



MOUNTMILLIGAN

Community Sustainability Committee (CSC) Meeting Minutes

Date: October 3, 2014 **Time:** 10:00 am – 2:00 pm
Location: Mackenzie Office 577 Skeena Drive
Mackenzie, BC T 250 997 8800 **Date Issued:** October 22, 2014
Prepared by: Catherine Rockandel, Rockandel Associates, IAF Certified Professional Facilitator
Facilitator: T: 1 (604) 898-4614 E: cat@growpartnerships.com

Attendees:

Name	Organization	Present
Emily Colombo	District of Fort St. James, EDO	
Joan Burdeniuk	District of Fort St. James, Councillor	
Ann McCormick	College of New Caledonia (CNC) Fort St. James, Supervisor	P
Trish Jacques	District of Mackenzie, Councillor	P
Diane Smith	District of Mackenzie, EDO/ Acting CAO	P
Shannon Bezo	College of New Caledonia, Interim Associate Regional Director	P
	McLeod Lake Indian Band, Councillor	
Cecilie Heron	West Moberly Land Use Manager, West Moberly First Nation	
Colleen Erickson	Nak'azdli Band Council, Natural Resources Manager	P
Lisa Sam	Nak'azdli Health Centre, Community Representative	P
Tom Clement	District of Vanderhoof, Director, Community Development	
Kevin Moutray	District of Vanderhoof, Councillor	P
Wayne Salewski	District of Vanderhoof, Community Representative	
Shari Green	Mayor, Prince George	
Dave Bailey	TCRK, Senior Director of Environment	P

Guests: TCRK Ian Berzins, VP/GM; J Cogley, Manager Technical Services; T Caldwell, Environmental Superintendent; Darin Guzzel, HR Superintendent

Description: Summary of Action Items	Resp.	Due Date	Item
Questions submitted by E Columbo not present at meeting are to be attached to the minutes	DB	ASAP	1

#	Topic
	<p>Introductions</p> <p>Catherine Rockandel welcomed the CSC members and guests. She led off the round of introductions by welcoming new member Colleen Erikson, Natural Resources Manager, Nak'azdli, to the committee.</p> <p>Catherine provided an overview of the agenda; updated the committee on members who were unable to attend; and shared the recent resignation of Prince George member Tom Sentes.</p> <p>The membership sub-committee will be reviewing the membership following the November 15th, 2014 municipal elections as Joan Burdeniuk and Shari Green, as municipal appointees have announced they will not be seeking re-election. A Council replacement representative for McLeod Lake will be sought as Jenine Solonas was not re-elected.</p>
1	<p>Mt Milligan Operational Update: Dave Bailey & Ian Berzins</p> <p>Dave Bailey provided an update on the new Thompson Creek Mining offices opening in Prince George and in the regions at the CNC campuses. A new Community Relations Specialist is in the process of being hired that will work with the Mt Milligan and Endako mines. TCRK hopes to introduce the Community Relations Specialist at the December CSC meeting.</p> <p>The focus at Mt Milligan has been on optimizing the mine and working with the new VP/GM on the management processes. This has resulted in the Legacy project implementation being stalled since the last meeting.</p> <p>Dave Bailey introduced the new VP/GM Ian Berzins. Ian is living at the Mt Milligan camp Monday to Friday. Ian said he is focused on developing a strong management team. This includes Darin Guzzel, HR Superintendent, who has begun to get more involved in the community and Jamie Cogley, who will be doing a technical presentation later in the meeting.</p> <p>Ian spoke about the focus on attraction and retention of employees. He shared some of the challenges including hiring apprentices because of competition from the Alberta oil sands and the diamond mines are attracting potential employees. He said that the hope is that the engineering and geological team will come from the local community.</p> <p>There continues to be a strong focus on safety while achieving a production rate of 48,000 tons a day. One-day, production hit 63,000 tons, but this has not been achieved for a sustained period. Mt Milligan is the crown jewel for Thompson Creek. The goal is exceed the minimum regulatory requirements and get beyond compliance.</p> <p>Currently there are 400 employees on site with roughly 25% from each of Fort St James, Mackenzie, and Vanderhoof/Prince George. Employees are largely BC based, with 15% First Nations and 8% females amongst the total employees.</p> <p>The Mt Milligan Operations Lodge had 50 people move in this week. Expect that by December 1 everyone will be in Lodge</p> <p>CSC questions included:</p> <p>Q1: What are the current employee turn-over rates?</p> <p>A1: Approximately 8 - 12 people leave per month. This is partially due to mine operations moving out of construction and in some instances people finding that mining is not for them.</p>

