount of drilling will depend on how conservative the estimates are and the factors of safety required.
- Steve ROTHMAN and Grant FELDINGER met and toured the site with the FN Chiefs today
 - Around the dam, went to the breach, went to the drilling and viewed some cores, toured the dam between corners 2 and 1, looked at the finger dykes, went down to the Gavin Road Bridge, went down to the Ditch Road Bridge, down to Likely,
 - 18 people total, Don PARSONS (MPMC), Steve ROBERTSON, ROTHMAN and FELDINGER, M.O.E. (Julie HALL and her assistant), Hubert BUNCE, Laurie HALLS, and several first nations group – ROBERTSON has the sign in sheet.
 - Tone of the trip was very interested and pleased to see the progress that has been accomplished thus far. Still have concerns about the upper bridge (Gavin Lake bridge).
 - Chief from the Williams Lake band had concerns about the flow in Hazeltine creek (the amount of flow and murkiness).
 - Discussion on how water is being moved around the site, first time for many on the ground although some had toured in the air.
 - Some FN taking photos with phones.
 - Grass growing well, 2-3 inches, large areas looking green
 - Some discussion about new roads being built
- ROTHMAN to get lowest elevation of the dam post breach from a surveyor for tomorrow's call
- Placement of filter rock between 3 and 4 corners needs to be filled in before winter comes
 - Safety concern
 - Luke MOGER sent request to WARNOCK, WARNOCK has no objections.
 - Keep construction to the minimum required to address safety hazard
- Waiting to see what the next stage is – still hauling rock into the TSF and pushing rock into the phase 4 and 5 areas
- Water building behind satellite dyke, getting ready to start pumping that out.
- DEMCHUK spoke to site today, Polley Lake at 922.26 as of 7:30am, down 1.04m
- Discussed proposed channel coming out of Polley Lake into Hazeltine
 - A few weeks away for the channel, depends on stability assessment by BGC

- DEMCHUK encouraged the site to give notice early and leave time for consultation
- MOE has concerns about whether they would be better off to continue pumping while they work on sedimentation control in the lower channel – need to balance some potentially conflicting influences there
- ROTHMAN to continue encouraging consultation in any plans he hears of.

Highlights from MPMC/MOE/MEM Call:

- Weather: light rain
- Polley Lake level: 922.26 m above sea level (down a total of 1.04 m)
 - Expect that pumps can continue to operate through winter.
 - Route has been selected for longer-term channel between the lake and Hazeltine. This has not been shared. Design work is ongoing, expect to take several weeks. Proposed construction timing is not defined.
- The Site has submitted a notice of work for construction of an access road in the breach area (downstream of the breach) and a settling pond downstream of the current breach pump location (attached).
 - This notice of work was shared with MEM, MOE and First Nations.
 - MEM has sent comments back to site and requested discussion on Wednesday's 3:00 conference call (invited participants include company, MOE, and First Nations).
- Gavin Lake Rd Bridge is complete. Ditch Road Bridge is 90% complete.
- Quesnel Lake still being described as green in colour.
 - Sampling ongoing
 - SCN is back in Hazeltine Creek completing follow-up soil sampling.
 - Planning is underway to start implementing the erosion and sediment control plan for Lower Hazeltine Creek
- MOE sent a letter September 28th requesting an integrated contingency and mitigation plan by October 3. (attached)

Early drill results from third hole, from Howard Plewes, to Harvey McLeod, to George Warnock:

- The clay is thicker was thicker at 7 feet, at a depth of 38 to 45 feet.
- In the middle of the clay, there was a 1.7 ft zone of clay which exhibited no laminations and had very slow undrained shear strength (PP=0). This could represent the main shear plane where the laminated structure has been destroyed and the clay lost strength due to its sensitivity.
- Above this layer, the laminations of the clay were inclined at angles up to 30 degrees. Below the layer, the laminations showed evidence of buckling perhaps due to drag. The undrained shear strength of these zones was measured to be slightly less than observed in the free field.

The till above the clay unit was felt to be similar to that seen at the dam toe, with some degree of softening above the clay unit (also seen at dam toe). The depth of fill above the foundation was 16.5 feet and pieces of geotextile were encountered at the contact with the native ground.

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 6pm Sep 30th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Sep 30 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1800	END: Unknown
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Present:

Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Primary Investigator
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Steve ROTHMAN – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Responded to a media request, working communications.
 - Discuss communications, 'statement of facts' from CIM? (Misinformation or partial information in media)
- Doug ABLETT and Art FRYE are on an 8 days on/6 days off rotation so that there will always be someone onsite as a manager under the act, even when Dale REIMER is not on site.
- Hooking up pumps from the upside of the satellite dyke and main dykes, will be pumping up to the main berm dyke, then up to the barge sump which will pump up to springer pit.
- Elevations for the main dyke at its lowest elevation
- Discussed drilling progress
- [Privileged] Hope to distribute data as it comes in, to the panel and the company (raw data/logs only, no analysis). WARNOCK discussing with legal (Karen TANNAS), but there may be implied obligations.
- Update on the pumping – all pumps running full out today, in 7 days, 21cm down Polley Lake.
- Phase 4 construction ongoing, not many trucks/1 bulldozer
 - Put 11700 tonnes in phase 4, 4500 tonnes in phase 5.
- Should have the ditch bridge finished today, but don't believe that they will be opening the bridge.

- Both drills working now, building pads to keep ahead of the drills to facilitate drilling
 - Putting in rock fill for the drill to sit on, using pipe to drill through to protect the piezometer wires.

Notes supplied by ROTHMAN and Grant FELDINGER:

- Currently working on the Breach Haul Road, construction currently ends above central collection sump
- Upstream 1 – intake in place including pipe. Electrical not hooked up yet.
- Upstream 2 is ready to go
- Settling pond intake lowered into place today, electrical not hooked up yet
- Slurry pump 1 – 2 pumps in place, electrical not hooked up yet
- Central collection sump – Peterson Contracting expanding pit, 2 more pumps and building to be put in
- Polley Lake pumps – 8 pumps running, both pipes 100% full
- Drilling:
 - 3 holes completed
 - 2nd drill rig on site and set up
 - Both rigs on east side of breach
 - Pad construction ongoing
- Breach sump intake working well – no discharge down Hazeltine after rain storms yesterday
- Main Dyke lowest point – 951m
- Old Dam height was 970m
- Water from upstream of satellite dyke will be pumped to upstream side of main dyke from there to the Barge Sump to settle out solids. From Barge Sump water will move to central collection sump.

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm Oct 1st via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREECH Investigation

BRIEFING MINUTES

DATE: Oct 1 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1700	END: Unknown
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Present:

Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Primary Investigator
Tania DEMCHUK – Mount Polley Project Manager
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Steve ROTHMAN – Site Inspector
Grant FELDINGER – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Working on investigation strategy, file management strategy
- Receiving feedback from engineering consultants, some legal counsel has been requested from some of the consultants
- Briefing and meeting with FOI, discussing scope and strategy
- WARNOCK's briefing of the Minister this morning, notes attached.
- Looking down the road for updating Q&A documents, STAR reports, development and management of the file
 - Will have to disclose at some point for FOI
- Received confirmation and approval for the ER3 database, will meet Friday
- Budget relating to Mt. Polley – site investigation, regular ongoing investigation, and dam safety inspections. Trying to capture costs relating to Mt. Polley.
 - KCB submitted one estimate so far for site investigation, 2 more components to follow.
- Ryan BROWN (MPMC) has sent an email summarizing their plan instead of the breach sump – should we be looking for something more formal in terms of a NOW?
 - Change in the plans, DEMCHUK to send to WARNOCK and ROTHMAN
- Call with MOE, Hubert summarized thoughts on the Monday tour
 - Noted that Don PARSONS was pointing out things like tilted strata at the breach site

- Don PARSONS (MPMC) giving the company's impression and putting the message out there
- FN group was quite adamant that they be allowed to go down and see that area
- ROTHMAN and FELDINGER Toured site with Dave CARPENTER
 - Blast pattern
 - Good system
 - Reviewed pumping system to the settling pond (barge sump), pumps going well, 3-4 generators showed up today for pumping systems
 - Creating weir for settling ponds, lined with non-porous material
- Polley lake discharge: 8 pumps running, both lines full
- Peterson still enlarging central collection sump
- Still working on the roads and bridge
- Drilling in hole F, pulling material back because there were some tension cracks in the dyke
- Set 4 piezometers so far, completed 4 holes and moved to the 5th
- Polley trucks still hauling for breach haul road, completing access road to drills
- Still working on Phase 4 and Phase 5
- KCB would like an extra drill hole, may come in with an extra rig
- Steve asked to go with the MOE minister on Friday and attend a lunch to help the Minister answer any questions on mining.
 - Hubert passed along some details on this to Tania DEMCHUK
- Still working out Helicopter protocol (NOTTAM)– KILOH to follow up with Transport Canada

Highlights from MPMC/MOE/MEM 3:00 pm phone call October 1, 2014:

- Weather: mixed sun and overcast with minor thunder showers
- Polley Lake level: 922.21 m above sea level (down a total of 1.10 m)
- The site has re-evaluated their recent notice of work submission and changed the plan. They will now construct the road as proposed and a 10,000 m³ breach sump with a channel to discharge to the till borrow. The till borrow has sufficient capacity to hold major rain events.
 - This updated information has not been presented in a formal notice of work.
 - MOE has requested details of the 24 hr 1 in 10 year rain event to support the design of the channel.
- Gavin Lake Rd bridge is complete. Ditch Road bridge is 90% complete.
- Quesnel Lake still being described as light green in colour.
 - Sampling ongoing. Continuous monitor has been removed from the Quesnel River because of risk of freezing (this equipment cannot freeze)
- Next Community Meeting in Likely is October 9, 2014

Briefing to Minister Bill BENNETT – October 1, 2014

The following summary includes highlights from the October 1, 2014 meeting attended by Minister Bill Bennett, the MO, the PO, and MEM staff. The purpose of the meeting was to discuss issues raised in the media surrounding the findings of the 2010 Dam Safety Inspection report. There was also a general discussion around what comprises an MEM geotechnical inspection, and what is being done to investigate the breach at Mt. Polley. Findings of the investigation, or anything deemed germane to the cause of the breach were not discussed.

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm Oct 2nd via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 2 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1700	END: Unknown
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Present:

Haley KUPPERS – Primary Investigator
Rolly THORPE – Deputy Chief Inspector
Tania DEMCHUK – Mount Polley Project Manager
George WARNOCK – Manager, Geotechnical Engineering
Steve ROTHMAN – Site Inspector
Emmanuel PADLEY – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Media request this morning, HOFFMAN did a live video interview
- Discussed Ling-Jarvis points, determined that nothing has changed
- Discussion on Mt Polley proposal for tailings dam repair, Kim BELLEFONTAINE and WARNOCK to follow up with site
- Call this morning with EMBC
 - Main thing was the weather forecast, rain coming in tomorrow and possibly early next week
 - Polley Lake level is 922.14, 1.16m decrease since pumping started
 - Continuing building haul road that will cross in front of the breach
 - Open house next Thursday Oct. 9th
- WARNOCK and Harvey MCLEOD to visit site on the 15th preliminarily
- Soil logs released today, going through company and from company to panel
- Investigation team to back away
- Explosives team today, blasting at 4, drilling shutting down for half an hour on each one of these blasts, happening over the next 8 days
- Starting to freeze overnight
- Sonic drill down most of the day, cylinder failure that needed repairing
- BGC still to give permission to go into hole G
- Tailings access road still building, 100m left until they meet where the Peterson haul road is above the main sump.

- NOTTAM: blaster said it would take three months to get one put in
- Tomorrow, Helicopter tour, ROTHMAN to be on the helicopter to ensure it is not in the area for 30 minutes while blasts are cleared. ROTHMAN also to take some pictures for updated aerial shots.
- Pumps from Polley lake and Hazeltine creek, two full pipes all day long
- Concern about trenching in freezing temperatures
- Tomorrow, meeting on ER3 database and speaking with legal counsel
- No call tomorrow, to meet Saturday at 5 instead

OLD BUSINESS

No items discussed.

NEW TASKING

- KUPPERS reviewing Dam Safety Reports, Annual Reclamation Reports for FOI and possible harms to the investigation
- KUPPERS drafting response to Bill SMART
- Follow-up on ER3 database, attending meeting with shared services and RCMP

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm Oct 4th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 4 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1700	END: Unknown
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Present:

Haley KUPPERS – Primary Investigator
George WARNOCK – Manager, Geotechnical Engineering
Joe NICHOLSON – Site Inspector
Emmanuel PADLEY – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Steve ROTHMAN was busy today with the Minister of Environment today, participated with Helicopter ride and meeting in Williams Lake.
- One sonic drill down for repairs
- NICHOLSON first time on site, spent much of the day orienting with the site and people onsite
- Some rain last night, quite muddy and wet on site today
 - Didn't overly affect activities
- Looked at drilling today, on the sixth hole, trying to move equipment out by tonight because they hope to do some seismic blasting tomorrow
- Central sump down today, actually popped the seal on the line so they were putting that back together again and were certain they could get it back up and running by end of day
- Two full pump lines discharging from Polley Lake today
- One report behind for lake water levels and tonnage, will need to do two tomorrow
- Pretty well finished the dykes but continuing to do slope stabilization and adding material inside the tailings area itself
- Setting up the pump, starting to commission the pumps inside the tailings off the satellite dyke, test running them today, to update again tomorrow.
- Spoke with Art FRYE, he is the weekend manager onsite this weekend
- Main Dyke Advancement
 - Volume = 18,221 cubic meters
 - Tonnage = 36,442 tonnes
- Polley Lake Water Elevation (Oct 4 - 7:20am)

- Current = 922.09
- 24-Hour Change = .01m
- Cumulative Change = -1.21m

Highlights from MPMC/MOE/MEM 3:00 pm phone call October 3, 2014:

Weather: expected to improve for Saturday and chances of showers for Sunday/Monday.

- Polley Lake level: 922.10 m above sea level (down a total of 1.2 m)
- Main Dyke advancement:
 - Volume = 15,629 cubic meters
 - Tonnage = 31,259 tonnes
- Breach area access road route has been modified to accommodate geotechnical investigation areas.
 - An updated notice of work reflecting the road and sump modifications has been requested from the site and is expected early the week of October 6. This is expected to include a figure with current water management practices as well.
 - MOE has requested details of the 24 hr 1 in 10 year rain event to support the design of the channel.
- Quesnel Lake has become more turbid and there is some indication that the thermocline is weakening. A turnover event may be occurring, influenced by recent strong winds on the lake
 - Sampling efforts were increased for October 3.
- Hazeltine Creek is picking up a large sediment load as it passes through the canyon area. This is a concern for MOE.
- Next Community Meeting in Likely is October 9, 2014

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm Oct 5th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 5 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1700	END: Unknown
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Present:

Haley KUPPERS – Primary Investigator
Al HOFFMAN – Chief Inspector
George WARNOCK – Manager, Geotechnical Engineering
Joe NICHOLSON – Site Inspector
Emmanuel PADLEY – Site Inspector
Naomi Hemphill – Project Coordinator, Scribe

OVERVIEW:

SITE INSPECTORS

- Very foggy on the site today
- Attended a meeting with the pit operations today
- Met with the frontier geoscience gang, they planned four spreads, 20 of 26 planned seismic blasts left
 - Having a difficult time coordinating – 45 minutes to do each blast, and drills must be cleared out of the area entirely each time they blast.
 - Unsure who is in charge or coordinating between blasting and drilling
 - Onsite inspectors witnessed blast today, was uneventful
 - To follow up on drilling and blasting schedules for timing and practicality coordination
- Both pipes flowing well out of Polley Lake today
- Looked at slope stabilization at phase 4 and phase 5
 - To look at the material
 - Leaving some holes for water collection with the possibility to transfer to Upstream 2
- Looking to reduce the pump size as the pump power in upstream 2 is oversize
- Went down to ditch bridge with Imperial Metal supervisor, about 26 people from various contractors doing work around the ditch bridge
- The sonic drills and the rotary drills were idle today, as it was their day off
- Lake elevation down 1.25 metres today as of this morning
- Unable to provide tonnage they have done over the last couple of days, working on revising the program so that they can get those numbers.

- Panel will want to do some of their own drill holes, not sure of the placement or timing. Won't be repeating hole drilling but want further holes downstream of the dam
- Big hurry to have the samples taken down to the city to be analyzed tomorrow (not good to let soil samples wait too long before analysis).
 - Art FRYE to drive down to the city with some of the core samples, to Burnaby by Monday morning, 8am
- Main Dyke Advancement
 - Volume = 20,666 cubic meters
 - Tonnage = 41,332 tonnes
- Polley Lake Water Elevation (Oct 5 - 7:10am)
 - Current = 922.05
 - 24-Hour Change = .04m
 - Cumulative Change = -1.25m

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm Oct 6th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 6 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1700	END: Unknown
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Present:

Haley KUPPERS – Primary Investigator
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Caroline NAKATSUKA – Manger, Occupational Health and Safety
Joe NICHOLSON – Site Inspector
Emmanuel PADLEY – Site Inspector
Steve ROTHMAN – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Michelle HYNES came on today, updated communications team and discussed communications strategy
- Discussed the Jarvis points, determined that we have not crossed the Rubicon
- Open house meeting on Thursday, what is the communications strategy for that meeting
 - Kim BELLEFONTAINE to put together posters as Tania DEMCHUK is out of town this week
 - Working with communications group to update Q&A sheets and updates for the onsite inspectors to review before the meeting
 - Use common sense and keep in mind confidentiality of information
- WARNOCK spoke to Harvey MCLEOD and decided to ask their questions at the update meeting tomorrow, will have further comments then
- ROTHMAN asking WARNOCK to follow up with drilling, seeing some opportunities for efficiencies
- Polly lake pumps all running, both pipes full
- Toured the white pit on the surface, underground
- Trucks hauling to the tailings access road (TAR) to see how much clearance they will have between the trucks and the power lines
- The sonic drills finished hole 7, set up for hole 8
- Rotary drill finished hole 3, set up on hole 4

- Frontier Geoscience blasters not onsite today, to return on the weekend to do tests when drillers are not onsite
- Did some work on upstream 2, put in two 10 horsepower pumps
- Onsite inspectors to spend some time at upstream 2 tomorrow to do some oversight
- 922 – 1.3 m above the failure day
- 41332 tonnes today
- Dam stabilization continuing phase 4 and may have completed phase 5
- Update on meetings last week
 - Meeting in Likely - some difficulty with public dissatisfaction and public distrust on the subject of water quality, heated exchanges
 - Meeting in Williams lake – public interested in getting ditch road opened and lifting emergency measures, but road being used for hauling rock, difficulty with articulated trucks and lack of radio communication
 - Road not holding up well to “wiggly” articulated truck use, would be difficult for public use
 - Trend of residents looking to gain access to the road, some instances of residents attempting to gain access despite gates
 - Concerns about tourism
- Sal BAFARO (MPMC) gave Joe NICHOLSON table including recommended updates on emergency response plan, will follow-up tomorrow

Highlights from MPMC/MOE/MEM 3:00 pm phone call October 6, 2014: (Kate and BGC contractor for MPMC, Hubert BUNCE and Gabi for MOE)

- Weather: few showers over the weekend, no significant runoff; expect good weather this week
- Polley Lake level: 922.05 m above sea level (down a total of 1.25 m)
- All pumps working at full capacity ~ 20,000gpm
- Bridges over Hazeltine (2?) have been installed; surveyors are laying out sediment ponds in Lower Hazeltine,
- MOE concerned with sediment releases for during construction of ponds; company assures mitigation materials are on site (i.e silt fences, hay bales)
- Silt curtain still performing as designed; notable difference in colour of lake on either side curtain
- Windy weather this weekend kept lake crews from collecting all samples; turbidity is still 5-6 NTU in parts of the upper level of the lake likely caused by wind churning up the water. Do not think the lake has turned over yet. Turbidity noted at creek to be less 2-3 NTU.
- Expect updated weekly report from MPMC
- Community Meeting in Likely is October 9, 2014

OLD BUSINESS

- Blog – issues on blog that were not verified(?). Blogger speaking with Panel member in a social venue.
- KUPPERS – coordinate ER3 + RCMP, responding and following up on engineer interview letters.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm Oct 7th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 7 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1700	END: Unknown
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Present:

Haley KUPPERS – Primary Investigator
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Caroline NAKATSUKA – Manger, Occupational Health and Safety
Joe NICHOLSON – Site Inspector
Emmanuel PADLEY – Site Inspector
Steve ROTHMAN – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Continue to work on the investigative strategy, process for bringing in ER3 database, all ongoing
- No updates from WARNOCK
- Blue ribbon panel up at the mine site today, bringing another rig in
- 62 people out on the mine site today total, including scientists and First Nations
 - Total includes contractors and visitors
- Blast at 2:15 that went fine
- NICHOLSON reviewing ERP with Sal BAFARO (MPMC), took some notes on the draft and included in log book
- Sonic drills on hole 8, rotary on hole 4
- Polley lake discharge good, two full pipes
- Permanent ditch for Polley lake might be 1-2 weeks before the plan comes out
- Crew change today, new crew tomorrow
- Polley Lake Water Elevation (Oct 7 - 7:48am)
 - Current = 921.96
 - 24-Hour Change = -.04m
 - Cumulative Change = -1.34m
- Oct 6 Main Dyke Advancement
 - Volume = 18,298 cubic meters
 - Tonnage = 36,596 tonnes

Highlights from EMBC Call October 7, 2014:

- Weather: expect showers Tuesday and Wednesday and cooler air and more showers over the weekend – up to 30mm rain possible later in the weekend. Freezing levels are dropping, frost expected in valleys. Lake samplers should be aware of potential stormy and windy conditions early next week.
- Polley Lake level: 921.96 m above sea level (down a total of 1.34 m)
- Breach area access road route has been modified to accommodate geotechnical investigation areas.
- No discharge to environment is occurring from TSF.
- Proceeding with Phase 5 of Satellite dyke. Have approximately 100,000 tonnes more rock to be deposited before complete.
- MPMC planning a small road extension towards Polley Lake for plug stability assessment work.
- Quesnel Lake sampling continues. Lake is still green colour. Choppy conditions prevented sampling in one location. Debris clean up on lake continues.
- Several agencies missing on the call; no FN groups. Few updates other than from company.
- Decision made by EMBC to decrease calls to once a week on Tuesdays. Next meeting October 14.
- Next Community Meeting in Likely is October 9, 2014.
- Ling Jarvis – spontaneous discussions around Ling-Jarvis.
 - Suspicions and grounds? (criminal sense)
 - Geotechnical support?

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm Oct 8th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, HALEY KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 8 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1700	END: Unknown
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Present:

Haley KUPPERS – Primary Investigator
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Caroline NAKATSUKA – Manger, Occupational Health and Safety
Joe NICHOLSON – Site Inspector
Emmanuel PADLEY – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Discussed the Jarvis points, determined that we have not crossed the rubicon
- Call with WARNOCK, update and discussion of the Geotechnical investigation
- Tomorrow we will be receiving the relational database ER3
- Dale REIMER inquiring about interview dates – investigation team still uncertain
- Follow-up on Steve ROTHMAN's question on logging core – drillers happy with the pace, don't believe another logger is necessary
- Fairly uneventful day onsite
- New crew came on today
- Polley Lake intake – all pumps running, both lines full
- Breach area – dozer starting into the area, marking for some pads
- Installed culvert on the other side of the road where the discharge was
- Central collection sump works continuing
- Sonic drill completed hole 8, started hole 9
- Rotary drill finished hole 4, onto hole 5
- Truck hauling to the main dyke, phase 5 of slope stabilization
- Two posters to be provided for community meeting tomorrow, will be delivered by Hubert BUNCE

Highlights from MPMC/MOE/MEM 3:00 pm phone call October 8, 2014: (Kate and Greg,(BGC contractor) for MPMC, Hubert BUNCE and Gabi for MOE)

- Weather: reasonable, still mild
- Polley Lake level: 921.96 m above sea level (down a total of 1.34 m); nearing normal levels so company is thinking they may be shifting into maintenance mode soon.
- Have added a second pump to center control pond, which is being expanded,
- Rock berm in east gully nearing completion
- Starting haul road to access plug area. Once east rock berm complete will start using rock trucks to help build out this road over the plug,
- BGC starting testing in plug area for design considerations for diversion ditch
- Plume appears to be migrating easterly, company doing profiling and additional surveys. There has been no change in the plug one way or another in terms of NTU.

Highlights from MOE/MEM 4:00 pm phone call October 8, 2014: (Hubert BUNCE only)

- MOE has their Environmental working group meeting tomorrow in Williams lake with First Nations.
- MOE is expecting to finalize the Sediment and Erosion control plan with the company by Friday; looking for contingency i.e. triggers to be included for when additional samples may be required
- MOE is continuing their benthic sampling in the Quesnel and Fraser Rivers.

