

MacLaren, Les MEM:EX

From: Wieringa, Paul MEM:EX
Sent: Friday, June 22, 2012 1:34 PM
To: MacLaren, Les MEM:EX; Carr, Steve MEM:EX
Cc: Barillaro, Scott W MEM:EX; Sekyer, Dean JTI:EX; Gilmore, Christopher JTI:EX
Subject: RioTintoAlcan meeting

s.12, S13

Paul Wieringa
Executive Director
Alternative Energy
Ministry of Energy and Mines
Telephone: 250-952-0651

MacLaren, Les MEM:EX

From: Wieringa, Paul MEM:EX
Sent: Friday, June 22, 2012 3:04 PM
To: MacLaren, Les MEM:EX; Carr, Steve MEM:EX
Subject: FW: Meeting with MPB this morning...

With some additional information from Dean Sekyer.

Paul Wieringa

From: Sekyer, Dean JTI:EX
Sent: Friday, June 22, 2012 3:03 PM
To: Yelovatz, Maureen JTI:EX; Hayden, Dana JTI:EX
Cc: Gilmore, Christopher JTI:EX; Wieringa, Paul MEM:EX; Davidson, Glen W FLNR:EX
Subject: Meeting with MPB this morning...

s.12, S13

D

Dean Sekyer
Executive Director
Economic Initiatives and Analysis Branch
Ministry of Jobs, Tourism and Innovation

Tel: 250-952-0409
Cel: S17
Fax: 250 952-0646

MacLaren, Les MEM:EX

From: MacLaren, Les MEM:EX
Sent: Monday, June 25, 2012 6:04 AM
To: Myers, Tobie A MEM:EX; Chawrun, Marc MEM:EX
Cc: Wieringa, Paul MEM:EX; Fitzpatrick, Brigitte C MEM:EX; Symes, Leslie MEM:EX
Subject: FW: Meeting with MPB this morning...

Tobie and Mark:

s.12, S13

Minister Bell's staff may be contacting you this week (or Minister Bell to Minister Coleman directly). I am in Portland and Vancouver until Friday, but Paul is up to speed on the issues. The attached MEM BN was prepared for the Friday meeting.



68915 BN MO
AED OIC for Rio T.

Les

From: Wieringa, Paul MEM:EX
Sent: Friday, June 22, 2012 3:04 PM
To: MacLaren, Les MEM:EX; Carr, Steve MEM:EX
Subject: FW: Meeting with MPB this morning...

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Subject: Meeting with MPB this morning...

s.12, S13

s.12, S13

D

Dean Sekyer

Executive Director

Economic Initiatives and Analysis Branch

Ministry of Jobs, Tourism and Innovation

Tel: 250-952-0409

Cel S17

Fax: 250 952-0646

**MINISTRY OF ENERGY AND MINES
BRIEFING NOTE FOR INFORMATION**

- I PREPARED FOR:** Honourable Rich Coleman, Minister of Energy and Mines
- II ISSUE:** Meeting on June 22, 2012 regarding Order-in-Council under the *Industrial Development Act* Authorizing Rio Tinto Alcan to Construct a Second Tunnel at the Kemano Generating Project

III BACKGROUND:

Rio Tinto Alcan (RTA) requires approval from the Ministry of Forest, Lands and Natural Resource Operations (FLNRO) to construct a second intake tunnel at its Kemano Generating Project. The majority of the energy is used for RTA's smelter in Kitimat. The remainder is sold to BC Hydro through an Electricity Purchase Agreement (EPA).

s.12, S13, S17

s.12, S13, S17

V CONCLUSION

s.13, S17

PREPARED BY:
Scott Barillaro, Director
250-952-0267

REVIEWED BY:
Paul Wieringa, A/ADM., EAED ✓
Steve Carr, DM ____

MacLaren, Les MEM:EX

From: MacLaren, Les MEM:EX
Sent: Wednesday, July 11, 2012 8:41 PM
To: McEwan, Tim JTI:EX
Cc: Carr, Steve MEM:EX; Wieringa, Paul MEM:EX; Davidson, Glen W FLNR:EX
Subject: Alcan Power Backgrounder



Alcan Power
ackgrounder 17-1-

Hi Tim:

Further to our conversation earlier this evening, attached is a background document I prepared in 2007 that sets out the relationship between what is now Rio Tinto Alcan and BC Hydro.

S21

Hope this helps.

Les

Backgrounder

ALCAN POWER SALES

Alcan's Power System:

- In conjunction with the development of its Kitimat Smelter in the 1950s, Alcan constructed the Kemano Generation Project. Maximum output from Kemano is about 890 megawatts (MW), making it BC's fourth largest hydroelectric plant. Due to fluctuations in snowpack and inflows into Alcan's reservoir, average generation from Kemano is 790MW. Generation drops to 700-730MW in a low water year, which is the "firm" capability of Kemano (730MW was used for the power sales agreement filed with the BC Utilities Commission in November 2006).

Historical Power Sales:

- Alcan has been selling power, surplus to the needs of its smelter, since the 1950s (see Attachment 1). Initially this power served the local area. In 1978 Alcan's power system was integrated into the main BC Hydro grid.
- The District of Kitimat has launched a lawsuit against the Province related to the legality of Alcan power sales.

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- Alcan's smelter currently operates at approximately 90% of capacity and uses 565MW. Surplus power is sold to BC Hydro and Powerex.
- Power sales to BC Hydro are currently made under the 1990 Long Term Electricity Purchase Agreement (LTEPA). The 1990 LTEPA with BC Hydro was key to Alcan's decision to build the Kemano Completion Project (KCP) by providing an assured market for KCP power before aluminum market conditions could allow Alcan to use KCP power in a new or expanded smelter. LTEPA provided for 285MW from 1995 (the scheduled completion of Alcan's KCP) to 2014, with the power recallable on 5-years notice for Alcan's industrial purposes. Base price was s.17, s.21, inflated at CPI to 1995, and at 3% per year thereafter. BC Hydro also reimburses Alcan for water rentals s.17, s.21. In 2006, the LTEPA price, inclusive of water rentals, was about s.17, s.21.
- After Kemano Completion was cancelled, in 1997 the LTEPA Memorandum was signed. The power sales amount was increased to 307MW, due to the shorter term, and Alcan was given the option to sell 167MW of that obligation to a third party. Alcan sold the 167MW delivery obligation to Enron, which subsequently defaulted.

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- When power is available in excess of smelter needs and LTEPA supply, Alcan sells power to BC Hydro's Powerex subsidiary, with pricing based on short-term markets in the Pacific Northwest. Powerex sales commenced in 2001, and have varied from a low of 17 aMW in 2001, to a high of 151 aMW in 2005.
- Despite the contractual arrangements, power generated by Alcan is consumed in the North Coast region, where demand is more than twice the available supply. The following information was filed as evidence in the recent BC Utilities Commission hearing:

The table below shows the actual 2005/06 loads (in MW) for load centers in the North Coast Transmission Region:

Kitimat	123 MW
Prince Rupert	50MW
Smithers / Hazelton	95MW
Terrace	52MW
Vanderhoof / Burns Lake	129MW
Total Load in the North Coast region	449MW

The following table shows electrical generation operating in the North Coast region:

Alcan LTEPA	Up to 147MW
Brown Lake Hydro	7MW
Falls River	5MW
Rupert Gas Plant	46MW
Generation in the North Coast region	205MW

BC Hydro develops its plans for the entire integrated system. The load in a region can be met by either local supply resources or energy transmitted from other regions in the province by the bulk transmission system.

- In 1997,^{s.21, s.17} Alcan and the government entered into the Replacement Electricity Supply Agreement (RESA), which requires the government to provide Alcan up to 175MW in the event that it constructs smelting facilities that require more power than Kemano can provide.
- Under RESA, Alcan committed to publicly announce its intention to use all reasonable efforts to construct the New Smelter (defined as 225,000 tonnes per year), subject to market and economic conditions and force majeure, and to re-start idled smelter capacity by January 1, 1998. Alcan made the announcement and re-started its idled capacity.
- Evidence submitted in the recent BC Utilities Commission hearings indicated that the cost to taxpayers of the RESA would be in excess of \$400 million in present value terms.

2006 Agreements:

- In August 2006, Alcan, BC Hydro and the Province announced an agreement in principle that would see Alcan invest \$2 billion to develop a state-of-the-art smelter at Kitimat. As a result of Alcan's modernization, the power sales for Alcan's surplus power needed to be adjusted.

- The result of negotiations among Alcan, BC Hydro and the Province was a Project Agreement between the Province and Alcan, and the Amended and Restated Long Term Electricity Purchase Agreement (LTEPA+) between BC Hydro and Alcan.
- The Project Agreement set out Alcan's \$2 billion commitment to a smelter modernization using modern technology. Alcan's preferred new smelter investment would produce 400,000 tonnes of aluminium per year ^{s.21} and consume 675MW ^{s.21}. Alcan's commitment was subject to:
 - Approval of LTEPA+ by the BC Utilities Commission;
 - Force majeure (acts of god, securing all required permits, etc.); and
 - Securing collective agreements with Alcan's unionized workforce.
- Alcan sized its new smelter to use substantially all (93%) of the firm power available from Kemano (based on 730MW firm Kemano capability). As a result of this decision, the 1997 RESA would not be required, and would have been terminated under the Project Agreement on the effective date of the LTEPA+. Alcan has recently made public statements that it will not exercise its option to take RESA power.
- The new Long-Term Electricity Supply Agreement (LTEPA+) was based on the structure and pricing for power contracts that were approved in September 2006 by the BC Utilities Commission. The combination of lump sum payments (called the "Reinstatement Fee") and payment for power as delivered under LTEPA+ was below the average of the pricing in the 38 power contracts the BCUC approved in September 2006 in BC Hydro's call for tenders.
- Alcan's smelter modernization plan was reflected in available power under LTEPA+. The plan called for a staged construction of new potlines and phase out of the old smelter, leading to a gradual increase in total smelter power demand. ^{s.17, s.21}

s.17, s.21

s.17, s.21

Power sales to Powerex were to end in December 2006.

Year	Smelter Load (average MW)	Firm Power (aMW)	Non-Firm Power (aMW)
2006	565	140 (BC Hydro)	106 (Powerex)(Actual)
2007-09	565	170	55-60 (BC Hydro)(Expected)
2010-11	610	120	55-60 (BC Hydro)

s.17, s.21

- The LTEPA+ contained some features that reflect the unique circumstances of Alcan's power supply and modernization project:
 - Power priority was "smelter first" so that in extreme low water Alcan could curtail deliveries to BC Hydro and avoid the situation that occurred in 2001, where Alcan shut down part of the smelter to meet its power sales contract commitments;
 - Alcan had options to periodically adjust the firm Tier 1 power amounts sold to BC Hydro (up or down) to match changes in consumption of the smelter;
 -

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- Because LTEPA+ was an electricity supply contract to BC Hydro reviewable by the BC Utilities Commission, it was subject to a public hearing before the BCUC. On December 29, 2006, the BCUC rejected the contract and declared it to be wholly unenforceable.
- As with modernization in most heavy industries, moving from 1950s technology to a modern smelter at Kitimat would require fewer workers. Alcan has stated that, given the age of its workforce and anticipated retirements in the coming years, s.21

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- Modernization would also provide significant environmental benefits, including reducing greenhouse gas emissions by an expected 70%, as well almost eliminating emissions of fluorine and other compounds of concern from an occupational health and safety perspective.