2	<p>Educational & Training Opportunities - Dave Bailey & Darin Guzzel</p> <p>All the training currently goes through Darin with oversight by Ian. Since the new HR Superintendent has come on board there has been a declining HR turnover. The focus has been on filling senior positions and building internal capacity. There are current six HR advisors that work on site seven days a week with a one-day hand over.</p> <p>Mt Milligan recently hired two top people that are from the community of Nak'azdli. We look at entry points for people, provide training and move them up through the company if they can demonstrate that they can work seven days and return to work the following week.</p> <p>The company has made a conscious shift to internal capacity building. This means as vacancy occur if an individual wants to move into the position and they have the basic aptitude needed then we support them.</p> <p>We are also building on the internal leadership training that Kent Watson initiated. The safety and leadership program looks at things in similar ways. How to give proper feedback; treating people with respect, etc. There are twenty elements are people are required to pass them. The company has also started this at Endako. We send people to different sites and provide in-house training through HR.</p> <p>CSC questions included:</p> <p>Q2: Has the company resolved the issue with follow up for resumes that are submitted for job postings via computer? In the past there was no response provided.</p> <p>A2: Unless people are short listed for the job they are not contacted because so many resumes are received electronically.</p> <p>C3: The computer program could be programmed to at least acknowledge receipt of the resume.</p> <p>Q4: Is there an HR liaison person site?</p> <p>A4: Darin puts on that hat when required. Training programs are working to foster empathy in supervisors</p>
3	<p>Tailings Dam Construction, Operational and Monitoring Practices: Jamie Cogley</p> <p>Jamie provided a presentation (see attachments) to review the construction and operations systems related to the tailings storage facility in place at Mt Milligan. Some of the highlights included: that there are several redundant systems in place to provide greater safety measures such as clay liners, seepage ponds, and collection ponds. In addition the tailings dam was designed for a two (2) metre freeboard (distance between top of water and the top of dam), the current freeboard is 9-10 metres.</p> <p>In addition there are fibre optic instrumentation built into the dam. This monitors pressure in the dam and sends signals back to the operations room 24 hours a day.</p> <p>Mt Milligan has no waste rock dumps, as non-acid generating waste rock is used in dam construction and all acid generating waste rock is stored below water, which stops acid creation. All the ore and the waste is tested and only non-acid generating gravels are also used for construction. "Cobble," which is a certain type of smooth river rock, is also used in dam construction.</p> <p>All organic matter is saved and stockpiled for reclamation.</p> <p>In terms of dam surveillance and inspection, there is ongoing instrumentation monitoring, twice a day a visual inspection is conducted and every month an unmanned aerial survey</p>

drone takes three dimensional pictures and GPS data to compare and look for movement. The surveyor also uses this data to review against as built requirements. The Ministry of Energy and Mines also conducts dam inspections with little notification.

Mt Milligan has 32 piezometers that measure core and in well casing pressures in multiple cross sections in each part of the dam; 8 inclinometers measure pressure and movement in toe and foundation of dam; 2 load cells measure how dense tailing materials are in lateral and longitudinal drains. These include water flow metres that measure reclaimed water flow to the mill.

CSC questions included:

Q5: How does dam design take into account 100 year storm event?

A5: The plan includes a 100 year storm event primarily through maintenance of the requisite freeboard.

Q6: What is snow pack?

A6: The snow pack varies so the plan covers highest snowpack and rain events (high precipitation events) together to plan for the worst case.

Q7: What are the freeboard averages across the industry and has this changed over the years?

A7: They vary, but the Canadian Dam Association publishes Dam Safety Guidelines, which address this issue. For more information:

http://www.imis100ca1.ca/cda/Main/Dams_in_Canada/Regulation/CDA/Dams_In_Canada_Pages/Regulation.aspx?hkey=2bee099d-1234-4be2-8d92-a3527e0cd8fe

Q8: How does the design take into effect seismic activity?