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm Oct 9th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 9 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1700	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
 Cheryl POCKLINGTON – File Coordinator
 George WARNOCK – Manager, Geotechnical Engineering
 Caroline NAKATSUKA – Manager, Occupational Health and Safety
 Joe NICHOLSON – Site Inspector
 Emmanuel PADLEY – Site Inspector
 Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Discussed Jarvis questions, determined that we have not crossed the Rubicon7
- Received the ER3 database today, servers arrived from the RCMP and we are getting it set up
 - Haley KUPPERS, POCKLINGTON, and HEMPHILL to receive training next Wednesday, Doug KILOH to accompany
- Still getting a lot of external requests for information
 - Expect there to be continued pressure to release reports
- Followed up on the electrical issues identified by Rory CUMMING – PADLEY confirmed that they have been working on some of the issues CUMMING identified
 - Grounding and ground testing at substations – put in more ground plates, for example.
 - Working on ground fall protection for the pumps, tested last night
- Orientation for new drills coming in today, PADLEY and NICHOLSON attended
- One of the Geotech drills has wireless remote control, asked Greg MCLEAN to take a look at it to see if it needs a kill switch or not
- Polley lake intake, 3 pumps running, 5 idle, 1 pipe full
- Lockout procedures with new drills coming onsite
- 3 drills with 3 drill companies onsite
- Working on the TAR road, put a culvert in to direct overflow to sump (to be put in) rather than Hazeltine Creek

- Looking at preliminary work to move discharge from Polley lake to another creek, need to get First Nations approval
 - Working on diversion ditch to go into Hazeltine creek, MOE pushing to divert water away from Hazeltine (second option) to allow work to be done while it is dry
- Public meeting tonight
- Golder geotech is onsite now as well
- No update calls Sat/Sun

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm Oct 10th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 10 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1700	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Cheryl POCKLINGTON – File Coordinator
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Joe NICHOLSON – Site Inspector
Sandy GILLIES – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Discussed Jarvis Points, determined that we have not crossed the Rubicon
- Signed TOR, once the deputy has a copy we will circulate to investigative team
- Briefing the deputy minister on Tuesday, to give him an idea of the complexity of the investigation and the necessity of maintaining an onsite presence to ensure safety of workers during remediation work
 - To determine when we can reduce presence – once freezing occurs and Polley Lake is back to level perhaps.
- Working on executive briefing presentation for Tuesday today
- Planning next set of interviews with engineering consultants and senior company employees (executive officers and mine managers)
- No update on drilling today, WARNOCK to meet Harvey MCLEOD onsite Tuesday and Wednesday, will be passing off preliminary slope stability analyses
- Report summaries on all 280 reports from KCB today, just a few blurbs on reach report. WARNOCK has done more detailed summaries on key reports. Some are not relevant.
- Panel doing some additional drilling, have already mobilized 2 new drill rigs to the site (13 holes planned but the number will depend on findings)
 - Sandy GILLIES to look into remote control on drills this weekend
- Aiming to be finished mid-November – depends on efficiency and breakdowns, but getting roughly one hole per day so they may beat that deadline
- Back up to 7 pumps at Polley intake, both discharge pipes full

- Finished work to main dyke, phases 4 and 5 for now
- Rotary drill still drilling on hole 6, had to pull off and demobilize for seismic this weekend
- Sonic drill finished hole 11, started hole 12 or 21 in total.
- Sumps all working
- Peterson Contracting still enlarging central collection sump, culvert in place, will tie in pumps and pipelines next week
 - Spotter in place, will have more of an automatic system for next week
- Lake elevation is -1.43m down, planning to shut down to 3 pumps tomorrow morning and 3 pumps all weekend - nearing target (1.7)
- Town hall meeting was interesting, 60-70 people there, 3 uniformed RCMP officers from Williams Lake attending
- Started out as open house, some people there trying to turn it into a town hall meeting
- MPMC had a PowerPoint presentation, Golder Associates Engineering had a presentation on water sediments and turbidity
- ADM for MOE spoke briefly on the environmental aspects of the investigation
- Ended around 9:30, some members of the public

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm Oct 13th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVEIWD BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 14 2014	LOCATION: 1810 Blanshard, Conf call	START: 1700	END: Unknown
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Present:

Al HOFFMAN – Chief Inspector
 Rolly THORPE – Deputy Chief Inspector
 Haley KUPPERS – Primary Investigator
 Cheryl POCKLINGTON – File Coordinator
 Steve ROTHMAN – Site Inspector
 Sandy GILLIES – Site Inspector
 Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Discussed Jarvis Points, determined that we have not crossed the Rubicon.
- Briefed the Deputy Minister this morning, using executive briefing v1.2
- Writing up job descriptions for the two positions that will be coming in to help support database management. To move forward with job descriptions and get them classified.
- Will need onsite presence probably for another month, will reassess as activities slow, pending information from meeting tomorrow.
- WARNOCK and Harvey MCLEOD to arrive onsite tomorrow, in Likely tonight.
- Training ER3 system tomorrow at the RCMP headquarters in Surrey. KUPPERS, POCKLINGTON, HEMPHILL, and KILOH to attend.
- Rain onsite today
- Last day of crews shift today, safety reminder for fatigue of MPMC employees
- 1 pipe 7/8 full, 3 pumps pumping, will maintain 4 pumps (3 and 1 spare).
- Demobilizing 4 pumps tomorrow due to cost, may bring them back for the spring.
- Going to seismic blast two blasts today, but they were cancelled
- Tailings access road 150m past breach sump
- Surveyors laying out 4 more drills tomorrow

Highlights from EMBC Call October 14, 2014:

- Weather: expect showers during the week, drier Friday through Sunday with increasing windy conditions.
- Polley Lake level: 921.80 m above sea level (down a total of 1.5 m)
 - Currently only half of the pumps (one pipeline) is running in an effort to minimize erosion in the Hazeltine Creek Channel. They were able to keep up with the rain event last night with this reduced pumping capacity.
- No discharge to environment is occurring from TSF.
- The road in front of the breach area is nearly complete and a small road extension towards Polley Lake for plug stability assessment work is underway.
- Quesnel Lake sampling continues. Lake is still green colour. Choppy conditions have slowed sampling. Debris clean up on lake continues, burning of small debris piles along the shore will happen this week.
- Several agencies missing on the call; no FN groups.
- Cariboo Regional District will continue the local state of emergency to maintain ongoing access restrictions.
- These calls are now once a week on Tuesdays. Next call is Oct. 21.

Summary of Site Investigation Meeting – October 14, 2014 @9:30AM

Attendees: Howard PLEWES (KCB), Harvey MCLEOD (KCB), Luke MOGER(MPMC), Terry ELDRIDGE (Golder), George WARNOCK (MEM), Dirk CAN ZYL (Expert Panel)

KCB

- 10 of 20 planned sonic holes are now complete. Estimated 15 days left to complete the remainder.
- 5 soil logs have been distributed, the remaining 5 should be complete this week.
- 5 of 17 CPT holes are complete. This work is taking longer than anticipated due to longer dissipation rates above and below the GLU (dissipation tests are used to determine hydraulic conductivity and other parameters).
- Vane shear testing was completed last week in hole SH14-03 (hole E).
- Four inclinometers have been installed, but not yet read.
- New piezometers are being read every 1-2 days.
- Lab testing is ongoing. Three samples indicate high plastic clays (CH).
- A test trench intersecting the upper GLU is no longer under consideration (too deep).

MPMC

- Frontier Geophysics worked on seismic lines over the weekend, but some work remains.

- MPMC will distribute CPT testing and geophysical data when available.
- First of 5 holes by Thurber/Panel to start today. Drill was on site last Thursday, but was down due to compliance issues.
- New access road now extends across breach. There will be light duty vehicle access by this evening.

Golder

- Starting consolidation testing, simple shear tests planned. Data will be distributed when it is available.
- Golder personnel on-site periodically.

Panel

- Shelby tube samples are planned.
- Mapping report almost ready for distribution.
- Decision on distribution of remaining data will be made this week.

MEM

- WARNOCK and MCLEOD to attend site this week (Wednesday) to review drilling and other Site Investigation work.

OLD BUSINESS

No items discussed.

NEW TASKING

- KUPPERS, POCKLINGTON, HEMPHILL, and KILOH: Training ER3 with RCMP
2014-10-15

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm OCT 15 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 15 2014	LOCATION: 1810 Blanshard, Conf call	START: 1700	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Rolly THORPE – Deputy Chief Inspector
George WARNOCK – Manager, Geotechnical Engineering
Heather NARYNSKI – Senior Geotechnical Inspector
Doug KILOH – Major Case Management Consultant
Steve ROTHMAN – Site Inspector
Sandy GILLIES – Site Inspector
Rory CUMMING – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- ROTHMAN spoke to Dale REIMER (MPMC) about pumps on Polley Lake – mine is being pushed by MOE to eliminate all pumps on Polley lake to stop discharge on Hazeltine creek
- Access roads both progressing
 - Polley Access and Tailings Access roads are both progressing
- Power lines being moved to accommodate changes to traffic patterns – drills, piezometers, access roads to toe of dam, berm, etc.
- Central collection sump no longer pumping until water level rises
- Settling pond sump – finally overflowing, will be some time before water level rises enough to pump.
- Moving a lot of material right now to finish roads
- Drills all working today
 - 1 hole set with 3 piezometers, started on next hole, had to leave due to bear activity today
- WARNOCK viewed tension cracks onsite with Harvey MCLEOD
 - Cracks are located on the outside edge of the rock shell (C Zone), typically 1-2m from the outer berm.

- There are two sets of cracks, separated by a distance of approximately 250m.
- The two sets of cracks are approximately 130m and 40m in length.
- Cracks show little horizontal separation (up to 10mm) and no discernible vertical drop.
- Rockfill is at the angle of repose and has a relatively high proportion of fines.
- The cracks have been painted orange and eight sets of pins have been established to monitor movement rates.
- Pressure from FOI to release previous dam safety reviews, may need to discuss how it could affect future interviews or information, as well as the rest of the investigation
- Volume, time, approach, perception, document concerns
- Possibility of releasing statement by AI to address some of these concerns?
- Public expectations for outcomes can be affected by our release or non-release of documents
- Discussed communication and document release concerns
 - Michelle HYNES to identify triggers
 - Put together Just fact sheet of common questions (FAQ sheet)
 - a few questions
 - Need to message up to Deputy Minister and Assistant Deputy Minister
- Training received by RCMP for ER3

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm OCT 16 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 16 2014	LOCATION: 1810 Blanshard, Conf call	START: 1700	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Cheryl POCKLINGTON – File Coordinator
Rolly THORPE – Deputy Chief Inspector
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Laurie MEADE – Site Inspector
Sandy GILLIES – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

SITE INSPECTORS:

- Freezing temperatures this morning
- Attended morning lineup
- Drilling progressing well
- 4 pumps running at Polley Lake today, 1 full pipe at Hazeltine
- Central collection sump now in full operation
- TAR and PAR roads used for two of the walls for the breach pond, on the other side of the breach pump as a contingency for the breach sump
- Drill hole DH14P thought to be too close to the edge of the breach, has been moved about 9m from its original position, approved by Luke Moger and consulted with KCB
- Some concern about the confidentiality of documents and document management for consultants in the house conference room in Likely.
 - WARNOCK to follow up, look into getting a key for that room
- Bryan OKE to be onsite tomorrow, GILLIES will be offsite
- Conversations about communications plans for releasing reports today, hoping to have a final communications plan tomorrow

- Briefing on meeting with Imperial Metals, both investigative group and David Morel, to work on consultations with First Nations and outline process moving forward for Imperial Metals
- Received follow-up request from office of Privacy Commissioner, Tania DEMCHUK to follow-up
 - Previous advice is to provide that information
 - Will send reminder to maintain confidentiality
- Onsite inspectors and KILOH following up on helicopter in breach area
 - May not need NOTTAM, may be sufficient to do a visual check
- Consultant letters to be reviewed and sent out hopefully this week
- Discussed *Jarvis* questions, determined that we have not crossed the Rubicon
 - There is some evidence that errors may have been made but they do not appear to constitute a contravention of the Act, Code, or Permit Conditions at this point in time
- Breach Access Road (TAR)
 - Advancement = 43.85 meters
- Plug Access Road (PAR)
 - Advancement = 52.165 meters
- Polley Lake Water Elevation
 - Current = 921.79 meters
 - 24 Hour Change = 0.01 meters
 - Cumulative = 1.51 meters
- Discussion – should we focus on regulatory role to get rebuild done versus looking/considering prosecution of any type?

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm OCT 17 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 17 2014	LOCATION: 1810 Blanshard, Conf call	START: 1700	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator
George WARNOCK – Manager, Geotechnical Engineering
Harvey MCLEOD – Geotechnical Engineering Consultant
Doug KILOH – Major Case Management Consultant
Cheryl POCKLINGTON – File Coordinator
Rolly THORPE – Deputy Chief Inspector
Tania DEMCHUK – Mount Polley Project Manager
Laurie MEADE – Site Inspector
Bryan OKE – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Art FRYE to be onsite this weekend as the weekend site manager
- Investigation team doing prep and strategy for the investigation
 - KUPPERS, HEMPHILL, KILOH, MCLEOD, and WARNOCK to proceed next week with interviews in Vancouver
- WARNOCK has followed up on the room in likely, has been locked and will continue to be secured
- Luke MOGER replied to WARNOCK email on the tension cracks yesterday (Oct 16); AMEC has been made aware of the cracks and they were observed yesterday by their representative on site. Golder and BGC representatives have also observed the cracks.
 - The most recent daily report (October 15) indicates that readings on the eight sets of monitoring pins indicate no displacement since their installation
- HOFFMAN comments on as-built plans and section views of the dam, nomenclature has changed, some questions around this.
- Sent responses to AMEC, KP, and Mt Polley Management on their responses to our first letters.

- Work continuing in lower Hazeltine Creek, working on two settling ponds (one completed archaeology assessment, one nearing completion)
 - Next week, expecting to see plan for upper Hazeltine area, will likely include some information for discharge from Polley Lake
 - Moving powerlines down around the breach area towards the discharge

SITE INSPECTORS

- Onsite at 5:30, windy and dry
- Work continuing on the breach pond on the other side of the TAR
- Disassembling the secondary discharge line from Polley discharge
 - Onsite inspectors spoke to management to ensure they were using blocking
 - MEADE and DEMCHUK to follow up – Tania had been under the impression that they would be leaving the second pipeline in place
 - MEADE to speak to Art FRYE
 - DEMCHUK to email Colleen HUGHES
- Continuing discussions on communication between workers and shifts

Highlights from MPMC/MOE/MEM Call October 17, 2014:

- Weather: Very windy, currently dry, forecast is dry through the weekend. Wind warning starting Saturday afternoon.
- Polley Lake level: 921.79 m above sea level. Now running 4 pumps on one pipeline to maintain (or slowly reduce) the lake level. Some ongoing discussion about Polley Lake turnover and if keeping the lake level slightly higher than historical may be helpful. Site and MOE are in discussion about this.
- Breach area access road and road into impacted area to access Polley Lake plug are progressing.
- No discharge to environment is occurring from TSF.
- Quesnel Lake sampling continues. Wind is hindering access.
- Next Community Meeting in Likely is October 25, 2014 and will be as a site tour.
- Breach Access Road (TAR)
 - Advancement = 0.00 meters
 - *Waiting on powerline to be moved
- Plug Access Road (PAR)
 - Advancement = 127.13 meters
- Polley Lake Water Elevation
 - Current = 921.79 meters
 - 24 Hour Change = 0.00 meters
 - Cumulative = 1.51 meters
- From the MOE call:

- MOE has been generally updated regarding MEM's meeting with Imperial about plans for TSF breach closure and the proposed process around that.

OLD BUSINESS

- KUPPERS reviewed draft letters responding to engineering consultants and Bill SMART.
- POCKLINGTON will be attending File Coordinator training at RCMP training centre in Chilliwack 2014-10-20 to 2014-10-24.

NEW TASKING

- MEADE to speak to Art FRYE regarding removal of second pipeline
- DEMCHUK to email Colleen HUGHES regarding removal of second pipeline

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm OCT 20 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 20 2014	LOCATION: 1810 Blanshard, Conf call	START: 1700	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator
George WARNOCK – Manager, Geotechnical Engineering
Harvey MCLEOD – Geotechnical Engineering Consultant
Doug KILOH – Major Case Management Consultant
Cheryl POCKLINGTON – File Coordinator
Rolly THORPE – Deputy Chief Inspector
Tania DEMCHUK – Mount Polley Project Manager
Laurie MEADE – Site Inspector
Bryan OKE – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- DEMCHUK preparing for senior Officials Meeting tomorrow
- Follow-up with respect to FN engagement requirements
- Update from site, constructing the Plug access road, the road across the breach area still on hold
- Turning off Polley lake pump today to allow work downstream
- Second Polley lake pipeline – pipeline being removed in areas where it is in the way of other activities, but leaving the pipeline in other areas intact. Will be put back in, not being removed entirely. DEMCHUK received confirmation verbally from Ryan BROWN.
- Monitoring program continuing on Quesnel lake, but windy conditions have made the sampling conditions more variable
- Working with DFO to develop sampling protocol for winter so they can safely sample in stormy conditions
- 921.77 Polley Lake level, continuing to monitor that
- Investigation group in Vancouver preparing for interviews with engineering consultants, including KP, AMEC, BGC the rest of this week

KUPPERS

- Preparing interview strategy, questions, background information for interviewees

POCKLINGTON

- File Coordinator foundations training this week in Chilliwack and will pass along information throughout the week
- First learnings:
 - Ensure that speed flow and direction of investigation remains objective, and manage information
 - Managing what will be drawn into ER3

SITE INSPECTORS

- Dry and windy onsite, 5:30 onsite
- Sat in on shift change, discussion about radio conversation, close call with a backing truck and a shovel (may have made contact with a truck and the shovel while the bucket was on the ground). Full investigation today but the onsite inspectors are not yet aware of the outcome.
- Spoke to Golder – plug at Polley Lake 1-2m in thickness, quite stable, they are not concerned
- Art FRYE was at the bottom half of Hazeltine all day, did not speak with.
- Dale REIMER discussed reinforcing the tailings plug, has not confirmed a plan yet
 - TAR to be reinforced over the plug area
- Spoke to person in charge of the pumps – said it would take 45 minutes to get all four pumps running again at any given time
- Breach Access Road (TAR) Advancement = 29.58 meters
- Plug Access Road (PAR) Advancement = 34.27 meters
- Polley Lake Water Elevation
 - Current = 921.77 meters
 - 24 Hour Change = 0.00 meters
 - Cumulative = 1.53 meters
- Advancement information for Oct 18th:
 - Breach Access Road (TAR) Advancement = 0.00 meters (waiting on powerline to be moved)
 - Plug Access Road (PAR) Advancement = 108.66 meters
 - Polley Lake Water Elevation
 - Current = 921.78 meters
 - 24 Hour Change = 0.00 meters
 - Cumulative = 1.52 meters

HEMPHILL

- Daily advancement supplied by surveyor from Oct 19:
- Breach Access Road (TAR)
 - Advancement = 0.00 meters
 - *Waiting on powerline to be moved
- Plug Access Road (PAR)
 - Advancement = 74.64 meters
- Polley Lake Water Elevation
 - Current = 921.77 meters
 - 24 Hour Change = 0.01 meters
 - Cumulative = 1.53 meters

OLD BUSINESS

No items discussed.

NEW TASKING

LASTNAME - Task

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm OCT 21 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct 21 2014	LOCATION: 1810 Blanshard, Conf call	START: 1700	END: Unknown
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Laurie MEADE – Site Inspector
Bryan OKE – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

- Received another FOI request for Mt Polley
- Hope to be able to post information publically to satisfy all FOI requests at once when it is appropriate to release the information
- HOFFMAN answering further letters today
- POCKLINGTON on her second day of the File Coordination Foundations course
- Three interviews of engineering consultants today

SITE INSPECTORS

- Foggy early morning onsite
- Dale REIMER (MPMC) met with day and night shifts, update as to planning for reinforcement of TSF and construction of breach plug
- Charlie RUEGER took onsite inspectors on a tour, discussed items discussed with Bryan over the weekend
- Mud Rotary drilling, two holes – one finished today, second tomorrow or early Thursday (sonic drilling)
- Laurie to send drawing for tomorrow
- Still many people working in and around breach
- Peterson onsite filling in trench between corner 3 and corner 4, 2inch- minus.
- South zone, spoke with first aid attendant about her duties and ability of mine rescue, she felt that mine rescue was available and mine rescue has actually contacted her and told her they would respond regardless of if she had asked for them or not. WCB side of Gavin Lake Bridge

- Work still happening on Gavin Lake Road, e.g. gravel to help improve road surface
- Mine managers discussing over shift changes possibilities for future work (road for buttressing, plugging breach, other work that still needs approval from the Ministry)
- Status of order that POCKLINGTON wrote on the emergency response plan – asked Laurie MEADE to follow-up with Joe NICHOLSON because the due date has passed.
- Interview team at 865 Hornby discussing silo'd communication at mine
 - Training not a set program – ad hoc
 - AMEC review of KP at take-over – was it complete, in depth enough
 - Org chart at mine incomplete, out of date, can't be relied on
 - Site as a whole not just parts – water, dam, mill, etc..
 - Rules for transfer should they be formal/prescribed?
 - Peng as EOR is required on site for construction, or?
 - Scalable response to risk evaluation (R.A.not done)
- Interview Panel includes: KUPPERS, MCLEOD, WARNOCK, KILOH.
 - Conducted two interviews today with AMEC engineers

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm OCT 22 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Cheryl POCKLINGTON

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Oct. 22 2014	LOCATION: 1810 Blanshard, Conf call	START: 17:00	END: 17:19
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Present:

Haley KUPPERS – Primary Investigator
George WARNOCK – Manager, Geotechnical Engineering
Harvey MCLEOD – Geotechnical Engineering Consultant
Doug KILOH – Major Case Management Consultant
Cheryl POCKLINGTON – File Coordinator
Tania DEMCHUK – Mount Polley Project Manager
Laurie MEADE – Site Inspector
Bryan OKE – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

KUPPERS

- Conducted three interviews with former KP engineers
- Hoping to have further discussions with command triangle on investigative approach
 - Looking to coordinate with HOFFMAN and POCKLINGTON

POCKLINGTON

- Sample Minutes template forwarded to HEMPHILL on 2014-10-21
- Writing business rules and drafts as the course progresses, will continue to send updates daily
- Briefing minutes – only one set of official briefing minutes are added to the file.
 - HEMPHILL only regular briefing, only notes from participants should be in relation to their own tasks, to maintain one single record for disclosure
 - Minutes to be turned over quickly so that minutes can be available and kept as a working copy for all.
- Email protocols to be provided tonight

MEADE

- 5:30 am onsite, warm wet and windy
- Tree blowdown on bootjack access road at 1.5 Km
 - Contacted pit shifter, two workers cut and dragged tree

- Crew change today, pit shifter Phil BENOIT
- BGC reported that plug was stable
- Spoke with Ryan BROWN and surveyor about concerns with the left turn (see map below) towards Polley Lake, too sharp and narrow.
 - Widened this morning before progressing road further
- Spoke with Dave CARPENTER and asked to have a berm installed along the road between 5 and 4 corner where the drop is higher than 3m, and he agreed to do it
- Peterson completed dumping fill material between 3 and 4 corner on the dam
- ERP – Murray DYMENT has a copy, needs Dale REIMER to sign off on it before it can be released
- Town meeting has been

DEMCHUK

- Follow-up with meeting with first nations, and permitting requirements for ongoing work happening now
- A couple of media requests on contaminated waste on the site
- DEMCHUK will need further direction with how much information needs to be pulled from these discussions with regards to the ongoing process and extraneous things happening with permitting and First Nations engagement.
 - What does and does not need to be passed to the investigative team
- Communications plan still in progress
- Highlights from MPMC/MOE/MEM 3:00 pm phone call October 22, 2014:
 - Weather: Has been very windy.
 - Polley Lake level: measurement being re-surveyed due to windy conditions
 - System is currently shut down to allow for work in lower Hazeltine Creek
 - Pumping capacity has been reduced to one line and four pumps now that Polley Lake is within historical levels.
 - The Site has submitted a notice of work regarding construction of the Polley Plug access road. Comments have been sent back with respect to ensuring the road does not become a water impounding feature during freshet.
 - This notice of work was shared with MEM, MOE and First Nations.
 - Assessment of the Polley Lake sediment plug and design for an outlet channel is underway. No timeline is available, however the site has indicated a desire to have this feature constructed prior to freshet if possible.
 - Receiving environment monitoring and sampling programs are being challenged by windy conditions that make lake sampling unsafe. There will be five monitoring buoys installed on Quesnel Lake to monitor conditions through the winter. These are designed/constructed by DFO.
 - The company will be hosting a site tour for Likely residents and local First Nations on Saturday October 25.
 - Next call: Friday October 24 at 3:00 pm.

HEMPHILL

- Received daily surveyor's update:
 - Breach Access Road (TAR) Advancement = 0.0 meters
 - Plug Access Road Advancement = 73.68 meters
 - Polley Lake Water Elevation
 - Current = 921.71 meters
 - 24 Hour Change = 0.0 meters
 - Cumulative = 1.59 meters

OLD BUSINESS

No items discussed.