Historical versus LTEPA+ Power Sales:

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Summary:

- Alcan has been selling power to BC Hydro and its predecessors since 1955.

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- Alcan's \$2 billion smelter modernization represents a huge boost to the Northwest and BC's economy. The new smelter would increase annual aluminium production by 63% compared to current production. Power sales would be 20% lower than current levels when the modernization is completed.
- The new power contract with BC Hydro added extra firm power in the near term to 2010, and extended the agreement from 2010 to at least 2025 - additional supply to support the Province's goal of electricity self-sufficiency.
- The new power sales agreement had a "smelter first" priority to ensure that metal production can continue even in the event of extreme low water conditions in Alcan's reservoir.
- The new power sales contract with BC Hydro was subject to review and approval by the BC Utilities Commission.

s.13, s.17

s.13, s.17

January 17, 2007

s.13, s.17, s.21

Attachment 2

s.13, s.17, s.21

MacLaren, Les MEM:EX

From: Hewitt, Jeremy JTI:EX
Sent: Tuesday, July 17, 2012 11:19 AM
To: MacLaren, Les MEM:EX; Wieringa, Paul MEM:EX
Cc: McEwan, Tim JTI:EX
Subject: DRAFT BN Alcan Prov 1997 Settlement Agreement
Attachments: DRAFT BN Alcan Prov 1997 Settlement Agreement.docx

Dear Les and Paul,

Thank you very much for providing our office with information relating to the 1997 Settlement Agreement between Alcan and the Province. Based on that information I have prepared the attached draft briefing note. Tim has asked that you please review the note to ensure accuracy.

We are really pressed for time on the RTA file, so if you can review this as soon as possible it would be much appreciated.

I also want to thank Scott Cutler for his help as I was tracking information down.

Thanks very much,

Jeremy

Jeremy Hewitt

Director, Major Investment Delivery
Major Investments Office
Ministry of Jobs, Tourism and Innovation
T: 250 356-7576

C: S17

DRAFT

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s.17, s.21
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s.17, s.21

Not Responsive

From: Sekyer, Dean JTI:EX
Sent: Thursday, July 5, 2012 9:02 AM
To: Gilmore, Christopher JTI:EX; MacLaren, Les MEM:EX; Davidson, Glen W FLNR:EX; Mason, Wenda FLNR:EX
Subject: FYI - meeting on Thursday. Support Documents attached.

fyi

From: Parhar, TJ S JTI:EX
Sent: Thursday, July 5, 2012 7:55 AM
To: Hayden, Dana JTI:EX
Cc: Sekyer, Dean JTI:EX; Yelovatz, Maureen JTI:EX
Subject: Fwd: Meeting with RTA on Thursday. Support Documents attached.

Fyi

Sent from my iPhone

Begin forwarded message:

From: "Henning, Paul (RTA)" <paul.henning@riotinto.com>
Date: 5 July, 2012 7:36:09 AM PDT
To: "Bell, Pat JTI:EX" <Pat.Bell@gov.bc.ca>, "Coleman, Rich MEM:EX" <RTC@gov.bc.ca>
Cc: "richard.prokopanko@alcan.com" <richard.prokopanko@alcan.com>, "Nyce, Colleen (RTA)" <colleen.nyce@riotinto.com>, "Henning, Paul (RTA)" <paul.henning@riotinto.com>, "Parhar, TJ S JTI:EX" <Tejindar.Parhar@gov.bc.ca>
Subject: Meeting with RTA on Thursday. Support Documents attached.

Dear Minister Bell, Minister Coleman,

s.12, S13

s.12, S13

I made it to Campbell River last night and will join the meeting today at 12:00 in person.

Thanks and best regards
Paul

Vice President Western Canada Strategic Projects
Rio Tinto Alcan.
Tel 250 6321910

Avis:

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CHESLATTA CARRIER NATION
Box 909
Burns Lake, BC
VOJ 1E0

May 17, 2012

Joy Hillier, Section Head, Habitat Management Program
Ecosystem Management
Fisheries and Oceans Canada
North Coast British Columbia
417 Second Ave W.,
Prince Rupert, BC

Email: joy.hillier@dfo-mpo.gc.ca

Shauna Norman, RFT, Land Officer
Nadina District
Ministry of Forests, Lands and Natural Resource Operations
Burns Lake, BC V0J 1E0

Email: shauna.norman@gov.bc.ca

Dear Ms. Hillier and Ms. Norman,

via email

RE: Rio Tinto Alcan – Tunnel Completion Project

We have engaged with Rio Tinto Alcan (RTA) over the past several months in a screening level environmental assessment of the Tunnel Completion Project, which is partially located within the Traditional Territory of the Cheslatta Carrier Nation. We also acknowledge our official meetings with DFO and BC regarding the project.

During that time, we have appreciated yours and RTA's willingness to work with us and provide more in-depth information on the project that could impact the Cheslatta around the Nechako Reservoir.

We are satisfied with the information we have received and would like to submit this letter in support of the Tunnel Completion Project. Any further concerns that we may have on this item, we feel confident that Rio Tinto Alcan will address it.

The Cheslatta look upon this project as an economic stimulus to the Cheslatta community and to the region as a whole.

Please contact us if you have questions.

Sincerely,
Cheslatta Carrier Nation

(original signed and faxed by)

Chief Richard Peters

Cc: Chief Ellis Ross, Kitamaat Village Council
Rio Tinto Alcan



Skin Tyee First Nation
Box 131 Southbank BC V0J 2P0
Phone: 250.694.3517
Fax: 250.694.3268

Joy Hillier, Section Head, Habitat Management Program
Ecosystem Management
Fisheries and Oceans Canada
North Coast British Columbia
417 Second Ave W.,
Prince Rupert, BC

Email: joy.hillier@dfo-mpo.gc.ca

Shauna Norman, RFT, Land Officer
Nadina District
Ministry of Forests, Lands and Natural Resource Operations
Burns Lake, BC V0J 1E0

Email: shauna.norman@gov.bc.ca

Dear Ms. Hillier and Ms. Norman,

RE: Rio Tinto Alcan – Tunnel Completion Project

Skin Tyee Nation have engaged with Rio Tinto Alcan over the past several months in a screening level environmental assessment of the Tunnel Completion Project, which is partially located within the Traditional Territory of the Skin Tyee Nation. We also acknowledge our official meetings with DFO and BC regarding the project.

Skin Tyee Nation is of the opinion that there will not be any significant impacts to their traditional use areas that may be impacted by the Kemano Backup Tunnel Project. Unfortunately, due to limited resources, Skin Tyee Nation is not able to do a thorough evaluation of the project right now. The Skin Tyee agree with the provincial comments that the intake area should be studied more to determine Kokanee juvenile migration and intake entrainment for all species.

The Skin Tyee also request that Rio Tinto Alcan continue to liaise with them during all aspects of the project and will include the Skin Tyee in decision making and participation in the project.

In conclusion, Skin Tyee Nation is satisfied with the information we have received and would like to submit this letter in support of the Tunnel Completion Project with the above mentioned considerations. Please contact us if you have questions.

Sincerely,

Chief Rene Skin
SKIN TYEE NATION
admin@skintyeenation.ca

cc. Adele Gooding, General Manager, Skin Tyee Nation, email: gm@skintyeenation.ca

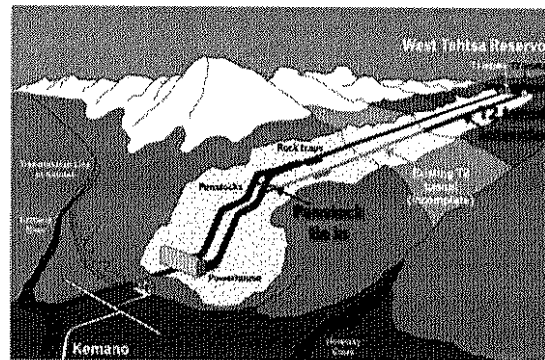
Back-up tunnel project

Context:

- Modernization of smelter is well under way. It will be energized in Q2 2014 and fully operational by year end 2014. **\$3.3bn spend, secures about 1000 solid jobs for up to 50 years.**
- Kemano is our only source of power, now and likely well into the future. The Kemano powerhouse and infrastructure including the tunnel is nearly 60 years old.
- Kemano relies on a single water tunnel to feed the generators.
- The tunnel collapsed in 1958 and was repaired in 1961. Maintenance on the run is not possible without closing the existing smelter.
- The tunnel continues to deteriorate and is showing signs of accelerated wear. **We do not believe the tunnel will last another 20 years never mind 50 years.**
- Two attempts to survey the tunnel with submersibles in 2010 and 2011 have not being conclusive but have highlighted material in the tunnel.

The Project:

- We have a unique opportunity with the T2 Project to “de risk” the tunnel and therefore the modernized smelter for the long term future.
- **No more water than in the existing license is required and is not being asked for. No additional generation is being added. We connect the new tunnel to the old system, two tunnels then feed one powerhouse**



Kemano Powerhouse System showing the T2 Project in red.

An amendment to the Water License is required:

- Legal teams in both government and company agree that we need to change the Final water license description of the “works” in the paragraphs that detail the Kemano system infrastructure.
- The proposed amendment will add the completed tunnel, second intake and penstock tie-in to the definition of “works”.
- The proposed amendment does not contemplate a change in water flow, storage or capacity. No change in water flow, storage or

Colleen Nyce
Manager, Communications & External Relations
BC Operations & Kitimat Modernization Project
Rio Tinto Alcan
1 Smeltersite Road Box 1800
Kitimat, BC V8C 2H2

March 1, 2012

Deleted: February 29

Dear Colleen,

We refer to recent discussions regarding the development of a Relationship Protocol Agreement between Rio Tinto Alcan and Nee Tahi Buhn Indian Band. We have been encouraged by our conversations with Rio Tinto Alcan and, subject to our agreed initial funding levels, look forward to a focused, sustained and mutually beneficial working arrangement with your company.

With specific respect to the Kemano T2 Tunnel Project ("the Project"), although constraints on available time and financial resources have precluded us from undertaking a normal impact assessment, we nonetheless appreciate the level of information and support that Rio Tinto Alcan has provided to us. We trust that, for any future projects your firm may propose, our Nation will be able to engage in meaningful consultation sufficiently early so that adequate capacity can be provided and impact evaluation can be completed in time for accommodation to take place prior to regulatory approvals.

We are pleased by Rio Tinto Alcan's willingness to develop a positive relationship that will accommodate Nee Tahi Buhn's rights and interests with respect to this Project and others in the future. To this end, we are committed to working with you toward a Relationship Protocol Agreement that contemplates long term economic benefits for our community.

