

Tenas Coal Project – Aquatics and Water Sub-Working Group Meeting Summary
Wednesday, January 30, 2019 from 1:00pm – 4:30pm (PST)
3333 Tatlow Road, Smithers (Skeena Stikine District Office, Driftwood Room) and
Teleconference (1-877-353-9184, Conference ID: 6882496#)

Meeting Summary

Meeting Participants

Indigenous Groups

- David deWit, Office of the Wet'suwet'en
- Mike Ridsdale, Office of the Wet'suwet'en

Provincial Government

- Terry Pratt, Environmental Assessment Office (EAO)
- Matt Rodgers (EAO)
- Anita Threlfall (EAO)
- Adrienne Turcotte, Ministry of Energy, Mines and Petroleum Resources (EMPR) – by phone
- Alexis McPherson, EMPR – by phone
- Tracy Bush, EMPR Major Mines Office – by phone
- Tara Cadeau, EMPR – by phone
- Sean Shaw EMPR - by phone
- Liz Freyman, Ministry of Environment and Climate Change Strategy (ENV) – by phone
- Erin Rainey, ENV – by phone
- Karen Fairweather, ENV – by phone
- Rusto Martinka, ENV – by phone
- Carla Grimson, Env - by phone
- Paula Tait, Northern Health - by phone

Federal Government

- Stephen Sheehan, Environment and Climate Change Canada (ECCC) – by phone
- Kathleen Belton, ECCC – by phone
- Francois Nzokou Tanekou, ECCC – by phone
- Ute Pott, ECCC - by phone

Proponent and Consultants

- Angela Waterman, Telkwa Coal Limited (TCL)
- Dan Farmer, TCL
- Megan MacCallum, TCL
- Kirsten Roberts, TCL
- James Henderson, TCL
- Mike Herrell, SRK Consulting
- Sarah Portelance, SRK Consulting
- Ryan Burgess, SRK Consulting
- Trevor Welton, Hemmera
- Kirsten Seymour, ERM Consultants
- Coby Hall, ERM Consultants
- Cody Cameron, Cassiar Geoscience - by phone

Meeting Objectives

- For Telkwa Coal Limited (TCL) to provide an overview of their Baseline Report, candidate aquatic resources intermediary components (ICs) and valued components (VCs), and initial potential project effects on candidate ICs/VCs;
- For Tenas Coal Working Group (WG) participants to ask questions and discuss issues and concerns on the Baseline Report and candidate aquatic resources ICs/VCs; and
- For the Environmental Assessment Office (EAO) and Ministry of Energy, Mines and Petroleum Resources (EMPR) to outline next steps in the environmental assessment (EA) and permitting processes with an opportunity for WG members to ask questions about process.

Introduction and Overview of the EA and Mine Permitting Processes

- The EAO started the meeting with an acknowledgement of being on Gitdumden Clan territory of the Wet'suwet'en People. The acknowledgement was followed by a round of introductions of WG members present in the room and those calling in.

- The EAO reviewed the agenda for the meeting with participants and the agenda was approved as presented.
- The EAO mentioned the purpose of the meeting was to review and discuss the Valued Components and Indicators of the Tenas Coal Project, and for the EAO and EMPR to determine the process for EA and mine permits.
- TCL is currently pursuing the concurrent review of permitting for the project.

TCL Overview of Baseline Reports

- TCL provided PowerPoint presentations of Baseline Reports on the following topics for the proposed Tenas Coal Project:

Geology and Mine Plan

- TCL proposes to build 40 feet high dam of till material from the ponds to the north of the potentially acid generating (PAG) cells that would allow the water to be raised overtop. The dam would hold high sulfur PAG.
- Centrifuges connected to BC Hydro 25KV grid will be used for drying the coal.
- TCL proposes to have three water sources for processing the coal – water collected from surface numerous ponds; ground water; and 3rd contingency from diversion of Four Creek during high flows/ pumping water from Goathorn Creek.