NEW TASKING

POCKLINGTON – to provide business rules surrounding email protocol

DEMCHUK – follow-up with Caroline NAKATSUKA on site tour on Saturday

ROUNDTABLE

No items discussed



NEXT MEETING SCHEDULED: 5pm OCT 23 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Cheryl POCKLINGTON

REVIEWED BY: Doug KILOH, Haley KUPPERS, Cheryl POCKLINGTON, Naomi HEMPHILL

Mt Polley TSF BREECH Investigation

BRIEFING MINUTES

DATE: Nov 02 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1700	END: 1725
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Present:

Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Caroline NAKATSUKA – Manager, Occupational Health
Doug KILOH – Major Case Management Consultant
Naomi Hemphill – Project Coordinator, Scribe
Carina DOYLE – Site Inspector
Steve ROTHMAN – Site Inspector

OVERVIEW:

ROTHMAN

Nov 1st:

- Very foggy, poor visibility, shifter discussing with crews on visibility,
- Morning tour
- Widening the road and raising berms between corners 4 and 5, hauling material down for Hazeltine
- DOYLE did a tour of the mill, some of the tunnels under the conveyors
- Defrosting materials procedure discussion
- Shortening propane lines to reduce pinch points
- Removing air lancing

DOYLE:

- Moving propane sensor, sensor has been out since April which is not a concern but it was in a location prone to being compromised
- Making suggestions on revising an SOP (Safe Operating Procedure) in the tunnel area
- Talked about propane sensors, can put warning lights and audio signals as a warning to gasses
- Talked about escape tunnels, prone to being blocked, they need to pull material away to make sure that they can be cleared when the snow comes
- Talked with the JOSH co-chair
 - Some members not receiving minutes despite repeatedly asking to receive them
 - Chatted about avenues to learn about the JOSH, so that workers can discuss their concerns, had a seemingly proactive discussion about current concerns (dust exposure, certain procedures)

- Janitorial staff lacking WHIMIS training, provision of PPE, fitting, safety, employees not knowing exactly what the JOSH was
 - Janitorial staff reported that they were asked by the company to not use the dry (change rooms) and keep their equipment in their vehicles

KUPPERS

- Investigation team discussion on detail necessary for the notes

POCKLINGTON

- Advised that no new work be undertaken without direction from the investigative team (Task number needs to be assigned, unless an immediate threat to safety)

NAKATSUKA

- Provided has DOYLE with Site Inspector Job Description

ROTHMAN

Nov 2nd

- Again foggy
- Safety meeting reviewed SOPs this morning, some good questions coming out of that
- Discussion operations in heavy fog, not to be concerned about shutting down if visibility is too poor
 - Mine access road particularly difficult to navigate in fog
 - Crew brought fog issues and lighting up with the JOSH committee
- GRANT, one of the shifters from A crew moved to steady days, moved to remediation on Hazeltine creek, some issues with articulated trucks that he plans to deal with
 - Winding road, need better communication on the radios
- DOYLE and ROTHMAN to speak with NAKATSUKA about the weld barn and continued noncompliance
 - NAKATSUKA to report on plan moving forward
- WorkSafe on site on next week
- Sat in on safety meeting from welders, main complaint is radiation burns, trying to get portable harnesses rather than reflective high vis

DOYLE:

- DOYLE in the lab today, discussed ventilation in the lab prep room
- Checking on status of she has written orders on in the past
- Reviewed ventilation in the lab, inside the mill, as well as a few other areas
- Saw some improvements since past orders, but expected to see more.
 - Would like to speak to supervisor to chat about some of these issues

KUPPERS:

- Directing to hold off on orders that are not of immediate concern
- Any issues need to be communicated to the command triangle
- Concerns with inundating the site with too many issues and deficiencies – we want to identify all the areas we have asked them to create, so that when we come out with recommendations it is very clear. We are still working on the

strategy, but do collect and inform the site of issues but we need to collate it in a specific way down the road

- Will be updated during tomorrow's conference call.

HEMPHILL: Notes received via email from onsite surveyor, not discussed in call

- Breach Access Road (TAR)
 - Advancement = Phase Completed
 - Plug Access Road (PAR)
 - Advancement = Phase Completed
- Perimeter Buttress
 - Advancement = 92.60m
- Polley Lake Water Elevation
 - Current = 921.81 meters
 - 24 Hour Change = 0.01 meters
 - Cumulative = 1.49 meters

OLD BUSINESS

No items discussed.

NEW TASKING

NAKATSUKA to report on plan moving forward regarding continued noncompliance in weld barn

HOUSEKEEPING

Any edits and comments for the business rules to be submitted tomorrow by 9:30

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm NOV 3rd via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Cheryl POCKLINGTON

Mt Polley TSF BREECH Investigation

BRIEFING MINUTES

DATE: Nov 03 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1700	END: 1716
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Tania DEMCHUK – Communications
Rolly THORPE – Deputy Chief Inspector
George WARNOCK – Manager, Geotechnical Engineering
Caroline NAKATSUKA – Manager, Occupational Health
Doug KILOH – Major Case Management Consultant
Naomi Hemphill – Project Coordinator, Scribe
Carina DOYLE – Site Inspector
Steve ROTHMAN – Site Inspector

OVERVIEW:

ROTHMAN

- Morning lineup, site doing well at putting safety updates into morning updates
- Working on preparing foundation of the toe of the dam between corners 2 and 3, Golder doing inspections
- Foundation prep stopped when it started to rain, stockpiling on the PAR for buttress instead
- Mill: looking for compatibility in chemicals being stored together, issues around training, handling, and storage.
- Toured underground shop, supposed to pour concrete floor week before the breach, still working on gravel floor hoping to pour before freeze, need more ventilation as well.
 - DEMCHUK asked if mine needs our permission to pour concrete, ROTHMAN unsure
- MSDS binder down at the underground white pit area; did not go underground today.
- Dry looking better, more neat and tidy
- Toured down at the white pit (bottom), very muddy, snowing on and off.

KUPPERS

- Worked with DEMCHUK and NAKATSUKA to review strategy and approach to follow-up to site inspectors being onsite, developing a plan to put together a strategy summary for tracking, listing and summarizing site issues, DEMCHUK and NAKATSUKA to follow up in the next week or two. Aiming for next Friday to have a set plan
- Currently onsite inspectors should communicate with NAKATSUKA
- Want to be able to identify issues observed on site then be able to discuss issues for notes and further directions
 - Issues like continued noncompliance with ventilation issues in the welding shed
- NAKATSUKA to compile issues, findings and contraventions onsite inspectors are identifying
- Site inspectors would like a template
 - Identify issue, actions on the issue, history of the issue, work done or not done
 - Issues most critical to allow them to start operating

WARNOCK

- Room ready for interviews tomorrow
- Will call into site investigation meeting tomorrow to get update for end date for site works (last word was the 8th)

DEMCHUK

- On site for MDRC meeting on Wednesday, spending day with site inspectors Thursday

HOFFMAN

- Question to POCKLINGTON if we need to record directed inspections in ER3
- POCKLINGTON: may be able to catalogue all of that in a windows tree outside of E&R with a tasking ledger
 - Disclosure, may not be able to go into E&R but may be a ledger of work done.
 - To discuss further

KUPPERS

- Will be away for interviews Tuesday, for training Wednesday and Thursday, back in office Friday
- Meeting tomorrow to be chaired by POCKLINTON as HOFFMAN, KUPPERS are unavailable due to travel. DEMCHUK also unavailable tomorrow due to travel.

HEMPHILL: Notes received via email from onsite surveyor, not discussed in call

- Breach Access Road (TAR)
 - Advancement = Phase Completed
- Plug Access Road (PAR)
 - Advancement = Phase Completed

- Perimeter Buttress
 - Advancement = 52.84m
- Polley Lake Water Elevation
 - Current = 921.82 meters
 - 24 Hour Change = 0.01 meters
 - Cumulative = 1.48 meters

OLD BUSINESS

No items discussed.

NEW TASKING

NAKATSUKA to forward business rules to onsite inspectors tomorrow, pages for review to be indicated in email.

HOUSEKEEPING

No items discussed.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm NOV 4th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Cheryl POCKLINGTON

Mt Polley TSF BREECH Investigation

BRIEFING MINUTES

DATE: Nov 04 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1700	END: 1713
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Present:

Cheryl POCKLINGTON – File Coordinator, Chair

Rolly THORPE – Deputy Chief Inspector

George WARNOCK – Manager, Geotechnical Engineering

Caroline NAKATSUKA – Manager, Occupational Health

Naomi Hemphill – Project Coordinator, Scribe

Carina DOYLE – Site Inspector

Steve ROTHMAN – Site Inspector

OVERVIEW:

WARNOCK

- Two interviews today of AMEC personnel today in Prince George office
- Email from Klohn Crippen Berger (Howard PLEWES)
 - Three holes left for onsite drilling
 - Site investigation expected to wrap up for the most part this week, core trenching into next week but drilling will be done

WARNOCK exits call

ROTHMAN

- Toured tailings with Dave CARPENTER
- Wet and raining onsite
- Two geotechnical drills working in breach area
- Preparing test holes in plug
- Active hauling to the North side of the TAR
- Progress with foundation prep for 3m lift buttress material between corners 1 and 2
- Rob ROSENER from WorkSafe on site, toured between Gavin Lake Bridge and the lake, had some issues with logbooks and egress on the cabs, some of the new equipment needs further escape measures as per WorkSafe regulations, as reported by ROSENER. WorkSafe to manage.
- Discussed weld barn ventilation plan with Dale REIMER, reported that NAKATSUKA'S order was not due until 60 days after start-up

- NAKATSUKA states that she does not recall such an order, NAKATSUKA to confirm in previous orders, ROTHMAN to clarify with REIMER tomorrow.
- Foundation preparation commenced after rain stopped
- DOYLE observed blast pattern loading
 - 160 sticks of old powder, included in blast for disposal
- Revised Emergency Response Plan reviewed by the manager today, Sal BAFARO said that he will do some edits tomorrow and make available tomorrow afternoon, training to start with frontline superintendents immediately.
 - Mine will provide ROTHMAN with electronic copy
- Don PARSONS said that there was a positive article in the Globe and Mail today
 - Williams Lake Indian Band sent letter supporting Mt. Polley, Chamber of Commerce and Sugar Cane Indian Band supporting as well.

DOYLE

- DOYLE and ROTHMAN to follow up weld barn ventilation plan with REIMER

NAKATSUKA

- Plan is in place to get deficiencies and issues compiled from onsite inspectors before the end of November as much as possible. NAKATSUKA, THORPE, PADLEY and MCLEAN will be involved.
 - Will determine how to report on the issues in a way that is helpful for the investigation and the site.
 - May use existing audit template to gather information
- THORPE
 - Thinking about how to collect information on deficiencies and issues, will likely make a site visit but unsure when.

POCKLINGTON

- HEMPHILL and POCKLINGTON working on database and breadth of dataset
- May see some questions on old tasking
- Looking to connect the dots between what we did, how we did it, and why.

HEMPHILL: Notes received via email from onsite surveyor, not discussed in call

- Buttress
 - Advancement 66.29 meters
- Polley Lake Water Elevation
 - Current = 921.77 meters
 - 24 Hour Change = 0.05 meters
 - Cumulative = 1.53 meters

HEMPHILL: Notes received via email from DEMCHUK regarding EMBC call held Nov 4th, not discussed in call.

OLD BUSINESS

No items discussed.

NEW TASKING

ROTHMAN to follow up with REIMER on weld barn.

HOUSEKEEPING

POCKLINGTON

- Reminder to review business rules
- Discussion on why they are important

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 5pm NOV 5th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: Jan 05 2015	LOCATION: 1810 Blanshard, Conf call	START: 1000	END: 1138
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Present:

Al HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Keith ELWOOD – Report Coordinator
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Naomi HEMPHILL – Project Coordinator, Scribe
Joe NICHOLSON – Site Inspector
Steve ROTHMAN – Site Inspector

OVERVIEW:

ROTHMAN

- Visited mine site once
- Stripped back the two sides of the breach to 3:1, identifying contacts between different materials
- Hauling away from breach
- Broken down conveyor so they were not able to finish trial crush
 - Had a discussion about PPE: if they are not using they are not crushing end of discussion.
- Building riprap for the Hazeltine and Edney Creek and digging diversion ditch from Polley lake, connecting Polley lake to Hazeltine
 - They have plans for a head gate, still fitting it as they are working down. ROTHMAN has seen a conceptual plan but SNC is on site fitting the plan daily (P.Eng. working for SNC). ROTHMAN to follow-up and ensure that the plans have been sent for the diversion ditch.
- Had two dangerous occurrences since inspectors left
 - One truck driver, broke back falling off of truck ladder
 - Surface dump truck (highway size) for hauling gravel rolled from failed part on hydraulic lift for box, nobody was hurt.
- Pumping systems and water control all in working order, circulating water to ensure that it is not freezing, managing water levels without discharging any water.
- No additional updates on inspection reports from Dale REIMER

- Inspection report to be forwarded to INBOX and NAKATSUKA and entered into MMS
- NAKATSUKA to visit site tomorrow to follow-up on progress regarding orders
- HOFFMAN noted that REIMER is being cooperative on the phone and expressed thanks for inspectors on site
- ROTHMAN went to Vancouver and looked at the machine that will be used to insert the concrete plug in the dam

HOFFMAN

- Signed permit for dam repair before Christmas

WARNOCK

- Spoke to Harvey MCLEOD this morning, no change in projected timelines
 - KCB is working on report and is on schedule, planning to meet with Quaternary Geologist next Thursday
- Will be working on some other projects in the next few weeks

KUPPERS

- Will be determining short term goals this week and setting schedules for more interviews and interviews with First Nations
- Working on the database
- Will continue to follow-up on legal issues and FOI discussion
- ELWOOD has a presentation on Root Cause Analysis (RCA) to discuss after call

NAKATSUKA, NICHOLSON, and ROTHMAN sign out of call.

ELWOOD presentation on Root Cause Analysis – *separate document*.

KUPPERS

- Spoke with Bill SMART on Friday December 19th 2014
 - Will want to schedule interviews with SMART's clients in January.
 - SMART is on holidays beginning of January
- Jan 21st there will be a meeting with First Nations in Williams Lake

HEMPHILL notes received from surveyor, not discussed in call:

Dec 17th:

- Buttress
 - Advancement = 44.03 meters
- Polley Lake Water Elevation
 - Current = 921.71
 - 24 Hour Change = 0.0 meters
 - Cumulative = 1.59 meters

Dec 18th:

- Buttress

- Advancement = 81.92 meters

- Polley Lake Water Elevation
 - Current = 921.72 meters
 - 24 Hour Change = 0.01 meters
 - Cumulative = 1.58 meters

Dec 19th:

- Buttress
 - Advancement = 4.84 meters

- Polley Lake Water Elevation
 - Current = 921.72 meters
 - 24 Hour Change = 0.0 meters
 - Cumulative = 1.58 meters

Dec 20th:

- Buttress
 - No Advancement

- Polley Lake Water Elevation
 - Current = 921.76 meters
 - 24 Hour Change = 0.04 meters
 - Cumulative = 1.54 meters

Dec 21st:

- Buttress
 - No Advancement
- Polley Lake Water Elevation
 - Current = 921.75 meters
 - 24 Hour Change = 0.01 meters
 - Cumulative = 1.55 meters

Dec 22nd:

- Buttress
 - No advancement
- Polley Lake Water Elevation
 - Current = 921.75 meters
 - 24 Hour Change = 0.0 meters
 - Cumulative = 1.55 meters

Jan 2nd:

- Buttress
 - Advancement = 28.67 meters
- Polley Lake Ice Elevation
 - Current = 921.80 meters
 - 24 Hour Change = 0.00 meters
 - Cumulative = 1.50 meters

Jan 4th:

- Buttress
 - No Advancement

- Polley Lake Ice Elevation
 - Current = 921.80 meters
 - 24 Hour Change = 0.00 meters
 - Cumulative = 1.50 meters

OLD TASKING

Rounding off tasks/No items discussed

NEW TASKING

- ROTHMAN to follow-up and ensure that the plans have been sent for the diversion ditch.
- WARNOCK to forward POCKLINGTON emails from BROUWER to Art FRYE
- Task for KUPPERS (KILOH supporting) to create interview summary documents
 - Action to create summaries
 - Action to create ledger justifying selection of transcripts to summarize
 - Link summaries to transcripts (document to document) and link summaries to witness statement tasks

HOUSEKEEPING

KUPPERS reminding all to keep detailed notes on visits to mine and any relevant discussions.

Need to discuss plans for the house in Likely, Need to discuss strategy for inspectors onsite.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 1700 Jan 06 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Cheryl POCKLINGTON

**Mt Polley TSF BREACH Investigation
BRIEFING MINUTES**

DATE: Jan 06 2015	LOCATION: 1810 Blanshard, Conf call	START: 1700	END: 1725
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Present:

AI HOFFMAN – Chief Inspector
Rolly THORPE – Deputy Chief Inspector
Haley KUPPERS – Primary Investigator
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Naomi HEMPHILL – Project Coordinator, Scribe
Steve ROTHMAN – Site Inspector

OVERVIEW:

ROTHMAN

- Met with ventilation specialist, Bryan DREW with Banter Designs, for weld barn, crusher system, and bucking room.
 - Determined that ventilation system was improper maintenance and improper use (air velocity too high).
 - Will have designs approved by a P.Eng.
 - Will come up with some final designs, currently designs are not finalized.
 - Preliminary designs within a week and a half
 - Don IBEY to review.
- May need full time inspectors on site in 2-3 weeks (last week of January)
 - Will be doing work in the breach in the ditch, and the mill. Inspectors will need to be on site to ensure that PPE is being worn appropriately while they are working in the breach.
- Golder will be looking after the designs for Hazeltine Creek, Edney Creek crossover, and repair of the breach. SNC will no longer be continuing.
 - Hubert BUNCE at MOE may need to be informed
- Will likely be onsite next on Jan 13th, for the public meeting
 - Team will supply more supporting material

HOFFMAN

- Will need to start lining people up early February
- Panel report will be delivered to Government 30th January, and Minister may have a public even on the 3rd or 4th, may bring the Deputy minister

OLD TASKING

- ROTHMAN to follow-up and ensure that the plans have been sent for the diversion ditch.
- WARNOCK to forward POCKLINGTON emails from BROUWER to Art FRYE
- Task for KUPPERS (KILOH supporting) to create interview summary documents
 - Action to create summaries
 - Action to create ledger justifying selection of transcripts to summarize
 - Link summaries to transcripts (document to document) and link summaries to witness statement tasks

NEW TASKING

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 1000 Jan 12 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

**Mt Polley TSF BREACH Investigation
BRIEFING MINUTES**

DATE: Jan 12 2015	LOCATION: 1810 Blanshard, Conf call	START: 1000	END: 1056
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Present:

Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
George WARNOCK – Manager, Geotechnical Engineering
Harvey MCLEOD – Geotechnical Engineering Consultant
Doug KILOH – Major Case Management Consultant
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Michelle HYNES – Senior Policy Analyst
Tania DEMCHUK – Mount Polley Project Manager
Matthew PARENT – Information Analyst
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

NAKATSUKA

- To follow-up on CI orders, planning to fly to site this week, Emmanuel PADLEY to be on site next week, starting the week of Jan 22nd
- Depending on activities on site, will make the decision on continued/increasing site presence
- Will need posters for public meeting tomorrow, but Ministry does not have updated photos – ROTHMAN may have some updated pictures

HYNES

- Nothing to report on media this morning
- Minister's office is focussing on the DSI reports currently, feeling pressure to get those done as soon as possible
 - Contractor putting together materials and briefings this week
- Putting together website for release of information on mines
 - team up to 12 working on this from GCPE and CSNR

AI HOFFMAN joins call

HYNES continues

- Release date of the independent report scheduled now for Jan 30th, but may be subject to change. Unsure if we will get advance notice to allow for review.

MCLEOD

- Site investigation progress report A 90% complete and will be issued final by next week
- Report 3 (advanced lab testing) 90% complete, will be issued Jan 23rd.
- Final testing will be wrapping up around Feb 10th
- Reports: technical assessment and mechanism of failure, and second report around the components leading to failure (oversight, design, etc.)
- Travis FERBY coming to KCB tomorrow to go over quaternary geology
- Using the OMS and tailings management systems, found that Luke MOGER was the tailings manager, and reported to Art FRYE and Don PARSONS.
 - Working through the guidelines to determine what components may have been problematic, which were adequately met
- A contributing cause of failure may have been the over steepened slope combined with the buttress excavation
- Confirmed that Independent Panel has Report 1, but they will be finalizing their report before KCB completes their upcoming reports. They have been receiving data as it comes out, but there will be more depth of information coming from KCB that the panel may not review before they release their report
 - Recommend that KCB communicate with Panel to allow them to incorporate information from KCB into their report statements

HOFFMAN exits call

MCLEOD continues

- Will check what data has been released and ensure that KCB has released all the data that is possible at this time
- Confirmed that the Panel would have the same drill hole information that KCB has access to

POCKLINGTON

- Will be seeking information specifically as we continue to process
- Have brainstormed a timeline for the report, will need to discuss further with ELWOOD but we are looking at June 1st as the earliest possible completion date.
 - Would then need the dataset to be completed by March 15th.
 - Tentative File Coordination and Final Report timeline:

March 15	Dataset complete Crystal reports ongoing
March 15-April 1	Auditing, troubleshooting the dataset
April 1	DROP DEAD DATE for dataset complete
April 1-May 1	Report Finalizing Dataset reporting out
May 1	Final Report Draft Due
May 1-June 1	Report revisions
June 1	Final Report Release

KUPPERS

- Have sent out further letters for interviews
- Jan 22nd, waiting on confirmation for Tim FISCH and Wally RENNIE, 26th and 28th for Don PARSONS, Dale REIMER, and Art FRYE.
 - Interviews set for downtown Vancouver
- Set deadline of Wednesday Jan 14th to hear back
- FN meeting and interviews delayed into February
- Generally KUPPERS' work has been distracted by FOI requests.

KILOH

- Professional Employees Association position on deregulation and comments on the Ministry were found on the SharePoint site provided by the Panel
 - Will need further review
 - May send a letter to the Association
 - WARNOCK advises that WARNOCK and Heather NARYNSKI were given the opportunity to comment, but they did not think it would be appropriate

OLD TASKING

- ROTHMAN to follow-up and ensure that the plans have been sent for the diversion ditch.
- ONGOING: Task for KUPPERS (KILOH supporting) to create interview summary documents
 - Action to create summaries
 - Action to create ledger justifying selection of transcripts to summarize
 - Link summaries to transcripts (document to document) and link summaries to witness statement tasks

NEW TASKING**HOUSEKEEPING**

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 1000 Jan 19 via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Cheryl POCKLINGTON

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: Jan 12 2015	LOCATION: 1810 Blanshard, Conf call	START: 1330	END: 1410
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Present:

Al HOFFMAN – Chief Inspector
 Haley KUPPERS – Primary Investigator
 Cheryl POCKLINGTON – File Coordinator
 George WARNOCK – Manager, Geotechnical Engineering
 Doug KILOH – Major Case Management Consultant
 Matthew PARENT – Information Analyst
 Naomi HEMPHILL – Project Coordinator, Scribe
 Elizabeth ROWBOTHAM – Legal Services Branch
 Clifton PROWSE – Legal Services Branch
 Stephanie LACUSTA – Legal Services Branch

OVERVIEW:

Sharepoints from Expert Panel Discussion

HOFFMAN

- Went through the SharePoint site over the weekend, it consists mostly of technical documents that the company already has or that will be released through FOI
 - No major concern that these documents will affect Chief Inspector's investigation
- Some concerns include personal information and contact information for MEM employees and members of the public
 - E.g. Ministry's Mine Emergency Response Plan schedules, public comments, lists of potential interviewees
- Includes some agenda and meeting minutes, don't include a lot of information but we would ask that they remove the names of the individuals they planned to interview.
- Have asked them to remove WARNOCK's resume, or at the least his contact information
- Will comment that the site is not well set up, with repetition and empty folders potentially misleading members of the public. Also includes draft documents and draft appendices that may need to be removed
 - Not confident that we have been able to or will be able to adequately review all the information due in part to the organization of the site

- Some concern that the recommendations and information in the report might affect the 'pure version' stories of interviewees and potential interviewees.
- They have not provided the interview summaries and the names of interviewees yet at this time.

PROWSE

- Discussed with John TUCK, JAG disclosure expert, FOI and disclosure. Seems clear that the panel cannot release documents with personal information in them.
- Conservation Officers sending a letter requesting a week to review the report to determine if there are harms, and identify any that exist.
- Appears that the CO is looking at the geotechnical aspects of the breach, and has requested technical information up to August 3rd.
 - MEM has provided a section of that information for review, and is waiting for the follow-up request from CO for the following sections
- The majority of the documents are not likely a concern for harms to the Chief Inspector's investigation

KUPPERS

- The names of the potential interviewees are included in some of the Panel's minutes, and there are individuals they have interviewed that MEM has not yet interviewed.

PROWSE

- The panel is not considered a government body and so is not necessarily subject to laws surrounding government disclosure, but their documents are likely considered to be in government custody and so they are likely governed by the same laws.
- The panel is obliged to disclose their report on Jan 31st
 - MEM can only speak to potential harms to their investigation
- 1B speaks to the broader investigation that MEM is undertaking that goes beyond prosecutorial and goes into recommendations.

POCKLINGTON

- Part of our purpose in our messaging is that we know that it would be ideal for our investigation for the report to not go out at this time. We would like to recommend the course of action that would be best for our investigation and we recognize that our recommendations may not be taken by the Panel.
 - KILOH: The Panel Terms of Reference a

OLD TASKING

NEW TASKING

- MEM to send out revised draft of letter, and will be speaking with Kevin RICHTER

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: N/A

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

**Mt Polley TSF BREACH Investigation
BRIEFING MINUTES**

DATE: Jan 19 2015	LOCATION: 1810 Blanshard, Conf call	START: 1030	END: 1111
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Matthew PARENT – Information Analyst, Scribe
Naomi HEMPHILL – Project Coordinator
Keith ELWOOD – Report Coordinator
Michelle HYNES – Senior Policy Analyst
Caroline NAKATSUKA – Manager
Harvey MCLEOD - Geotechnical Engineering Consultant (KCB)
Emmanuel PADLEY – Site Inspector
Tania DEMCHUK – Mount Polley Project Manager

OVERVIEW:

NAKATSUKA:

- At the mine site on the 13th and followed up with the orders issued in December.
 - They did not follow up on electrical issues but followed up on sewer related orders.
 - As a result, they no longer have any washrooms in the crusher and now just use the crusher maintenance shop washroom, which is being serviced by a pumper truck.
 - Crusher not currently in regular operation
 - The sewage system is going to be redesigned by a qualified professional once operations resume.
 - Chemicals and storage orders: demonstrated that they ordered new containment trays and new flammable storage cabinets. They will be following up on installation.
 - Orders regarding discharge from mill scrubber systems.
 - The discharge before was going out onto the mill floor, and they said they were going to reroute it elsewhere – however it is still going out onto the floor. It is a pipe that just pipes the fluid onto the floor.
- Since last week they removed the ventilation systems and they are waiting for the new parts to arrive.

- Ventilation technician was onsite the week previous to NAKATSUKA's inspection, submitted report last week on the type of work that is needed on the ventilation in the crusher, weld barn, and sample prep room.
 - Did have an industrial hygienist come to look at the weld barn, from Total Safety (previously known as Pacific Environmental)
- Followed up with crusher orders – they made it mandatory for anyone near the crusher to wear half mask respirators and must be fit tested. They have not been testing people on respiratory protection, and they are just giving basic pointers. They should be doing a training program as right now they are working towards meeting the requirements found within the permits / orders.
 - They are maintaining paper records now regarding fit testing.