Yours sincerely,



Raymond Alexander Morris
Chief
Nee Tahi Buhn Indian Band



Haisla Nation Council

HAISLA PO BOX 1101, KITAMAAT VILLAGE, BC V0T 2B0 TELEPHONE (250) 639-9361 FAX (250) 632-2840

June 18, 2012

PRIVILEGED AND CONFIDENTIAL

VIA FACSIMILE: 1-250-356-3000

Ministry of Jobs, Tourism and Innovation
PO Box 9071 Stn Prov Govt
Victoria, BC V8W 9E9

Attention: Hon. Minister Pat Bell

Dear Hon. Minister Bell:

**Re: Rio Tinto Alcan's Applications to Complete Works on the Second Tunnel
Located at Kemano, BC**

On May 1, 2012 we received a referral letter concerning Rio Tinto Alcan's application to amend their Water Licence to allow for the second tunnel, located at Kemano, BC, to be completed. In order to permit our informed review of this referral, we requested provision of the actual changes proposed to the Agreement and Water Licence. The provision of this information was facilitated through a Confidential Information Agreement with the Province of British Columbia Rio Tinto Alcan, and the Haisla Nation.

We have reviewed the information in question and write to advise that we have no objection to the proposed application. We note that section 3.3 of the 2012 Amendment to the 1950 Agreement provides for a review and report on the proposed Works by an independent professional engineer prior to the Works proceeding. We ask, in the spirit of continued collaboration, that we be provided with the opportunity to review and comment on this report prior to the Works proceeding.

We extend our thanks to British Columbia and Rio Tinto Alcan for the creative approach to this referral which allowed us to review the confidential documents and thereby participate, in an informed way, in this referral process.

Yours truly,

Ellis Ross
Chief Councillor

cc: Paul Henning, VP, BC Operations, Rio Tinto Alcan
(Fax: 1-250-632-8127)

**FISHERIES AND OCEANS
CANADIAN ENVIRONMENTAL ASSESSMENT ACT (CEAA)
SCREENING REPORT**

GENERAL INFORMATION

1. EA Title: RTA Kemano Backup Tunnel Project	
2. Proponent: Rio Tinto Alcan	
3. Other Contacts (Other Proponent, Consultant or Contractor): Dryden, Ian	4. Role: Proponent
5. Source: Rio Tinto Alcan	
6. EA Start Date: November 24, 2011	7. CEAA (or FEAI) No.: 11-01-65354
8. PATH No.: 11-HPAC-PA4-00283	9. DFO File No: RTA
10. Provincial/Territorial File No.:	

BACKGROUND

11. Background about Proposed Development (including a description of the proposed development):

Rio Tinto Alcan presently has a tunnel that takes flows from Tahtsa Lake to the Kemano river for the purpose of generating hydroelectric power to operate an aluminum smelter in Kitimat, British Columbia. A second tunnel was partially completed before construction was suspended in 1992. RTA would like to complete this second tunnel and tie it into the existing penstock on the original tunnel. The existing power tunnel is almost 60 years old. RTA has conducted detailed engineering studies which indicate a risk of tunnel collapse. Underwater inspections were carried out in both 2010 and 2011 – results were not conclusive as the entire length of tunnel could not be seen. If the existing tunnel were to collapse there would be an increased risk of flooding in the Nechako River during high water, a decrease in flow to the Kemano River affecting fish and fish habitat (16 km of river which has seen augmented flows for 60 years) and decreased power to the smelter operation with a potential pot line shutdown. ***This review considers the effects of constructing a backup tunnel structure for existing water use practices, to maintain flows and protect existing fish stocks. No other changes to water use are being endorsed by this review.***

The works would involve:

Construction of the interconnections between the proposed T2 tunnel and the existing T1 penstocks including the necessary isolation valves, piping, access tunnel, and a second surge shaft and tunnel adjacent to the T2 tunnel.

Completion of the second intake structure at the east end of the T2 tunnel including concrete works, installation of isolation gates, and rock excavation for the structure and for the intake channel. This work was partially completed in 1991.

Temporary work camps will be constructed in the town site of Kemano and at brown-field locations from 1991 at the Tahtsa Intake and at the T2 entry portal (Horetzky Adit) in the upper Horetzky Creek Watershed. Spoil rock from T2 completion will be at brown-field sites used in 1991. A new barge landing will be constructed at the terminus of the Sweeney Forest Service Road on Tahtsa Lake which will allow for transport of project equipment and supplies to a barge landing site at the existing Tahtsa Intake site.

The primary advantage of the T2 option is that the existing T1 tunnel and powerhouse will remain in operation while the second tunnel, the new intake, and most of the interconnections between the T2 tunnel and the T1 penstocks are being constructed. When the interconnection tunnels and guard valves are complete, each of the T1 penstocks will shut down sequentially to allow for the interconnection piping to be connected to each penstock.

This will result in a partial reduction (50%) of the powerhouse discharge to the Kemano River while the interconnections are completed. The reduction in tunnel discharge will occur over approximately three months to allow for the completion of new connections.

ENVIRONMENTAL ASSESSMENT

12. DFO Trigger(s): Law List	13. Act & Section(s): Fisheries Act Alteration etc. of fish habitat as authorized by Minister (Law List Trigger) Fisheries Act. S. 32 & 35(2)
14. Other RAs and RB(s): 16. Lead RA: Fisheries & Oceans Canada – Ecosystem Management Branch, Habitat Management	15. CEAA Trigger(s) of Other RA(s) and RB(s): Law List
17. Other Jurisdiction: Provincial Permitting <ul style="list-style-type: none"> • Forest Act - Clearing/harvesting for rock disposal site, barge landing sites, and road use permits. • Industrial Development Act - amendment to main water license • Land Act - Water treatment areas/settling ponds, waste rock areas and foreshore areas. • Heritage Conservation Act - Rock disposal areas. • Environmental Mgmt. Act - Construction camps - burning, waste discharge • Water Act - Short term water use for camp. • Commercial Transport Act - Transportation routes for equipment. • Wildlife Act - Scientific Collection Permits. 	
18. FEAC:	19. Rationale for FEAC:
20. Expert Federal Authority (ies): Environment Canada/ Transport Canada Natural Resources Canada Health Canada	21. Area(s) of Interest of Expert FA(s): Deleterious substances. EC had no concerns but was waiting for comments from CWS. No comments from CWS received. TC using Sec. 5(3) of NWPA which is not a trigger for CEAA. TC requirements to address impacts will include permanent warning signs at the intake, temporary warning signs at the mouth of the Kemano River for the duration of construction, Public notification in a newspaper for low water levels as well as a term and condition regarding signage and public notifications for all future draw downs. No trigger, able to act as an Expert Advice. No decision required.

22. Other Contacts and Responses:

Cheslatta Carrier Nation – Chief Richard Peters, Mike Robertson (Senior Policy Advisor)

-Verbal comments made during meeting indicated that there were no significant effects to the Cheslatta traditional uses of the area by the proposed project.

-The Cheslatta would like to be involved with the project in hopes of economic benefits.

-Letter of support for RTA T2 Project from Chief Russell Peters dated May 17, 2012 was received & is on file.

Skin Tyee Nation – Chief Rene Skin, Adele Gooding (General Manager)

-verbal comments (meeting) implied that there were no significant effects to the Skin Tyee traditional uses of the area by the proposed project.

-the Skin Tyee would like to be involved with the project in hopes of economic benefits.

-would like to see more work done on fish use of the Tahtsa intake area and monitoring of fish entrainment at the intake(s). RTA has agreed to this.

-Email to Chief and Council from Ian Bergsma (DFO) on April 13, 2012 to request confirmation of First Nation consultation – no response. E mail re-sent to Adele Gooding (Band Manager) on April 17, 2012 – no response.

Nee Tahi Buhn Nation - Chief Raymond Alexander Morris

-Appreciate all the information but as of March 1st do not have the time or financial resources to review and provide comments on project.

-Letter regarding First Nation Consultation dated March 1, 2012 received from Chief Raymond Alexander Morris.

Office of the Wet'suwet'en - David de Wit (Natural Resources Manager), Mike Risdale (Environmental Assessment Coordinator).

-June 11, 2011 RTA hand delivered letter to Office of the Wet'suwet'en stating project had been filed with Province and to request a meeting.

-November 2, 2011 hand delivered 3 copies of Environmental Impact Assessment to Office of the Wet'suwet'en.

-November 15, 2011 Mike Risdale called Joy Hillier (DFO) in regard to RTA Tunnel 2 Project.

-February 15, 2012 Mitch Drewes provided Acid Rock Report to Office of the Wet'suwet'en – response to thank him for information.

-March 28, 2012 DFO Mitch Drewes conference with Office of the Wet'suwet'en. March 29, 2012 letter sent to DFO stating position: Are waiting to reach a Communications and Engagement Agreement with RTA before providing comments on project.

-April 13, 2012 email to Mike Risdale (Office of the Wet'suwet'en) from Ian Bergsma (DFO) informing him that DFO assessor had changed – response included March 29, 2012 letter.

-May 3, 2012 Meeting between Office of the Wet'suwet'en representatives and DFO (Ian Bergsma & Joy Hillier). Office of the Wet'suwet'en intend to participate in environmental review process. Concerns with potential compensation on Tahtsa Lake – ongoing discussions.

-May 8, 2012 letter from Office of the Wet'suwet'en stating their intent to participate in environmental review process.

-May 9, 2012 letter from DFO to Office of the Wet'suwet'en requesting comments by May 23, 2012.

-May 11, 2012 call from Ian Bergsma to Mike Risdale regarding their review; Mike to start the following week.

-May 18, 2012 call from Ian Bergsma to Mike Risdale regarding their review; Mike not in, left voice mail. Followed up with e-mail with cc to David de Wit.

-May 22, 2012 e-mail from David de Wit informing DFO that the Office of the Wet'suwet'en had retained a contractor to review the project documents.

-May 25, 2012 e-mail from Joy Hillier to David de Wit thanking him for the update and to re-state DFO's position that the project will likely result in negligible changes in the reservoir area or to the Fisheries resources within.

Call from the contractor retained by the Office of the Wet'suwet'en to DFO with preliminary comments.

-May 30, 2012 e-mail from Mike Risdale with comments regarding Backup Tunnel Project.

May 30, 2012 e-mail from Ian Bergsma to David de Wit thanking him for providing the comments to DFO.

-June 1, 2012 response from RTA sent to DFO regarding Office of the Wet'suwet'en comments.

-Office of the Wet'suwet'en has concerns with need for the project. The existing power tunnel is almost 60 years old. RTA has conducted detailed engineering studies which indicate a risk of tunnel collapse. Underwater inspections were carried out in both 2010 and 2011 – results were not conclusive as the entire length of tunnel could not be seen. If the existing tunnel were to collapse there would be an increased risk of flooding in the Nechako River during high water, a decrease in flow to the Kemano River affecting fish and fish habitat (16 km of river which has seen augmented flows for 60 years) and decreased power to the smelter operation with a potential pot line shutdown.

-Office of the Wet'suwet'en has concerns that the 2nd Tunnel will facilitate increased water movement to Kemano and generation of additional hydro power & a potential resurfacing of the Kemano Completion Project. This project involves the interconnection of the 2nd tunnel with the existing penstocks. The project will still operate within RTA's existing water licence, with no additional water being diverted and with no additional generating capacity being added. A slight generation increase will result through efficiencies derived from using a smoother tunnel.

-Office of the Wet'suwet'en has concerns with: fish entrainment at the tunnel intakes on Tahtsa Lake and the duration of conducted studies; vegetation and wildlife impacts; detail in the Environmental Impact Assessment; potential significant effects on land and resources; water temperatures in Nechako River; Heritage Baseline Information (Grease Trail) and Archaeological Assessments; availability of information (i.e. fish presence, abundance, distribution) referred to in the Environmental Impact Assessment. These documents are part of the public record; RTA can make copies available to the Office of the Wet'suwet'en.

