

Tenas Coal Project – Valued Components Working Group Meeting Notes

Thursday, January 31, 2019 from 8:30am – 4:30pm (PST)

3726 Alfred Ave., Smithers, BC (Nora Building, 2nd Floor Caribou 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

Local Government

- Gladys Atrill, Town of Smithers
- Frank Wray, Town of Smithers
- Jason Llewellyn, Regional District of Bulkley Nechako (RDBN)
- Jennifer MacIntyre, RDBN
- Eric Becker, Bulkley Valley Community Resources Board

Provincial Government

- Terry Pratt, Environmental Assessment Office (EAO)
- Matt Rodgers (EAO)
- Anita Threlfall (EAO)
- Andrew Dickinson, Ministry of Energy, Mines and Petroleum Resources (EMPR) – by phone
- Adrienne Turcotte, EMPR – by phone
- Alexis McPherson, EMPR – by phone
- Jennifer McConnachie, EMPR – by phone
- Tracy Bush, EMPR Major Mines Office – 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
- Ben Weinstein, ENV – by phone
- Brandy Hughes, Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD)

- Chris Schell, FLNRORD
- Barry Dobbin, FLNRORD – by phone
- Nida Asa, Agricultural Land Commission – by phone
- Leanne Helkenberg, Ministry of Transportation and Infrastructure
- Paula Tait, Northern Health - by phone

Federal Government

- Stephen Sheehan, Environment and Climate Change Canada (ECCC) – by phone
- Kathleen Belton, ECCC – by phone
- Jayme Brooks, Canadian Wildlife Services (CWS) – by phone
- Andrew Huang, CWS - 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
- Andy Smith,
- Laurence Turney, Ardea
- Trevor Welton, Hemmera
- Kirsten Seymour, ERM Consultants
- Coby Hall, ERM Consultants
- James Humble
- Cathy McKay, EDI Dynamics – by phone
- Cody Cameron, Cassiar Geoscience - by phone
- Mark Milner, Hemmera – by phone

Meeting Objectives:

- For Telkwa Coal Limited (TCL) to provide an overview of the proposed Tenas Coal Project, baseline work completed to date, and proposed candidate Intermediate Components (ICs) and Valued Components (VCs);
- For the Environmental Assessment Office (EAO) and the Ministry of Energy, Mines and Petroleum Resources (EMPR) to provide an overview of next steps in the environmental assessment (EA) and mine permitting processes; and
- For Working Group (WG) members to ask the EAO/EMPR questions about the EA and permitting processes and to ask TCL questions about the candidate ICs/VCs presented and identified in the draft VC scoping document.

Introduction and Updates on the EA Process and Mine Permitting Process

- The EAO opened the meeting with an acknowledgement of the traditional territory of Gitdumden Clan of Wet'suwet'en people. The acknowledgement was followed by a round of introductions of all attendees in the room and those calling in remotely.
- The EAO reviewed the agenda and the agenda was accepted as presented.
- The Office of the Wet'suwet'en (OW) welcomed WG members to the traditional territory of the Gitdumden Clan of Wet'suwet'en Nation.

The EAO Provided an EA Process Update

- The EAO noted that the purpose of the meeting was to review the candidate VCs in the Tenas Coal Project Valued Components Scoping Document and solicit input from the WG.
- The VC document forms the basis for the Application Information Requirements (AIR) and the Application for an EA certificate.
- The draft AIR (dAIR) is expected to be available for viewing by April/May 2019.
- An EAO-led Public Open House on the dAIR is anticipated to be held in mid-April 2019.
 - *Update:* Public Open House on dAIR likely mid-May or June.
- An EA Application to be developed based on information requirements in the AIR is anticipated in late fall 2019.

