

REPORT - MEETING No. 3

INDEPENDENT GEOTECHNICAL REVIEW BOARD (IGRB)

June 2018

Review of Water Dam, Water Management and Tailings Storage Systems, KSM Project

British Columbia, Canada



REPORT – MEETING NO. 3, INDEPENDENT GEOTECHNICAL REVIEW BOARD REVIEW OF WATER DAM, WATER MANAGEMENT AND TAILINGS STORAGE SYSTEMS, KSM PROJECT

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Acronyms and Abbreviations

3-D	Three-dimensional
ACRD	Asphalt Core Rock-fill Dam
ARD	Acid Rock Drainage
BAT	Best Available Technologies
BC	British Columbia
BCWQG	British Columbia Water Quality Goals
BGC	BGC Engineering Consultants
Board	Independent Geotechnical Review Board
CDA	Canadian Dam Association
CIL	Carbon-In-Leach
CL	Clay
EA	Environmental Assessment
EI.	Elevation
ERM	Environmental Resource Management (ERM) Consultants Canada Ltd.
FMEA	Failure Modes and Effects Analysis
FOS	Factor of safety
FS	Feasibility Study
Gs	Specific gravity
HDPE	High Density Polyethylene
HDS	High Density Sludge
HPGR	High Pressure Grinding
KCB	Klohn Crippen Berger
KSM	Kerr-Sulphurets-Mitchell
Mine Site	Proposed mine pits area
ML	Silt
NAG	Non-acid generating
NSCD	North Seepage Collection Dam

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OPC	Ore Processing Centre
PAG	Potential acid generation
PFS	Pre-Feasibility Study
PGA	Peak Ground Acceleration
PMF	Probable Maximum Flood
RSF	Rock Storage Facility
SCD	Seepage Collection Dam
SG/P	Seabridge Gold Inc. and KSM Partner
SPT	Standard Penetration Test
SSCD	South Seepage Collection Dam
SSD	Saddle Seepage Collection Dam
TMF	Tailings Management Facility
WAD	Weak acid dissociable
WSD	Water Storage Dam
WSF	Water Storage Facility (this includes the WSD and the SCD)

Units of Measurement

Bt	billion tonnes
km	kilometre
kPa	kilo pascals
l/s	litres per second
m	metre
M	million
M²	cubic metres
t/m³	tonnes per cubic metre
tpd	tonnes per day

1. Introduction

The third meeting of the KSM Independent Geotechnical Review Board (IGRB or Board) was convened by Seabridge Gold Inc. (SG) and on behalf of a future KSM Partner (FP) (jointly referred to as SG/FP). It was held from August 8th through August 10th, 2017. The Board is comprised of Dr. Andrew Robertson (Chairman), Mr. Anthony Rattue (Vice Chairman), Mr. Terry Eldridge, Dr. Gabriel Fernandez, Dr. Ian Hutchison, Mr. Jim Obermeyer, Dr. Leslie Smith, and Dr. Jean-Pierre Tournier. These members, with the exception of Dr. Gabriel Fernandez, attended this meeting, which was conducted at the offices of Klohn Crippen Berger (KCB) in Vancouver. The Agenda of the meeting is attached as Appendix A, and the list of attendees as Appendix B.

The principal objectives of the meeting were to:

- Receive presentations on recently completed studies and design updates;
- Review the action list and responses by SG/FP to IGRB recommendations from IGRB meetings 1 and 2; and
- Based on the experience of the Board, provide comment on the overall completeness and adequacy of the Pre-Feasibility Study (PFS) and the Pre-Feasibility Study Update (PFSU) to support a decision by SG/FP to proceed with the Feasibility Study (FS).

The Board's review scope includes the Water Storage Dam (WSD), the Waste Rock Storage Facility (RSF), surface water management, Tailings Storage Facility (TSF) and seepage control facilities.