-June 4, 2012 call from Mike Risdale to Joy Hillier to inquire how things were going on file, Joy stated things were good and nothing had changed.

Haisla Nation Council – Chief Ellis Ross, Councilor Russell Ross, Tracey Ross (Haisla Community Liaison Officer)

-Concerns regarding possible effects of rampdown on Eulachon.

-Looking for more detail in RTA's compensation plan. Compensation plan provided to Haisla with this also being addressed by DFO in the authorization.

-Email to Tracey Ross (Haisla Nation) for Chief and Council of the Haisla Nation on April 13, 2012 from Ian Bergsma (DFO) to request confirmation of First Nation consultation – response on April 16, 2012 was that waiting response to compensation question.

-April 16, 2012 Ian Bergsma provided RTA responses to some of Haisla's questions, addressed outstanding items from that request and addressed further questions raised in e-mail traffic – no further responses or questions.

23. Scope of Project (details of the project subject to screening):

The scope includes all aspects of Tunnel 2 construction as described in the project description as well as ancillary works, and environmental effects of the changes to flows in the Kemano River and the Nechako Reservoir during

project works.

24. Location of Project:

Polygon, British Columbia 534500, 1260010

Project works located in the inland sections of the North Coast and into the northern interior of the province. Project activities to take place in the Kemano Watershed (Horetzky Creek, Kemano River) and in the Nechako Watershed (Nechako Reservoir – Tahtsa Lake).

25. Environment Description:

The Kemano Watershed (1000 km²) is located in the inland sections of the North Coast of British Columbia (off of Gardner Canal) with the Kemano River being a coastal river with variable seasonal & daily flows. The Kemano River flows for over 60 km and supports (from FISS data) populations of 5 Pacific Salmon species, Steelhead, resident species as well as Eulachon (a First Nation food fish). The Kemano Powerhouse is located on the east side of the Kemano River, approximately 16 km upstream of the marine environment, and is where water diverted from the Nechako Reservoir augments water flows in the lower 16 km of the Kemano River with the amount being dependent upon power generation or maintenance related requirements. Horetzky Creek is an east to west flowing creek that supports (from FISS data) Pink, Chum, Coho & Chinook salmon to 2.1 km upstream of the confluence with the Kemano River, which is downstream of the powerhouse. An existing road provides access to the portal on the existing section of the T2 tunnel and the proposed camp location (1991 brown-field site). Logging has occurred in the Kemano Watershed although substantial areas of old growth forest remains.

The Nechako Reservoir is located on a plateau in the northern interior region of British Columbia with Tahtsa Lake (Reach) being the most western in the reservoir; it receives runoff from alpine and glacial watersheds to the east. The intake which provides water to the Kemano Powerhouse via the existing tunnel lies at the western end of Tahtsa Lake. The Sweeney Forest Service Road terminates on the north shore near the eastern end of Tahtsa Lake (west of Tahtsa Narrows). No rare or endangered species were found to exist in the project area with wildlife monitoring will occur during the project.

Biogeoclimatic units in the project area include subzones and variants from the Coastal Western Hemlock (CWH), Mountain Hemlock (MH) and Coastal Mountain Alpine (CMA) zones.

26. Factors and Scope of Factors Considered:

Fish and Fish Habitat; wildlife habitat; surface water quality; ARD issues; vegetation, SARA listed species; current use of land and resources for traditional purposes by First Nations; accidents and malfunctions.

27. Environmental Effects:

This review considers the effects of constructing a backup tunnel structure for existing water use practices, to maintain flows and protect existing fish stocks. No other changes to water use are being endorsed by this review.

Nechako Reservoir - Most of project works will be carried out in existing footprint of earlier works in 1992. The management of the Nechako Reservoir will not change as a result of this work. Entrainment studies to date do not indicate an issue is present. There will be a temporary loss of riparian vegetation at the barge sites.

Kemano River - The Kemano ramp down will affect the Kemano River flows below the tailrace which could lead to a temporary loss of fish habitat and may cause mortality to some juvenile salmonids. Salvage and monitoring of these effects will be used to quantify the habitat compensation requirements.

- Temporary loss of juvenile fish habitats and their food sources
- Possible juvenile fish mortality

28. Mitigation Measures (Including Habitat Compensation):

The project planning considered minimizing its footprint by limiting works to areas of existing disturbance dating back to the early 1990's and the operational regime of the reservoir will remain consistent with current practices (less than 1% change). No changes in reservoir operation and management of flows to the Nechako River are planned.

RTA conducted fish entrainment studies in 2011 and determined there to be a low risk. In order to validate this work, RTA is conducting further fish entrainment studies in 2012 and will provide this information when completed; should entrainment be shown to be at a higher risk level a management plan or mitigation measures would be developed to reduce entrainment risk. Under ice studies in the area of the intake can not be conducted as it will pose a significant safety hazard.

No rare or endangered species were found to exist in the project area with wildlife monitoring will occur during the project.

RTA has an Archaeological Management Plan which will address protecting archaeological discoveries; this will include Grease Trails which will be protected by relocating roads. RTA has contracted a consultant to conduct further archaeological work; and will adapt the road placement if any disturbance is likely.

Ramp down

The ramp down of the Kemano powerhouse will be timed to minimize the destruction of fish, and will monitor the eulachon spawn & out-migration and time the ramp down to avoid impacts to this stock (RTA has conducted these works in previous years). QEPs retained by RTA and DFO will be on site at the time of the ramp down. This monitoring plan will be developed and used during a planned ramp down in June 2012 (to allow RTA to perform operational maintenance and inspections on the Sphere Valves and Penstocks). A review of the 2012 monitoring program and historical ramp down data will be conducted in order to: 1) evaluate the effectiveness of the monitoring plan and ramp down protocol, 2) quantify the observed impacts, and 3) determine what changes to the monitoring plan and ramp down protocol are required for the 2013 Backup Tunnel Project ramp down. Data collected during the 2012 ramp down, as well as historical ramp down information, will be used to inform 2013 ramp down procedures.

Habitat Compensation

The habitat compensation will target Coho salmon as the impacts to fish habitat in the Kemano River will be in river margin areas utilized by 0+ to 2+ age class juvenile Coho salmon. The compensation habitat to be constructed is located on the old Kemano golf course and entails: 1) the extension of the upper pond along the road to intercept additional groundwater to feed the ponds. 2) Excavation of two ponds along the alignment of the outflow channel to create an additional 2000m² of habitat. These will be >1.5 m deep with large woody debris placed to cover approximately 25% of the ponds to provide cover for rearing juveniles. 3) Excavation of an additional pond and outflow channel between the road and the existing outflow channel to create an additional 1000 to 1500 m² of habitat for spawning and rearing of coho. The pond will be > 1.5 m deep and have suitable gravel for spawning in the outflow channel. The compensation package that has been submitted will then be evaluated for its fish habitat gains compared to losses from the ramp down and barge landing sites with adjustments being made, if necessary. RTA will conduct monitoring of the compensation habitat at defined intervals with reports being submitted to DFO.

Environmental Management Plans

Rio Tinto Alcan contractors have developed an Environmental Management Plan for the Backup Tunnel Project using guidelines provided by RTA and Triton Environmental Consultants Ltd. as well as available Best Management Practices. Identified potential environmental effects are addressed by a series of Environmental Protection Plans which will be implemented for the project; task specific plans developed in consultation with a QEP will also aid in addressing identified potential environmental effects. The Environmental Management Plan includes: Project Environmental Monitor, contractor environmental monitor/coordinator, preparation & submission of Environmental Monitoring Reports, Erosion and Sediment Control Plan, Marine Environment Protection Plan, Construction Waste Management Plan, Hazardous Materials Management – Spill Prevention & Response Plan, Terrestrial Vegetation & Wildlife Management Plan, Concrete Management Plan, Blasting Management Plan, Air Quality & Dust Control, and an Archaeological Management Plan.

29. Significance of Adverse Environmental Effects:

Most of project works will be carried out in existing footprint of earlier works in 1992. The management of the Nechako Reservoir will not change as a result of this work. The Kemano ramp down will affect the Kemano River flows below the tailrace which could lead to a temporary loss of fish habitat and may cause some mortality to juvenile fishes. Salvage and monitoring these effects will be used to quantify the habitat compensation requirements

Based on this information, DFO has determined that impacts are not likely to be significant.

30. Public Participation in Screening under Subsection 18(3) of CEAA:

Was it considered appropriate in the circumstances? Yes ☐ No ☒

a) Explain why public participation was or was not considered appropriate.

No changes caused by project except for temporary navigational issues in the Kemano River. The users of the Kemano River have been contacted.

b) If considered appropriate, provide details of the public participation program.

31. Summary of Public Comments and Concerns Related to Screening under Subsection 18(3): First Nation issues are addressed in Section 22.
32. Follow-up Program: Was it considered appropriate in the circumstances? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> a) Explain why a follow-up program was or was not considered appropriate. Project completion will not significantly change any flows in the Nechako or Kemano watersheds. b) If considered appropriate, provide details of the follow-up program.
33. Other Monitoring and Compliance Requirements: Identify other monitoring and compliance requirements including: site visits, inspections or reporting to confirm that mitigation measures or compensation or other conditions are being met or implemented. As part of any Fisheries Act Authorization process detailed conditions outlining compensation plans, monitoring requirements and financial security will be developed and incorporated into the Fisheries Act Authorization.

SCREENING CONCLUSION

34. Conclusion on Significance of Adverse Environmental Effects: Based on the above, DFO is of the opinion that this project will not result in significant adverse environmental effects.	
35. Prepared by: _____	36. Date: June 4, 2012
37. Name: Mitch Drewes, Ian Bergsma	
38. Title: Habitat Technician, A/Habitat Management Biologist	
39. Approved by: _____	40. Date: June 4, 2012
41. Name: Jeffrey Lemieux	
42. Title: Area Manager, North Coast Ecosystem Management Branch	

PUBLIC PARTICIPATION UNDER PARAGRAPH 18(3)(b) of CEEA

43. Application of Paragraph 18(3)(b) of CEEA:
44. Summary of Public Comments and Concerns Related to Screening After Application of Paragraph 18(3)(b) of CEEA:

COURSE OF ACTION DECISION

45. Course of Action Decision: (under Section 20 of CEAA)

X DFO may exercise its power, duty or function, i.e. may issue the authorization - where the project is not likely to cause significant adverse environmental effects. Confirm below the specific power, duty or function that may be exercised.

X DFO to issue *Fisheries Act* Authorization or Approval

☐ DFO to recommend to Governor in Council to exercise power, duty or function

☐ DFO to proceed with project (as proponent)

☐ DFO to provide financial assistance for project to proceed

☐ DFO to provide federal land for project to proceed

☐ DFO may not exercise its power, duty or function - the project is likely to cause significant adverse environmental effects that cannot be justified in the circumstances.

☐ DFO shall refer the project to the Minister of the Environment for referral to a mediator or review panel if it is uncertain whether the project is likely to cause significant adverse environmental effects.