PADLEY:

- Will attend site Thursday Jan 22nd
- Plans for this week: going to confirm that they have followed up with orders from last time, including electrical issues as per the Chief Inspector's orders

NAKATSUKA:

- If PADLEY is to go into the crusher he must go through the fit test protocol. Unsure when they are going to be crushing again.

DEMCHUCK:

- During her meeting with ROTHMAN, they found out that they would be running the crusher every third day to maintain a stockpile of 30,000 tons with a total of 100,000 tons for the repair.
 - DEMCHUK and ROTHMAN meeting weekly with site around permitting
- With regard to the breach repair: it has been reported that it is on schedule and this week they will be starting on the perimeter embankment.
 - Received application for the limited restart of operations. CARR, Chris and DEMCHUCK believe that it is not adequate and that it is to be determined if it will be necessary for public consultation or MDRC.
 - They are currently out of compliance from the December 17th notice on multiple issues. MOGER, Luke and BROWN, Ryan wrote it together with MOGER as the main author and REIMER with the cover letter.
- Mine has submitted names for their independent review panel applications. They have nominated three individuals, all of which are engineers in British Columbia. They include: Nigel SCURMER, John BRODY, and Rod SMITH.
 - MEM may suggest that a fourth engineer be included in the panel.
 - Unclear if they have sufficient qualifications, experience, or expertise on soil mechanics
 - There has been no consultation with First Nations

KILOH:

- Suggests that each party involved (the mine, First Nations, etc) put forward a nominee in order to avoid internal bias.

- Discussing various issues with academics could prove useful in order to receive objective opinions on suitability of the candidates.

KUPPERS:

- The investigation report from the mine received last week:
 - Will Mine be providing report to First Nations - unknown

HOFFMAN:

- Letter from Mount Polley re: investigation report doesn't look at any broader issues than the geotechnical information
- Will be responding with comments
- Need to look at broader implications as to if they decide to release the document early

MCLEOD:

- The report is less than satisfactory. Stating that the cause of it was the GLU, does not provide adequate information, especially considering that there are multiple types of GLU's. Wonders if the mine understands the issues at hand and how this could have happened.
 - Nobody seems to be accountable, and believes that an engineer should have signed out on the report.

KILOH:

- The report clearly demonstrates their attempt to absolve themselves of any culpability.
 - Providing the report to BROWER, Ken could prove beneficial. He may have some resources that would be useful in an interview, etc.
 - Mount Polley hasn't provided any comfort in how or what they investigated. They must uphold a high standard of law in terms of what is practiced during the investigation.
- TASK 157: HOFFMAN to develop a response to the Mine, with MCLEOD and WARNOCK to support

KUPPERS:

- Interviews have been scheduled for this week in Vancouver and next week. Discussions should be made if BROWER, Ken is to be re-interviewed before mine management in light of the letter from Mine

KILOH:

- Possible that it would be helpful to postpone interviews. Being able to list off issues and get "hammered down to" what the issues are. This will help determine the gaps between stories and find problems in their duty of care, etc.

HOFFMAN leaves

HYNES:

- Media: the Minister had a few interviews over the weekend including discussions regarding the panel report
 - The panel review report is scheduled for the 30th of January. There will be a media event – more info to come.
 - HYNES will be briefing on overview, what we expect to see in the panel report, things we can do differently or better that are coming from our investigation, and release of the dam safety inspection report
 - Release of the dam safety inspection report – everything is moving along quite nicely and the website is being developed.

WARNOCK:

- Idea of compiling a map to compile lacustrine clay (GLU) information spatially as a recommendation
- MCLEOD: should be a requirement for mines to provide their geological information to one place, but may run into issues with this being thought of as proprietary information

DEMCHUCK:

- Looking at geology maps as a starting point in order to have a map of all the GLU's in the province would be helpful and made as a recommendation.
- Reminder: GLU doesn't just mean clay.

OLD TASKING

- ROTHMAN to follow-up and ensure that the plans have been sent for the diversion ditch.

NEW TASKING**HOUSEKEEPING****POCKLINGTON:**

- Consider what you have that may need to be entered into the dataset, and drop into the inbox in the format that you have it.
 - Request for everyone to start sending documents to the inbox for processing.
 - If you are generating a new concept or idea, it needs to be generated as a task.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 1000 Jan 26th via CONF CALL

AUTHORED BY: Matthew PARENT

APPROVED BY: Cheryl POCKLINGTON, Naomi HEMPHILL

**Mt Polley TSF BREACH Investigation
BRIEFING MINUTES**

DATE: Jan 26 2015	LOCATION: 1810 Blanshard, Conf call	START: 1000	END: 1030
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Naomi HEMPHILL – Project Coordinator, Scribe
Keith ELWOOD – Report Coordinator
Harvey MCLEOD – Geotechnical Engineering Consultant

OVERVIEW:

KUPPERS

- Investigation team update:
- Conducted interviews with BROUWER and SMYTHE on Wednesday afternoon, FISCH and RENNIE on Thursday and a briefing by KCB on Friday
- Interviewing KYNOCH this afternoon, REIMER and ROBERTSON Tuesday, PARSONS and FRYE on Wednesday. Counsel has been present so far, with little interference.
 - Counsel wanted to confirm that they were compelled interviews, but up to this point we are trying to request the interview so we are uncertain whether they will be protected by his statements that the interviews are compelled.

HOFFMAN enters

- Discussion on highlights of the interviews this past week, seeing similar themes on organization (including culture, documentation, and reporting), accountability, and critical thinking.

OLD TASKING

- ROTHMAN to follow-up and ensure that the plans have been sent for the diversion ditch.

NEW TASKING

HOUSEKEEPING

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 0830 Jan 27th via CONF CALL

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

**Mt Polley TSF BREACH Investigation
BRIEFING MINUTES**

DATE: Jan 27 2015	LOCATION: 1810 Blanshard, Conf call	START: 0830	END: 0924
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Present:

Al HOFFMAN – Chief Inspector
Cheryl POCKLINGTON – File Coordinator
Michelle HYNES – Senior Policy Analyst
Haley KUPPERS – Primary Investigator
Harvey MCLEOD – Geotechnical Engineering Consultant
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Tania DEMCHUK – Mount Polley Project Manager
Keith ELWOOD – Report Coordinator
Matthew PARENT – Information Analyst, Scribe
Naomi HEMPHILL – Project Coordinator

OVERVIEW:

Ling Jarvis Conversation:

Do we have reasonable grounds or information to take to prosecution?

- HOFFMAN, does not believe so
- KUPPERS: Confirming some of the expectations and assumptions we had on poor corporate responsibility and management practices, but have not talked to all the management yet at this point.
 - Steve ROBERTSON, Don PARSONS, Art FRYE, and Dale REIMER still to be interviewed.
- SMART is stating that individuals feel compelled under the mines act to be interviewed. There is an argument against particular standard of care
- KILOH: There is an argument against any particular standard of care that should have been there. Is a discussion that can be had, but we are not completely able to link information together and point it in one direction at this point. May need to enter into discussions with a prosecutorial thought process, may want input from Crown.

Does it appear from our knowledge to date that a decision to proceed to charge could be made now?

- We would need to know what part of the Act, Code, or Regulations we would be prosecuting under.

What has the conduct of our investigation implied in pursuit of this investigation?

- POCKLINGTON: looks like we are being patient. We are contemplating our moves and ensuring we are attentive to our decisions.
- KUPPERS: Takeaways are that we are looking at more specific lines of questioning around corporate cultures and responsibilities around tailings management, asking some of the harder questions to more important people. Moving forward openly and collaboratively.

Is there damning evidence of non-compliance level during inspection?

- Perception as of today:
 - KUPPERS: there is a long list of outstanding orders that have not been resolved, and much work is still needed. Being able to assess the management practices that are present and make recommendations that MEM can further assess management is necessary.
 - Splitting question up: compliance with regards to prosecution vs. compliance with the code
 - HOFFMAN: In terms of prosecution there is no damaging evidence but in terms of non-compliance there is.

Any circumstances the court would think we are pursuing criminal or quasi-criminal charge?

- Yes – the questions we are asking of management, and the posture of counsel (using the compelling argument to protect themselves from prosecution) would make it reasonable to assume that we would take it that way.
- KILOH: Being considered now is the overall management and non-compliance issues of the mine. Legal counsel provides the investigation team with the feeling that they feel they are defending against criminal allegations, etc. It is reasonable to assume that MEM would take it as a criminal area.
- KILOH: The presumption is of innocence needs always to be considered when reflecting on the actions of management. Although using all information provided from other management members could be used against KYNOCH, it is important to consider that KYNOCH may not be the person to 'go after.' All fingers are being pointed in different directions and so further investigation is needed before assumptions of culpability are made.
- If information is compelled, it cannot be used. COS is attempting to obtain information separately – regardless if it is the same information.
- Does the team need to change its actions as a result of these answers? We need to keep it in mind but don't believe we need to change our approach to the interviews at this point

Response letter to Dale REIMER's investigation report:

Five page letter from REIMER which was likely written by someone else. He points to the mechanism of mechanical failure of the dam, and points to third party review (likely the consultant engineers) as the responsible parties

- Response includes the root cause of the TSF and reiterated what he indicated what the failure was. Issues include GLU strength and factors of safety.
 - While the un-drained shear strength plays a role, it is important to consider the GLU that is at a higher elevation.
 - In the interview with Brian KYNOCH, it should be considered that he is looking at MEM as well, indicating that it is the engineers and the ministry that approve all things the mine does.
 - We are administrators. A MEM inspection versus a dam safety inspection definitions need to be reviewed and defined for the public, as well as for mine management. We review plans to see if they are reasonable, but do not check calculations and so on.
 - It is necessary to consider what is the area of responsibility for the Ministry, the engineers, and the mining corporation. Duty of care needs to be expanded upon.
 - We shouldn't be telling them what they should have provided in their report. If MEM gives them criteria, then the mine gets what they want, when they should be able to provide their information.
 - Perhaps if there are no additional factors added, they will state that there is nothing to add to their investigation.
 - The five page report becomes evidence regarding what the mine thought was necessary for the investigation.
 - Without providing all the guidelines for what is necessary in the report, it is unlikely that they even know what is meant to be provided in a report. There has been significant problems with following orders for the past few years.
- The Dam Safety Inspection and the Expert Panel Report are being released this week. As such, the response should be delayed. There are pros and cons to delaying the response. Perhaps having a wide response and non-inclusive list of things that are missing before the panel report is released. Sending out a very brief letter to that effect should be fine on Wednesday afternoon.

PANEL REPORT:

No persons are receiving the release of the panel report before Friday.

- Keeping in mind the thoughts and concerns of First Nation groups would be important as the team continues to build relationship with First Nation groups.
- The release should be streamed and then the panel is complete in their terms of reference.
- From the interview there should be a new set of orders prepared by Thursday – which can be used to help respond on Friday when media confronts the Ministry.
 - Very high level with a few bullets regarding where the team is at in the investigation with a rough timeline (summer).

ELWOOD: A synthesis report of the final report which could be released to the public first, followed by a more detailed “ten thousand page” report at a later date.

OLD BUSINESS

No items discussed

NEW TASKING

No items discussed

HOUSEKEEPING

General items/No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 1000 Feb 02 2015

AUTHORED BY: Matthew PARENT

APPROVED BY: Naomi HEMPHILL

**Mt Polley TSF BREACH Investigation
BRIEFING MINUTES**

DATE: Feb 02 2015	LOCATION: 1810 Blanshard, Conf call	START: 1000	END: 1125
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Present:

AI HOFFMAN – Chief Inspector
Cheryl POCKLINGTON – File Coordinator
Haley KUPPERS – Provincial Health and Safety Specialist Inspector
Harvey MCLEOD – Geotechnical Engineering Consultant (KCB)
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Tania DEMCHUK – Senior Environmental Geologist
Keith ELWOOD – Report Coordinator
Matthew PARENT – Information Analyst, Scribe
Naomi HEMPHILL – Project Coordinator

OVERVIEW:

KUPPERS

- Panel report released on Friday, HOFFMAN and WARNOCK attended in Victoria, DEMCHUK attended in Williams Lake

DEMCHUK

- Did get biweekly construction report this morning, but can't speak to it yet
- Had numerous meetings on information requirements for application with MPMC last week, and will have a more in depth conversation tomorrow
- Attended Likely and Williams Lake last week for Panel release and presentation
 - Dirk VAN ZYL presented, then had a question answer period with DEMCHUK and Laurie (?) including if the tailings impoundment should have been built, looking for blame
 - Meeting went very well, there was a moderator present
 - DEMCHUK took some names for follow-up by KUPPERS, to submit public comments
 - No forum for open approach after meeting, very structured event by communications groups
 - Some questions about who is looking at government due diligence, did say that the COS and Chief Inspectors investigations are looking at government due diligence as well

Release of Report

- Ministry received hard copy of report but not the appendices, however appendices and report are published online.
- Minister committed to allow COS to have access to Panel around 30 days after report release, we may want to interview panel members as well regarding geotechnical information
- Report does not lay blame
- Interviewing the Panel may allow us to tease out more information, regarding topics like corporate governance and critical thinking
- Discussion on beaches around the TSF, and the report does allude to the water levels contributing to the causality of the breach. Report does indicate that the mine had been reminded “yet again” to maintain beaches
- Quotes from KP on beaches, indicating a potential lack of concern for the absence of beaches at times
- WARNOCK to summarize his comments and takeaways, including shortcomings of company or engineers, to be sent for Harvey TASK
 - KILOH to do this as well, WARNOCK and KILOH to discuss formatting
- WARNOCK to look at recommendations from the Panel, will be considering how to satisfy the recommendations and apply them to our work
- WARNOCK and HOFFMAN to send out letters to all operating minds and mines with consequence levels above medium (may be all above low?) as requested by the minister.

DSI Reports

- Did not see any press coverage, anticipating more public response

WARNOCK

- Recommendation for future might be clarity in roles, in light of criticisms of government. Regulators are not (and should not be) designers
- Need internal guidance on interpretation of CDA, including interim factors of safety. May be in the form of a live document on the geotech ministry website, hoping to complete for the next few weeks.
 - TASK for WARNOCK

NEXT WEEK

- Community meeting in Williams Lake
- Discussion on Mine Emergency Response Plans
 - POCKLINGTON and Kim BELLEFONTAINE to attend meeting
 - POCKLINGTON to note any recommendations that come from the meeting to bring into the investigation.

- KUPPERS to discuss with First Nations, planning to complete interviews later this month
- Permitting, unlikely to meet the timeline the company would like so we may see some issues arising from that
 - Discussing several potential outcomes, including layoffs or putting mine into care and maintenance.
- HOFFMAN to send out investigation letter to REIMER, HOFFMAN to finish draft and circulate today
- Response to KP and mine for their document requests, KILOH to review and forward to KUPPERS and MCLEOD
- MCLEOD to look through code requirements and CDA guidelines to compare and include in report, including post-earthquake factor of safety
- FOIs: MP files made public by Panel, we still need to address it.
- Last week's interviews being transcribed

OLD BUSINESS

No items discussed

NEW TASKING

- WARNOCK to summarize his comments and takeaways, including shortcomings of company or engineers, to be sent for Harvey
 - KILOH and ELWOOD to do this as well, to send format to POCKLINGTON to ensure conformity
- WARNOCK to look at recommendations from the Panel, will be considering how to satisfy the recommendations and apply them to our work
- WARNOCK and HOFFMAN to send out letters to all operating mines and mines with consequence levels above medium (may be all above low?) as requested by the minister.
- TASK: sending out investigation letter to REIMER, HOFFMAN to finish draft and circulate today
- TASK: Response to KP and mine for their document requests, KILOH to review and forward to KUPPERS and MCLEOD
- DEMCHUK took some names for follow-up by KUPPERS, to submit public comments

HOUSEKEEPING

- Need to clearly indicate individual objectives, reminder to report to POCKLINGTON and KUPPERS to ensure that we are capturing all work in tasks

- Need to ensure that we are staying true to the timeline we have set out, with the report release in June. If this is not realistic we will need to brief upwards as soon as that becomes clear.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 1000 Feb 09 2015

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

**Mt Polley TSF BREACH Investigation
BRIEFING MINUTES**

DATE: Feb 03 2015	LOCATION: 1810 Blanshard, Conf call	START: 1100	END: 1112
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Present:

Cheryl POCKLINGTON – File Coordinator
Haley KUPPERS – Provincial Health and Safety Specialist Inspector
Harvey MCLEOD – Geotechnical Engineering Consultant
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Keith ELWOOD – Report Coordinator
Matthew PARENT – Information Analyst, Scribe
Naomi HEMPHILL – Project Coordinator
Howard PLEWES – Geo-forensic Project Manager (KCB)

OVERVIEW:

ADHOC meeting called by WARNOCK, George to discuss KCB Report to Mine re:
Mechanism of Failure geotechnical information:

WARNOCK – meeting to discuss what is released to Mount Polley.

- The mine is interested in receiving the information relating to the mechanism of failure report from KCB, etc.
- Can the mechanism of report be redacted in a way that it will not harm the investigation in any way?
- The mechanism report is going to be very consistent with what the panel released.
- Regarding the interpretation of the data surrounding the investigation, etc.

KUPPERS:

- No harm in this as long as there is no information regarding the state of knowledge before the breach, as well as interview information. Whatever can be provided that will help them without harming the MEM investigation is good.
- Should recommendations be made to them or are there any “need to do’s” for the Mine.
- Highlighting additional concerns and potential recommendations that they should be considering in their design would be important to pass onto the mine.

- If it is a mechanism of failure report, the information provided doesn't need to be too extensive.

WARNOCK:

- We want them to have the best data possible. As long we are just providing the factual data and none of the subjective perspectives to them, then this would be beneficial.
- To get a sense of what is going to them first would be beneficial through the creation of a draft.

HOWARD:

- It is failing from the Upper GLU but do not forget about the Lower GLU and the upper sedimentary rock. This should be noted in the mechanism of failure information that is provided to the mine.

OLD BUSINESS

No items discussed

NEW TASKING**HOUSEKEEPING****ROUNDTABLE**

No items discussed

NEXT MEETING SCHEDULED: N/A

AUTHORED BY: Matthew PARENT

APPROVED BY:

**Mt Polley TSF BREACH Investigation
BRIEFING MINUTES**

DATE: Feb 16 2015	LOCATION: 1810 Blanshard, Conf call	START: 1000	END: 1100
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Present:

Haley KUPPERS – Primary Investigator
George WARNOCK – Manager, Geotechnical Engineering
Harvey MCLEOD – Geotechnical Engineering Consultant
Doug KILOH – Major Case Management Consultant
Keith ELWOOD – Report Coordinator
Matthew PARENT – Information Analyst, Scribe
Naomi HEMPHILL – Project Coordinator
Neil WELLS – Database Administrator

OVERVIEW:

MCLEOD:

- Progress report 4 out, WARNOCK has circulated link to report on G drive
- Mechanical failure: finished stress and seepage analysis, will be completed this week
- Data review: completed everything on the Mount Polley List and over 50% of the consultants information

AI HOFFMAN enters meeting room

MCLEOD continues

- Seepage analysis supports the idea that there is ~4m of uplift pressure on GLU, which would contribute to degraded stability.

Keith ELWOOD enters call

WARNOCK

- Some items of interest on the dam progress report from the Canadian Dam Association front, sounds like the CDA is interested in updating CDA guidelines with more of a national solution rather than solution for only BC, as long as the outcome makes sense for BC
- Participated in a call on Kitsault review panel presentation which included representation from KP, discussed where we are heading
- Some discussion with other mining companies, some more discussion on tailings storage facilities.

ELWOOD

- Received response from NASA, to receive update on root cause analysis software request this week
- KILOH is working on providing feedback and findings from the expert panel report, will be useful for ELWOOD and for the investigative team. This will allow us to look at the report from different perspectives as well.

HOFFMAN

- We will need to also analyze their permit conditions and create a record of compliance and noncompliance.
 - Will allow the team to identify recommendations and shape future standards of practice.
 - Need to bear in mind amendments to the Health Safety and Reclamation Code, permits, to prepare to make recommendations for the Code review.

KILOH

- Met with First Nations in Williams Lake for interviews last week
 - Mentioned ideas of how to involve First Nations in mining inspection and review, for example bringing First Nations inspectors in alongside MEM inspectors, with modified training to help build trust and provide a more transparent process. Funding and logistical needs would need to be considered as well.

HOWE and BELLEFONTAINE enter meeting

Environmental Assessment Office Certificate Discussion

KUPPERS

- EAO contacted POCKLINGTON about noncompliance with the EAO certificate and provided a few conditions of noncompliance
- EAO would like to move forward and discuss noncompliance with the mine, the purpose of this meeting is to discuss how this could affect our investigation.

Non-compliance

- MPMC is or has been out of compliance with condition 1, specific to the dam height (maximum of 955m). Current height is 969m.
 - Core width: minimum of 8m for perimeter embankment, current width is 5m
 - Slope requires 1.75-2 horizontal: 1 vertical. Currently 1.3:1.
 - Requires beach separating pond and dam
 - Dam was not originally designed as a water retaining dam, but dam acting such that it was considered a water retaining dam

- Condition 2: consent of the minister for material changes
- Condition 3: Milling rate cannot exceed 13,700 tons per day (mine has been operating at 18,000 to 22,000 since 2010)
- Condition 4: to seek amendments if they were to exceed the milling rate.
- Noncompliance identified only with the TSF, not with other areas of the EAO certificate.
 - Discussion of double jeopardy investigation where they are being charged from multiple departments, especially creating problems that MEM did not know the certifications at this time.

Conditions

- Mine would have been a part of the original Mine Development Review process, which is a precursor to modern EA. In some certificates issued at this time, another regulatory agency may be allowed to amend the certificate.
- Comment on the understanding of 'Government' where one piece of government approves an action that should not have been approved, looking for possible recommendations for governmental oversight in the course of our investigation.
 - Will need to clarify what the role is of MEM in this process as well
- MEM will need to get a copy of the original certificate, and any amendments.
 - Also may be important to look at who is responsible for signing and approving changes to any piece of the permit or certificates, as well as how much crossover there is.
- Conditions are very different to how conditions are outlined today as well – much more prescriptive and detailed.

Process

- EAO compliance will be looking at this subject
- Need to highlight this as part of a larger concern

Potential Harms

- CO service has seen the same summary and has stated that it does not affect their investigation
- Will need to provide Michelle HYNES with information on the certificate, permit, and historical information to provide messaging.
- Mine restart would require further discussion and amendments to the permit, but breach repair would be an emergency measure
- Looks reasonable for them to discuss these conditions of noncompliance with MPMC, but MEM will need to discuss way forward with EAO to avoid similar issues in the future
- Will need to look at lift approvals over EAO certificate (955m)

HOWE and BELLEFONTAINE exit call.

Ling Jarvis Questions

QUESTION 1:

- KUPPERS: Still in development, however it is not the primary focus of the efforts at the moment.
- HOFFMAN: Needs to be done soon. If MEM determines there is not a link to prosecution, it will change the focus of where the investigation goes. Not convinced at the moment that prosecution could move forward.
- In a number of instances there were changes to the design after approval – which resulted in the changes in the designs not meeting the requirements as outlined within the permit.
- KILOH: You cannot accept blind ignorance as being a defence for their duty of care to ensure they are operating the mine properly – where the ignorance is clear.

(SKIP TO) QUESTION 5:

- Non-compliance is definitely there. Perhaps not any non-compliance when it comes to the breach, however there are definitely many instances of non-compliance.
- Yes.

QUESTION 2:

- There are multiple non-compliance issues, but they stand outside the breach, and as such we must say no at this time.
 - Review of the permit conditions as they relate to the storage facility is necessary.

QUESTION 3:

- KILOH: We must recognize our emotional bias and note that we would like to close the mine or have them change their management structure, etc. Our investigation is comprehensive, however the way in which the mine is managed is completely “cringe worthy.”

QUESTION 6:

- Continuing the investigation, being comprehensive and have yet to determine whether or not prosecution is to occur – at this point there is not pursuit of charge.

QUESTION 4 answered yes in August, not discussed in call.

OLD BUSINESS

No items discussed

NEW TASKING

- HOWE to get copy of the original EAO certificate. BELLEFONTAINE to support.

HOUSEKEEPING

Please advise the command triangle when undertaking new work, to be provided with a new Task number.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: Feb 23 at 1000 via CONF CALL

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Matthew PARENT

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: Feb 23 2015	LOCATION: 1810 Blanshard, Conf call	START: 1000	END: 1145
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Present:

Al HOFFMAN – Chief Inspector
 Haley KUPPERS – Primary Investigator
 Cheryl POCKLINGTON – File Coordinator
 Harvey MCLEOD – Geotechnical Engineering Consultant
 Doug KILOH – Major Case Management Consultant
 Keith ELWOOD – Report Coordinator
 Michelle HYNES – Senior Policy Analyst
 Caroline NAKATSUKA – Manager, Occupational Health
 Matthew PARENT – Information Analyst, Scribe
 Naomi HEMPHILL – Project Coordinator

OVERVIEW:

MCLEOD

- Have a rough draft of failure assessment report, being internally reviewed by KCB
- Inquiry report, focussed on water management and state of knowledge throughout the project, as well as review of management and MAC guidelines.
 - Will likely complete both reports in the next 3 weeks.
- Sent latest version of document review, was missing a section of the AMEC files
 - HEMPHILL to send to MCLEOD
- ELWOOD discussion on planned production for the mine, increasing from 12500 tonnes per day, rising to 17500 tonnes per day within a year, and up to about 20000 tonnes per day at time of breach. Curious about the increase, and if it was expected and permitted.
 - May have exceeded their EA permitted tonnage, and we will need to look into our permitted amounts.
 - WARNOCK to follow-up with Michael CULLEN (TASK)

NAKATSUKA

- Update on site activities, attended site past Wednesday
- Took some samples but the crusher was having some issues and was not running for most of the day. Sampling was not comprehensive due to these maintenance difficulties. Sampling results will be available in a few weeks.
- Mill had been winterized, no items of concern there

- Still no change to ventilation system in weld barn or crusher, site has indicated that they are waiting for their permits before they do the repairs, citing need to assurance that there will be income before investing the money to fix the facilities.
- Have had weekly inspections, will be increasing presence with the new cutting machine (daily or 4-5 days/week)
- Steve ROTHMAN is currently on site, and Emmanuel PADLEY intends to review the site later this week with a focus on electrical systems.