A8: The potential impact of seismic activity is an engineering analysis conducted by the Engineer of Record for the tailings storage facility that includes a number of factors.

Q9: What is the width of the key clay within the tailings dam? What are the requirements?

A9: It stays constant at 10 metres from 1055 elevation. A geotechnical expert tests level of compaction. The soil tech on site takes multiple tests as the dam is being built to meet design specifications and quality assurance guidelines.

Q10: As the tailings pack down does the remaining water create more pressure on the dam?

A10: No, the 600 ml pipes in dam pull water out and it is recycled in plant

Q11: At the bottom of the dam what do you use to seal it with?

A11: The tailings material is ground to talc size so it acts as a seal

Q12: How deep does the non-acid generating material run along dam? What will be the length at reclamation?

A12: It currently runs 7km dam length and at reclamation it will be 11km.

Q13: Where does year fifteen water collection come from?

A13: Meadow Creek

Q14: Is the emergency preparation and response plan coordinated in conjunction with community plans?

A14: The plan is completed and evaluated by engineering firm Knight Piesold, the Engineer of Record for technical issues. There is a community component for notification and several levels of notification. For example: level two is at the Provincial Government ministerial level,

whereas level three is with the mine inspectors and RCMP.

Q15: What are the protocols for inspections

A15: In late October 2014 an annual safety inspection report is completed by the Engineer of Record; in November, at minister's inspection report is required; and then a third party geotechnical inspector will inspect the dam and verify the annual report. An inundation study is or will be conducted, and a third party will evaluate the report.

Q16: Did Mt Polley have the same instrumentation as Mt Milligan?

A16: Mt Polley is still under investigation, and we do not know the answer to this question. Initial reports have suggested that some of the piezometers at Mt Polley weren't working. They can get cut during construction and maintenance activities and may not have been replaced.

Q17: Can you tell if they are not working at Mt Milligan?

A17: Yes, because the radio telemetry stops sending information. They take readings every 6 hours

Q18: How do you monitor the piezometers as you build?

A18: As you build the piezometer knows how much weight is being added?

Q19: Is there a contingency to go beyond mine life?

A19: This tailings storage facility has a finite life

Q20: Are you going to have some public meetings to explain how Endako is built because it is an old mine?

A20: Yes, we will have meetings. We will also comply with the Order issued by the Chief Inspector of Mines, which is described above

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Environmental Report, Tim Caldwell

Tim provided a presentation and update on the 2013 environmental filings.

CSC questions included:

Q21: How many wells are around the site and how dirty is the water you are extracting?

A21: There are 40 wells around the site. We measure a variety of constituents of the groundwater. The groundwater is not "dirty."

Q22: Is there underwater seepage from the tailings storage facility at Heidi or Alpine Lakes?

A22: The water from the dam tailings facility does not flow that way

Q23: How is seepage that comes under the dam captured?

A23: The natural clay liner creates a seal. If there is any seepage it is captured in seepage ponds.

Q24: Did the flows change with construction?

A24: Yes some changes have been seen?

Q25: Where do you measure?

A25: We measure above, below and on site on a daily, weekly, monthly basis as required by our Effluent Permit. There is downstream water monitoring of all streams. Right now no impacts have been observed

Q26: Is there water monitoring on Michigan Creek? Do you look at flows and water levels?

A26: Yes

Q27: What is the earliest baseline data you have?

A27: As part of Environmental Assessment baseline studies were completed 2006-2010. You can find environmental assessment data on E-PIC (on the Environmental Assessment Office website)

Q28: There have been some concerns around Nation River because some years it back flows and there is higher water. Do you also monitor around Rainbow Creek?

A28: We monitor for water levels and water quality on Rainbow Creek

Q29: What are your plans for monitoring or testing moose or beavers that might access tailings facility?

A29: Moose are not accessing dam, and no plans to test beavers. The research has suggested you need a few generations of beavers to conduct baseline tests.

Q30: Are you seeing any birds or ducks on the tailings pond?