☐ DFO shall refer the project to the Minister of the Environment for referral to a mediator or panel - the project is likely to cause significant adverse environmental effects that may be justified in the circumstances.

☐ DFO shall refer the project to the Minister of the Environment for referral to a mediator or review panel - public concerns warrant a reference to a mediator or review panel.

46. Approved by: _____

47. Date: June 5, 2012

48. Name: Jeffrey Lemieux

49. Title: Area Manager, North Coast Ecosystem Management Branch

50. References:



NORTHERN STEEL LTD.

9588 Milwaukee Way
Prince George, B.C.
V2N 5T3
Ph. 250-561-1121
Fax 250-561-0954

ISO 9001

www.northernsteeltd.com

July 4, 2012

Attention: Minister Pat Bell

RE: Rio Tinto Alcan – Backup Tunnel Completion Project

Dear Minister Bell,

Please accept this letter as a show of our company's support for Rio Tinto Alcan's efforts with regards to modernizing its aluminium smelter in Kitimat, and the associated work that is about to be undertaken to secure the project by ensuring a reliable power infrastructure system in Kemano.

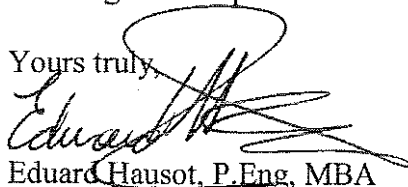
At US\$3.3 billion, the Kitimat Modernization Project is the single largest private investment in this province at the moment, and it is a critical economic driver in northern BC.

The smelter is fully powered by clean, renewable energy from its Kemano station, which currently carries a collapse risk due to its age. The Back Up Tunnel an important project for our economy. This project is currently providing employment to over a dozen workers in our shop alone, with further employment expected in the future. This money stays in Northern BC where our workers live, play, raise their families and pay their taxes.

We are also in the watershed region and are highly concerned about flooding issues. We understand that the second tunnel will have an added advantage to assist with flood risk mitigation.

For the above reasons, we are in support of this important project, which will hopefully lead to more jobs for our local workers, provide clean energy for the modernization project, while reducing flood exposure in our area.

Yours truly,



Eduard Hausot, P.Eng, MBA
President
Northern Steel Ltd.



**WESTERN INDUSTRIAL
CONTRACTORS LTD.**

- PRINCE GEORGE
 - CASTLEGAR
 - KITIMAT
-

July 4, 2012

Honorable Pat Bell

103-770 Central Street

Prince George, BC

V2M 3B7

RE: Rio Tinto Alcan – Tunnel Completion Project

Dear Pat,

As you know, Western Industrial Contractors Ltd. and Farr Installations Ltd. have been very active over the last few years supporting the Rio Tinto Alcan, Kitimat Modernization Project. This project has been very important to the continued prosperity of our companies as well as the 234 members of our staff. WIC has been able to increase our management team in the Kitimat Regional Office three fold and continue to hire additional team members to support this important project.

As you know the Rio Tinto operation has been the life blood of Kitimat in the past and continues to be the foundation of the region. It is imperative that we do everything possible to support this major private investment in the future of British Columbia.

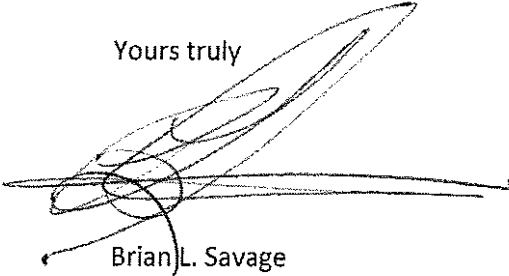
The Kitimat Operations would not be financially viable without the Kemano Power Operation. You know that I spent two years on the Kemano Completion Project back in 1989 and 1990 prior to the project being curtailed. It has now become abundantly clear that the 1950's tunnel has deteriorated to the point that a continued and reliable source of water to generate power is an ongoing concern not only for Rio Tinto, but also the economy of British Columbia.

I have worked with Rio Tinto Alcan (previously Alcan) since 1986 and will continue to provide support as and when required. Their corporate philosophy and community support puts them in the top ten percent of our client list. I can describe in detail the efforts that Rio Tinto Alcan has taken in regard to the protection of our environment as well as economy of British Columbia but you already know this fact.

The completion of the Back Up Tunnel will enable Rio Tinto Alcan to plan for the long term expansion and operation of the new smelter without the constant stress of, "Will we continue to have a reliable source of water". The completion of the Back Up Tunnel will also allow the communities downstream of the Skins Spillway to know that positive flood control continues to be possible. It is not that many years ago that we used to experience flooding of the Island Cache area of Prince George on an annual basis.

I will be more than happy to discuss this important project should you have any questions or would like to get together to discuss. The Management and Staff of the WIC group of companies will continue to support Rio Tinto Alcan on this important project.

Yours truly

A handwritten signature in black ink, appearing to read "Brian L. Savage", with a long horizontal line extending to the right.

Brian L. Savage

Vice President – Chief Operating Officer

WIC Group of Companies

Western Industrial Contractors Ltd.

Farr Installations Ltd.

Farr Fabricating Ltd.

Bonnyman, Sue MEM:EX

From: Bonnyman, Sue MEM:EX
Sent: Tuesday, July 19, 2011 10:37 AM
To: Bonnyman, Sue MEM:EX; MacLaren, Les MEM:EX
Cc: Griffin, Derek MEM:EX; Piccini, Robert FLNR:EX
Subject: RE: URGENT: Media Request, Permit Application, Rio Tinto Alcan

Wenda Mason/Pieter Bekker from Water Stewardship has advised that RTO has been doing work to evaluate the viability of their existing diversion tunnel. They have been asked to determine if the existing tunnel has a 50 year life span. A mini sub has been engaged in doing the evaluation. Paul Henning RTO had hoped to update the Water Controller this week, S22 the update will most likely take place next week.

In the event the existing diversion is not rated for 50 years, RTO would likely try to complete the Kemano Completion Tunnel, to replace the existing tunnel, with the switch over planned for the transition from the old smelter to the new smelter. WSD has agreed to keep us up to speed on this issue. Please advise if a BN is needed for the Minister.

Sue Bonnyman

From: Bonnyman, Sue MEM:EX
Sent: Tuesday, July 19, 2011 10:14 AM
To: MacLaren, Les MEM:EX
Cc: Griffin, Derek MEM:EX
Subject: FW: URGENT: Media Request, Permit Application, Rio Tinto Alcan

Les – this is just a heads up that we have had an enquiry about Kemano Completion, and have directed the press to PG Water Stewardship.

Sue

From: Bonnyman, Sue MEM:EX
Sent: Tuesday, July 19, 2011 10:12 AM
To: Piccini, Robert FLNR:EX
Cc: Bronstein, Ron FLNR:EX; McLarty, Jennifer GCPE:EX; Bekker, Pieter FLNR:EX
Subject: RE: URGENT: Media Request, Permit Application, Rio Tinto Alcan

Robert – as discussed, here is the enquiry from the Northern Sentinel regarding Kemano Completion. I think they must be confused with respect to the substantial investment Rio Tinto is making in the Kitimat Smelter. Given Kemano is a water licensing issue, I think this enquiry is best directed through you, s.22

Sue Bonnyman
Director, Generation and Regulation
Electricity Policy

From: Bronstein, Ron FLNR:EX
Sent: Monday, July 18, 2011 2:40 PM
To: Bonnyman, Sue MEM:EX
Subject: FW: URGENT: Media Request, Permit Application, Rio Tinto Alcan
Importance: High

Sue, is this something your branch manages (ie the tunnel approval? I'd be interested in knowing as well. Thanks, Ron

Bonnyman, Sue MEM:EX

From: Bronstein, Ron FLNR:EX
Sent: Monday, July 18, 2011 2:40 PM
To: Bonnyman, Sue MEM:EX
Subject: FW: URGENT: Media Request, Permit Application, Rio Tinto Alcan

Importance: High

Sue, is this something your branch manages (ie the tunnel approval? I'd be interested in knowing as well. Thanks, Ron

From: McLarty, Jennifer GCPE:EX
Sent: Monday, July 18, 2011 1:41 PM
To: Bronstein, Ron FLNR:EX
Cc: Crebo, David GCPE:EX
Subject: URGENT: Media Request, Permit Application, Rio Tinto Alcan
Importance: High

Hi Ron! I know you're not the contact for this, but crossing my fingers you know who is ☺.
Opinion 250 is looking for Rio Tinto Alcan's permit application to complete a half-finished tunnel under the Kemano Completion Project. (email below)

Thanks kindly,

Jennifer McLarty | Government Communications and Public Engagement
Ministry of Forests, Lands and Natural Resource Operations | P: 250 953-3675

Here is the link to the story which appeared in the Northern Sentinel earlier this month.
http://www.bclocalnews.com/bc_north/northernsentinel/news/124971539.html

I would like to have a full copy of the permit application.

Thanks

Elaine Meisner

P 250-962-6397
F 778-415-6397
C 250-640-6898
E elaine@opinion250.com

(PG → Robert Picini
Norm Brado)

OPINION 250

YOUR NEWS, YOUR VIEWS, NOW

Johnstone, Heather MEM:EX

From: Griffin, Derek MEM:EX
Sent: Thursday, October 6, 2011 8:43 AM
To: Bonnyman, Sue MEM:EX; Johnstone, Heather MEM:EX
Subject: FW: TNO: Native band rushes to save grave markers from flood - Mark Hume - Globe and Mail
Attachments: 59873 BN att MO EAED GRB Kemano related power gen appendix_Nechako Map.docx

More news related to Kemano.

From: MacLaren, Les MEM:EX
Sent: Thursday, October 06, 2011 8:19 AM
To: Woolley, Paul GCPE:EX
Cc: Griffin, Derek MEM:EX; Fitzpatrick, Brigitte C MEM:EX
Subject: RE: TNO: Native band rushes to save grave markers from flood - Mark Hume - Globe and Mail

Hi Paul:

This is a FLNRO issue related to water management and dam safety.

The Kemano/Nechako system was created by the Kenney Dam which dewatered a canyon on the Nechako River and diverted water that used to drain into the Fraser River through a tunnel under the Coast Mountains to RTA's Kemano Powerhouse and out into the Pacific Not Responsive
Not Responsive . The Skins Lake spillway is used to manage reservoir levels and provide some flows farther downstream on the Nechako River to support salmon and sturgeon populations. The spillway moves water through Cheslatta Lake and River and into the Nechako downstream of the dewatered canyon.

As part of a 1987 Settlement Agreement between RTA and the feds, RTA releases flows from their reservoir to support the downstream fisheries in the Nechako. A key issue is temperature of the water. The Skins Lake Spillway releases water from the surface of the reservoir which is warmer, so higher volumes need to be released to meet the downstream temperature targets. The agreement provided for some joint funding of a cold water release facility (taking cooler water from deeper in the reservoir) at the Kenney Dam which could meet the downstream temperature targets with lower releases, allowing more to be diverted for power generation and supporting the mothballed Kemano Completion Project. The cold water release facility has been studied extensively and never implemented, primarily due to cost.

Some years, like this one with large snow pack and lots of rain, inflows can greatly exceed the ability to move power out of the reservoir through the Kemano powerhouse and normal flows from the Skins Lake Spillway. RTA has to increase flows (with related flooding on the Cheslatta system) to ensure that the reservoir remains within its licenced (and safe) operating range.