HOFFMAN

- Mine has put in a submission for a limited restart. They are likely to run out of space for water in the Springer Pit late this year.
 - DEMCHUK had some meetings with Imperial Metals to discuss water management. Currently appears that there is a lack of forward planning in water management.
- Imperial Metals may be meeting with Minister Polak today
- KILOH had some indication through meetings last week that they might be thinking about a shut-down, moving into care and maintenance, rather than continuing forward. MEM should not overlook this possibility, especially in light of the issue with water management and storage.
- MCLEOD on water storage on site: they should not be storing water in the TSF and Springer Pit will not be a viable option for very long. They will need to look seriously at water treatment options. They do currently have enough capacity to withstand the freshet.

HYNES

- Release went out 20150211 outlining government reactions to expert panel report recommendations, and the Minister's acceptance of these recommendations
- Working to move forward with code review
- Looking to change the site with the DSI's on them
- Many groups very interested about Red Chris Mine and the tailings dam on site. There is a standard letter that is being provided to those who are writing into the Minister with expressed concerns about Red Chris Mine.
- Question from KILOH on number of letters to the Minister about employment and restarting the mine – Hynes indicates no increase.
- Looking to integrate all of the panel's recommendations, beginning the planning stages.

KUPPERS

- Looking at doing statement summaries for interviews, looking at outstanding gaps and tracking themes.
 - As we identify themes, we are following up and trying to connect the themes with documents and history.

KILOH

- No updates with COS yet
- Still working on statement summaries, and will be able to start linking these points.
- Panel report review to come as well, will provide some good follow-up points to consider.
- We may consider interviewing panel members (potential **TASK**)

MCLEOD

- On panel recommendations for tailings technology need to take into account the cost of alternatives and different types of mining. It is feasible to implement a dry stacking system, for example, that costs 10\$/tonne when tailings are worth 250\$/tonne, but not so feasible when tailings are only worth 20\$/tonne.
- The report mentioned dry-stacking and it is being taken by many to be the absolute recommendation for best practices. The panel has made it clear that the report intended only to demonstrate this as a possibility among many different available technologies, and that dry stacking is not necessarily the best option depending on the site.

No change to Ling Jarvis.

MCLEOD and HYNES exit meeting

Discussion on Panel Recommendations

- Would like to get an update on the position of government and the commitments made so that we can integrate it into our investigation and recommendations.
- KUPPERS to put together table for Chief Inspector recommendations(TASK T0184)

OLD BUSINESS

No items discussed

NEW TASKING

- HOWE to get copy of the original EAO certificate. BELLEFONTAINE to support.
- KUPPERS to put together table for Chief Inspector recommendations(TASK T0184)
-

HOUSEKEEPING

Please advise the command triangle when undertaking new work, to be provided with a new Task number.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: Mar 09 at 1000 via CONF CALL

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Matthew PARENT

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: Mar 09 2015	LOCATION: 1810 Blanshard, Conf call	START: 1000	END: 1052
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Present:

Haley KUPPERS – Primary Investigator
 Al HOFFMAN – Chief Inspector
 Cheryl POCKLINGTON – File Coordinator
 Rolly THORPE – Deputy Chief Inspector
 George WARNOCK – Manager, Geotechnical Engineering
 Keith ELWOOD – Report Coordinator
 Caroline NAKATSUKA – Manager, Occupational Health and Safety
 Michelle HYNES – Senior Policy Analyst
 Matthew PARENT – Information Analyst, Scribe
 Naomi HEMPHILL – Project Coordinator

OVERVIEW:

WARNOCK

- Mechanism of failure report, we had made a commitment to provide the report to MCMP. We may need to redact some things out of the report before providing it to MPMC, will need to discuss with team when the report comes out.
- KCB confirmed that they have gone through the KP, AMEC, and BGC reports, will receive tables this week.
- Need to be mindful of KCB's time, ensuring that we are prioritizing necessary work as we are coming up on the contract budget.
- TASK for WARNOCK to review the mechanism of failure report.
 - WARNOCK to coordinate the review to ensure the reports are reviewed with the most up to date versions and changes are carried forward.
 - ELWOOD to receive a copy to inform the report

ELWOOD

- NASA has provided their approval to allow us access to the Root Cause Analysis software (RCAT software)
 - Usage agreement signed by ELWOOD's company, only restriction is that it can only be used in Canada.
 - ELWOOD to provide all paperwork and emails regarding the software to POCKLINGTON to inform tasking.

- Working on draft report, still immersed in history as informed by his own research and the explication portion of the Panel Report to integrate permitting, design, construction, operation, and inspections of the TSF.
- Identified theme of three time periods, emerging from design documents, annual reviews and design documents.
 - KP efforts from design through to care and maintenance (1996-2001), characterized by better cooperation between MPMC and KP
 - KP efforts from restart to switch over to AMEC (2006-2011), where KP and MPMC were not on the same page, disagreeing with proposed slopes for example, to safety review released in 2010-2011. Includes issues identified with density and placement of instrumentation, interim slopes, and cost considerations.
 - AMEC involvement, 2006 to 2011-2014. AMEC more on the same page as MPMC, making it possible to maintain interim slopes. Identifying issues regarding AMEC's interpretation of the CDA guidelines regarding interim slopes during construction.
 - WARNOCK discussing quote from waste rock dump codes allowing factor of safety of 1.3 during operations. It may seem out of line in hindsight, but it is within the industry standard and is practiced by other companies for dams and waste rock dumps. It is also important to note that the factor of safety calculated for the area of the breach was 1.58 to 1.6. They will be able to make a supported argument for the factor of safety decisions they made.
 - KUPPERS recommends that WARNOCK and ELWOOD work together to ensure that we are evaluating these findings with geotechnical expertise and ensuring we are not introducing bias to the report. MCLEOD to assist.
- ELWOOD to provide a rough draft of his report so far by the end of the week.

NAKATSUKA

- Continuing to conduct weekly inspections on site
- Will discuss with Steve ROTHMAN this week, but will likely continue with this schedule. Has been ROTHMAN for the past few weeks, may need to incorporate another inspector to alternate.

WARNOCK

- Chris CARR and Brent BEATIE also attending site to monitor geotechnical considerations as well.

PARENT

- Update on jurisdictional review for future recommendations. Looking at international mining disasters and lessons learned - the superfund program in the US as an example.

KUPPERS

- Looking to tackle themes and complete the database in the next month or so. Will be focussing on recommendations once we can evaluate the information we have collected so far.
- WARNOCK confirmed with the panel that they will be available to us on 2014-03-20 around meeting with First Nations in Prince George to discuss their recommendations to MEM. WARNOCK, NARYNSKI, HYNES, MOREL, MCLEOD, and HOFFMAN will be attending.

No changes to Ling Jarvis.

NEW TASKING

- WARNOCK: to review the mechanism of failure report.
- WARNOCK: to coordinate the review to ensure the reports are reviewed with the most up to date versions and changes are carried forward.
- ELWOOD: to provide all paperwork and emails regarding the software to POCKLINGTON to inform tasking.
- ELWOOD: WARNOCK and ELWOOD work together to ensure that we are evaluating these findings with geotechnical expertise and ensuring we are not introducing bias to the report. MCLEOD to assist.
- ELWOOD: to provide a rough draft of the report by 2015-03-13

OLD BUSINESS

No items discussed

OLD TASKING

- Possible Task: Interviewing the Expert Panel may prove necessary. TASK: Follow up with possibly interviewing them for additional information.

HOUSEKEEPING

Please advise the command triangle when undertaking new work, to be provided with a new Task number.

Please keep working files in working folders under the Mount Polley Investigation folder on the G: drive to allow the file management team to better coordinate the file.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: Mar 16, 2015 10:00AM

AUTHORED BY: Matthew PARENT

APPROVED BY: Naomi HEMPHILL

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: Mar 16 2015	LOCATION: 1810 Blanshard, Conf call	START: 1000	END: 1032
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Present:

Haley KUPPERS – Primary Investigator
 Al HOFFMAN – Chief Inspector
 Cheryl POCKLINGTON – File Coordinator
 George WARNOCK – Manager, Geotechnical Engineering
 Harvey MCLEOD – Geotechnical Engineering Consultant
 Michelle HYNES – Senior Policy Analyst
 Matthew PARENT – Information Analyst
 Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

HYNES

- FN dialogue on mining this Friday, confirmed speakers and final agenda, will be able to provide copies to the team upon request
- HOFFMAN, WARNOCK, and MCLEOD to attend from the investigation team.
- Pulling together background for code review and the independent technical review background research. Committee has yet to be formed.
- Media focussing more on Red Chris now, but Imperial Metals still featuring in the news fairly regularly.
- There will be a report issuing from the meeting on Friday, likely to be drafted by the First Nations energy and mining counsel.

DEMCHUK enters meeting

MCLEOD

- KCB received the rest of the documents on Monday last week, still needing to review the some lower priority files and photographs. Will document the file review to provide an overview of the process.
- Looking at the code and what might be relevant to compliance, will provide comments to the team.
- WARNOCK interested in the dates of the OMS manuals and annual dam safety inspections would be useful.

WARNOCK

- CULLENS and CARR provided comments on underground noncompliance, DEMCHUK to review by the end of March if possible.
- KUPPERS: The noncompliance analysis will be a factor in if we decide to prosecute or not.
- Auditor general's report on dam regulation process in Alberta has provided some recommendations that we should look at. Auditor general in BC has also asked us for a good amount of geotechnical data.
- Check in with MCLEOD on KCB contract budget status. Currently sitting below \$200 000, but will need to confirm exact figures.

DEMCHUK

- Expecting a new restricted restart application on Friday, as well as a work plan for water management which will include a discharge plan to the environment.
- Flooding event behind the breach repair over the weekend, no discharge of water but impacted ability to work. Further information to be provided later this week.
- We are expecting that the plans submitted this Friday will include water management options as well as an outline of the work plan to form their discharge application. Both the permit and the water management applications will be submitted for a 30 day public comment period.
- Site remains challenged by resources to work on the breach repair and the restricted restart application. Will likely hear more about staffing and restart this week.
- Will need an updated design permit by the end of this month as well.
- WARNOCK: we had discussed releasing the mechanism of failure report to MPMC to inform the updated design, but would prefer not to issue until it is absolutely completed. They do already have all the data.

HOFFMAN: no updates

POCKLINGTON

- Creating relational links in the database following the KCB analysis.
- Working on adding and linking necessary information given time restraints.
- Goal to have the dataset complete by mid-April. Does not include files determined to be non-essential, as determined by KCB analysis.

KUPPERS

- Moving forward on the statement summaries and analysis. KILOH to return from vacation next week.
- Also working on FOI requests and other issues as they come up.

No changes to Ling Jarvis.

NEW TASKING

No items discussed.

OLD BUSINESS

No items discussed

OLD TASKING

- WARNOCK: to review the mechanism of failure report.
- WARNOCK: to coordinate the review to ensure the reports are reviewed with the most up to date versions and changes are carried forward.
- ELWOOD: to provide all paperwork and emails regarding the software to POCKLINGTON to inform tasking.
- ELWOOD: WARNOCK and ELWOOD work together to ensure that we are evaluating these findings with geotechnical expertise and ensuring we are not introducing bias to the report. MCLEOD to assist.
- ELWOOD: to provide a rough draft of the report by 2015-03-13. **OUTSTANDING**
- Possible Task: Interviewing the Expert Panel may prove necessary. TASK: Follow up with possibly interviewing them for additional information.

HOUSEKEEPING

- Please advise the command triangle when undertaking new work, to be provided with a new Task number.
- Please keep working files in working folders under the Mount Polley Investigation folder on the G: drive to allow the file management team to better coordinate the file.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: Mar 23, 2015 10:00AM

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Matthew PARENT

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: Mar 23 2015	LOCATION: 1810 Blanshard, Conf call	START: 1000	END: 1105
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Present:

Haley KUPPERS – Primary Investigator, Chair
 Al HOFFMAN – Chief Inspector
 Cheryl POCKLINGTON – File Coordinator
 George WARNOCK – Manager, Geotechnical Engineering
 Keith ELWOOD – Report Coordinator
 Michelle HYNES – Senior Policy Analyst
 Tania DEMCHUCK – Mount Polley Project Manager
 Harvey MCLEOD – Geotechnical Engineering Consultant (KCB)
 Matthew PARENT – Information Analyst, Scribe
 Naomi HEMPHILL – Project Coordinator

OVERVIEW:

HOFFMAN

- Meeting with First Nations Friday, industry did not really engage and left rather than participating in workshops.
- Mediation went well, aside from attendance (fewer First Nations people than expected).
- All three members of the expert panel were in attendance.
 - Were able to discuss the recommendations made by the panel directly with panel members
- MABC was resistant to discussing the panel recommendations with MEM, especially dry stack tailings.
 - Should be noted that there are many technologies that can be helpful, and there are many other technologies that may be more appropriate depending on the site and would uphold the panel recommendations more faithfully.
- Independent panel members did agree that independent panels are necessary and discussions on Engineer of Record are in alignment with the Chief Inspector's investigation findings.
 - Did discuss the essential elements of sign-off when changing EOR, and in their opinion the independent panel would be able to track the evolution of the TSF.

DEMCHUK:

- Things on site are okay, they are continuing construction on breach repair and cut-off wall, cut-off wall construction is going much more slowly than they had originally planned because of the heavily compacted dry conditions. Some discussion of bringing an auger to help with this but nothing is settled yet.
- Water management continues to be an issue; some difficulty pumping to springer pit, two pumps went down from last week.
 - Hoping to see pumping in better shape this week
- With warmer weather, the snowpack has been down to about 10% which reduces the risk from snow, moving forward the concern will be rain.
- Received the draft for the restart application, and the plan for the new water management plan on Friday, FN are being included in the screening process as are representatives from Likely.
 - Several people from MOE, MEM and Jim KUIPERS did a review on the draft, but we have not had the chance to have an in depth look at the documents, will be reviewing this week. Goal to have a decision on the application by this Thursday.
 - Documents will be out for public consultation starting next week, with documents posted to MEM's website (again, very different from normal process)
 - Community meeting in Likely next week, and will have more community meetings coming over the course of the public consultation period.
 - MPMC and Imperial Metals are aware that the documents will be posted.
 - Process will continue to unfold over the next couple weeks. If application is accepted, 2 weeks for MDRC technical review, 2 weeks company response, some back and forth responding to comments, then review of draft permit conditions and then review by statutory decision makers.
- Company may also need to seek an EA amendment; EAO and DEMCHUK have been looking into this. May be a decision by the Minister on if the amendment is required or not.
 - Likely that MEM and MOE will be open to some criticism on why an amendment was not already done. EAO working on messaging around that, as are MEM.

MCLEOD

- Mechanism report draft sent out on Friday, WARNOCK to distribute
- Inquiry report draft sections ongoing. KUPPERS and WARNOCK reviewing, providing feedback to MCLEOD.
- These reports are intended as appendices to our own report.

WARNOCK

- Two reports with prelim data, two with advanced data, then mechanism report and prelim report.
- Hope to have mechanism report reviewed this week. KUPPERS to review by Wednesday.

ELWOOD

- Has format for final report, which will be two separate documents. The report itself, and a 'general consumption' report that will provide a shorter and more accessible extract intended as a broader distribution report.
- Main report will include three sections: the factual elements, analysis (including root cause analysis), and recommendations.
- NASA has come through with the root cause analysis tool, will provide a briefing next Monday
 - Tool is sufficiently flexible and methodological that we will be able to incorporate it well into our current methodology and information management.
- ELWOOD to distribute methodology documentation to the team.

POCKLINGTON:

- Update on executive briefing, may need to message upwards on the report timeline.
- To provide further briefing upwards when we come to the decision on prosecution. Roughly three weeks out at this point.
- Processing the consultants data at this point, addressing the most necessary processing first, documenting areas of improvement to the dataset pending the investigative timeline.
- May overtopping event raised, discussed the information surrounding the overtopping, reporting, and need to incorporate the event to and response into the investigation.

DEMCHUK exits call

HYNES

- Given the response in the media to the overtopping, we will need to look further into it.
- May need to look into the need for an investigation by mine management.

No changes to Ling Jarvis.

NEW TASKING

No items discussed.

OLD BUSINESS

No items discussed

OLD TASKING

- WARNOCK: to review the mechanism of failure report (To be completed by this week)
- WARNOCK: to coordinate the review to ensure the reports are reviewed with the most up to date versions and changes are carried forward.
- ELWOOD: to provide all paperwork and emails regarding the software to POCKLINGTON to inform tasking.
- ELWOOD: WARNOCK and ELWOOD work together to ensure that we are evaluating these findings with geotechnical expertise and ensuring we are not introducing bias to the report. MCLEOD to assist.
- ELWOOD: to provide a rough draft of the report by 2015-03-13. **PROVIDED TODAY**
- Possible Task: Interviewing the Expert Panel may prove necessary. TASK: Follow up with possibly interviewing them for additional information.

HOUSEKEEPING

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: Mar 30, 2015 10:00AM

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Matthew PARENT

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: Mar 30 2015	LOCATION: 1810 Blanshard, Conf call	START: 1000	END: 1035
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Present:

Haley KUPPERS – Primary Investigator, Chair
 Cheryl POCKLINGTON – File Coordinator
 George WARNOCK – Manager, Geotechnical Engineering
 Tania DEMCHUK – Mount Polley Project Manager
 Keith ELWOOD – Report Coordinator
 Harvey MCLEOD – Geotechnical Engineering Consultant (KCB)
 Matthew PARENT – Information Analyst
 Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

DECMHUK

- MEM, MOE, FN and community reps screened application for restricted restart, as well as MPMC plan for long term water management last week
- Application will move forward through MDRC process, MDRC meeting scheduled in Williams Lake tomorrow, and documents will also be released for 30 day public comment period this week.
 - There will be an email address set up for the public to submit comments to CI
- Plan includes lower daily production rates and tailings to Springer Pit
- The water balance is under a worst case scenario, wet year event, hoping to get a discharge permit as well, as springer pit water levels could reach levels that would interact with ground water by July given a 1 in 200 year water event. Under normal conditions this timeline would likely be closer to October or January depending on tailings volumes.
- With new information on water balance it is difficult to separate restricted restart permit from discharge permit.
 - Discharge permit will depend on the water quality information for modelling.
 - WARNOCK question on if water information collected as a part of the breach would meet water quality guidelines – no, but settling and some treatment may mitigate some of the outstanding water quality issues. Will need further information before any decisions can be made.
 - Water would be close to drinking water quality but may not meet aquatic criteria

- DEMCHUK heading to Williams Lake tomorrow, and will also attend meeting in Likely Wednesday evening. Expecting good attendance to these meetings.
- Information on water management and applications to be provided on MEM website.

MCLEOD

- Went through the photos, should be able to provide final review of documents to team this week
- Working on inquiry report as well, finding output from the database helpful.
- POCKLINGTON to copy MCLEOD on any new reports
- KUPPERS notes that SMYTHE sent follow-up email from Jan 21st meeting, MCLEOD to review as well. Forms another set of information for analysis.
- Update on CDA:
 - Task group in CDA including 5 on mining and 5 on water side, workshop in Toronto in a few weeks.
 - **TOP 5**
- CDA should release some information on what the outcomes are of the meetings, as will likely MABC.

WARNOCK

- Working through draft mechanism of failure report
- WARNOCK has accepted a job at the Ministry of Transportation, last day at MEM will be April 24th.
 - Recommends Heather NARYNSKI to serve as an internal reviewer for MEM, but notes that her time is very limited.

POCKLINGTON

- Waiting on some analysis from KCB on new KP files and new AMEC files.
- Will be looking for files and notes over the next six weeks or so, as we complete the dataset.

ELWOOD

- Should be able to do a briefing/training on the RCAT process Tuesday April 7 at the next briefing, will be reviewing the timelines and KCB drafts this week.

KUPPERS

- Has completed the statement summaries, will be feeding them into the database and linking themes over this week.
- Will be discussing how to review the non-compliances and the permit, and the decision on whether or not we will proceed to prosecution.
 - Will likely schedule a meeting next week to discuss this

HOUSEKEEPING

- Call for holiday dates for the summer, so that we can plan for team vacations.

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: Apr 07, 2015 10:00AM

AUTHORED BY: Naomi HEMPHILL
APPROVED BY: Matthew PARENT

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: April 07 2015	LOCATION: 1810 Blanshard, Conf call	START: 1100	END: 1159
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Present:

Haley KUPPERS – Primary Investigator, Chair
Cheryl POCKLINGTON – File Coordinator
Keith ELWOOD – Report Coordinator
Harvey MCLEOD – Geotechnical Engineering Consultant (KCB)
Matthew PARENT – Information Analyst, Scribe
Naomi HEMPHILL – Project Coordinator
George WARNOCK – Manager, Geotechnical Engineer

OVERVIEW:

KUPPERS:

Discussing the meetings April 20th- 22nd:

- MCLEOD is unavailable for those dates, will need to discuss dates and possible solutions
 - KILOH may be able to do some work with MCLEOD to clarify specific questions, or possible to split meeting to allow for different scheduling conflicts.
 - Next week to plan questions and meeting structure
- WARNOCK will be leaving by the end of April.
- Separate discussions may have to occur to go through geotechnical information.
 - Meeting to occur this afternoon at 1400 to discuss various issues further – with HOFFMAN, KUPPERS, KILOH.

MCLEOD:

- Inquiry report, through the consultant sections and MPMC management sections
- Jim CASEY is working with MCLEOD, adding detail on possible causes and contributing causes, making good progress.
- Requested a report from the database regarding TSM (Towards Sustainable Mining). To send a list of search terms to POCKLINGTON, to improve search functions in the database for MCLEOD review.
 - TSM has not been tracked in the database and as such, a report cannot be conducted using those terms. Moving forward, other terminology will be investigated to attempt to highlight TSM documentation.
- Requesting MEM and Geotechnical inspection reports as one package. **TASK** for POCKLINGTON to extract files. Due Wednesday 2015-04-08.
 - May be available on the MEM website

KILOH:

- Finishing interview summaries, now including enterprise connections for enterprise tracking

ELWOOD:

- Presented NASA Root Cause Analysis tool (RCAT) this morning
- Rules and examples have been consistent with the analysis we are undertaking, tool is a good fit for the investigation

WARNOCK joins call**ELWOOD continues**

- Key concept introduced in this briefing: root cause is defined by NASA as an organizational factor, rather than a physical condition or event.
- RCAT is also applicable to the prosecution exercise, and may act as a valuable tool in these discussions.
- Also finding close relation between the investigative reports and the RCAT tool. MCLEOD and ELWOOD to continue to work collaboratively, so that the investigation report can inform RCAT in real time.

WARNOCK

- Sent out mechanism of failure review, will meet with Howard PLEWES this Friday to finalize the report.
- Booked flights to Victoria for the 20th to 21st meetings
- MAC does have the TSM self-assessments, but has not released them to the public. Will request from the company but may also request from MAC if it is not available from the company

HOFFMAN:

- Sent response to the amendment to the MPMC failure investigation report, which claimed that the Golder Report was a privileged document.
- Will not be distributing the Golder Report until we have received clarification on why it is privileged. HOFFMAN is receiving review on the letter he drafted to request the reasoning behind marking it as privileged and confidential.
- Should hold a meeting to update the Deputy Minister, will organize in the next week or two. **TASK** action.
- May not be able to link non-compliances to the failure, but it could be considered that we prosecute on the other non-compliances of the Code. They are not generally prosecuted on, but it is important to remember that they are still non-compliances and *ultra vires* of the Code.

POCKLINGTON:

- In the midst of processing the rest of the interview summaries and KCB analysis of documents
- Will be contacting team members for remaining notes and documents

HOUSEKEEPING

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: Apr 13, 2015 10:00AM

AUTHORED BY: Matthew PARENT

APPROVED BY: Naomi HEMPHILL

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: April 13 2015	LOCATION: 1810 Blanshard, Conf call	START: 1004	END: 1049
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Present:

Al HOFFMAN – Chief Inspector
 Haley KUPPERS – Primary Investigator
 Cheryl POCKLINGTON – File Coordinator
 George WARNOCK – Manager, Geotechnical Engineering
 Doug KILOH – Major Case Management Consultant
 Harvey MCLEOD – Geotechnical Engineering Consultant
 Tania DEMCHUK – Mount Polley Project Manager
 Michelle HYNES – Senior Policy Analyst
 Keith ELWOOD – Report Coordinator
 Steve ROTHMAN – Site Inspector
 Naomi HEMPHILL – Project Coordinator, Scribe
 Matthew PARENT – Information Analyst

OVERVIEW:

DEMCHUK

Restart permit:

- No big changes from last week
 - Applications are under review and out for public comments
 - First round of technical comments are due today, so we don't have them available yet.
- Work continues, with community meetings next week at Williams Lake and Sugar Cane.
- Crux is about water management and whether or not we feel they are on their way to a permit –need to have a discharge permit that MOE has determined to be acceptable.
- Relationship with FN with respect to their economic community development agreement, which is between the province and FN and the company and FN.
- Without the discharge permit there is only about a month of difference in the worst case scenario, before they would need to start discharging. There are some sources of water on site currently that are not yet well understood. Site is working hard on getting their information together, with guidance from MOE and Golder.
- There is water getting into springer pit, but they are unsure from where the source is. Their projections are lower than the amount of water that is actually within the pit.