Topics that were discussed during the meeting included:

- Draft KSM 2016 Hydrometeorology Report (see Section 3 below);
- Draft Report for Design Basis and Criteria (Section 4);
- Mitchell Glacial underflow intake design discussion (Section 5);
- Advances in design of Mitchell Diversion Tunnels (Section 6);
- Matters arising from the previous Board Report - Report No. 2 (Section 7); and
- PFS Completion (Section 8).

As for prior meetings, the Board's review was carried out at "Discussion Level", in which the Board relied principally on information provided during meeting presentations, with support of KSM study reports where these were provided.

In this report, the Board provides: observations made during the meeting; presents the outcomes of the discussions and gives recommendations for future work. Comments on the responses provided to recommendations made in earlier Board reports are provided in Section 7.

The recommendations are given in the body of the report in italics. The more significant recommendations are underlined. Consistent with the Board's Report No. 2, the following categories of recommendations are provided:

- **Category 1:** This recommendation applies to the PFS or the PFSU and should be addressed before the pre-feasibility phase of engineering can be considered complete;

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- **Category 2:** These are recommendations the Board suggests are best addressed during the period before the next phase of engineering is performed, which is Feasibility Study (FS). These recommendations are typically for longer lead time activities such as specific studies, field data collection, or implementation of project controls; and
- **Category 3:** These are recommendations the Board recommends be addressed during performance of the FS.

This Report contains no Category 1 recommendations since the Board considers the PFS and PFSU complete.

2. Information Provided

Information provided to the Board, prior to the meetings, included the following draft technical reports:

- Draft 2016 Hydrometeorological Report, December, by Klohn Crippen Berger (KCB) & ERM, Consultants to SG/FP; and
- Draft Design Basis Report, by Seabridge Gold, July 2017.

Presentations given to the Board during the meetings included:

- Meeting Introductions, by SG/FP;
- 2016 Hydro-meteorological Study, KCB;
- Design Basis Review, SG/FP; and
- Mitchell Glacier Diversion Updates, KCB.

Other information provided to the Board included:

- Draft Memorandum: KSM 2016 Hydrometeorological Study – Comparison of 2012/2016 Key Design Parameters, KCB & ERM.

3. Draft Hydrometeorological Report

KCB and ERM have been commissioned to update the 2012 hydrometeorology and hydrological analyses. The principal objective of the study is to provide an updated and agreed-upon set of values for climatic and hydrologic parameters that will be considered for both future environmental analyses and engineering designs. The Board understands that this KCB/ERM study is still a work in progress and subject to further refinements and incorporation of relevant Board recommendations.

With the 2016 update, important overall mass balance constraints are now placed on the hydrological analyses by satisfying the water balance in watersheds at; (1) the Mine Site and, (2) the Process Plant and Tailings Management Area (PTMA); i.e. $R = P - ET \pm D$. Here, R is the runoff (or streamflow from the watershed), P is precipitation in the watershed, ET is evapotranspiration and D is the difference which includes both significant components such as glacial melt over an annual cycle, and other smaller components such as annual changes in soil moisture and groundwater storage in the watershed.

3.1 CLIMATE

The climate parameters examined include: (i) average annual and monthly precipitation (rain and snow), (ii) snow accumulation for various return periods, (iii) wet and dry year precipitation for various return periods, (iv) storms of various durations (short-term medium-term and long-term) and return periods up to the Probable Maximum Precipitation (PMP), (v) average annual and monthly evapotranspiration, (vi) average annual sublimation, and (vii) several other meteorological parameters. These parameters are inputs to water balance calculations and are required for design of conveyance structures and assessment of water storage volumes and freeboard requirements.

The Board considers these 2016 analyses to be more reliable and accurate than the prior, 2012, estimates. They incorporate the use of correlations between the site data with shorter period of record (ranging from 2 to 8 years through 2014) and longer term climate measuring stations, such as Stewart which has a 105 year long record of precipitation data, for estimating annual, monthly and short term precipitation events (snow and rainfall). It is common in remote areas that the climate analyses rely upon an assessment of regional climate stations with long term measurements when only recent data are available at a project site. Nearby regional stations with much shorter periods of record, were used in the 2012 study.