We have a BN coming forward on a related issue of whether RTA should complete the tunnel started for the Kemano Completion which would allow them to operate the existing Kemano Project at higher capacity and contribute to meeting anticipated increases in power demand in the Northwest from LNG and mining developments.

Les

From: Woolley, Paul GCPE:EX
Sent: Thursday, October 6, 2011 7:36 AM
To: MacLaren, Les MEM:EX

Subject: Fw: TNO: Native band rushes to save grave markers from flood - Mark Hume - Globe and Mail

Hey Les, do we have a connection to this?

From: Myers, Tobie A MEM:EX

Sent: Thursday, October 06, 2011 07:26 AM

To: Woolley, Paul GCPE:EX

Subject: Fw: TNO: Native band rushes to save grave markers from flood - Mark Hume - Globe and Mail

This us??

s.3

s.3

**MINISTRY OF ENERGY AND MINES
BRIEFING NOTE FOR INFORMATION**

I PREPARED FOR: Steve Carr, Deputy Minister of Energy and Mines

II ISSUE: Potential Rio Tinto Alcan hydroelectric generation opportunities in the Nechako Watershed (map appended) to support LNG development in the Kitimat area.

III BACKGROUND:

Rio Tinto Alcan Inc. (RTA) is a global business whose primary products are bauxite, alumina and primary aluminum. RTA's British Columbia operations are part of its North American Primary Metal Group and consist of a primary aluminum smelter in Kitimat that produces sheet ingot and billet ingot.

In 1951, RTA proceeded with Kemano 1 – the existing Nechako Reservoir, Kemano powerhouse, and the Kitimat smelter. In the late 1970's, RTA announced their intention to proceed with the Kemano Completion Project (KCP), which would: dam the Nanika River, link the Nanika to the Nechako Reservoir, dredge Tahtsa Narrows, construct a second power tunnel, and add additional facilities to increase firm energy production by 550 megawatts (MW). RTA put the project in abeyance in the mid-1980's while negotiating an agreement with Fisheries and Oceans Canada providing a schedule of flows for fisheries protection, particularly for chinook and sockeye salmon, in the Nechako River and agreeing to abandon their water rights and works on the Nanika (Section 2.1 E (a) of "1987 Settlement Agreement": http://www.nfcp.org/Settlement_Agreement/1987%20Settlement%20Agreement.pdf).

With social and environmental costs, Kemano has always been a contentious political issue in the province and perhaps one of the most litigated. In January 1995, the BC Government rejected RTA's KCP. Following litigation on the part of RTA, a 1997 agreement was negotiated providing a final water licence, in perpetuity, to water from the Nechako River above Grand Canyon (essentially the Nechako Reservoir). Schedule 4 of the agreement established the terms for the Nechako Environmental Enhancement Fund (NEEF) and the NEEF Management Committee with a mandate to: review, assess and report on options for the downstream enhancement of the Nechako watershed.

Under current operations, approximately 75 percent of all Kemano power is for the Kitimat smelter. Kemano has a maximum capacity of 896 MW and generates 1,945 gigawatt hours (GWh) annually. The surplus power is sold to BC Hydro under a long-term Electricity Purchase Agreement, with the smelter's electricity needs having priority over power sales.

RTA has initiated a \$2.5 billion investment

s.21

s.21 to modernize the Kitimat smelter. The project will increase the smelter's annual production capacity by more than 40 percent to about 420,000 tonnes per year, with an energy efficiency increase of almost 30 percent. It is designed to use all of the firm power from Kemano.

The new smelter design will have a single potline, which does not provide the flexibility of load shedding in a timely manner in response to electrical disturbances. RTA has recently proposed finishing the tunnel that was bored about halfway of its intended distance as part of the KCP. This would be operated in conjunction with the existing tunnel to provide a backup for delivery of water to the power project. Both tunnels could operate concurrently to reduce friction losses.

IV DISCUSSION:

Currently proposed developments on the north coast (e.g. LNG export facilities), maybe limited by the available electricity supply. With an agreement in place where RTA has abandoned their water rights on the Nanika River, it is not possible for KCP to be reactivated. The maximum power outflow from the reservoir (195 cubic metres per second (CMS)) is a limitation to power generation. Though the KCP was rejected, there may be some viable related components with potential for additional hydroelectric generation. These may include the following:

Kenney Dam

- There is the possibility of generating hydroelectricity by releasing water at the Kenney Dam.
- Another consideration regarding the Kenney Dam is water release for environmental flows. In 2001, the NEEF Management Committee proposed a cold water release facility (CWRF) at the Kenney Dam for downstream enhancement. Following eight years of study, RTA did not support the construction of a CWRF due to engineering risks associated with a deep water intake and high cost. A less expensive, less risky surface water release facility and associated works is estimated to cost s.21. Based on Schedule 4 of the 1997 Agreement, up to s.17, s.21 could be available through the NEEF, with RTA's contributions capped at \$50 M. The Government and RTA have recently agreed to reconvene NEEF and revisit the 2001 decision of a CWRF.

Skins Lake Spillway

- There is the possibility of generating run-of-river waterpower at the Skins Lake Spillway if a water release facility is not constructed at Kenney Dam. This is a generating option in the 25 MW – 30 MW range and would require a transmission line s.17, s.21 to connect to the grid.

Completion of the Second Kemano Tunnel

- Prior to rejection of the KCP, excavation began for the placement of the additional generators, the penstocks and the second tunnel at Kemano. These works were not completed.
- The second Kemano Tunnel is currently in a *Canadian Environmental Assessment Act* (CEAA) regulatory review. With the second tunnel, both tunnels can operate concurrently

to reduce friction losses, and generate an additional 100 MW without the use of any additional water.

Tahtsa Narrows

- Dredging of Tahtsa Narrows to improve flows to the intake was part of the KCP proposal. Though viable, this is controversial because of the expanse of shoreline habitat that would be exposed with the water draw down. In 2001, a coordinated Federal CEAA/ Provincial *Water Act* review was initiated in response to an application by RTA to dredge Tahtsa Narrows. RTA withdrew the application in December 2003 due to the public concern and Federal response to the proposal. RTA remains interested in dredging Tahtsa Narrows as a means of ensuring firm power and is contemplating a 'partial' dredge, with less environmental impact. This may provide an additional opportunity for generation of non-firm power, especially during high flow conditions where, rather than spilling water at Skins Lake Spillway, it could be run through the Kemano tunnel(s).

On September 29, 2011, the Saik'uz and Stellate'en bands filed a civil claim in the B.C. Supreme Court in an effort to force RTA to release more water into the Nechako River, to augment flows for sturgeon and salmon. There is also dormant litigation by each of the Skin Tyee and the Cheslatta First Nation related to damages caused by the original diversion.

V. CONCLUSION:

There is potential through the Tunnel project to generate an additional 100 MW, and RTA has indicated a willingness to discuss its sale to BC Hydro.

A Skins Lake Spillway run-of-river project could contribute an additional 25 MW, and is not expected to raise unmanageable public or regulatory concerns. The Cheslatta First Nation may be interested in partnering with RTA on such an initiative.

Tahtsa Narrows dredging will be controversial and likely litigious, with any regulatory process expected to exceed the time frame available for electrification of the first phase of LNG development.

s.13, s.16

s.13, s.16

A consideration for any new hydroelectric generation facilities is the transmission cost and build-out time. A limitation to power generation is the maximum inflow to the reservoir. New generation would require a new source of flows.

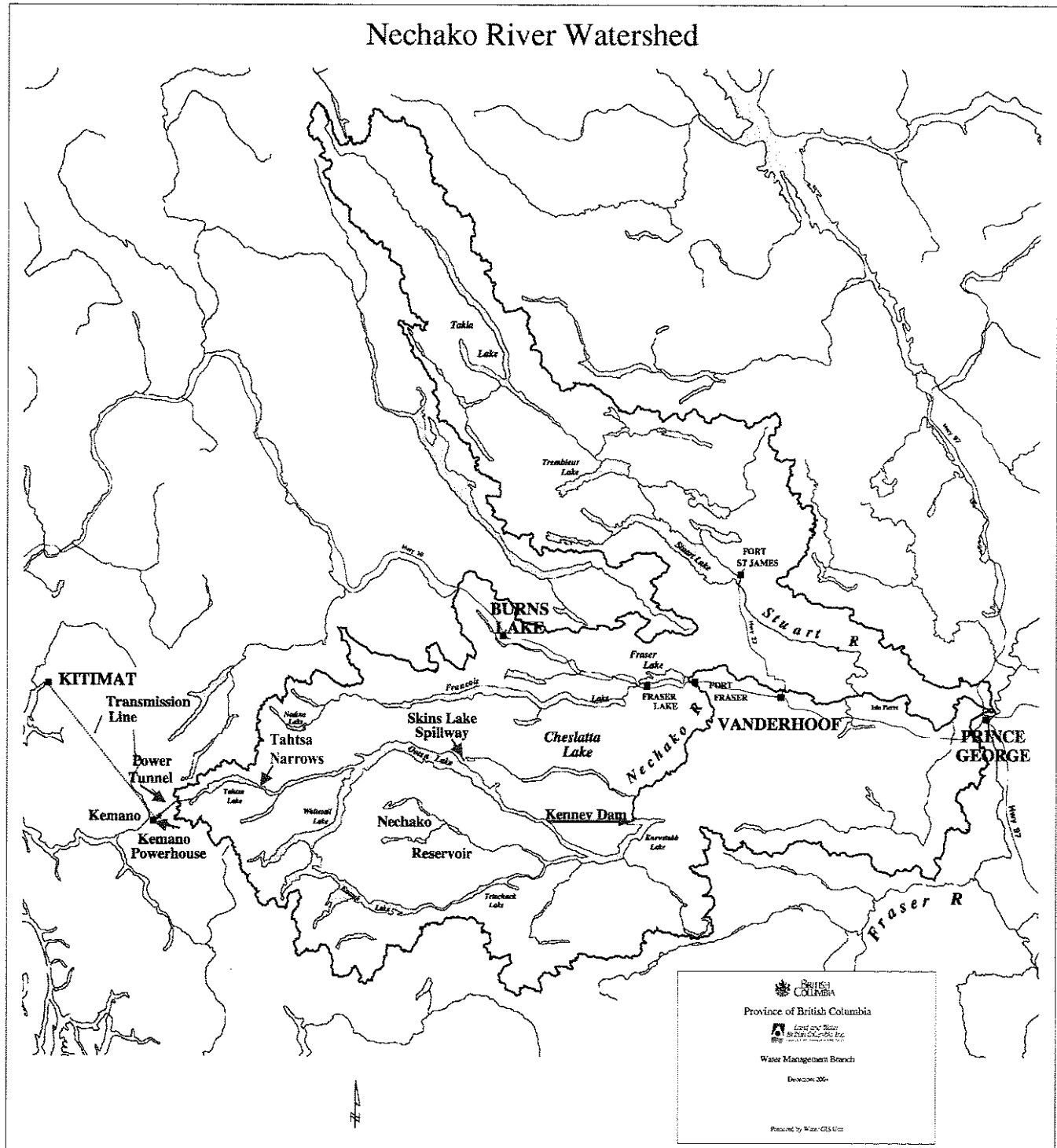
s.13, s.16

DRAFTED BY:
Heather Johnstone, Electricity - GRB
250-952-0887

APPROVED BY:
Sue Bonnyman, Director ✓
Derek Griffin, Exec. Director ✓
Les MacLaren, ADM EAED ✓

Enclosure

Appendix 1. Map of the Nechako Watershed



Johnstone, Heather MEM:EX

From: Mason, Wenda FLNR:EX
Sent: Monday, October 3, 2011 2:40 PM
To: Johnstone, Heather MEM:EX
Subject: RE: info note

s.13

Just confirming numbers, my notes on the proposed second tunnel completion include the following:

Water Licence = 170 cms (would generate 1000 MW) Current Max = 860 MW Normal operation = 123 cms (790 MW)

On the Second Tunnel:

They stated that rocks from the tunnel contribute to additional costs, loss of generation efficiency due to rock screens and runner damage. Operating two tunnels in tandem would reduce the velocity in a portion of the existing tunnel and therefore reduce the movement of rocks to the turbines.