EMPR Provided a Mine Permitting Process Update

- EMPR noted that the Mining Review Committee (MRC) will be formed to lead technical review of mines permitting for the project and would consist of some WG members.
- The MRC will review permits for the Tenas Coal project.
- TCL has indicated it intends to request concurrent review for permitting applications alongside the EA application.
- The EAO explained that the EA process will be managed by the EAO, while the permitting process by EMPR.
- It was mentioned that the VC scoping document is internal to the WG. WG meeting summary will be posted to the EAO's Project Information and Collaboration (ePIC) website.
- The dAIR will be made public by April or May 2019 (*update:* potentially May or June 2019)

Tenas Coal Project – Valued Components Working Group Meeting Notes
Thursday, January 31, 2019 from 8:30am – 4:30pm (PST)

- The MRC will develop the permit list and the draft Information Requirement Table (IRT) for review by statutory decision makers.
- The IRT includes permitting requirements under the *Mines Act* and the *Environmental Management Act*, and will capture details of potential effects on fish, aquatics, reclamation, water quality, meteorology, among others.
- The IRT is developed in collaboration with the EAO. The draft IRT is anticipated in April.
- The IRT initiates conversations with the MRC and consultations with Indigenous Nations.

Environment and Climate Change Canada (ECCC) Role in the EA Process

- The Federal Team for Tenas Project would comprise of biologists from Canadian Wildlife Service (CWS), members from Environment and Climate Change Canada and others as required with the progress of the Project.
- The Project at present does not trigger a federal review under the *Canadian Environmental Assessment Act* (CEAA).
- OW invited DFO to participate in the WG.
- DFO advised OW and the EAO that it does not intend to participate in the WG, as the effects to fish and fish habitat at the EA-level will be covered by ECCC and BC. DFO will be involved in permitting decisions where there is a trigger under the federal *Fisheries Act*.

TCL Provided an Overview of the Mine Plan

- Electricity for the Tenas Coal mine operations will be from an existing hydro facility.
- Mine pit contains two types of rock/materials in the mine: high sulphur or potentially acid generating (PAG) and low sulphur or non-acid generating (NAG). These materials have the potential to cause acid rock drainage (ARD) from contact with oxygen.
- To prevent oxidation, PAG and NAG rock will be covered with water and will be monitored under the Tenas Coal Water Management Plan.
- Two options for management of discharged contact water: 1. water flow via pipeline along/under the Telkwa coalmine road to Telkwa River near gas line crossing; and 2. via pipeline along the proposed haul road route to the Bulkley River.
 - TCL noted that option 1 was used for considerations in the Baseline Report.
 - Telkwa River is closer, but the terrain is challenging for building pipeline.
 - Telkwa River and Bulkley River flow year-round without the risk of ice buildup/freezing. Freezing conditions limit discharging to Goathorn Creek and/or Tenas Creek.
 - Volume of water being discharged to the receiving environments will be established in the feasibility report.
 - Project planning to conclude at the end of 2nd quarter to have a better idea of numbers.
 - The effects of discharging into the Telkwa and Bulkley Rivers will be measured in a water balance model.
- Concerns were raised about not having firm study area boundaries at this time. TCL noted that the VCs and ICs for the Project are general enough to be discussed without finalization of mine plan. TCL also noted that proposed VCs/ICs are not expected to change the boundaries of the local study area (LSA) or the regional study area (RSA).
- The Project area spans 1,000 hectares and includes the mine pit (900 hectares), rail loop and access roads.

Tenas Coal Project – Valued Components Working Group Meeting Notes
Thursday, January 31, 2019 from 8:30am – 4:30pm (PST)

- Back fill would be comprised of NAG and overburden. PAG will be submerged underwater in storage ponds.
- TCL will manage the storage ponds forever after reclamation with systems in place for monitoring changes to water levels and pond stability.
- Post-closure monitoring program starts at the closure of the mine. Monitoring periods decrease over time with one mine check per year. Data collected informs the monitoring frequency.