Longer term rainfall on snow events and snow pack accumulation were estimated using correlations with the nearby Unuk River and Eskay Creek sites with 17 and 13 years of record respectively.

Evaporation estimates were improved by correlating site data with Juneau Airport, Alaska and Topley Landing sites, also with much longer periods of record than the site area.

Adjustments were made in the above estimates for variation with altitude when appropriate. Air temperature, wind speed, relative humidity and solar radiation information was updated using the now longer periods of record at the on-site stations.

In comparison to the 2012 hydrometeorology report, the 2016 estimates for average annual precipitation are largely the same at the mine site, but are lower for the PTMA. There are differences in the updated precipitation estimates for longer return period events and more analysis is needed to confirm these values and to explain and discuss these differences. (Category 3 recommendation) These kinds of differences can be expected to occur when initial data sets are based on short term records, of say 10 years, or less.

3.2 STREAMFLOW

Streamflow measurements for the site were extended for statistical analyses by correlations with a longer term gauging station on the Iskut River below Johnson using the Empirical Frequency Pairing Method, rather than chronological pairing. The extended site records were then used to determine dry, mean and wet annual runoff values, monthly runoff values and extreme flood values for different durations including peak flows.

Glacial melt contributions to streamflow were also calculated by comparing runoff patterns in streams without glaciers to those containing glaciers to varying extents. Other aspects considered included the effects of climate change, runoff coefficients, and surface and groundwater interaction

These studies result in generally lower values for the 2-year to 200-year flood peaks and the Board recommends these analyses be further developed and that any differences to the 2012 results be explained. (Category 2 recommendation) These values are important, as they are one of the factors used for the sizing of the flood diversion ditches and tunnels. The estimates of extreme low flows have both increased and decreased in the various streams that were studied.

4. Draft Design Basis Report

In the IGRB report for Meeting No. 2, the following Category 2 recommendation was made:

“In order to more readily assess the analyses and designs presented, particularly for coherence, the Board requests that a document which consolidates the Design Criteria for the major structures of the project be prepared. This document should include:

- *Operating requirements;*
- *Permit restrictions, including those arising from commitments or conditions related to the Environmental Assessment (EA);*
- *Corporate commitments to governments and to First Nations;*
- *Long-term performance considerations allowing for access, instrumentation and maintenance.*

The above referenced document could also include the engineering design criteria, even if these have been provided elsewhere in the interests of ensuring that all parties are working from a common base. Sources of the criteria and any appropriate discussion on the selection would facilitate the consistent application. In the interest of providing a concise document, design parameters such as material properties, need not be included.”

One of the objectives envisaged by the IGRB was to encourage the contribution of all the consulting groups working on the KSM project to facilitate the exchange of design criteria to ensure a coherent approach to design, to enable SG/FP to validate the criteria adopted by their consultants, and, reciprocally, to provide the consultants with the affirmation that SG/FP concurs with the basis of their work. Another objective is to capture the design bases and criteria while the designers that selected and relied on these are available to provide the descriptions and verify the completeness of the design criteria.

SG/FP and their consultants have responded to this recommendation in exemplary fashion by preparing a Design Basis Report (DBR) for the KSM project. A draft version dated July 2017 was transmitted to the IGRB for their high level comments on the overall format and content. The IGRB is favourably impressed by the effort that has obviously gone into the preparation of this document. It is anticipated that this document will be updated as the project designs become more detailed and that such items as “operating requirements” and “design criteria”, for example, will be expanded on in later versions.

Although the report is in draft form it is evident that the fundamental objective has already been met. SG/FP will undertake to ensure distribution of the latest versions to their consultants as and when needed.