The timing of the tie-in to the existing penstocks and at the Horetzky must occur prior to the startup of the new smelter (in the window between the shutdown of the existing smelter and the start-up of the new smelter). Completion of the rest of the tunnel can occur later. Reservoir elevation management will be critical during the 'down' period as the only means of getting water out of the reservoir will be through SLS. There is also a risk that if the reservoir is drawn down to accommodate inflows at this time and it is followed by a dry year or years, that could jeopardize power generation for the new smelter.

Cheers

Wenda

-----Original Message-----

From: Johnstone, Heather MEM:EX
Sent: Monday, October 3, 2011 1:16 PM
To: Mason, Wenda FLNR:EX
Subject: RE: info note

Hi Wenda:

As promised, attached is a current version of the (still draft) info note. We will call you from Sue's office just after 1:30 pm.

Thanks.

Heather

-----Original Message-----

From: Mason, Wenda FLNR:EX
Sent: Monday, October 3, 2011 8:45 AM

To: Johnstone, Heather MEM:EX
Subject: RE: info note

Morning Heather

Thanks for the update. I have confirmed that the firm power is 896 MW so it isn't necessary to modify the following statement in your BN:

Under current operations approximately 75 percent of all Kemano power is for the Kitimat smelter. Kemano has 896 megawatts (MW) of capacity and represents 1,945 gigawatt hours (GWh) annually.

I'm around today with a couple of meetings. As I mentioned, we are meeting with RTA tomorrow morning for our regular meeting. If you have any points requiring clarification I can perhaps get clarification as part of our session with them.

Have a good day.

W.

-----Original Message-----

From: Johnstone, Heather MEM:EX
Sent: Friday, September 30, 2011 5:46 PM
To: Mason, Wenda FLNR:EX
Subject: RE: info note

Hi Wenda:

Sue just got back to me with her additions just before she left for the day. I guess we are not dead with today's deadline. She did not mention discussion from the meeting this afternoon. I will flip an updated version to you after speaking with Sue (on Monday morning?) and getting Derek Griffin's input.

You have been extremely helpful.

Thank you.

Heather

-----Original Message-----

From: Mason, Wenda FLNR:EX
Sent: Fri, September 30, 2011 12:21 PM
To: Johnstone, Heather MEM:EX
Subject: FW: info note

Some suggestions in track changes/comments. Hope you find my input helpful. I'm happy to take another look later this aft especially as you refine the conclusions.

Cheers

Wenda

-----Original Message-----

From: Johnstone, Heather MEM:EX
Sent: Friday, September 30, 2011 10:23 AM
To: Mason, Wenda FLNR:EX
Subject: info note

Hi Wenda:

As you'll see, this still needs work.

I'll follow-up by phone shortly.

Heather

-----Original Message-----

From: Mason, Wenda FLNR:EX
Sent: Thu, September 29, 2011 7:21 PM

To: Johnstone, Heather MEM:EX
Subject: RE: more on kitimat smelter power requirements

Sounds like you have a work night ahead of you. I'll be in the office tomorrow morning around 9..
s.22 Hope the writing goes quickly.

From: Johnstone, Heather MEM:EX
Sent: Thursday, September 29, 2011 5:10 PM
To: Mason, Wenda FLNR:EX
Subject: RE: more on kitimat smelter power requirements

Thank you, yet again.

I will need to get back to the briefing note later this evening. I hope that you will be able to have a look at it tomorrow morning to ensure that I haven't misrepresented any information.

Cheers,
Heather

From: Mason, Wenda FLNR:EX
Sent: Thursday, September 29, 2011 2:44 PM
To: Johnstone, Heather MEM:EX
Subject: more on kitimat smelter power requirements

The following may be helpful although it is dated (2007):

1. http://transmission.bchydro.com/nr/rdonlyres/5c6577c2-7939-4abc-b9af-5b9963d31cc7/0/alcanmodernizationproject_sppa_mo.pdf

1.1 Alcan Modernization Project

Alcan plans to upgrade its aluminium smelter at Kitimat in northern BC which will increase its productivity and efficiency. The new smelter will consist of a single potline of 625 MW and a 50 MW auxiliary load, totalling 675 MW. The project is planned to be in service around 2010. Electrically there are some major changes from the existing plant. The new smelter load is 675MW, up by 45 MW compared to the existing plant. Without generation capacity increase, the surplus power from Kemano generation available for transfer to BCTC will be reduced. Given the new design of a single potline, the flexibility of applying appropriate amount of load shedding in a timely manner in response to disturbances is not available in the new smelter. This will negatively impact the system performance, plant reliability and security.

Johnstone, Heather MEM:EX

From: Mason, Wenda FLNR:EX
Sent: Thursday, September 29, 2011 2:44 PM
To: Johnstone, Heather MEM:EX
Subject: more on kitimat smelter power requirements

The following may be helpful although it is dated (2007):

1. http://transmission.bchydro.com/nr/rdonlyres/5c6577c2-7939-4abc-b9af-5b9963d31cc7/0/alcanmodernizationproject_sppa_mo.pdf

1.1 Alcan Modernization Project

Alcan plans to upgrade its aluminium smelter at Kitimat in northern BC which will increase its productivity and efficiency. The new smelter will consist of a single potline of 625 MW and a 50 MW auxiliary load, totalling 675 MW. The project is planned to be in service around 2010. Electrically there are some major changes from the existing plant. The new smelter load is 675MW, up by 45 MW compared to the existing plant. Without generation capacity increase, the surplus power from Kemano generation available for transfer to BCTC will be reduced. Given the new design of a single potline, the flexibility of applying appropriate amount of load shedding in a timely manner in response to disturbances is not available in the new smelter. This will negatively impact the system performance, plant reliability and security.

Johnstone, Heather MEM:EX

From: Mason, Wenda FLNR:EX
Sent: Thursday, September 29, 2011 1:54 PM
To: Johnstone, Heather MEM:EX
Subject: FW: Kemano

Not sure if Pieter forwarded this to your group or not – gives the status of the tunnel project wrt DFO & EAO.

From: Bekker, Pieter FLNR:EX
Sent: Friday, September 16, 2011 2:56 PM
To: Mason, Wenda FLNR:EX
Subject: FW: Kemano

fyi

From: Millar, Daniel [PYR] [<mailto:Daniel.Millar@ec.gc.ca>]
Sent: Friday, September 16, 2011 1:58 PM
To: Bekker, Pieter FLNR:EX
Subject: FW: Kemano

Hi Pieter,

Here's the scoop.

Dan

From: Nelson, Bryan [CEAA]
Sent: September 16, 2011 13:48
To: Walls, Lisa [CEAA]; Millar, Daniel [PYR]; Maclean, Laura [PYR]
Cc: LeRoy, Sean [CEAA]
Subject: RE: Kemano

Hi Dan,

CEAA has determined that this project would require a screening type environmental assessment with DFO as a likely RA. The EAO sent the proponent a letter stating the project doesn't trigger a provincial EA. Please let me know if you would like further details.

Bryan

Bryan Nelson
Project Manager | Agent principal de projets
Canadian Environmental Assessment Agency | Agence canadienne d'évaluation environnementale
701 Georgia Street W, Suite 410, Vancouver, B.C. V7Y 1C6
Bryan.Nelson@ceaa-acee.gc.ca
Telephone | Téléphone 604-666-9115
Government of Canada | Gouvernement du Canada

From: Walls, Lisa [CEAA]
Sent: Friday, September 16, 2011 1:30 PM

To: Millar, Daniel [PYR]; Maclean, Laura [PYR]
Cc: Nelson, Bryan [CEAA]; LeRoy, Sean [CEAA]
Subject: RE: Kemano

Hi Dan,

CEAA received a project description/environmental impact statement for this project, however additional information is needed to confirm whether there is a CEAA trigger and, if so, the review type. Byron Nutton is DFO contact re. possible Fisheries Act trigger, and Bryan Nelson is the CEAA contact. Bryan, Please follow-up with Dan Millar, EC PYR, to fill Dan in on latest info we have.

Lisa Walls
Director | Directrice
Canadian Environmental Assessment Agency | Agence canadienne d'évaluation environnementale
701 Georgia Street W, Suite 410, Vancouver, B.C. V7Y 1C6
lisa.walls@ceaa-acee.gc.ca
Telephone | Téléphone 604-666-6989

From: Millar, Daniel [PYR]
Sent: Friday, September 16, 2011 1:06 PM
To: Maclean, Laura [PYR]; Walls, Lisa [CEAA]
Subject: FW: Kemano

Hi Laura, Lisa,

Have either of you come across any application for Alcan to complete a second Nechako-Kemano tunnel? Would such a project trigger CEAA?

Dan

From: Bekker, Pieter FLNR:EX [<mailto:Pieter.Bekker@gov.bc.ca>]
Sent: September 16, 2011 12:54
To: Millar, Daniel [PYR]
Subject: Kemano

Dan,

Further to our call, there is a news article that states RTA has applied for a permit to complete the half finished tunnel (second one) between the Nechako Reservoir and Kemano powerhouse and River.

I looked at the CEAA website, specifically the registry and found no mention of this (nothing on the provincial EAO website either). Would it be somewhere else or has the application not been registered yet? Thx

Regards,

Pieter

Manager
Water Allocation and Utility Regulation
Water Management Branch
Phone: (250) 952-6791
<mailto:pieter.bekker@gov.bc.ca>

Water for BC: safe, sustainable and valued by all.

Johnstone, Heather MEM:EX

From: Bonnyman, Sue MEM:EX
Sent: Thursday, September 22, 2011 12:07 PM
To: Johnstone, Heather MEM:EX
Subject: FW: your request

From: Bekker, Pieter FLNR:EX
Sent: Thursday, September 15, 2011 1:49 PM
To: Bonnyman, Sue MEM:EX
Subject: FW: your request

Sue,

Rather than try to interpret I am sending you the background directly from various documents.

Current generating capacity = 860 MW.

As you will see there were many components to the KCP.

Some may be viable today to move forward on and as I understand RTA has applied to the feds (DFO screening) for go ahead on completing a second tunnel. Currently they cannot use the entire volume in their water licence and a second tunnel would allow them to do that.

My sense is that non-viable components would certainly include development on the Nanika.