HOFFMAN:

- Meeting today on the privilege MPMC is claiming with the Golder report
- Site seems unwilling or unable to complete an adequate investigation.

MCLEOD

- CDA has put together a working group of about 10 people, MCLEOD is chairing, to look into guides or revisions with respect to the Mount Polley failure.
- HYNES is putting together TOR for code review, may want some coordination between these groups.
- MCLEOD may look to revise the Factor of Safety (FoS) section, and possibly revisions to the descriptions of Engineer of Record (EoR) and frequency of Dam Safety Review (DSR) for tailings dams.
- Otherwise it would be just overall improvement of the CDA guidelines, and would include the Panel recommendations as well.
- Also working on the APEG group, covering the site characterization and producing guidance documents with reference to site characterization
- Not yet reviewed final submission from AMEC, submitted last week. To submit analysis by end of Wednesday.
- Jim CASEY to be available for next week's meetings, as he was the reviewer for the historical documents.

ELWOOD

- We have started the Root Cause Analysis (RCAT) process, and have built a good portion of the timeline
- Should have a good product to inform the meetings next week
- Good parallels between the RCAT activities and the discussion around prosecution.

KILOH

- To be in the Victoria office Tuesday through Thursday

HYNES

- There is now an incident page on the MEM website to start to host the MEM relevant Mount Polley documents, including the public consultation invitation for the restricted restart documents.
- Have received some public comments on transparency that we will need to consider.
- Code review is upcoming, working on the TOR currently. Resources are the limiting factor at this point.
 - Will want to keep the code review in mind, to allow the current work to inform our future direction.

ROTHMAN

- Will attend site this coming week starting tomorrow

- Plans to inspect Hazeltine Creek and the Auger where they are drilling
 - They are still installing the curtain wall but it is going very slowly, auger to help with this
 - Estimated completion date tentatively for April 26th.
- Will ask Charlie RUGER if the OHSC was involved in the investigation at all.

POCKLINGTON

- We are processing data, attempting to get meaningful documents processed before next week's meetings
- Reminder to supply notes and information to the investigation team, as has been requested by PARENT.

Team will wait and address the Ling Jarvis questions next week in depth.

MEETING ON APRIL 9th LETTER REGARDING CONFIDENTIALITY OF GOLDR REPORT

Attendees:

HOFFMAN

POCKLINGTON

KUPPERS

WARNOCK

THOMPSON, Barbara

ROWBOTHAM, Elizabeth

HEMPHILL

PARENT,

Discussion of letter sent on 2015-04-09, and response received from Imperial Metals. Sophie HSAI response states that the letter is subject to both solicitor client privilege and litigation privilege.

- Uncertain why they would claim this privilege and still provide the Ministry with the report.
- ROWBOTHAM, THOMPSON are uncertain as to how and why they are claiming privilege, and how these types of privilege apply in this situation.
 - There is not much evidence of case law showing that, in accordance with these privileges, they either have to provide the documents or that providing documents, the privilege is not waived.
- Normal procedure would be to get the investigation done under solicitor client privilege, and you might release it if it is in your interest to do so
- If it is privileged, we may want to send it back to the company as a privileged document but the company would then be out of compliance for failing to adequately provide their investigation as required under the code.

- We cannot use a report that is privileged (e.g. by sending it for analysis by KCB), which amounts to the report not being adequately provided as we cannot use it.
 - Not only this but we are vulnerable to accusation that we are using it unintentionally by virtue of having read it, if we do read it.
- Will need more research to find if they can provide the report without automatically waiving privilege, why they provided a privileged report
- Team to secure the document as a hard copy
- Code uses potentially unclear language around the investigation
- HOFFMAN to contact Imperial Metals, to assure them that we are not reviewing the report. ROWBOTHAM to provide draft to HOFFMAN for this purpose.

Group to meet again to discuss next week.

HOUSEKEEPING

NEW TASKING

OLD TASKING

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: Apr 20, 2015 10:00AM

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: April 27 2015	LOCATION: 1810 Blanshard, Conf call	START: 1000	END: 1039
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Present:

Al HOFFMAN – Chief Inspector
Haley KUPPERS – Provincial Health and Safety Specialist Inspector
Cheryl POCKLINGTON – File Coordinator
Doug KILOH – Major Case Management Consultant
Harvey MCLEOD – Geotechnical Engineering Consultant
Tania DEMCHUK – Mount Polley Project Manger
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Keith ELWOOD – Report Coordinator
Matthew PARENT – Information Analyst, Scribe

OVERVIEW:

DEMCHUCK:

- Breach repair construction is starting to wrap-up with 1-3 days left on construction, followed by downstream buttressing work that has been permitted so far.
- Review of the Restricted Restart Application continues:
 - Receiving many comments from First Nations, which will have to be reviewed.
- A short term permit is expected to come out by July, followed by the development of a long term permitting plan.
- Will be heading up to Williams Lake tomorrow (20150427).

HOFFMAN:

- After a meeting with the Minister last week, it looks as though recommendations relating to Tailings Dams will come out first, followed by recommendations on Health & Safety.

MCLEOD:

- PLEWES is hoping to finish the review of his report this week.
- There is a ledger for the most recent KP files which were sent to the investigation team.
 - Will send the ledger once they have tied up some loose ends.
- KUPPERS sent part of the Golder Report on the Mount Polley Report, and asks MCLEOD to review for overall quality and comprehensiveness.
 - MCLEOD to provide an analysis of report to investigation team.

ELWOOD:

- Investigation Team continues to proceed with RCAT analysis.

KILOH:

- To go over the RCAT Draft with MCLEOD next week to get technical opinions / review.

POCKLINGTON:

- Dataset update: continue auditing and processing the last parts of the evidence collected.
 - Considering finding an outside auditor to help 'perfect' the dataset.
- Beginning to use the dataset to help support the RCAT information investigation team has collected.

NATKATSUKA:

- Met with mine to discuss the plans relating to the ventilation and crusher.
 - The plans were not detailed, and there were many questions posed regarding the designs.
 - The crusher design was created to capture "very light particles of dust." Ultimately this will have little effect on ambient dust in the crusher area.
 - There are many gaps in the designs and notes from the various meetings regarding the ventilation and crusher.

Daily questions on *Ling-Jarvis*

1. Do we have reasonable grounds or information to take to prosecution?
 - ELWOOD: believes that we are very close to having reasonable grounds / information to take to prosecution. Evidence collection must continue to support the various findings that the investigation team has collected.
 - Moving towards prosecution.
2. Does it appear from our knowledge to date that a decision to proceed to charge could be made now?
 - KUPPERS: No. We still have not yet pulled together all supporting documentation.
3. What has the conduct of our investigation implied in pursuit of this investigation?
 - a. Safety: Continues to be an underlying theme of the investigation. Focus has been primarily on "B" – most recently.
 - b. Root cause: using the RCAT has given us more focus which will allow us to answer the following questions.
 - c. Charge: Not the focus of the investigation yet, however the various threads as we continue with the RCAT , it may become clearer
 - d. Contravention: Same as "C"
4. ~~As investigators, have we had access to mine inspector's files? (yes in August)~~
5. ~~Is there damning evidence of non-compliance level during inspection (Yes on 2015021)~~
 - a. ~~TSF elevated~~

- b. ~~Pre breach~~
 - c. ~~Post breach overview~~
6. Any circumstances the court would think we are pursuing criminal or quasi-criminal charge?
- o N/A

HOUSEKEEPING

NEW TASKING

OLD TASKING

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: May 4, 2015

AUTHORED BY: Matthew PARENT

APPROVED BY:

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: May 04 2015	LOCATION: 1810 Blanshard, Conf call	START: 1003	END: 1051
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Doug KILOH – Major Case Management Consultant
Harvey MCLEOD – Geotechnical Engineering Consultant
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Neil WELLS – Database Administrator
Keith ELWOOD – Report Coordinator
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

MCLEOD:

- Completed the analysis that was asked for, no further updates on the report itself
- Investigation team is working through the KP submission received last week (20150430)

KUPPERS

- Ken BROUWER from Knight Piesold met with Dave NIKOLEJSIN, the Deputy Minister last week.
 - Provided diagrams with beaches and slope gradients – focus on steep slope and water balance.
 - Presented the drawing and discussed with DM, who then called a last-minute briefing with Tania DEMCHUK and KUPPERS to present them what Knight Piesold had given to NIKOLEJSIN
- KUPPERS, KILOH to go to Knight Piesold this Wednesday (20150506) to interview BROUWER at his invitation.
 - Intend to interview about the issues he wishes to speak about, as well as questions the investigation team has developed over the past few months since BROUWERS last interview.
 - KILOH notes that we need to accept the information into the investigation, but bear in mind that it is as any other information from an interested party and contains potential bias.

Michelle HYNES joins meeting

- Continuing discussion on Knight Piesold information

- They may submit their information to the public which could influence public opinion on cause before the investigation is complete. The investigation team should be aware of this but there is nothing we can or should do to prevent them from releasing their information
- KUPPERS, HOFFMAN, POCKLINGTON, KILOH, and ELWOOD to go to Klohn Crippen Berger tomorrow (2015-05-05) to review the data and go over the Root Cause Analysis with MCLEOD and Jim CASEY.
- KUPPERS, HOFFMAN, KILOH, MCLEOD to attend interview with BROUWER. Some discussion of POCKLINGTON to attend.
 - POCKLINGTON to listen to the recording rather than attend due to number of interviewers.

ELWOOD

- Continuing to write the historical overview
- Working with POCKLINGTON and file management team, finding the process and document review very helpful.

NAKATSUKA

- No new updates
- May need to meet with KUPPERS and DEMCHUK for permit requirements around the ventilation system. Potential meeting later this week.
- No new notes from Rolly THORPE or Steve ROTHMAN. Notes are included as part of an inspection report. NAKATSUKA to verify that there is only one report, or check for separate reports.
- ROTHMAN has been attending site as he has time, generally a few times a month.
- NAKATSUKA has ordered review the containment of the sulphur pile – they had planned to coat the sulphur pile but the temperatures would not allow it.
 - Also concerned about the chemical totes and appropriate storage.
- Difficulty in getting the ventilation system – mine will not implement it before they have a permit to operate, but once they have a permit they will likely want to operate immediately to generate the income to pay for the ventilation. Will need to develop a plan around this.
- POCKLINGTON recommends some distance between team managing operations and investigation team, in order to better protect our time

HYNES

- Petition emails have been sent to Megan METCALFE from Change.org
 - We are not able to respond to many of them (we don't have their contact information). We will need to respond to those that we are able.
- Will need to brief on the code review committee, currently developing guidelines around expertise to ensure that the best possible person is assigned to each position.

HOUSEKEEPING

NEW TASKING

OLD TASKING

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: May 11, 2015

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation BRIEFING MINUTES

DATE: May 11 2015	LOCATION: 1810 Blanshard, Conf call	START: 1000	END: 1100
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Doug KILOH – Major Case Management Consultant
Harvey MCLEOD – Geotechnical Engineering Consultant
Keith ELWOOD – Report Coordinator
Michelle HYNES – Senior Policy Analyst
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

KUPPERS:

- Meetings last week with KCB
 - Continuing work on Root Cause Analysis

MCLEOD

- Reviewing Golder report conclusions:
 - The changing factor of safety is within margins of error of the design (3.5% change due to buttress excavation?);
 - The erosion in the left abutment attributed to piping in the Panel report was due to erosion during the breach event, and;
 - The two meter water reduction level (increasing beach), the change in the factor of safety would not have been significant.
- MCLEOD is only commenting on what Golder found, not on whether or not the findings are correct or not.
- Found that the Golder report did not look at recommendations
- Report did look at the GLU and over-steepening but did not address water balance and beach issue.
 - Provided examples of other facilities that are using steeper slopes, but facilities are angle of repose slopes on bedrock foundations
- Golder report doesn't supply any new information, primarily supporting Mount Polley's position.

Tania DEMCHUK enters meeting

DEMCHUK

- Restart permit application review continues, waiting on additional comments from the company responding to technical questions from the Ministry
- Public comment period ended last week, received over 8000 comments from the public many of which resulted from online petitions from various organizations
 - Comments form a part of MEM's record, as well as MOE.
- Expecting an application for short term water discharge at the end of this month to help with the water surplus issue on site – likely permitting from a year to a year and a half.
 - Looking for referrals to statutory decision makers from June to July.
- Community meeting in Likely on Wednesday night, and a second meeting on a weekend in early June to capture the summer residents of Likely who may only be present in the summer and/or on weekends.
 - May see the public opinion in meetings change as the layoffs from Mount Polley take effect.
 - Residents overwhelmingly oppose discharge to Quesnel Lake, preferring Quesnel River which is much more challenging for the mine site. Concerns include the impacts to Quesnel Lake and the ongoing analysis of the effects of the breach on Quesnel Lake that could be confounded by permitting discharge to the Lake.
 - Pipeline routes and pumping are challenging – looking for more passive alternatives as well (e.g. ditches or gravity feed)
- Potential upcoming issues for the site include bonding and liability
- Outstanding FOI requests continue to be an issue
 - Will need to generate strategy to fill these requests without putting the investigation entirely on hold
 - Will need to consider strategy for future FOI requests
 - Ongoing need to review for harms before releasing

Doug KILOH joins call

HYNES

- Working on the code review that is upcoming
 - Currently looking at the First Nations Consultation section, looking at four to six appointed people for tailings review and health, safety, and permitting committees.
- MABC has received the draft Terms of Reference for the committees, waiting on their response regarding the committees

DEMCHUK

- Need to meet with Deputy Minister and Assistant Deputy Minister to discuss timelines

KUPPERS

- Meeting last week with Knight Piesold, who may release their own conclusions on the causes of the breach
- Some follow-up: need to go over the timeline with their water balance, maybe with MOE
- Have received his PowerPoints, both the presentation to the DM and the timeline they created.
- We do agree that the water balance impacted the consequence of the failure, and that steep slopes contributed to the failure.

- There are points of agreement, but we may need to get some messaging out around the pieces that are a concern.
- KUPPERS to set up a meeting around the potential release by KP before the meeting with the ADM and DM.

POCKLINGTON

- Need to start auditing the database so that we can begin to feed information out of it.

JARVIS questions

1. No, still doing the analysis, do not have sufficient evidence or information to go to prosecution
2. There is some information that would speak to potential permit, code, act non-compliances that we are continuing to gather support for. Not yet sufficient.
3. Continue to be open and comprehensive. Furthering analysis and understanding of the factors.
4. Yes in August
5. Yes in February
6. Not at this point.

HOUSEKEEPING

NEW TASKING

- KUPPERS to set up a meeting around the potential release by KP before the meeting with the ADM and DM

OLD TASKING

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: May 19, 2015

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

**Mt Polley TSF BREACH Investigation
DEPUTY MINISTER BRIEFING**

DATE: April 17 2015	LOCATION: 1810 Blanshard, Conf call	START: 1500	END: 1553
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Present: Dave, David

Dave

David

Al HOFFMAN – Chief Inspector

Rolly THORPE -

Haley KUPPERS – Provincial Health and Safety Specialist Inspector

Cheryl POCKLINGTON – Site Inspector

George WARNOCK – Manager, Geotechnical Inspector

Harvey MCLEOD – Geotechnical Consultant

Tania DEMCHUK – Senior Environmental Geologist

Nathaniel

Michelle HYNES – Communications

Naomi HEMPHILL – Project Coordinator (PHONE)

Matthew PARENT – Information Analyst, Scribe

OVERVIEW:

POCKLINGTON: Executive Briefing

- Basic Review:
 - Review of the importance of investigation
 - Major Case Management Structure
 - Accomplishments to Date
 - E&R Database
 - Current issues on-going:
 - Claims of privilege over investigation from the mine
 - Moving forward with concerns of possible prosecution
 - Possible non-compliances for Order of Investigation from mine
 - KCB Inquiry Report (Geotechnical)
 - Coordination with Policy group (recommendations, etc)
 - Panel information discrepancies
 - Interviews for further depth
- Next steps:
 - Writing of report by Report coordinator – Keith ELWOOD

- Meetings beginning on 20150420 to determine whether or not prosecution may occur.
- Root Cause Analysis (NASA) database
 - Determines why it occurred in comparison to the 'how' it occurred through the Panel report.

DAVID:

- Perhaps considering a tree of Ministry inspections

POCKLINGTON continues:

- Discusses challenges to the investigation at this time.
 - Ensuring that the work that DEMCHUK conducts remains at arms length.
 - FOI
 - Room for the investigation
 - Auditor of dataset
 - Continuation of contracts
- TIMELINE:
 - Working towards end of July for a near complete draft to executive

DAVE:

- RCA – figure out when the team will be able to let Dave know exactly what the report is going say – before the report is written.

DAVID:

- Ensure that information provided to executive does not influence the report or negatively affect the use of information or affect prosecution.
- Too early to say whether or not it will be an academic or legal report (i.e. if it goes to prosecution).

HOUSEKEEPING

NEW TASKING

- Forecast cost of work conducted on investigation and provide to executive

OLD TASKING

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: N/A
AUTHORED BY: Matthew PARENT
APPROVED BY:

Mt Polley TSF BREACH Investigation

EXECUTIVE MEETING DEBRIEF MINUTES

DATE: JULY 24, 2015	LOCATION: 1810 Blanshard, 6002	START: 1000	END: 1045
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Present:

Al HOFFMAN – Chief Inspector of Mines
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Matthew PARENT – Information Analyst, Scribe
Naomi HEMPHILL – Project Coordinator

OVERVIEW:

1) Duty of Care in Code Review:

- **TASK:** Research on 'Duty of Care' through the review of other jurisdictions and WorkSafeBC. Establishing a *clear* definition of Duty of Care and how it applies to code review, etc.

2) What is required for an excavation (and additional construction projects)?

- What is standard practice?
 - i. Enforceable
 - ii. Toe Excavation
 - iii. Roles and responsibilities of those in management positions. Professional Accountability and Duty of care needs to be clearly outlined. (EOR, manger, etc).

3) The Executive Summary

- **NOTE FOR ELWOOD:** Lay person summary – using the complex systems approach to demonstrate the complexity of the issues, rather than the linear formatting.
 - i. Visualizations (i.e. ven diagrams, tables, charts, etc)

4) Considering Long Term Planning in Report:

- The elevation of planning may be necessary as the common thread throughout all issues present at MPMC were privy to a lack of planning.

5) Specific Recommendations:

- Ensure detail that link back to the issues of the event (Because of X, we recommend Y).
- Identifying the inability to demonstrate contraventions – ensure clear roles and responsibilities and who is primarily at fault.

- Recognize the way in which executive will want the report ‘packaged.’ Ironing out the presentation of how we would like to influence the organizational structure, etc.

6) Recognizing weakness within MEM:

- MEM did would not have prevented this from happening, however self-reflection enabling improvements across the industry, etc.

7) Review EA Feasibility Assessments:

- Review roles and responsibilities of EA Feasibility assessments and how MEM permitting is integrated within the review process.
- Should dam design and water balance be reviewed at the EA certificate stage?

8) Involvement of Executive:

- Consider providing chapters to legal services and MOREL, David concurrently.

9) Resources:

- Recommendation for more geotech’s needs to be tied to permitting and specific identified issues.
- Regulatory functions: consider a recommendation that evaluates our organization structure (Dedicated prevention, dam safety manager, C&E).

TASK: Review MCLEOD’s “Draft” Inquiry Report – confirm changes and have finalized.

AUDIT TASK: Provide interview transcripts to interviewees

Mt Polley TSF BREACH Investigation

OPERATIONAL STRATEGY MEETING MINUTES

DATE: Aug 25 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1530	END: 1800
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Provincial Health and Safety Specialist
Rolly THORPE – Deputy Chief Inspector
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Harvey MCLEOD – Geotechnical Engineering Consultant

OVERVIEW:

Discuss Town meeting, AI Hoffman will be attending and sitting out of the last interview on Tuesday. AI Hoffman will be providing summary of facts.

Independent parallel investigation: integrity of the investigation is priority.

What is happening on the site: Priority is to reduce the amount of sediment and slimes leaving the site. This is being done by constructing a number of sumps as well as constructing a Main Dyke and Satellite Dyke upstream of the breach area. Tailings released from the dam created a plug between Polley Lake and Hazeltine Creek, which increased the water level by 1.7 metres, the site is currently working on reducing the water level to reduce erosion of sediment into the lake.

Number of parallel, conservation services, environment Canada, chief inspector, expert panel, and the Mount Polley mine.

Mt Polley TSF BREACH Investigation

OPERATIONAL STRATEGY MEETING MINUTES

DATE: Oct 30 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1603	END: 1704
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Rolly THORPE – Deputy Chief Inspector
Tania DEMCHUK – Communications
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Naomi Hemphill – Project Coordinator, Scribe
Caroline NAKATSUKA – Manager, Occupational Health and Safety
Michelle HYNES – Senior Policy Analyst
Steve ROTHMAN – Site Inspector
Rory CUMMING – Site Inspector
Gerry BARCELONIA – Site Inspector

OVERVIEW:

KUPPERS

- Collaborative session, stemming from conversations this week

CUMMINGS exits due to feedback over the conference line.

KUPPERS continues

- Objective: collaborative and ensure that we are doing a thorough investigation including the broad scope including all personnel involved in the investigation
- Scope: consistent with Terms of Reference for MP investigation, finding contraventions, issuing orders, and findings for recommendations. Strategy moving forward, objective is to improve recommendations for the mining industry, starting with Mr. Polley, as a trial run to work collaboratively with site, as well as other agencies.
 - Through guidance and compliance, diving into issues surrounding health and safety, emergency response, and adjusting our own approach while maintaining openness, honesty, and collaboration
 - Use our onsite inspectors to gather some of this information

CUMMINGS re-enters via conference call

KUPPERS continues:

- Guiding principles include involving site and onsite inspectors, working on buy-in, collaboration, and recommending practices, sustainable practices, and innovation
- Bigger picture includes furthering onsite activities by diving deeper into risky areas or by doing a broader overview of Mt. Polley
- Identified several areas where we need to do a more fulsome overview – emergency response plan, JOSH committee, as well as onsite inspections (eg electrical), furthering understanding of organizational structure and culture at Mt Polley
- ROTHMAN: Are we going to be telling them how to run their mine? Who in our team has the experience and knowledge to do that?
- KUPPERS: No, we are trying to ensure that they are working at compliance. Collecting further information to develop standards and a comprehensive list they will need to take prior to some of the work that will be coming into the picture. This is separate from, and beyond the investigation
- HOFFMAN: Again, this is confidential, but we have found that they did not have an acceptable MERP. We will need to send some orders to ensure that these standards are met. This has happened again since the breach. We cannot allow this to continue to happen especially when they start moving beyond emergency work. Their JOSH committee is also not functioning properly, and this is not unique to Mt Polley. There may be other issues- we have to get the mine into a level of minimal standards, and improve minimal standards before we can allow them to continue to work.
- KILOH: This also puts the mining industry at risk; the public will not support the industry, or the ministry. We need to support these goals from community activity to compliance through a collaborative system.
- ROTHMAN: The MERP went into the G: drive and is now on there.
- KUPPERS: We are looking at the big picture, and we're focussing on the whole picture to identify all the issues, together with the mine and in an open manner, to resolve the issues and get the details we need. Not just how we have done things in the past, how we can improve our own practices, encouraging feedback and file management. Asking CUMMING for his input

CUMMING

- Saw some electrical issues but did not focus on it as that is not their function currently. Crusher building was especially bad.
- As far as strategy, would like to return to the site and focus on a few areas and get some of those things shored up.
- Would like to provide a report within his specialty, feels sure that other inspectors would also appreciate the opportunity

Discussion:

- HOFFMAN: there is a time concern as well.
 - Site's immediate concerns (e.g. freshet) to smaller levels of production to similar levels of production to pre-breach.

- Suggestion of a tiered approach, to get the most prioritized items completed before moving to the next level of priority
- Need to ensure that the approach is as collaborative as possible
- Existing issues as well – post-breach work is, in CUMMING’s opinion, some of the lowest risk work that is currently being done. Need to ensure that we are looking outside of the post-breach work.
- Issues with leaving the most prominent issues.
- THORPE: Inquiring if it is possible to do both onsite, with one inspector on each topic (post breach work, and regular operational work)
- ROTHMAN: interjecting that the roads pre-breach were some of the best in the province, but recently they have not been kept up to the standard, are trying to reduce costs everywhere possible to extend the time they can carry on.
- Weaknesses in the connectivity of the management at the mine.
- Communications and reporting structures, organizational structures, persons responsible for different elements, and connections – looking for areas that can be improved and strategies to improve that we can clearly identify on site. Cannot allow them to continue to cut costs and be in noncompliance before we can allow the mine to operate.
- Mine is asking Ministry what information they need to provide, there is an opportunity here. Can incorporate this into permit conditions.
- Seeing many of the same issues at Red Chris
 - Terry PATTESON pushed for inspectors to stay on Red Chris to ensure that they are not falling far out of compliance
- Need to plan around this, and will need to be comprehensive in our approach.
- Moving forward, need to plan and develop an approach to this. Will be a work between NAKATSUKA, KUPPERS, KILOH, and DEMCHUK, using the onsite inspectors to feed upwards through NAKATSUKA following business rules around notes, document collection and data collection
 - Essentially a risk analysis
 - Will need to plan a format to ensure consistency – will be applied to tasks and subject to business rules governing the investigation that will be put into practice Monday Nov 3rd
- Collaborating with other experts (e.g. mechanical to electrical) to look over the entire operation.
- Need to ensure that the tasks are delegated appropriately and that work follows the tasks.
- Suggestion to try to maintain some continuity – however, difficulties with ensuring we are complying with union requirements (e.g. equitable overtime)
 - Sharing notebooks to try to increase continuity
 - Internal communication can be difficult, as well as time taken to acclimatize to the site

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: Not Applicable?