TCL Presented Candidate ICs and VCs

Groundwater – Intermediate Component

- Multiple groundwater monitoring wells exist that are deeper than the base of the proposed mine pit, and along the down gradient between the pit and receptors deep enough to capture the elevation of the pit.
- A request was made for a schematic representation of the location of all the nearby wells and known faults and fractures, depending on the depth of the fractures or connections with aquifers for the Tenas Coal project.
 - TCL to look into the request for providing the schematic representation of well locations. Manalta Coal mine baseline groundwater reports did not reveal fractures.
- A discussion was had around the connection of groundwater with the proposed south pond; around faults below PAG rock holding area; and wells at the bottom of the pit.
 - Testing at associated projects looked at permeability of those faults and concluded they didn't not include preferential pathways.
 - Hydrological models will provide a better understanding of the groundwater flow.
- Concerns were raised about the potential risks to the aquifer (i.e. Telkwa River) and domestic water users near the proposed discharge location, should effluent be discharged into the Telkwa River. This is especially important given the connection between the river and aquifer.
 - TCL noted that full water modeling is yet to be completed but groundwater flows north and northeast and does conceptually discharge into nearby creeks and into the Telkwa River. BC water quality guidelines will be met for all water discharged from the mine site.
 - Faults are discovered by drilling, drilling done to date on the north of the proposed Tenas mine site has not defined faults effectively and it is difficult to map faults. It is easier to determine faulting through modelling and come up with mitigation measures based on models.
 - PAG cell design includes engineered mitigation plans to ensure there is no seepage if a fault is found.
- A request was made for the distance between the Project site and Village of Telkwa's main water source.
- A question was posed if groundwater flow is represented numerically and how fractured bedrock is being captured in the numerical models.
 - TCL noted that the scale does not represent groundwater flow numerically or faults in the base case. There is a conceptual understanding, and the different scenarios will be addressed in sensitivity modeling to assess how they change potential effects.

Surface Water Quality/Quantity ICs

Tenas Coal Project – Valued Components Working Group Meeting Notes
Thursday, January 31, 2019 from 8:30am – 4:30pm (PST)

- The water discharged from the mine site will include untreated or captured stockpile seepage to tributaries and the volume and influence of that seepage on downstream receptors will be evaluated in the effects' assessment.
- Water from PAG cells and runoff will be directed to the water management pond where the treatment is mainly sedimentation (settling solids to minimize total suspended solids loadings discharged from the site). The main effluent discharge is from this pond.
- The purpose of the design of the PAG cells is to submerge potentially acid generating or high sulfur rock to prevent oxidation and acidification. No additional treatment is planned but as part of permitting process, effluent limits will be set for downstream compliance.
- A concern was raised around the physical effects to the river where the pipes are discharging (i.e. having rip rap and the pipe in the same place can cause erosion downstream where salmon may be spawning).
 - TCL noted that this will be part of the fish habitat and water management effects assessment. Currently developing the water balance models and siting of discharge locations and this will be considered when setting the discharge location.
- The sum of Tenas Creek, Goathorn Creek, and Telkwa River monitoring stations is approximately the total flow of the Goathorn Creek and Telkwa River confluence monitoring station.
- A concern was raised about water in ditch catchments being released into the surrounding environment.
 - TCL noted that rainwater in the mine footprint is captured by the collection ditches (channels) which flow to a downstream control pond before discharging to the environment. The water balance is calibrated to include the catchment area.

Break (20 mins)

Aquatic Resources/Fish and Fish Habitat VCs

- TCL noted that the aquatic LSAs/RSAs assume discharge into the Telkwa River and if the discharge location changes to the Bulkley then the RSA would change to reflect this.
- It is important to understand the current status of fish, fish habitat, and cumulative effects on fish, fish habitat, and fish populations and it was suggested that TCL look at the federal wild salmon policy indicators. Federal policy uses indicators to develop a fish and fish habitat monitoring initiative through the Environmental Stewardship Initiative (ESI) in collaboration with the province. The effects assessment considers how the mine will impact fish/fish habitat in the direct mine area, but not the current status of salmon species and their habitat in order to determine these impacts. For total impacts to fish/fish habitat, include the roads, and compare to baseline levels.
 - It was noted that all concerns will be captured in an issues-tracking spreadsheet and TCL will need to respond.
- A discussion around cumulative effects (CE) followed. Cumulative effects will consider potential for other existing/future projects to cumulatively effect VCs. CE terminology in the EAO guidance for cumulative effects refers to 'reasonably foreseeable' projects.