The report covers the major structures and their geotechnical and civil engineering components, and appropriately excludes information on geologic and resource block models, process design criteria and criteria for minor project infrastructure components.

The Board notes that additional work on the first version of the DBR is required to ensure:

- *That treatment of the sections on the various project components is uniform;*
- *That all principal criteria and logic processes are covered;*
- *That pertinent references are given; and*
- *That the level of detail is adequate while keeping the document concise.*

The appendices of the DBR contain criteria as adopted by specific consultants. However, the main body of the report is generally descriptive. It may be useful to include more information in a tabular format to facilitate access. The IGRB considers that the level of descriptive detail in some sections could be reduced without detracting from the overall quality of the report.

As the document evolves, and particularly for the later stages of the FS, the design bases and criteria can be expanded on, and assessments of the resilience of each system can be incorporated to ensure that the variations of loads and performance requirements due to variability in site characteristics, weather, geochemistry etc. can be identified and managed. (This is a general recommendation for future design and construction phases of the Project)

The resilience of a structure is its ability to manage change. In complex systems, the system performance capacity is determined by the design basis and criteria for the different structures forming the system. Robustness is that part of resilience that can be incorporated into the structure to manage change prior to triggering 'failure', and the basis for establishing stability and load factors in designs. Post failure resilience is a combination of consequential resilience (the severity of damage after failure), and recovery resilience (ability to recover from failure and prevent either cascading or continuing undesirable consequences). Many unwanted changes can be addressed by monitoring to detect change and implementing adaptive design or mitigation in a timely manner. Consideration of resilience and robustness is particularly important at sites such as KSM, with complex and challenging site, weather, geotechnical and geochemical conditions. To provide flexibility to manage change (resilience) requires that it be considered in the selection of structure type and the design basis.

The IGRB considers the DBR to be an internal working document but will be pleased to review the next version for content detail and to provide comments.

5. Mitchell Glacial Underflow Intake

The Mitchell Diversion Tunnels (MDTs) are proposed to convey non-contact water (fresh water) around the mine disturbed areas and to discharge this water to Sulphurets Creek downstream. The water inlets to the tunnels will be installed beneath the Mitchell Glacier, to the east of the Brucejack Fault. The PFSU design considers that the inlets will generally be 20 to 30 m long, 1.5 m in diameter, and constructed as unlined raise bores between the tunnel and the ground surface beneath the glacier.

The PFS recognizes that flow paths vary beneath glaciers and that the diversion inlets will need to be designed to intercept flows across a wide area beneath the glacier. In the toe areas, where the glacier is thinner, flow is expected to be concentrated in axial channels flowing in bedrock depressions which would provide good locations for the inlets. In the thicker sections of the glacier, additional inlets may be required under the margins of the glacier as water may flow there seasonally. Diversion structures that intercept surface inflows at the margin of the glacier before they disappear beneath the glacier would also be considered.

The 2012 PFS reports also envisaged other approaches to conveying flow under the glacier into the diversion tunnels. These include branch ramps driven from the tunnels in the downstream direction towards the base of the Glacier to create sub-ice portal openings to enhance capture efficiency. These openings have the same dimensions as the tunnels and are thus larger than the raise bores described above. An assessment of the minimum bore diameter indicated that a minimum diameter of 1 m was required to prevent plugging of the bores with boulders and soil carried with the glacier.

Another option, that was discussed in the PFSU included blasting a zone of bedrock above the tunnels to create a zone of permeable, fractured rock. The Board concurs that in future design stages more investigation and evaluation is needed and that combinations of the various methods also be considered.