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREECH Investigation

OPERATIONAL STRATEGY MEETING MINUTES

DATE: Nov 12 2014	LOCATION: 1810 Blanshard, Conf Call	START: 0933	END: 1445
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Present:

Al HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator, Chair
Cheryl POCKLINGTON – File Coordinator
Rolly THORPE – Deputy Chief Inspector
Tania DEMCHUK – Mount Polley Project Manager
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Harvey MCLEOD – Geotechnical Engineering Consultant
Naomi Hemphill – Project Coordinator, Scribe

OVERVIEW:

KUPPERS

Agenda:

- Overview last week's interviews
- Review way forward
- Ling-Jarvis Test
- Communications
- Dataset
- Tasking
- Legal issues
- STAR reports
- Round table
- Engineering updates
- Project Management
- Briefing strategy

Last week

- Interviews with Luke MARQUIS and Dmitri OSRICHENKO
 - Brief overview of each interview
 - AMEC spent less time on site than Knight Piesold

- Some uncertainty about oversight of the dam (Students); comfortable to a point, and named Luke MOGER for actions and Nicholas BERGERON for information
- Both started off with less in depth experience
- Will need to allocate some time to discuss what remedies might be available for the ministry to manage these risks and issues
 - qualification requirements, person responsible for specific mine components (e.g. tailings dam) or operations (e.g. construction)
 - Regulation of oversight, regulation of engineering transitions
 - Dam design versus permit designs, documentation of ultimate design rather than design of individual lifts per year
 - Balances the workload of the ministry and allows for more complete evaluation of the dam design with an eye for the future
 - Describing who is in charge and when, potential for paradigm shift in how we do work and how we monitor issues
 - Does the Ministry then return to requiring qualifications vs. Industry led (as per our deregulation 10 years ago)
 - Monetary fines/administrative penalties
 - Documentation of decisions, clarity of process for regulatory bodies, engineers, and mines. Currently poor documentation, actions
 - Messaging to professionals about managing work that is undertaken and signed off – considerations about the type of working culture and pressures to take on work when work is available
 - Transitions and recognitions for the industry, professional associations, and so on, for transfers of engineer of record. Requirements for reporting on transitions (what information has been transferred, reasons for transfer, etc.)
 - Ideas of fines as a regulatory tool
 - Mining dam bulletin includes the discussion on engineer of record – potential resource for regulatory information and support
 - Need to look at other geotechnical issues as well, where applicable
 - Issues with publicity as well, e.g. waste rock spoils as another great risk to life
 - Consequences of failure
 - Designing to minimize the consequences of failures: safety by design
 - Integrating risk management earlier in the process
 - QA and QC to be clearly defined, with regulations in place to ensure that they are being applied appropriately – defining best practices (QA generally is design, QC is testing)
- Lack of accountability for consulting engineers and site engineers
- Documentation and accountability quite poor
- Any recommendations that come out about person responsible for TSF should also address any situation where and engineer of record would be important (e.g. major waste dumps)

- If a team member takes on any review of best practices to help form our recommendations, this will need to be captured in a task.

Review Way Forward

- Roughly 20 interviews to do, mostly Mt Polley and potentially some more engineering consultants
- Bill SMART representing several of the Mt Polley employees
 - To discuss with Karen TANNAS
 - Number of legal issues
 - Need to develop strategy, prepare, and understand the possible outcomes of each approach
 - Employees won't attend without being advised as per SMART
- Need to be careful of document sharing
- Site recently laid off 36 employees, Dale REIMER showing 'signs of stress' and complaining about operational or compliance pressure (e.g. ventilation system)
 - Need to identify priority items to do before mine could reopen
 - Need to track progress and commitment from site to improve
- Onsite inspectors guide the mine into compliance
 - May be helpful to have an onsite inspector (or new onsite inspector) there in a purely investigative role, so that site inspectors can continue with evaluating their specialties
- Need to provide briefing information to David MOREL so that he can start briefing the Minister – messaging upwards
 - If mine is complaining we are pushing too hard to reach compliance, they may use this as an excuse to shut down – who then is on the hook for site remediation?
- Mine operating outside of their EA certificate (daily processing rate) since 2005
- Need to identify major non-compliances and get legal advice
- Including First Nations in the process of making recommendations – open to the public and FN to give input to the Mt Polley Investigation Inbox

DEMCHUK

- New request from Minister's office for information
 - Gord HOEKSTRA requesting more information
 - Taking up investigative resources
- Expert panel will be coming out with recommendations and findings, which may affect the reaction to our findings
- Expert panel has had Thurber to evaluate Ministry documentation, looking at when mines were commissioned and which dams have water covers – they are compiling a list
 - On site in Victoria last week and weekend
- Ministry may want to interview the Panel
- KILOH: if Conservation Office charges someone and that information is then disclosed to Crown, we could then apply to receive this.

MCLEOD

- Geotechnical investigation starting to wrap up
- Summary of potential root causes and contributory factors:
 - (1) Glaciolacustrine layer (GLU), GLU not identified in critical areas
 - (2) Pond water level – possible that the phreatic surface in the core area may not have been as high as they thought
 - (3) Layers of sand through till (zone of weakness through the dam – pervious layer) = raised water in rock fill
 - (4) If filter was not the proper gradation, which would again raise the phreatic surface of the downstream side, piping of water through core, raising water in rock fill reducing factor of safety.
- Other possible factors:
 - Multiple planes of failure (“Swirly”)
 - Lack of instrumentation, potentially could have seen movement to indicate impending failure
 - Factors of safety
 - Sections used for analysis (critical section identified in a separate area)
 - Excavation at toe
 - Stripping of foundation
 - AMEC and BGC did not get the Knight Piesold strength testing on GLU
 - Stage six design
 - Should have been key information in a hand-off
 - Provided to Ministry when it was requested by Chris CARR to be done, unsure why it was not provided to consultants
 - Unsure how AMEC and BGC evaluated the strength testing of the materials that were there – chose a strength that was higher than the strength shown in the testing done by Knight Piesold
 - Lack of drilling in the breach area
 - GLU noted in drill holes downstream of the dam – interpretation of spatial extent of GLU
 - Strength of the glacial till is variable, and they were using a high strength for all till, regardless of upper and lower
 - George is keeping a draft document including potential causes and factors of failure KCB will be filing out technical side of this doc
 - Will also need to address any blasting that had occurred
 - Via AI DAY, there had been reported seen underground faults or cracks that were not known if this affected ground movement elsewhere – KCB will be following this up
 - To evaluate with communications perspective
- Will need to do more investigation of foundation to move forward

KUPPERS

Ling-Jarvis Questions

- Will need to look more closely and routinely at any major contraventions of the permit conditions, act, or regulations
- Useful to revisit requests with an eye for language to evaluate perception

- We are unable to make any decisions at this point, may not be able to ever get specific enough or to relate to prosecutorial offence. Currently not clear.
- Slowing down our investigation has allowed us to remain objective, and give the continuing impression of objectiveness. Onsite inspectors have also updated their approach – general approach is changing to be able to better support our work.
- Evidence of noncompliance on site, but nothing that would usually be charged for (e.g. MERP)
- Statements made by Ministry officials imply that we may need to message upwards to ensure that the motives of the investigative team are not misconstrued. Public comment may vary from investigative view and fact, and can include speculation, political aspiration, etc.
- Determined that we have not crossed the Rubicon

Briefings

- Due for a briefing to executives
- To include recommendations and goals of the investigative team
- Focus of briefing
- Timing and attendance
 - Longer briefings on fewer days
 - Clarity of priorities for onsite inspectors – timing briefings to ensure that they are not obstructing
- Replacing email conversations and enabling discussions

POCKLINGTON

- Gap in record keeping between Aug 4th and Aug 25th, information exists in personal records and emails, will be trying to obtain documentation on the topic
 - Anything where someone has been assigned work, emails on strategy, to ensure that we are not missing information
- Regarding personal notes and relevant emails, will need a pdf for month of August. Will look to gather over the next month

KILOH

Legal Issues

- Spoke with VAN CLAVERN and John AHERN on Nov 5th about 3rd party – there are no protocols on 3rd party law in the Ministry
- Need to separate legal services branch and Crown, will need to look at COS and ensuring that we are not influencing or being influenced by other investigations
 - Production Order coming likely from COS
 - Need to determine what can be produced, 3rd party
 - Already provided OMS recent inspections
- Need to source every document we receive
- Crown will be hesitant to use information received after August 4th, regardless of our intentions, as a form of protection against

- Legal issues are continuous, and will need to speak also with Karen TANNAS about issues that Crown does not advise on (e.g. FOI)
- HOFFMAN has two outstanding letters, one from APEG BC and one from the Panel.
 - Any value in HOFFMAN providing a written submission to the Panel? To be tabled for further discussion.
 - May be helpful to provide a response not on findings but on scope of the investigation

MCLEOD

- Data sharing and logs with the Panel – raw data has been shared through the mine, have not received anything from the mine itself
 - Discussed voluntary technical information sharing
- Looking at the DS Inspection – change from KP to AMEC: states that they do not need a buttress for operations (written by AMEC 2006)
- Will need to look at the assumptions – timelines of stability analysis, understanding of the factor of safety, GLU data

MCLEOD exits meeting

STAR reports

- May no longer be relevant for briefing upwards
- We need to be able to show where our investigation was at certain points
 - Reduces the volume of information that you need to review in the future
- Might be helpful to go retroactively through notes, while we are compiling information
- Adding what resources were available, including more facts that will show where the investigation was at given points in time

KILOH exits meeting

- Need to be doing more targeted inspections and continue to brief upwards – pushback from company regarding requirements prior to reopening.
- Need to ensure that if the mine is allowed to reopen there are no known outstanding issues that may cause other incidents.
- May see application to restart mid-December
- George WARNOCK to communicate with Caroline NAKATSUKA for targeted site inspections (Steve ROTHMAN and John COX potentially)

WARNOCK exits meeting

- Need to be aware that the Mine will need to be able to safely reopen before the Ministry allows it to go ahead, team to look at messaging to encourage buy-in from interested parties.
- THORPE has concerns about ROTHMAN for identifying hazards as he may not be completely on board with current direction.

OLD BUSINESS

No items discussed.

NEW TASKING

2 tasks for Harvey – inquiry and site investigation

Possible tasks:

Response to panel's request for submission from HOFFMAN: suggest we craft a response to clarify our scope

Suggestion to formalize sharing of data directly with panel, not through mine

Suggestion to interview panel members

Someone needs to determine who got a copy of the KP report including strength testing on GLU (regarding later assumptions of GLU strengths that did not match the findings of the report)

Changing calls to Monday Wednesday Friday at 9:30

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: N/A

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation

OPERATIONAL STRATEGY MEETING MINUTES

DATE: Nov 13 2014	LOCATION: 1810 Blanshard, 3002	START: 1315	END: 1350
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator, Chair
Cheryl POCKLINGTON – File Coordinator
Tania DEMCHUK – Mount Polley Project Manager
Doug KILOH – Major Case Management Consultant
Naomi Hemphill – Project Coordinator, Scribe

OVERVIEW:

Discussion on briefing to Deputy Minister

Previous Meeting

- Communications
- Expectations of Release
- Accountability and Responsibility
- Examine the need to be more prescriptive, balanced with responsibility for managing mine (should not fall to government)

Brainstorm for upcoming meeting

- **Images of whiteboard**
- Concerns about time
- DEMCHUK suggest that we introduce the status of the investigation on one slide
- Risks and way forward – 14 slides may be too many
 - Build discussion form to show, and also have a condensed version available so that we can pass off the notes
 - We need to understand the details, but we don't have to go over each piece unless asked in the briefing.
 - Presentation needs to be able to stand alone, for purposes of disclosure
- Unsure what the purpose of the meeting is – likely, status of investigation and status of the Notice of Work.
- Need to lead the discussion to include the information that is necessary to share the information
 - Will request another appointment to go further into the risks and way forward

- May need to update Assistant Deputy Minister before thoroughly briefing the Deputy Minister
- Introduce the topics
- Half hour, very high level, fast paced presentation

Topics to cover:

1. Status update on investigation
 2. Areas of risk – structured approach
 3. Approach of onsite inspectors – risk, requirements/orders
 4. Permit – moving forward
- First Nations – government engagement
 - Critical thinking
 - Data tracking
 - Communications

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: N/A

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Nov 17 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1000	END: 1100
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator, Chair
Rolly THORPE – Deputy Chief Inspector
Tania DEMCHUK – Mount Polley Project Manager
Caroline NAKATSUKA – Manager, Occupational Health
Naomi HEMPHILL – Project Coordinator, Scribe
Steve ROTHMAN – Site Inspector
Emmanuel PADLEY – Site Inspector
Victor KOYANAGI – Site Inspector
Greg MCLEAN – Site Inspector
Sandy GILLIES – Site Inspector

OVERVIEW:

Discussion of strategy moving forward for focussed inspections and investigative team

NAKATSUKA:

- PADLEY has some comments on our strategies onsite, and NAKATSUKA will be providing some further summaries
 - Most prominent issues include weld barn ventilation, sewage issues, chemical storage issues

PADLEY

- Did a bit of a different approach last week, focussing more on the site as a whole rather than the drilling and pumping.
- Looking more towards the culture of Mt Polley and the high ticket items
 - Rory had talked about the grid testing – has been identified since 2004 and we are still finding the same issues. PADLEY printed off some of the repeat orders, and gave them to Dale REIMER, noting that REIMER seemed surprised that the issues had been outstanding for so long.
- Making a list of the high priority items that are non-negotiable items that need to be addressed before they start up

- Looking into electrical safety programs and what they are doing for training
- Employees at Mt Polley saying that they need to write orders before things can be fixed, because management is not wanting to fix things unless ordered by MEM
- Site inspectors are feeling like MEM is being the “code police” and we would like to pass responsibility of compliance back to Mt Polley so that they are identifying their own issues and fixing them.
 - Goal is to find how to get them to do this rather than the onus being on us
- Trying to plant the seeds with REIMER about what they have to do before they start up – welding barn, crusher, and sewage for example.
- Looking to see what MEM can do going forward – have a pretty good handle on what we want to do on site but need to look at what to do about man power, inspections, and picking high priority items to have addressed, then to look at systems and try to help the mine going forward
- Breach becoming a bit of an excuse for the site going forward – not being very proactive, waiting for the breach to be sorted out before they do anything.
- Need to encourage them to start looking forwards and moving forwards
 - Clean up, maintenance, before breach and after breach – the culture has to change after the breach
- NAKATSUKA and PADLEY touring site, seeing chemicals stored very haphazardly and left for long periods of time
- Lack of communication on site, there are real issues with communication between departments and levels - discussed with REIMER
- Wary of just going in and writing a load of orders
 - Will need to change the culture, reminding team that that same group is now at Red Chris
 - Too many orders at once could overwhelm the mine or take focus off the most critical issues
 - HOFFMAN: recommend that we choose the most high priority items and write those up first.
- PADLEY putting together list of priorities, list of things they can work on going back in time, and then the smaller more common low risk items.
- MERP issued ten days ago, Sal has until Thursday to ensure it is disseminated among the crews
 - Emailed around but wasn’t discussed at all when it was released.
 - Saw them collecting the old copies, but would have liked to see more discussion onsite about it.

KUPPERS

- This follows the investigative team approach as well, trying to guide them into compliance but writing orders on the most high priority items.
 - Those hazards do need to be identified and followed up, and we need to ensure that they are making progress and the culture is improving.
 - Working to build relationships and involve the various groups, encouraging communication between entities and employees
- PADLEY: We do need to help their culture improve and we need to have a structure in place to ensure that items that did not receive orders are still being followed up, to make sure that items are not slipping through the cracks
 - Will also need to look out for other mines and ensuring that these changes carry out to other groups
- PADLEY: Need to also look at the resources we are using on mines, taking care of our people and also ensuring that the site is not overwhelmed by so many different inspectors with different priorities – makes it hard to maintain consistent messaging and focus and also build relationships with mine.
- Would like to help them take the initiative – reducing our numbers and trying to get the mine to move in one direction together
- HOFFMAN: Will need to be careful with reducing our load because they will be taking up some more high risk activities and we do need to be on top of it
 - Need to balance the need to supervise with the ministry managing the mine rather than the mine managing themselves
- ROTHMAN: It is amazing to see with a bit of coaching the improvements we have been able to see, and encouraging them along.
 - E.g. bringing on junior shifters a day early to encourage communications

MCLEAN

- Looking at historically identified reoccurring issues, Lockouts, Dust in the crusher and ventilation in the weld barn. Still need to look over the rest of the site to see what else will join the list.

THORPE

- Highlighted some items from historical audits, highlighted some things he would like to deal with (e.g. underground) – wants to determine who is the manager for the underground, do a full evaluation
 - Issue identified that the ventilation is not adequate
 - To follow up with Derek and Carrie (Underground superintendent and electrician)

KUPPERS

- Michael CULLEN will be coming on site on December 4th to do a full evaluation of the underground
- DEMCHUK may be able to coordinate with Jen MCCONNACHIE from MEM to discuss the environmental sewage issue as it is a bit of a crossover issue.
- Timeline for measuring progress at Mt Polley will need to coincide with the date that the permit amendment would be issued to restart
- Instead of writing orders individually, orders will be going through the chief inspector.
- Would like to get these orders written as soon as possible, but onsite inspectors are going to try to get them working on it ahead of time – orders have already been written on these issues as well, which will help with moving things forward.

PADLEY:

- Don IBEY had said that they have done an evaluation and know how much the weld barn will cost. Approximately \$80,000.
- NAKATSUKA: Question: should orders be issued piecemeal as they are written or grouped together?
 - Group consensus is that grouped would likely be better.
- PADLEY: Timeline that we will try to audit some of the issues that are non-ordered, but measureable?
 - Sense is at least monthly (as needed) to start and may taper off as needed

NEW TASKING

PADLEY and NAKATSUKA to compile their orders this week

Onsite inspectors writing orders and sending them to NAKATSUKA

MCLEAN and THORPE to see what work is being conducted in breach area and provide an update on activities, in addition to their focused inspection duties.

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 0930 NOV 19th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Haley KUPPERS

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Nov 17 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1000	END: 1100
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Present:

Al HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator, Chair
Cheryl POCKLINGTON – File Coordinator
Tania DEMCHUK – Mount Polley Project Manager
Caroline NAKATSUKA – Manager, Occupational Health
Michelle HYNES – Senior Policy Analyst
Doug KILOH – Major Case Management Consultant
Naomi Hemphill – Project Coordinator, Scribe

OVERVIEW:

General Discussion

- Need to think about what we will need to do should the mine choose to declare bankruptcy
 - Considerations of Imperial Metals versus Mt Polley
- Need to ensure that the provisions laid out before Mt Polley can operate will need to be thorough
 - Balance working with the company to keep them on board, and ensuring that they are in compliance if they reopen
- Do we need to contact Imperial Metals to determine whether they are the Operating Mind? What are their intentions regarding restart and funding to support this?
 - Do we need to interview Bryan KYNOCH first?
- May need to have Rolly THORPE conduct the discussions with the company, with David MOREL and the deputy minister, along with HOFFMAN
 - Need to be getting corporate on board, rather than relying on the buy-in coming from the mine manager.
- Ministry needs to recognize the difficulties between departments and between employees and supervisors
- The trust issue if Mt Polley were to walk away from the mine would be ongoing – to take this into account if we are to send a letter to the company
 - Conversations with KYNOCH, to move the conversation to a positive place and
- Discussions with Rolly THORPE to work out future strategy

- Friday, Nov 21st afternoon
- Coverage:
 - Onsite inspectors currently scheduled until Dec 12th, need to decide what level of coverage is needed between that date and January.

NEW TASKING

- Meeting Friday, Nov 21st to discuss the strategy going forward with the company
- DEMCHUK to meet Friday afternoon with MOE on their presentation on Mt Polley

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 0930 NOV 19th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Haley KUPPERS

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Nov 17 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1005	END: 1115
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator, Chair
Cheryl POCKLINGTON – File Coordinator
Doug KILOH – Major Case Management Consultant
Naomi Hemphill – Project Coordinator, Scribe

OVERVIEW:

General Discussion:

- Discussion on Keith ELWOOD's role
- Need to create a timeline – may be useful for ELWOOD to start on this, and needs to be digital
- Could start digitizing the appendices – need to be able to refer to them but they likely will not need to be included in the document itself
- Document needs to be able to stand alone – Executive summary, orders, etc.
 - Will be released and so should be constructed with the public in mind.
- Need to determine if ELWOOD is included in all of the strategy and data, or only what is given to him by the investigative team.
 - Including him in everything may be useful or may not, but he has already not been included in everything.
 - Direction currently to supply him with as much information as is possible and practical, and ensure that his reports are thoroughly reviewed at each iteration
- May release and information note when expert panel releases their report
 - Recommendations and update on investigative process
 - Need to be prepared for mid-January
 - TASK for Michelle HYNES, for information release and investigation update
 - Number of inspectors to number of mines, permits, major mine permits, permit ammendments, first nations consultation,

certifications, mine rescue.... (include list of work that is done, process, scope of business).

- KCB fact based data report
- HOFFMAN to draft a letter to APEG BC
- Expert Panel – advised that we can request information from them as well
- HOFFMAN meeting yesterday
 - KYNOCH not aware that the mine was planning to submit an application to reopen within the next few weeks
- Possible future interviews to include
 - Union president
 - Joint Occupational Health and Safety committee
 - First Nations
 - Need to be careful not to cross the SOC committee inappropriately
 - Surveyor that did the water levels
 - POCKLINGTON to follow up on some of these leads we might have missed – document and determine if we will follow up.
 - Possible to go to COS to get their interviews, to avoid duplication of work

NEW TASKING

- Recommendations and update on investigative process
- Need to be prepared for mid-January
- TASK for Michelle HYNES, for information release and investigation update
 - Number of inspectors to number of mines, permits, major mine permits, permit ammendments, first nations consultation, certifications, mine rescue.... (include list of work that is done, process, scope of business).
 - KCB fact based data report

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED:

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation

BRIEFING MINUTES

DATE: Nov 26 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1530	END: 1614
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Present:

Haley KUPPERS – Primary Investigator, Chair
Al HOFFMAN – Chief Inspector
Tania DEMCHUK – Mount Polley Project Manager
George WARNOCK – Manager, Geotechnical Engineering
Doug KILOH – Major Case Management Consultant
Naomi Hemphill – Project Coordinator, Scribe
Chris CARR – Consultant, Geotechnical Inspector of Mines
Rick ADAMS – Chair of Cariboo Mine Development Review Committee for Mount Polley

OVERVIEW:

General Discussion

- Context: MEM expecting to receive breach repair application from Mount Polley this week – the design for the repair has been informed by the information from the geotechnical investigation, which has been provided to Golder. All available information has been used to inform the design but not all the information has been provided due to confidentiality concerns. Other agencies want to ensure that the data is shared to ensure that geotechnical evaluations are possible to ensure the design is robust and appropriate.
- Want to ensure the reviewers are getting the information they need without interfering with the investigation
- One thought is that we should not have a problem providing data to CARR because he has an existing contract with a confidentiality agreement. Waiting to get the design from Golder first.
- DEMCHUK suggesting that it could be possible for him to review the information together, but that James (Jim) KUIPERS could not take the information with him to share. It is a very sensitive issue to ask for confidentiality agreements, so we may need to look for a way to ensure that the information is not compromised without causing an issue.

- KUIPERS likely to want to be able to keep a copy

CARR: depends on how much information is included in the Golder design.

- DEMCHUK: understanding is that the borehole data is informing the design. Company has no issue sharing geophysical and cone penetration.
- First Nations do not want to be seen to be delaying the process, and nobody wants to be tied to a repair that then leads to a subsequent failure. Both CARR and KUIPERS need to be satisfied and KUIPERS will need to have access to the information for this to happen. It may be possible that the First Nations will walk away if they do not feel they are being adequately included in the review.
- There is an understanding that the integrity of the investigation is maintained, but it is agreed that there is a legitimate need for that information
- WARNOCK: in lieu of the confidentiality agreement, we could mark the copy that it is the property of MEM and must be returned, and possibly to add a letter detailing that it is not to be copied or distributed.
 - Would allow him to review, some concern about sharing

Cheryl POCKLINGTON joins call

- ADAMS: Has confidence that KUIPERS will be able to manage the information and get the Chiefs to understand that the information cannot be shared, and he needs to see it to conduct his technical review but it can't be shared
- the question is what do we lose if it went out - the only risk would be if the First Nations were to decide that they could determine the cause of the breach and make a public release. This has already been talked about publicly by members of the mine.
 - WARNOCK: as it has been out in the public eye a few times, it appears that we would not stand to lose much if the report was compromised.
- DEMCHUK: question if we need to clear the release of the report to First Nations with the Panel?
 - Consensus was that we do own the data so it is unlikely they would have a say or that it would be an issue with them
- We ideally would share the information openly with First Nations technical groups, but that the information should not go further than that.
 - KILOH: having those conversations, limiting their access, all are things that could minimize our risk. We will just need to determine what levels of risk are acceptable to us
- KUIPERS was hoping to have it in advance of CARR and KUIPERS meeting on December 3rd so that they could form impressions independently and then discuss it.

- Possible to send KUIPERS a digital copy, watermarked with DRAFT
- CARR only interested in seeing the data that Golder would have used to come up with the design and do the stability analyses. Stratigraphy, shear strength testing, location of bore holes, and so on.
 - If KUIPERS would like to meet with CARR, both would have to review the design and the geotechnical background data before then, whatever form it is in. Getting a hard copy for him in time would be possible only while he is visiting Vancouver on November 28th.
 - DEMCHUK and CARR to receive link from WARNOCK, DEMCHUK to print for KUIPERS and CARR.
 - CARR also requests a summary of the work that has been done – WARNOCK to provide the presentation from Klohn Crippen Berger to CARR only, as it provides a good summary. DEMCHUK to look to add a table of contents
 - POCKLINGTON also will need a ledger of what has been released.
- MPMC has indicated it would be willing to share raw data, including geophysics, seismic, cone penetration, given a confidentiality agreement
- Hard copies printed by end of day tomorrow, CARR to pick up copies Friday November 28th.
- Discussion of the pollution abatement order from MOE
- Will need to brief Michelle HYNES to be prepared for the permit and the sharing of information

Call end

AI HOFFMAN, Doug KILOH, Tania DEMCHUK, Haley KUPPERS, Naomi HEMPHILL discussion.