Geochemical Information

- Sulphide sulfur creates acidity and it needs to be separated from total sulfur to determine the acid generating potential. Active management of acid rock drainage (ARD) potential is needed due to sulphide content of rock, PAG strata and process rejects. The strategy for ARD management is to remove the oxygen and prevent oxidation by putting PAG rock underwater or covering it.
- EMPR noted that if this is the proposed approach to ARD management, TCL will need a strong argument around time to acidity and how that cover system is going to be developed and kept in tact to ensure there is no onset of acidity at some point.
- TCL is conducting 40-week humidity cell test analysis to develop source terms for use in water quality predictions and determine the ARD potential.

Hydrogeological Flow

- The nearest domestic wells are approximately six kilometers away from mine site with groundwater flow in a north-northeasterly direction into the Four Creek and Tenas Creek. There is upward flow of ground water between the coal units.
- Bedding and dip vary in Skeena group and there can be preferential flow paths in sedimentary settings. This has been hypothesized in tests and has been carried forward by TCL in their baseline reports and will be carried forward in the EA.
- TCL is developing the groundwater flow modeling to determine the volume entering the receiving environment. TCL also has a conceptual groundwater balance being used to feed into the numerical groundwater flow model.

Hydrology

- TCL has installed sensors to collect hydrology baseline data that will be reviewed annually.
- The study was designed to follow the highest grade of data (Grade A with 10 rating points).

Surface Water Quality

- TCL assured the WG that laboratory and field parameters include selenium baseline and other metals in the water quality analysis.
- Surface water compliance nodes would be located in the Telkwa River, the Bulkley River, and Goathorn Creek, where project discharges are proposed to occur.
- The water discharge pipeline from the management pond would discharge by gravity to one of the three water bodies. For the mixing zone, a Cormix model will be completed to evaluate the mixing.
 - A request was made to review the dilution factor during the low levels of water in Telkwa River and the present and future effects on fish, fish habitat and fish populations from the project discharge.
- TCL noted that this is the baseline stage and other inputs are being collected to answer what the changes to water quality would be. There is historical baseline that can be used to look at trends. Part of the EA will be to look at climate change scenarios.
- ECCC mentioned that the Department of Fisheries and Oceans (DFO) does not consider dilution zones. The new Federal coal mining regulation limits the effluent discharge into the receiving environment. Mines would be prohibited from combining water with effluent for the purposes of diluting effluent.

Fisheries and Aquatics

- Concerns were raised about bioaccumulation of toxins in fish that are consumed or used for ceremonial purposes. It was suggested chemical sampling from larger resident fish (rainbow trout in particular) be conducted to get a better sense of the bioaccumulation of toxins.
- Two fish sampled showed exceedances of selenium, mercury, arsenic, iron, manganese, copper and nickel in the Provincial Water Quality Guidelines.
- Baseline report for 2017-2018 will present data collected on fish up to three years old.
- Attention was drawn to the characterization of fish with respect to fish population and distribution for future generations.
- It was suggested that TCL review the Bustard map from 1997, which shows benthic samples and fish and fish habitat in the Telkwa and Bulkley Rivers.
- It was also suggested that DFO participate on the Working Group.

Next Steps in the EA Process

- The EAO identified the next steps in the EA process as: finalize the VCs; prepare the draft Application Information Requirements (dAIR); schedule a Public Open-house on dAIR (April or May); EMPR to provide IRT after AIR is finalized.
- Concerns were raised about blending the EA and permitting processes and it was requested that a clear distinction be made between the two processes.

Action Items

- TCL to provide information on depth of holding ponds; groundwater wells relative to depth of proposed mine; height of overburden piles; and the depth of groundwater wells relative to the depth of the proposed mine pit.
 - *Update:* TCL noted that this information will be provided during the EA.
- The EAO to co-ordinate a conversation with DFO/ECCC, Office of the Wet'suwet'en (OW) and TCL around salmon populations in Telkwa and Bulkley Rivers. The EAO and OW to follow up with DFO requesting their engagement in the EA and on the WG.
 - *Update:* DFO has indicated that they will not be participating on the WG.
- The EAO to share the 1997 Bustard map containing detailed information on fish populations in nearby waterbodies with the WG.
 - *Update:* the EAO shared the map with the WG on February 26, 2019.
- ECCC to send link to info on new federal coal regulations to the EAO for sharing with WG.
 - *Update:* info provided and shared with the WG on March 7, 2019.

End of meeting (4:30pm)