The Board recognizes that more investigative and design work will be required during the FS to establish designs that accommodate the hydraulics and the transient nature of flow channels under a glacier, and to assure the 1.5 m diameter raise bores and other components of the inlets would capture the flood flows that are intended to be diverted. (Category 3 recommendation)

The Board reiterates that there is limited precedent for this type of construction for the design team to draw on, and recommends that special attention be paid to find an acceptable and efficient design for the sub-glacier inlets. A detailed review of existing similar type of inlets must be performed. (e.g. in Nordic countries or in high mountains regions.) (Category 2 recommendation)

6. Mitchell Tunnels

In Report No 2, the Board made recommendations for the Mitchell Diversion Tunnel (MDT). Since the Board noted a better rock mass quality than anticipated along some tunnel alignment, it suggested this provides an opportunity to optimize the current design and defer the excavation of a second tunnel until the commencement of block caving mining operations. The Board recommended the use a larger diameter tunnel capable of accommodating the 200-year flood and operating during the open pit operations be studied as part of the FS. A second tunnel, excavated at a later stage, could accommodate peak flows with a longer return period (say 1 in 1 000 years) and provide additional protection for the block caving operation.

For the PFSU the KCB team evaluated whether the glacial inlets could be simplified, the overall amount of tunneling be reduced, and if the requirement for initial twinning of the MDT could be eliminated. Comparing the 2016 PFSU to 2012 PFS, the results of that study concluded:

- Single tunnels can be used during open pit phases and twinned for underground phase, instead of twin tunnels during both phases;
- The tunnels would be larger or the same size for both the open pit and underground phases; instead of smaller for open pit and larger for underground. It was also noted that two tunnels of the same size can result in the initial open pit tunnel system being oversized. This either provides an initial contingency for greater than the 200-yr flow, or alternatively, an opportunity to build smaller tunnels initially to just meet this criterion, and then to slash out wider tunnels when the underground mining phase is added; and
- Sub-glacial inlets would be placed along a roughly straight line allowing for underground vehicle access from the south and a manway escape decline on the north side, instead of the 2012 proposed switch-backed ramps. This would keep grades low enough for vehicle access along the length of the glacier inlets.

The criteria for the design flows are unchanged for the open pit and underground operations, but the flows are lower than reported in 2012 PFS for the MDT but higher for the contact water flows due to the revised catchments associated with the new MDT inlet locations. The liner installation in one of these tunnels can also be carried out gradually throughout operation to increase long-term reliability and flow capacity.

The Board is satisfied with the revised layout but recommends additional design work for the glacial inlets as discussed in Section 5 above. (Category 3 recommendation)

7. Matters Arising from Previous Reports

In a working session with SG/FP and KCB staff, the IGRB was advised of the project team's responses to suggestions and recommendations made by the Board in IGRB Reports No.1 and No. 2.

As discussed in Report No. 2 by the Board, the project team demonstrated to the Board's satisfaction that they had addressed the Category 1 recommendations as defined in that report and above in Section 1.0. The KCB response action table provided to the Board, indicates that SG/FP and KCB have provided satisfactory responses to most of the Category 2 and 3 recommendations contained in the Board's Report No. 2. Specific items the Board considers were not adequately addressed, or where a response is still required, are briefly summarized below.

7.1 CATEGORY 2 RECOMMENDATIONS

The following recommendations by the Board are still under consideration by SG/FP and their responses are still being developed.

Board Recommendation

“Consider pH adjustment to the water stored behind the Water Storage Dam (WSD) or conduct a series of “barrel tests” to assess the effect of the acid water to be stored in the WSD on the calcareous formation in the left abutment of the dam.”

SG/FP Response

SG/FP indicated it would be impractical to conduct any long-term barrel tests on-site due to the weather conditions, the snow and geologic hazards, and the absence of full-time personnel at the site. None-the-less the Board anticipates that SG/FP will provide a suitable means for addressing these issues at some time in the future, particularly when all-year round camp facilities are available.

Board Recommendation

“At the WSD and the Seepage Collection Dam (SCD) install thermistor strings to determine the rock temperatures at different depths for planning grouting mixes and give consideration to carrying out in-situ grout testing.”