Atmospheric Environment ICs/VCs

- Atmospheric Environment includes air quality, GHG (green house gas), and noise/acoustics. Dustfall is mainly from road dust in baseline studies

Tenas Coal Project – Valued Components Working Group Meeting Notes
Thursday, January 31, 2019 from 8:30am – 4:30pm (PST)

- The BC Oil and Gas Commission (OGC) has noise guidelines adopted from the Alberta noise assessments; US Environmental Protection Agency (EPA) guidelines; and Health Canada guidelines around sleep disturbances and percent highly annoyed. TCL is using these guidelines in their assessment of noise and vibration.
- Air quality is a pathway, which feeds into other disciplines such as human health, wildlife, vegetation, and soils.
- Concerns were expressed about potential effects on air quality due to dust from the load out facility.
 - TCL noted that there is currently no MET station near the load out facility, however, weather research and forecasting model data used takes into account all nearby health weather stations to assess regional inputs.
- Concerns were raised that there are no particulate monitoring stations along the haul road and dust can impact vegetation, wildlife, and creeks nearby.
 - TCL noted that the haul road will be included in the air quality modelling. Air quality is a pathway that feeds into human health, soils, vegetation, wildlife assessments and is considered by these disciplines. Dust generated from haul road traffic is limited to 50 and 100 m from the road.
- A concern was raised around recreational use and camping in the Telkwa River valley and potential noise impacts (i.e. from blasting).
 - TCL noted that the haul road has been moved just above the mine site, away from the Telkwa Coal mine and towards the Telkwa River. Blasting is a short-term event expected once a day and the distance is far enough from the Telkwa River that noise impacts aren't anticipated. Timing of events will be considered in the noise assessment and will look at more in relation to impacts on wildlife (i.e. calving areas) and seasonal cabins in the area.
- A discussion followed around the 'percentage of people highly annoyed' parameter. This is the increase in percentage of people who are disturbed by noise levels. A 6.5% threshold was set by Health Canada guidelines developed in the 1970s.
- A concern was raised that vibration was not considered as an indicator for the atmospheric VCs. TCL noted that most vibration comes from haul trucks and now that the haul road has been moved away from populated areas, vibration should not be a concern.
- Concerns were raised around potential noise generated from the rail loadout facility during operation. TCL is working with CN and Canadian Pacific (CP) Rail on several studies and will consider the effects of noise from shunting and coupling cars. Noise levels were low from a 300-500 meters distance from a large rail facility, noise mitigation measures will be considered when designing the rail loadout and receptors and design of a system will be looked at to model railcar noise into the EA.
- Concern expressed that air quality in the valley is at capacity for air pollutants. People report illnesses and hospitalizations due to road dust and wood smoke. It was noted that BC Ministry of Environment (ENV) conducted a study in Telkwa and discussed wood smoke as an issue.
- ENV noted that TCL's baseline monitoring program is adequate because: there is enough data to estimate baseline particulate matter (PM) concentrations in Telkwa; there is a monitoring station on site; there is more than one MET stations in the valley, all of which should be adequate to estimate air quality during modeling.

Tenas Coal Project – Valued Components Working Group Meeting Notes
Thursday, January 31, 2019 from 8:30am – 4:30pm (PST)

- ENV noted that the important thing is getting a well-run air quality model that considers air pollutants around the mine site, trucking, and the rail loadout. Emissions could be localized but the greater area including Telkwa has high levels of particulate matter in the air, which will be important to consider in the EA.