A30: No we are not seeing any in that area

5 **CSC Round Table: Community Updates on Issues Relating to the Mine**

Fort St James, CNC (AM)

- Next group of mineral processing program students have visited Mt Milligan and Gibraltar mines
- Continue to offer small training programs ie: First Aid and Cultural Competency
- Foundation program students in heavy duty equipment program have received calls from mine
- Promote students that have taken training
- Will be more a part of Mt Milligan through offices and network
- Ongoing presence in community is important

Nak'azdli, (LS)

- Housing in the community is a concern
- Wellness committee focuses on concern of workers, pressures on women, being away from families, stress.
- Training could focus on life skills, money management
- Turn over rate is a concern as don't want to set people up for failure. Need to consider people's history, transition time to adjust to work life and wellness program to support new workers

Vanderhoof, (KM)

- Liveability continues to be focus
- Aquatic centre being developed
- Focus on trades training and development of trades campus
- No rental housing; stock continues to be issue

Mackenzie, (DS & TJ)

- Upgrading the recreation centre

- Elections on Nov 15 slows down municipal activity
- Hosting the 2015 Minerals North Conference in last week of May
- In terms of housing 40-50 houses are available. Prices have come up. Values have stabilized over last 2 years. Rental is low - there is not many units available

Mackenzie, CNC (SB)

- Initiatives and communications are going well
- Preparing people prior to employment and life skills program
- Expectation that there will be more educational opportunities are mine operates

McLeod Lake, (TD)

- Working on recruitment
- Have good relationships and contact information at mine

6	<p>New Business</p> <ul style="list-style-type: none"> • Next meeting is Friday, December 5th at the new Thompson Creek offices at 177 Victoria Street, Prince George from 10am - 2pm
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Questions from Emily Colombo, EDO at Fort St. James

No.	Question	Responder	Response
1	What ways is the company looking to work collaboratively with the communities? What is the company determining in regards to legacy funding, and the potential role of the CSC?	Bailey Sandstrom	<p>Mount Milligan has, and will continue to, review and implement opportunities to work collaboratively with the communities.</p> <ul style="list-style-type: none"> • Representatives of Mount Milligan have recently attended community functions with Fort St. James, the Nak’azdli First Nation, Mackenzie, the McLeod Lake Indian Band and the CNC campuses in Mackenzie, Fort St. James and Prince George. • Mount Milligan has discussed new training classes with the CNC. Please see the response to Question 2 below. • Mount Milligan has discussed new community office opportunities with the CNC. Please see the response to Question 4 below. • John Sandstrom recently made a presentation to the Regional District Business Forum. • Tim Caldwell, Environmental Superintendent, will be making a presentation to the Nak’azdli Council. • Mount Milligan personnel have and will continue to volunteer and attend local functions whenever possible. • We have not advanced the legacy fund process in light of changes in our senior management both in Denver and at site. We expect the process to be a significant part of the December CSC meeting.
2	How many employees are currently being sent to trades training, and what trades? Is there opportunity for us to collaborate with Mt. Milligan to make cases to offer some of this training at our local campuses? (How will this be initiated?)	Sandstrom	<p>Training and educational initiatives include:</p> <ul style="list-style-type: none"> • Firearms acquisition license. • Computer training. • Smoking cessation. • Heavy duty mechanic apprenticeship program with CNC and Finning. Mount Milligan and Finning will make monetary contributions, CNC will provide the training and Finning and Mount Milligan will try to hire the top graduates.

			<ul style="list-style-type: none"> • 14 New Apprentice registrations with Industry since mid- 2014 • 7 Warehouse / Parts Person • 1 Automotive Technician • 1 Welder • 5 Industrial Mechanics (Millwrights) • Seven apprentices have successfully completed next-level training at CNC in Prince George in Heavy Duty Mechanics and Industrial Mechanic programs. • 4 currently attending training or scheduled to attend within the next month.
3	Can we make movement on the offer to work with the Supply Chain team to develop a complete listing of businesses in each community, what they each offer, and opportunities for them to provide equipment rentals, logging, hauling services, building supplies and daily consumables?	Bailey	I would like this to be an agenda item for the December meeting.
4	What is the current status of the local offices? How frequently and when are each open to the public? Is this still the primary means for job postings to be shared with the communities? How will postings be shared when and if these offices are closed permanently?	Bailey	We are discussing a plan with the CNC campuses in Fort St. James and Mackenzie under which we will move the company offices to the CNC campuses. Mount Milligan will make a monetary contribution to each campus in exchange for signage, office space and a person dedicated to responding to Mount Milligan-related inquiries. Job postings will be available at these offices and would continue to be available on-line.
5	Is staff still being encouraged to stay on site rather than commute daily? Are they being informed that it is their choice, not an obligation to stay on site? (From Sept 2013 CSC)	Bailey	All Mount Milligan employees may either stay on site or commute by company bus to FSJ or Mackenzie on a daily basis. The choice belongs entirely to the employee.
6	Direction was given to Brannoch food suppliers that where possible they should try to source food locally in the communities. Could we	Bailey (with assistance from the Compass	The caterer for the operations residence is ESS Compass Group, not Brannoch. Utilizing local vendors is good practice, and something we try to support when we can.