SG/FP Response

SG/FP is still considering the possibility of installing the thermistors and has agreed that grout testing will be done for the FS. *The Board continues to recommend thermistors be installed.*

The following recommendation was discussed further with SG/FP during the meetings and resolved as described below.

Board Recommendation

“A trade-off study should be performed for the FS to confirm the choice between the ACRD and an RCC alternative.”

SG/FP Response

The Board understands from SG/FP that this type of trade-off had been a consideration in the early PFS designs conducted during the preparation of the Environmental Assessment (EA) documents. Since ACRD has been selected as a result of review and consultation of the EA, SG/FP considers this issue closed. The Board accepts SG/FP's response.

7.2 CATEGORY 3 RECOMMENDATIONS

The following recommendations are still considered pending items by the Board.

Board Recommendation

“The Board recommends further exploration of the alluvial deposits at the foundations of the submerged toe of the Rock Storage Facility (RSF) to assess their potential for liquefaction. The deposits may be exploited to obtain construction materials for certain elements of the RSF.”

SG/FP Response

The Board understands from KCB that this would require additional borings be installed for the FS, and has been informed that SG/FP has taken this under advisement.

Board Recommendation

“For the Tailings Management Facility, the Board sought to be advised on the results of the water quality assessments including the predicted seepage rates and water quality, the water quality standards that have to be met, and the locations of the compliance monitoring points.”

SG/FP Response

The Board was informed that extensive seepage rate and water quality assessments were completed during the EA process. *The Board seeks to be briefed on these evaluations including the predicted seepage rates and water quality, the water quality standards that have to be met, and the locations of the compliance monitoring points. The Board also anticipates that further updated information will be forthcoming during the FS review process and future permitting exercises.*

8. PFS Completion

As mentioned above, the several of PFS investigations, designs and analyses performed by KSM Project Team (including their consultants) and presented to the Board in March 2015, have been updated in what is referred to as the PFS Update (PFSU). Additional information on designs has been provided to the Board during the June 2016 site visits and meetings and the above referenced 2017 meetings. The Board is of the opinion that the PFS and PFSU investigations, designs and analyses meet the definition of pre-feasibility.

The 'test' applied by the Board as to satisfaction of PFS level study completion is that all major elements of the development considered within the scope of the IGRB review responsibilities have been developed to a stage that the designs are technically plausible and the Board has identified no specific flaws that would prevent development. Possible flaws may be identified in future studies, but in the opinion of the Board, there are mitigation measures or alternative engineering approaches that can be applied to address these.

PFS level designs are typically not optimized and cost estimates have a substantial range of uncertainty. Some future design refinements would be expected to reduce costs, while others would increase costs. Where there are possible flaws in designs and cost uncertainties, the Board considers the potential total project cost consequence of necessary mitigation or alternative designs. The Board then provides its opinion as to whether such design or cost consequences would make a substantial change in project viability, and whether additional studies are appropriate prior to proceeding to the FS studies and designs.

The KSM site has challenging weather, terrain and access restrictions, and the site area is large. Drilling, sampling, and monitoring for site characterization represent a large cost. Justification to proceed to the FS level of investigations, studies and designs requires a well-integrated development plan at PFS level. The PFSU has achieved this level of integration on aspects such as water and waste (tailings and mine rock) management.

9. Conclusions

The IGRB concludes the KSM Project PFS and PFSU satisfy typical PFS level criteria and SG/FP can appropriately proceed to FS level studies and designs. The Board seeks to be advised of the programs of investigation, evaluation and design that will be performed to satisfy the FS level design in timely manner to enable IGRB commentary and recommendations to be incorporated in these future programs.