Terrestrial (Terrain and Soils) and Wildlife ICs/VCS

- It was suggested that TCL conduct a grizzly bear hair snare DNA analysis.
 - TCL followed up with the local expert to work out something for this spring. Talked about this in the summer and it was suggested that springtime is better.
- It was articulated that soil quantity will be very important during the *Mines Act* permit application process.
- A discussion of the Telkwa caribou herd followed, including engagement to date with BC/Canada/Indigenous Groups about recovery efforts and habitat mapping.
 - TCL noted that this is the starting point for discussions and feedback; a number of baseline environmental workshops with the Wet'suwet'en (November 2017 & July 2018) have been held that outlined all of baseline information.
- The EAO noted that they expect to have more sub-working groups discussion on specific topics such as caribou.
- TCL has held conversations with BC on approaches to mitigation, habitat offsets, exploration program, developed comprehensive caribou and moose management plan that would be expanded on for the EA.
- Canadian Wildlife Services (CWS) offered to share unpublished information about the Telkwa herd that can be shared under a data sharing agreement.
- A discussion around data and data management followed. It was noted that it is unfortunate that data from consultants and proponents is not managed and held for future use. Raw data and analysis are key ingredients for transparency and accountability and a thorough analysis.

Heritage (Culture) VCS

- An overview of Wet'suwet'en governance structure was provided. There are 5 Clans, each clan has subgroups (13 houses). 13 House Chiefs make the board of directors for OW. Wet'suwet'en territory comprises 22,000 square km.
- *Yinta* means territory but much more – all living beings are connected and interdependent in ways that we do and don't know about. This is essential for Wet'suwet'en to express their interest on the *Yinta*. This helps to illustrate cumulative effects. Framed solely on the Wet'suwet'en ability to access and use resources to support decision making.
- Terrestrial Ecosystem Mapping (TEM) and other inputs really show the impacts on the land, which has a direct connection to Wet'suwet'en culture.
- There is a long history of working with Wet'suwet'en elders and merging Traditional Ecological Knowledge (TEK) with modern technology (spatial/tabular data).
- Health and well being of the land is the health and well being of the people.
- For the RSAs, it's interesting to point out house territories. The scale of analysis for the generalized wildlife LSA did seem to fit well with the house boundaries. Choosing indicators is a challenge. The Wet'suwet'en have created their own valued components.

Tenas Coal Project – Valued Components Working Group Meeting Notes
Thursday, January 31, 2019 from 8:30am – 4:30pm (PST)

Socio-Economics VCs

- It was suggested that the Town Smithers should be included in the LSA and the Town of Houston in the RSA for socio-economic consideration, particularly for housing impacts.
- It was noted that there needs to be an assessment of the negative impacts that could occur to local government, not just the positive economic benefits.
- There needs to be a consideration for local employment to give local residents an opportunity to get involved in the mining industry.
 - TCL noted that all socio-economic impacts will be considered and that they anticipate filling as many of the positions with local employees as possible but that certain skill sets may be difficult to fill. TCL is committed to training and learning on the job.
- It was noted that when assessing housing impacts, consider impacts on the rental housing market. As a recommendation, please reach out to the municipalities to consider mitigation measures.
- It was noted that Microwave Ridge is near Smithers across the valley where there is a legitimate motorized vehicle area that may be impacted by the proposed project.
 - TCL is engaging with local recreation stakeholders, like Smithers Snow Mobile Association and BV Quad Riders.
- A discussion around visual quality impacts followed. Visual quality has been assessed at numerous viewpoints by TCL. 15 sites found in the Bulkley Land and Resource Management Plan were visited and scoped out of the study as they did not have any view of the project. An additional 18 viewpoints were assessed, four of these were scoped out as they had vegetative screening that completely obscured any view of the project site.
- TCL noted that, to the extent possible, they will be reclaiming or revegetating during the project, the soil will be kept there and seeded, and over the 25-year mine life, the entire area will not be disturbed.
- It was suggested that visual quality analysis consider light pollution and that an emergency response plan be developed as part of the EA or permitting process to deal with a dam breach.
 - TCL noted that they will draft an emergency response plan for WG review and that their understanding was that management plans will not be EA level, but permitting level.
- A question was raised around if there will be a Socio-Economic Environmental Management Plan (SEEMP) process for the EA. SEEMP will be part of the EA process to identify mitigations, monitor conditions.