- Possibility of discussing with APEG BC?
- Permitting process for reopening, after permit to repair for freshet – need to look at timelines and be clear from the beginning what the timelines will look like.
- Thinking about presenting information to the public – health and safety orders, for example.
 - Needing to get ahead in putting information out
- Need our own timeline for releasing things
 - Need to start messaging upwards so ensure that we are able to release things
- Update on investigations on tomorrow SOC meeting – Michelle HYNES putting together some messaging

NEW TASKING

- WARNOCK to send raw data report to DEMCHUK and CARR, DEMCHUK to print two copies.
- Team to draft cover letter for package for KUIPERS, outlining the confidentiality of the document

HOUSEKEEPING

No items discussed

OLD BUSINESS

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: 0930 NOV 28th via CONF CALL.

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation

OPERATIONAL STRATEGY MEETING MINUTES

DATE: Dec 10 2014	LOCATION: 1810 Blanshard, 3002	START: 1330	END:
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator, Chair
Cheryl POCKLINGTON – File Coordinator
Doug KILOH – Major Case Management Consultant
Naomi HEMPHILL – Project Coordinator, Scribe
Caroline NAKATSUKA – Manger, Occupational Health and Safety
Carina DOYLE – Site Inspector
Rory CUMMING – Site Inspector
Emmanuel PADLEY – Site Inspector

OVERVIEW:

Endako has also shut down (political climate)

Mt Polley is running their crusher

PADLEY

- Noticed that there was rock coming off the conveyors near the stock pile, struck them as odd, so they went to investigate and the crusher was operating
- Dusty, noted 3 employees with no respirators or paper respirators in or near the crusher
- Spoke to an employee around noon, he said they had been running for about an hour and a half at that time.
- Speaking to REIMER this morning, mentioned that they wanted to run the crusher for a few days in the future but gave no indication that it would be running soon. Unknown if he was aware that it would be running today.
- Site has not been told not to run the crusher
- Put some new parts on the crusher on Sunday or Monday (Dec 7th or 8th)
 - repairs
- They are screening and sizing as well
- There is a sign on the door before you go in stating that respirators are required

ROTHMAN and MCLEAN join call

General Discussion

- No indication that they may or may not use the crusher, no permission given but not told not to
- ROTHMAN: they are trying to get material for the breach repair, to be prepared once the permit comes through
 - REIMER called ROTHMAN to talk about the dispatcher, ROTHMAN asked about the material that they were moving
 - POCKLINGTON requests a summary of the conversation to be emailed to her so that it can be a part of the dataset
 - ROTHMAN encouraged to call into the MWF update call to share any information that may come up
- MCLEAN did not write orders when he was there and took the pictures, he did not write any orders on the crusher under the direction of the Investigative Team
- Inspectors will let REIMER know that there were orders forthcoming, we were holding back because we were unaware that there were plans to run the crusher, now that it is running orders will have to come through
 - Maybe it would be a good idea for HOFFMAN to speak with him about orders and permitting
 - By running the crusher there has been some breach of trust for us – in the MDRC meeting they had said that they had sufficient material in appropriate size.
- Confirmed that REIMER was aware of the state of the crusher – MCLEAN showed him the photos
- They did run it a month ago, and nobody said anything at that time.
- Concerns with worker health and safety, as well as communication onsite and forthright attitudes
- Onsite inspectors to follow-up at 1700

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: Dec 10 2014 17:00

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation

OPERATIONAL STRATEGY MEETING MINUTES

DATE: Dec 10 2014	LOCATION: 1810 Blanshard, 3002	START: 1408	END: 1435
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Present:

AI HOFFMAN – Chief Inspector
Haley KUPPERS – Primary Investigator, Chair
Cheryl POCKLINGTON – File Coordinator
Doug KILOH – Major Case Management Consultant
Naomi HEMPHILL – Project Coordinator, Scribe
Rolly THORPE – Deputy Chief Inspector of Mines
Karen TANNAS – Legal Services Branch

OVERVIEW:

KUPPERS

- Received a request for disclosure directed to HOFFMAN from CO service on 2014-12-04
- Quite a volume of information that has been requested

TANNAS

- Seem to be focussing on things that happened before the breach rather than than the investigation
 - KILOH: thinking that they may be trying to minimize the Ling-Jarvis arguments
- KILOH: Previous direction from TANNAS has been that government information can be shared between government bodies without too much issue
 - TANNAS : difficult to say in a general sense, needs to be more specific depending on what is requested
 - Focussed on a particular area, not focussed on the events, suspecting negligence tilt
 - Can we go beyond the four corners of their request for the investigation or do we stick literally to each point?
 - TANNAS: what is the value in going beyond, asking only for documents?

- Looking at names, what people can say – not necessarily documented, may need to be written out.

WARNOCK joins call

- The greatest risk would be for them to prosecute a member of MEM
 - Discussion on protections
- Are there any concerns for us providing what they've requested
 - Question is if it is going to jeopardize or investigation in any way
 - Only other jeopardy would be for them to prosecute one of the members of MEM
- Documentation that we were in possession of but not necessarily aware of before Aug 3rd (e.g. offsite storage)
 - Much of the information we learned about in interviews would not be included
- Put together a list of questions – potentially able to delay producing the information (priorities, volume, timelines, and a contact person)

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: N/A

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation

OPERATIONAL STRATEGY MEETING MINUTES

DATE: Dec 10 2014	LOCATION: 1810 Blanshard, 3002	START: 1705	END: 1810
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Present:

AI HOFFMAN – Chief Inspector
Caroline NAKATSUKA – Manger, Occupational Health and Safety
Carina DOYLE – Site Inspector
Rory CUMMING – Site Inspector
Emmanuel PADLEY – Site Inspector
Naomi HEMPHILL – Project Coordinator, Scribe

OVERVIEW:

Decision on crusher

CUMMING

- Dale REIMER did not know this morning what was going on
- Did not get into future plans, but wanted to let off steam about orders; upset about some things and would like to speak with HOFFMAN
 - Section 2, but no specifics known yet
- Ran into Sal BAFARO, seemed surprised that the crusher was running
- CUMMING's understanding is that they ran the crusher a month ago, then they stripped further back and they needed a bigger stockpile, so they decided to run it again
- Suggested that they might get a call from HOFFMAN, but most of the discussion was on why we were not informed (REIMER did not apologize but said that he did not know it was going on)
- Tried to emphasize that it was part of their permit, and that it was a big deal
- REIMER had a few rants, was quite upset
 - Spoke about that he was thinking about getting his own certificates and doing his own audits, more ranting
 - Inspectors redirected back to talking about the crusher
 - Inspectors emphasized that they had witnessed lack of respirators and masks today, REIMER said that he was disappointed that this would happen

- Sal BAFARO has mentioned hiring a hygienist, possible a recent student who would be interested in creating more programs
- We need to decide what we are going to do moving forward, and be consistent in our approach
- NAKATSUKA: We have drafted some orders but they refer to implementing an effective dust control system in the crusher, which is a longer term fix
 - Will need to line up with permit conditions as well
- Site stated they will need to run the crusher for 4- 6 days (10 trucks?)
- Will need to ensure that the rock can meet the standards specified by the engineering consultants
- HOFFMAN: we will need to let them get that rock, but we also need to ensure that they have appropriate personal protection for employees
- REIMER said that NAKATSUKA said that they could use paper masks, but NAKATUKA specifies that they still need to fit test those masks which is not happening
- In an inspection report, REIMER states that workers are trained in the use of respiratory protection and fit tested for proper size, and that respiratory protection is mandatory.
- Need to do some more work, HOFFMAN may need to visit site, and HOFFMAN will need to speak with REIMER
- DOYLE confirms that they are not running the mill

Decisions

- Need produce appropriate orders and permit conditions specifically relating to the crusher
 - Force them to alert us when they operate, possibly as a permit condition
 - Need to get the system repaired or have a plan in place

OLD BUSINESS

No items discussed.

NEW TASKING

No items discussed

HOUSEKEEPING

No items discussed

ROUNDTABLE

No items discussed

NEXT MEETING SCHEDULED: N/A

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation**BRIEFING MINUTES**

DATE: Dec 18 2014	LOCATION: 1810 Blanshard, Conf Call	START: 1500	END: 1630
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Present:

AI HOFFMAN – Chief Inspector of Mines
Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Naomi HEMPHILL – Project Coordinator, Scribe
Matthew PARENT – Information Analyst
Doug KILOH – Major Case Management Consultant
Cliff PROWSE – Legal Services Branch
Stephanie LACUSTA – Legal Services Branch
Karen TANNAS – Legal Services Branch

s.14

Legal services sign out of call

Discussion

- We need to be seen to be doing the right thing – we have applied critical thinking, we have considered the different points of view
- Need to more clearly define (internally or through discussions with SMART) what the ground rules are for SMART to sit in on interviews
- Cheryl to confirm if there is precedence with respect to structuring procedure and ground rules on counsel in the room for interviews.
- Need to plan interviews as soon as possible

AUTHORED BY: Naomi HEMPHILL

APPROVED BY:

Mt Polley TSF BREACH Investigation

OPERATIONAL STRATEGY MEETING MINUTES

DATE: Apr 02 2015	LOCATION: 1810 Blanshard, 3002	START: 1000	END: 1030
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Present:

Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Doug KILOH – Major Case Management consultant
Matthew PARENT – Information Analyst
Naomi HEMPHILL – Project Coordinator

OVERVIEW:

POCKLINGTON

- Received hard drive from panel so that MEM can be the keepers of the file, identified possible omissions
- Sent email to Kevin RICHTER identifying our concerns, and he replied that there were no omissions and there is nothing more to come.
- We checked what we were given against the SharePoint site that we still have access to, found minutes and references to interview summary notes that were not included in the hard drive
- We need to determine how we will respond to an FOI request given what we know is missing.

KILOH

- If we have found a discrepancy, that is what a defense counsel would do.
- If we go to prosecution, this could become an issue and we would need to go to much greater lengths to secure the information. Even if we were not able to secure the information we would at least be able to show what we found and what we did to find it.
- If it was on the hard drive, and it was deleted, we would also be able to find it with a thorough sweep by an IT person.
- KILOH to draft a short response to RICHTER, requesting he review the files. We could also send a list of what we have found to be missing and request a more thorough review.

- Evidence suggests that it is sloppiness rather than intentional omissions.

POCKLINGTON

- We do currently have an FOI, we are trying to secure an extension but we are unsure as to how to respond given the possible omissions.

KIPOH

- We can't disclose what we don't have. It is not the responsibility of the Ministry to speak to the integrity of the Panel's filing system or database.
- If we go to prosecution it is a motto point because we may not be able to release anyway.

KUPPERS

- Task for KILOH and Keith ELWOOD to go through the expert panel report to identify key points, recommendations, and items for follow-up.
- Need to go back to the table developed through that to ensure we don't lose those pieces.

KILOH

- We will also need to bear in mind that the scope of the investigation may not allow us to complete every piece that we would like to (nice to do vs. need to do tasks). In these cases we need to close off these tasks in a documented way.

KUPPERS:

- Harvey MCLEOD is also sitting in on several panels, and we need to ensure that the team is consistent with their direction.

KILOH

- **Task to** monitor APEGBC to ensure that we are aware of their direction and recommendations and bring the benefit of their work into the investigation recommendations and outcomes. APEG, CDA, other work moving towards improving the safety of the mining industry.

KUPPERS

- Task to interview Steve ROTHMAN.
- Will likely bring him to Vancouver, and conduct an interview to learn more detail on the sequence of events but we need to be cautious about possible risk to him.

- HOFFMAN and THORPE agree that this is a part of our normal process so it is unlikely to be an issue but there may be some concern.

KILOH

- It is a normal part of process, but if an item emerges that introduces a jeopardy to an individual, the interviewers need to extend the invitation to introduce a union rep to the conversation.
- The goal is not disciplinary, and if it starts to head in that direction it needs to stop and be revisited in the appropriate way.
- Will depend on the union agreement as well.
- Will need to ensure that the goals and objectives of the interview are well defined ahead of time.

KUPPERS

- May be able to arrange it for the week before the meetings on April 20-22.
- KILOH to draft a few possible dates
- POCKLINGTON and KUPPERS to formulate the correspondence with correspond with ROTHMAN (likely phone call, or email) to let him know rough dates and what to bring, if anything.
- Will meet Tuesday morning after briefing (2015-04-07).

**Mt Polley TSF BREACH Investigation
STRATEGY MINUTES/PLAN**

DATE: APRIL 07 2015	LOCATION: 1810 Blanshard, Conf call	START: 14:00	END: 15:22
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Present:

Al HOFFMAN – Chief Inspector
Haley KUPPERS – Provincial Health and Safety Specialist Inspector
Cheryl POCKLINGTON – File Coordinator
Doug KILOH – Major Case Management Consultant
Keith ELWOOD – Report Coordinator
George WARNOCK – Manager Geotechnical

OVERVIEW:

The purpose of this meeting is to outline an agenda and strategy to determine whether we will be in a position to prosecute in the context of the Mount Polley TSF failure and breach. Scheduled date for conference to discuss this to outcome April 20-22.

GOAL:

- Determine root cause and contributing factors, the WHY it occurred
- Prevent it from happening again
- Improve the safety in mining industry and the operations of tailings facility
- Identify contributing factors finding opportunities for improvement (industry, corporate, ministry)

SCOPE:

- **Check mining plan, business plan**

ROLES for April 20-22:

- Facilitator: Doug KILOH
- Discussion leads: HOFFMAN, KUPPERS, ELWOOD
- Supporting evidence in Database: POCKLINGTON
- Database Support, visual display tools, minutes, referees: PARENT, HEMPHILL
- Geotechnical Advisor: WARNOCK
- Database Administration Support: WELLS (oncall)

FOCUS:

Root Cause

1. GLU

Potential Contributing Causes

1. Design vs Construction deviations
 - Lacking Sand Cells
 - Varying core width
 - Sleep Slope
 - In adequate Materials
2. Water Balance - excessive
3. Buttress Excavation
4. Possible Amelioration
 - MERP
 - Water Management
 - What else?

RECOMMENDATIONS

Need to justify our conclusions

If blame seems imminent:

- How do we prove? Through RCAT

If a prosecution recommendation appears imminent:

- How do we prove? Ensure done through a RCAT
- Need to do test of public interest and likelihood of prosecution?
- Cost/benefit analysis

TASKING

ADMIN:

- i. Written statement to govern our work here – 4 pillars, mining plan, business plan
- ii. Define Scope of investigation – 10 years ago to shift to results based from prescriptive, check investigative TOR
- iii. Systematic approach to addressing questions/topics during conference
- iv. Need to establish Rules of conduct for meeting
 - a. Staff focused, no tangents,

RCAT-

- v. Geotechnical Analyses (first)

AFTER RCAT done:

- vi. Permit Conditions – met or not? Need to find out what is out of compliance
 - a. Analysis for compliance may also be concurrent

HOUSEKEEPING

Will need to stay on track.

NEXT MEETING SCHEDULED: 9:30 am 20150408

AUTHORED BY: Cheryl POCKLINGTON

APPROVED BY:

**Mt Polley TSF BREACH Investigation
STRATEGY MINUTES/PLAN**

DATE: APRIL 20 2015	LOCATION: 1810 Blanshard, Conf call	START: 1000	END: 1715
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Present:

Al HOFFMAN – Chief Inspector
Haley KUPPERS – Provincial Health and Safety Specialist Inspector
Cheryl POCKLINGTON – File Coordinator
Doug KILOH – Major Case Management Consultant
Keith ELWOOD – Report Coordinator
Michelle HYNES – Communications (not present for full day)
George WARNOCK – Manager Geotechnical
Naomi HEMPHILL – Project Coordinator
Matthew PARENT – Information Analyst

OVERVIEW:

Meeting Materials: Strategy Workshop Agenda, Root Cause Analysis (RCAT) Flowchart, Executive Briefing Presentation, “Parking Lot” (live document),

Code of Conduct: 30 minutes per topic, to move through the agenda in a timely fashion

Investigation Briefing: see executive briefing presentation, 2014-04-17

Background, Mandate, and Interpretation of the Mines Act: reminder that we need to focus on noncompliance and offenses under the Mines Act when looking towards prosecution.

Priorities and Goals: Use the RCAT to guide us through a process to examine the known facts of the breach, drawing out root and contributory causes and any opportunities for review, examination or investigation or recommendations, which could include a recommendation for prosecution to the Crown. Also includes a gap analysis for the investigation to date. (EDITS FOR CLARITY).

Introduction to RCAT: see RCAT training presentation

Walk through of RCAT flowchart:

Interim Steep Slope:

- Questions on whether the slope was designed and approved, or approved in the as-built stage of construction. Was this slope designed or approved in accordance with the knowledge and the best practices of the time?
 - When was the 2:1 slope redesigned to 1.3 to 1?
 - Are there supporting documents to this decision?
 - Survey control or understanding of dam height and raises all the way around (e.g. may overtopping event, they did not think it was low in that area) Links to freeboard.
 - Links to how freeboard is determined – how were they measuring the water levels vs. how were they measuring the height of the core?
 - Engineering input to water balance, rather than MPMC control (KCB good practice would be for an engineer to review)
 - Water balance best practices would be to build at least to handle the water balance of the year – built this year should be able to handle the following year freshet.
 - Practical ability for the Ministry to review water balance in the province would be prohibitive (one week/mine?).
 - Triggers for deeper review (e.g. water balance issues over a certain period of time). Currently not reviewing water balance as it is not practical and our geotechnical inspectors do not have the necessary expertise.
 - Recommendation from WARNOCK: one inspector in each region, two in Victoria.
 - Training for inspectors relating to monitoring and evaluation of inspection criteria (and follow-up).
 - Clearly define inspector roles and responsibilities, gaps, and practical application of inspections. (on a larger scale, the function and ability of the Ministry).
- Water discharge
 - Toe drain (some discharge) but not sufficient
 - Check to see if MOE was involved in the delay of discharge
 - Need to clarify timeline for MOE discharge permit
 - Knowledge, skill, and ability of mine employees (for things like permit applications, for example).
 - EAO permit compliance as well
- Original design, AMEC DSR, AMEC takeover (opportunities to raise questions on slope and GLU)

Buttress:

- Buttress excavation – any concrete plans for filling? Possible recommendation for fill timelines when completing excavations?

Toe drain present

- Piping was not cause of failure, not a direct cause?

Seepage pond pipes raised appropriately

- Was this a factor? Not a factor?
 - Does not appear to be a factor

Seepage pond water response

- Seepage pond water surplus around 10:30pm
 - Where was the water coming from
 - Links to failure mechanism – stages of failure
 - MCLEOD report timeline

UGLU was weak

- No further investigation needed

Raise and compaction in progress

- Narrow crest
- Resulted in hiring Peterson contracting (smaller trucks).

Dam construction did not account for UGLU

- Site investigation did not detect UGLU (violation or error?)
- Did they follow standard best practices?
 - Evidence to support standard or substandard practice
 - BRONNER wanted more bore holes?
 - Third party review scope
 - Specific geotech inspection report on review and extra bore holes
 - ~1995-1996 BRONNER report
 - If this was standard of practice, possible recommendations to change standard of practice.

QUESTIONS END OF DAY:

	IA or GEO	QUESTION FROM 2015-04-20	ACTION IN DISCUSSION ON 2015-04-21 Q: Question, A: Answer
??	GEO	<ul style="list-style-type: none"> Who determined water level prediction for freshet? – how did water level predict designed dam height 	<ul style="list-style-type: none"> 1A: PLEWES: You would design for the year of tailings storage, the spring freshet and for a flood event. The EoR would approve this design. Q: Would it be appropriate to question, what else can we do in terms of discharge and water treatment? A: PLEWES: Absolutely. Q: Could these designs be extended long term? A: You can only direct them so much.
21	GEO	<ul style="list-style-type: none"> 1 – Why (or who) did they not do more quaternary investigation/research? 2 - Why was there an investigation at the main embankment and not the perimeter? 	<ul style="list-style-type: none"> 1A – the EoR. 2A – not prepared to answer
22 & 48	GEO	<ul style="list-style-type: none"> 1- Choice of critical section – how it was chosen, why it was never changed or expanded (is there justification, what was it) 2 - Uneven site investigation <ul style="list-style-type: none"> Possibly due to building order, complacency, oversight (rather than purposeful omission)? 	<ul style="list-style-type: none"> 1A: Section D: Without the UGLU the dam would not have failed. The FoS were above marginal but it would not have failed there. The critical section would have been the same conclusion. 2A: NA
42	IA	<ul style="list-style-type: none"> Timing for application of discharge permit? Why did the application take so long? Was MOE involved in that delay? What was the timeline in 	<ul style="list-style-type: none"> N/A MOE interviews is considered to be a gap.

		terms of requesting a permit for water treatment and how that aligned with the ordering of the water treatment plant? If it was delayed, why? If it did not happen, why not?	
43	MEM?	<ul style="list-style-type: none"> 1 - Mine expansion/footprint increase – how did it affect the amount of water, how was this incorporated into water management plan 	<ul style="list-style-type: none"> NA
48	GEO	<ul style="list-style-type: none"> 1 - EOR changeover to AMEC risk assessment – was it done and was it too minimal? 	<ul style="list-style-type: none"> 1A: (PLEWES) It would take approximately 6mths full time in order to review all of the information and then go from there in order to begin creating the new designs. WARNOCK: we have the number of hours from 2010 to 2011 that there was a huge amount of hours for AMEC as they familiarized themselves with the site. WARNOCK does not remember exactly seeing an increase of hours. Q: Individually, within AMEC, the EoR changed over the course of the years – what process should this be? A: FIDEL was the EoR at one point and then was replaced. The transfer was not done to satisfaction and was not done in a formal way. A: By reviewing the interviews we can confirm this as a failure in the transfer of EoR especially considering there was a significant decrease of hours in KP to AMEC.

			<ul style="list-style-type: none"> If there was a failure (after confirmation) what could have been done to change this?
60	GEO/MEM?	<ul style="list-style-type: none"> 1 - Sporadic measure of the freeboard – how was it measured, how they determined it, how they applied it (Accuracy, precision, frequency, and method). 2 - How was it applied to the dam elevation? 3 - Was production non-compliant with the EAO? When did this start? How far into the EAO question do we want to look/is it relevant to our investigation? (Phone call/correspondence with POCKLINGTON) 	<ul style="list-style-type: none"> 1A: NA 2A: NA 3A: We know that there were noncompliances with EAO however we have to note that we may not want to touch this at all.
63	MEM?	<ul style="list-style-type: none"> How the third party review was scoped (terms of reference and scope – how were they determined?) 	<ul style="list-style-type: none"> A: Further investigation needed
71	GEO	<ul style="list-style-type: none"> When was the steep slope introduced (Design or as-built? Who proposed/approved?) 	<ul style="list-style-type: none"> A: We know when it occurred but we do not know who approved it. Stage 5 as built should be investigated further to properly answer this question.
75	IA	<ul style="list-style-type: none"> Who determined that the mine should manage their own water balance instead of the engineering consultants? How was that decision made? 	<ul style="list-style-type: none"> NA
79	GEO	<ul style="list-style-type: none"> How much institutional memory was lost when they changed staff under the EOR within KP? 	<ul style="list-style-type: none"> NA

- Reduction of the width of the till core (when and why did the change occur/when/why was it approved) (possibly just an example of original design changes)

NEXT MEETING SCHEDULED: 2014-04-21

AUTHORED BY: Naomi HEMPHILL

APPROVED BY: Matthew PARENT

Mt Polley TSF BREACH Investigation

OPERATIONAL STRATEGY MEETING MINUTES

DATE: Apr 02 2015	LOCATION: 1810 Blanshard, 3002	START: 0950	END:
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Present:

Haley KUPPERS – Primary Investigator
Cheryl POCKLINGTON – File Coordinator
Matthew PARENT – Information Analyst
Naomi HEMPHILL – Project Coordinator
Keith ELWOOD -

OVERVIEW:

ELWOOD:

- Root cause analysis Defined: the NASA tool was built from the ground up to determine the “who what when where and why’s” of an event.
- Root Cause is: one of multiple factors that are organizational in nature (not mechanical) they have to do with the budgets, practices, cultures, policies, etc, of an organization.
 - When we get to a root cause, we can’t go any ‘further’
 - If a root cause is eliminated or modified, the undesired would have been prevented or not occurred. There are also mitigating levels.
 - Sometimes multiple root causes can relate to the undesired event.
- STEPS TO TAKE (NASA):
 - Identify the undesired outcome
 - Differentiate between events and conditions
 - Identify the relationship between causes and effects
 - Identify the difference between barriers and controls
 - Construct a timeline
 - Construct an event and causal factor tree
 - Generate recommendations
- An event is a single discreet action that occurs in real time.
 - In contrast is a condition is an as found state. It is an element in a chain of events and is an inactive element in that chain. “The road was icy” would be a condition. Whereas the tire lost traction would be an event. An effect is an outcome is a changed state; result or outcome.

- Rules of cause and effect include: precedence; causal relation; necessity; and sufficiency.
- Additional important terms: Proximate (or direct) cause; contributing factor; initiating event.
- BARRIERS: “a passive physical device or an administrative intervention that is used to prevent or reduce the likelihood that the undesired outcome will occur. Barriers provide physical intervention (e.g., a guardrail) between hazards and the target or provide procedural separation in time and space (e.g., lock-out/tag-out procedure).”
 - Two types of barriers: Physical (engineered); or administrative.
- CONTROLS:
 - Different than a barrier and is an active mechanism.
 - Detection of hazard increasing or being released
 - Acted upon and enable an active device to stop the hazard from being released.
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