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Appendix A

Meeting Agenda

SEABRIDGE GOLD

MEMORANDUM

DATE: July 5, 2017

TO: Andy Robertson, Robertson Geoconsultants

CC: Gabriel Fernandez, Terry Eldridge, Anthony Rattue, Jim Obermeyer, Ian Hutchison, Jean-Pierre Tournier, Leslie Smith, Jay Layman, Brent Murphy, Mike Skurski, Garry Stevenson, Graham Parkinson, Harvey McLeod, Ali Naghibi, Cameron McCarthy, Charles Masala, Mary-Jane Piggott

FROM: Peter Williams

RE: **Agenda for 3rd Meeting of the KSM Independent Geotechnical Review Board**

Objectives

The objectives for the third IGRB meeting are:

1. Review and discuss "B.1 KSM 2016 Hydrometeorology Report", followed by discussion of an alternative approach. IGRB to supply further guidance.
2. Review and discuss Draft report for Design Basis and Criteria. IGRB to supply further guidance.
3. High level review of Action List
4. If time permits, review potential design update for Glacial inlets of MDT.
5. IGRB to supply guidance to Seabridge on items 1 to 4.

Date and Location:

August 8th – 10th Kipling Room, KCB Offices, #500, 2955 Virtual Way, (East Broadway and Renfrew St.)
Vancouver, Reception: 604-669-3800

Attendees:

IGRB: Dr. Andrew Robertson, IGRB Chair, Robertson Geoconsultants, Core
Dr. Gabriel Fernandez, Rock Engineering and Civil, University of Illinois, Core
Mr. Terry Eldridge, Tailings, Golder Associates, Core
Mr. Anthony Rattue, Geotechnical/Dams/Tunnels/Slope Stability, Core, Rattue Consultants
Mr. Jim Obermeyer, Tailings and Water Dam Geotechnical, VP MWH
Dr. Ian Hutchison, Civil and Water Management, SLR International Corp.
Dr. Jean-Pierre Tournier, Asphalt Core Rockfill Dams, Independent
Dr. Leslie Smith, Hydrogeology, Independent.

Seabridge: Jay Layman, Exec. President and Chief Operating Officer, Seabridge Gold Inc.
Brent Murphy, VP Environment, Seabridge Gold Inc.

Peter Williams, VP Technical Services, Seabridge Gold Inc.

Mike Skurski, Manager Engineering, Seabridge Gold Inc.

KCB: Harvey McLeod, Tailing Facility
Garry Stevenson, KCB Water Storage Dam,
Charles Masala, KCB Tailing Facility, Hydrometeorology
Graham Parkinson, KCB General

ERM: Ali Nagbihi, Water Model
Cameron McCarthy

Table 1. Overall Agenda August 8-10, Kipling Room KCB Office

Day	Time	Subject
Tuesday, August 8	9:00 - 9:15 am	Safety Share
	9:15 - 5:00 pm	Signature Page Distribution
		Presentations to refresh subject "2016 Hydrometeorology Report"
		Discussion of 2016 Hydrometeorology Report
		Lunch
		Discussion on Alternative Approach
		Review and discussion of Design Basis and Criteria report
	May have spare time.	
Wednesday August 9	9:00 - 5:00 pm	Carry over from Tuesday
		High Level Review of Action List
		Lunch
		Review of Potential Design of Glacial Inlets MDT
		May have spare time
Thursday, August 10	9:00 am - noon	IGRB guidance formulation and report writing
	12:30 - 1:00 pm	Lunch
	1:00 - 2:00 pm	IGRB guidance formulation and report writing
	2:00 - 5:00 pm	IGRB report out of draft report

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Appendix B

Meeting Attendees

Meeting Attendees

Seabridge Gold

- Peter Williams
- Brent Murphy
- Mike Skurski
- Jessie Chaplin

IGRB

- Andy Robertson
- Jim Obermeyer
- Terry Eldridge
- Leslie Smith
- Anthony Rattue
- Ian Hutchison
- Jean-Pierre Tournier

KCB

- MJ Piggott
- Charles Masala
- Michael Dabiri
- Graham Parkinson
- Harvey McCleod

ERM

- Ali Naghibi

Swiftwater Consulting

- Cameron McCarthy