	<p>please be given a summary of where and what \$s this is taking place? Who are they purchasing food from locally? (from the 2009 EA certificate)</p>	<p>Group)</p>	<p>Currently, we have several local agreements in place:</p> <ul style="list-style-type: none"> • Shoppers Whole Sale in Prince George - This is for some bulk purchases for produce and dry goods. However, due to our volume and the logistics of getting products to a remote camp this is not a full time solution. • PepsiCo in Prince George - This is a recent change in which we moved from Pepsi Co in Edmonton. This was specifically done to support the local branch and reduce the environmental impact of the travel. • We are also currently in conversation to have a local bakery out of Mackenzie provide us with fresh baked bread during the week. <p>We currently purchase the majority of our products from Sysco in Edmonton because it is actually the closest major hub with a vendor that can supply a large facility such as Mount Milligan. Currently, Sysco classifies the following products as local (meaning obtained in BC or Alberta):</p> <ul style="list-style-type: none"> • Potatoes • Cabbage • Carrots • Beef • Seasonal Fruits (Apples / Cherries/ Stone Fruits) <p>The challenge we sometimes run into when looking at truly local vendors is that they are not able to be confirmed as a Compass Group Canada preferred vendor due to risk management concerns. The majority of these businesses are not federally inspected, and this can limit or eliminate them as potential suppliers.</p>
<p>7</p>	<p>What is currently taking place in regards to the development of the Sustainability Management Plan? Is there an annual review or report we can contribute to? Collaboration with communities is highlighted in the</p>	<p>Bailey</p>	<p>Our corporate-wide Corporate Responsibility Report (i.e., including Mount Milligan) is available on our website.</p>

	requirement. (from the 2012 EA certificate)		
8	Is the SEAC ready for the opening of the worker camp? Is there a plan in place? Have community reps been assigned? I had a few names from Fort St. James contributed from the public (Fire Chief Michael Navertil, community member Kris Neilson). Is there a process for bringing these names forward? Has baseline information started to be collected in communities? (Additional comments)	Bailey	The Social Effects Advisory Committee met on May 21, 2014 to discuss the Social Effects Monitoring and Adaptive Management Plan, the SEAC Terms of Reference and the SEAC's plans going forward. FSJ was represented by Mayor McDougall. Comments to the SEMAMP have been received from EAO and the Nak'azdli First Nation and will be discussed by the SEAC in a conference call on October 7, 2014. At the May meetings, FSJ and Mackenzie agreed to discuss the SEAC at community meetings scheduled over the summer and report back issues of concern to the communities that are within the scope of the SEAC (i.e., community impacts resulting from the operations residence). No responses from the community meetings have been received by the SEAC; however, the operations residence has not yet been occupied (occupancy is expected to begin in October 2014).
9	I noticed that minutes from the CSC for 2014 haven't been shared online. - could we please get these posted?	Bailey	Posting of the April 11, 2014 meeting minutes and attachments are in process. There are no minutes from the CSC's site visit on June 20, 2014.
10	With the change-over in community representation, could we set time (perhaps by teleconference) to review the CSC's Terms of Reference with mine reps and community reps? Do our terms of reference need updating?	Bailey	CSC discussion at December meeting.
11	A survey was conducted last Sept evaluating how CSC members felt about the effectiveness of the CSC. Is it possible to re-send this survey and see what has changed a year later?	Bailey	CSC discussion at December meeting.