Health VCs

- For community wellbeing, while examining social determinants of health, it was suggested that Town of Houston be included in the RSA. For the RSA include Area A (Smithers) and G (Houston).
- It was suggested that Witset be considered for economic opportunities for nearby Indigenous communities. When considering economic opportunities for Indigenous communities, Witset is definitely one of the communities. To include Indigenous labour in the mine plan, the main town needs to be included as well.

General Questions and Discussion

- A discussion was had around potential workforce projections how that might impact health services in the community.

Tenas Coal Project – Valued Components Working Group Meeting Notes
Thursday, January 31, 2019 from 8:30am – 4:30pm (PST)

- TCL anticipates that there will be 100-110 direct full-time employees (construction and operations respectively). This may change following feasibility studies. Currently identifying where workforce and materials will come from but will be getting as much from the nearby municipalities as possible.
- Concerns were raised around rental housing and accommodation availability and the protection of community culture. Part of TCL's strategy used on other projects was to discuss with hotel owners to have rooms booked and ready for construction workers.
- A discussion around CN Rail's involvement in the EA followed. Concerns raised around rail noise, traffic, wildlife mortality, and the risk of a rail car spill.
 - The EAO noted that they will connect with TCL to obtain CN rail contacts.
 - TCL noted that the current traffic is one train every hour, 24 hrs/day and that Tenas Coal would add one train per week.

The EAO and EMPR Gave an Overview of Next Steps in EA and Permitting Processes

- The EAO thanked everybody for participating in the VC discussion and requested everyone to review the candidate VCs and ICs in the VC scoping document to determine if they hit the mark from each organization's mandate.
- The EAO will send an email formally requesting comments from the WG on TCL's VC scoping document. The WG will have 30 days from the date of the email requesting feedback to respond with comments.
- WG meeting summary notes will be posted to the EAO's website upon compilation and formalization.

Action Items:

- ECCC/CWS to share unpublished Telkwa caribou herd info with TCL.
 - *Update:* ECCC/CWS provided this information on March 5, 2019
- The EAO to consider setting up a sub-WG for caribou.
 - *Update:* caribou sub-WG meeting was held on March 21, 2019.
- The EAO to connect with Village of Telkwa to request the distance between the project area and the Village of Telkwa's main drinking water source.
 - *Update:* Village of Telkwa has informed the EAO that drinking water comes directly from the Bulkley River at an intake location just upstream of the confluence with the Telkwa River.
- The EAO to coordinate data management meeting with TCL and OW to ensure OW has access to all required raw data.
- The EAO to follow up with TCL to get CN Rail contacts and start conversation.
 - *Update:* TCL provided the EAO with CN Rail contacts.
- The EAO to share Northern Health's best management plans and list of socio-economic indicators with the WG.
 - *Update:* this information was provided by Northern Health and the EAO shared this information with the WG on February 21, 2019.
- The EAO to provide SEEMP information with the WG.

Tenas Coal Project – Valued Components Working Group Meeting Notes
Thursday, January 31, 2019 from 8:30am – 4:30pm (PST)

- *Update:* the EAO shared the Baldy Ridge Extension Project’s Table of Conditions, which includes a Condition outlining the requirements for a Socio-Community and Economic Effects Management Plan.
- OW and the EAO to follow up with DFO requesting their engagement in the EA.
 - *Update:* DFO has indicated that they will not be participating on the WG for Tenas Coal.
- OW to share Wild Salmon Policy indicators report.
- The EAO to send the WG a formal request for comments on TCL’s VC scoping document.
 - *Update:* the EAO sent an email with this request on February 26, 2019 with March 28, 2019 as a deadline for comments.

End of meeting (3:30)