Pieter

from Nanika

Not Responsive

MINISTRY OF ENERGY AND MINES

BRIEFING NOTE FOR INFORMATION

- I. PREPARED FOR:** Honourable Rich Coleman, Minister of Energy and Mines
- II. ISSUE:** April 18, 2011 Meeting with Rio Tinto Alcan (Richard Prokopanko and Paul Henning)
- III. BACKGROUND:**

Rio Tinto Alcan Inc. (RTA) is a global business whose primary products are bauxite, alumina and primary aluminum. RTA's British Columbia operations are part of its North American Primary Metal Group and consist of a primary aluminum smelter in Kitimat that produces sheet ingot and billet ingot. The provincial economic impact of the smelter exceeds a quarter of a billion dollars annually and provides well over a 1,000 jobs in the northwest.

Twice, in the 1920's and 1940's, the Province invited RTA to build a smelter. An agreement, with conditional water rights, came into effect in 1950 allowing RTA to divert water out of the Nechako watershed to generate hydroelectric power at the Kemano Generating Station. A 1987 agreement provided a schedule of flows for fisheries protection, particularly for Chinook and sockeye salmon. A 1997 agreement provided final water licences in perpetuity. These water licences were issued under the *Industrial Development Act* (not the *Water Act*).

Under current operations approximately 75 percent of all Kemano power is for the Kitimat smelter. Kemano has 896 megawatts (MW) of capacity and represents 1,945 gigawatt hours (GWh) annually. The surplus power is sold to BC Hydro under a long-term Electricity Purchase Agreement, with the smelter's electricity needs having priority over power sales.

RTA is planning a \$2.5 billion investment s.21
s.21 to modernize the Kitimat smelter. This would be the largest non-government investment in BC since the 1950s. The project would increase the smelter's annual production capacity by more than 40 percent to about 420,000 tonnes per year, with an energy efficiency increase of almost 30 percent. It would be designed to use all of the firm power from Kemano.

Without the smelter modernization project, the smelter would be expected to operate for another 10 years.

The modernization/upgrade project would:

- improve air quality;
- reduce water consumption and fluoride emissions;
- extend the smelter's life by 35 to 50 years;

- continue to provide revenue for local government;
- reduce RTA's greenhouse gas (GHG) emissions by 30 to 40 percent (overall reduction of 0.5 million tonnes per year in British Columbia); and
- provide 2,000 construction jobs at the peak of construction.

IV. DISCUSSION:

RTA representatives are interested in discussing its investment in the Kitimat smelter upgrade project and its contribution to British Columbia.

s.13, s.17

The 1997 agreement between RTA and the Province settled litigation by RTA due to the province cancelling the Kemano Completion Project.

Staff from Electricity Policy, the Ministry of Environment (MoE), Water Protection and Sustainability Branch, and the Ministry of Forests, Lands and Natural Resource Operations met with RTA staff on January 25, 2011 to discuss the preliminary December 2010 Policy Proposal for the *Water Sustainability Act*.

s.13, S14

MoE indicates they are developing options to further engage the public, stakeholders and First Nations on the final policy proposal and/or draft legislation.

IV. CONCLUSION:

The Government recognizes the important economic and social contributions of Rio Tinto Alcan's Kitimat smelter, in particular to the northwest region of the Province.

The Province anticipates and encourages RTA to provide input to the final *Water Act* modernization policy proposal (when a detailed version of this becomes available), and can expect further engagement with MEM and MOE on its development.

DRAFTED BY:
Heather Johnstone, Policy Advisor

APPROVED BY:
Sue Bonnyman ✓
Les MacLaren, ADM
Steve Carr, DM

**MINISTRY OF ENERGY AND MINES
BRIEFING NOTE FOR INFORMATION**

- I. PREPARED FOR:** Honourable Rich Coleman, Minister of Energy and Mines
- II. ISSUE:** April 12, 2011 Meeting with Rio Tinto Alcan (Richard Prokopanko and Paul Henning)

III. BACKGROUND:

- Rio Tinto Alcan (RTA) is a global business whose primary products are bauxite, alumina and primary aluminum. RTA's British Columbia operations are part of its North American Primary Metal Group and consist of a primary aluminum smelter in Kitimat. In 2009 the Kitimat smelter directly contributed \$267.8 million to British Columbia's economy and provided over 1000 jobs in the northwest.
- RTA is planning to spend approximately \$3 billion ^{s.21} to modernize the Kitimat smelter. This would be the largest non-government investment in BC since the 1950s. The project would increase the smelter's annual production capacity from 275,000 to approximately 400,000 tonnes of primary aluminium using approximately 700 megawatts of energy (an energy efficiency increase of almost 30%).
- The modernization/upgrade project would:
 - improve air quality;
 - reduce water consumption and fluoride emissions;
 - extend the smelter's life by 30 to 35 years;
 - continue to provide revenue for local government;
 - reduce RTA's greenhouse gas (GHG) emissions by 30 to 40 percent (overall reduction of 0.5 million tonnes per year in British Columbia); and
 - provide 2000 construction jobs at the peak of construction.
- RTA has been a member of the Mining and Smelting Climate Action Working Group since the Climate Action Secretariat was established in 2008. The group meets regularly to provide input on climate policy and identify opportunities for their sector to reduce emissions and realize economic opportunities in the low carbon economy.
- RTA wrote to the Province in 2008 with respect to the Western Climate Initiative (WCI) and incentives to reduce GHG emissions. The Minister of Environment responded by committing to harmonize its approach with other WCI partners, provide regulatory certainty, and put forward incentives to support improvement and implementation of best performing technologies.
- RTA wrote to the Premier in May 2010 and met with the Ministers of Finance and Minister of State for Climate Action to seek further assurance from the Province as it sought to raise the next increment of US\$2.5 billion in capital for the Kitimat upgrade project. The Premier

responded (letter dated September 12, 2010) indicating B.C.'s greenhouse gas targets would not encumber investments in the project.

•

s.13

IV. DISCUSSION:

- Rio Tinto representatives are interested in discussing its investment in the Kitimat smelter upgrade project and its contribution to BC's GHG reduction targets.
- The Climate Action Secretariat and RTA have had discussions on business certainty in relation to the Kitimat upgrade project over the last year. RTA is seeking assurances in four areas:

s.17, s.21

IV. GOVERNMENT POSITION:

- The government recognizes the important economic and social contributions of Rio Tinto Alcan's Kitimat smelter, in particular to the northwest region of the Province.
- The Climate Action Secretariat is not yet ready to release results of public consultations on proposed regulations for offsets and emissions trading under the existing Greenhouse Gas Cap and Trade Act. Therefore details regarding cap and trade are not yet available.
- The upgrade of the Kitimat smelter provides an opportunity to demonstrate how BC will use carbon pricing to support and encourage economic development.

DRAFTED BY:
Anne Currie, Chief Gold Commissioner

APPROVED BY:
Dave Lefebure, A/ADM√
Steve Carr, DM√

Current Status

In 2001, the Nechako Environmental Enhancement Fund Management Committee tabled their decision for downstream enhancement of the Nechako watershed: a cold water release facility to be constructed at Kenney Dam at an estimated cost of \$96M (2001). The province, Rio Tinto Alcan and the Nechako Watershed Council then undertook 8 years of studies to better document the risks, issues and costs associated with construction of a cold water release facility (see History below).

In 2010 Rio Tinto Alcan met with the Minister of Environment and stated that they do not support construction of a water release facility at Kenney Dam primarily due to the risks involved but that they are fully committed to resolving the outstanding commitments in the 1997 BC/Alcan Agreement.

As a result of ongoing discussions, the government and Rio Tinto Alcan have recently agreed to reconvene the Nechako Environmental Enhancement Committee to revisit the 2001 decision of a cold water release facility at Kenney Dam. The decision to reconvene the NEEF Management Committee has not yet been made public.

History

The social and environmental costs of the Kenney Dam construction resulted in over 60 years of bitter controversy. The immediate impacts included:

- Relocation of the Cheslatta Carrier Nation from its traditional homeland and the flooding of their villages and gravesites.
- Dewatering of the Nechako Canyon for 9 km downstream from the Kenney Dam.
- Reduced flows in the Nechako River resulting from the diversion of water to Kemano and altered seasonal flows.
- Destruction of fish habitat in the Murray-Cheslatta watershed as a result of the redirection of the upper Nechako River

Following rejection of the Kemano Completion Project by the Government of BC and subsequent litigation on the part of Alcan, the 1997 BC/Alcan Agreement was negotiated to address the outstanding legal matters. Schedule 4 of the Agreement established the terms for the Nechako Environmental Enhancement Fund (NEEF) and the NEEF Management Committee with a mandate to: review, assess and report on options that may be available for the downstream enhancement of the Nechako watershed area. These options may include, but are not limited to, the development of a water release facility at or near the Kenney Dam, or the use of the Nechako Environmental Enhancement Fund for other downstream enhancement purposes. The Agreement also allowed for establishment of the Nechako Watershed Council to provide advice to the Management Committee.

Schedule 4 of the 1997 Agreement also obligates Alcan to match contributions made to the NEEF by another “person” for the purpose of implementing the recommended option. Under the agreement, Alcan’s contributions are capped at \$50 million less any credit, ^{s.17, s.21} for Alcan’s existing design or engineering studies that would reduce or eliminate costs related to the CWRP.

Between 1999 and 2001 the NEEF Management Committee conducted public workshops, commissioned 10 independent studies, and held over 40 meetings with interested parties over a three year period. The Report of the Management Committee, released June 7, 2001, determined that a Cold Water Release Facility at the Kenney Dam was the preferred option to provide the greatest benefits to both the Nechako River and the Murray-Cheslatta Lake system. This decision has not been implemented.

Since 2002 the Province and RTA, with the Nechako Watershed Council, have completed the studies necessary to further the understanding of issues and options related to a water release facility at Kenney Dam. Through these studies it was discovered that DFO's temperature and flow requirements for salmon migration would not result in the previously anticipated 'freed-up flows' for the Nechako River. This plus the engineering risks associated with the deep water intake required for a cold water release facility resulted in the Nechako Watershed Council recommending the less expensive, less risky surface water release facility estimated to cost

s.17, s.21 This sum far exceeds the s.17, s.21 that might be available through the Nechako Environmental Enhancement Fund.

The Nechako Watershed Council continues to support a water release facility at Kenney Dam as the best solution for enhancement of the downstream Nechako watershed area. The Cheslatta First Nation, who wants to return to their traditional territories and undertake the rehabilitation of the Cheslatta River and Lake system, can only do so if a water release facility is constructed. The Cheslatta have expressed frustration by the lack of action on the part of government and Rio Tinto Alcan in moving ahead with construction of a water release facility. That said, they have also indicated a willingness to discuss other options if a water release facility is not going to proceed.

Since 2001, the Nechako White Sturgeon has been recognized as endangered and listed under the federal Species at Risk Act. This issue was not contemplated in the original 2001 Management Committee decision and has come up repeatedly in the past several years as the Sturgeon Recovery Initiative seeks funding for a hatchery program and habitat enhancement.

Prepared by:
Wenda Mason
Manager, River Forecast Centre and Dam Safety
Water Management Branch
Provincial Operations – Authorization Services
Forests, Lands and Natural Resource Operations
Last Update: 18 April 2011

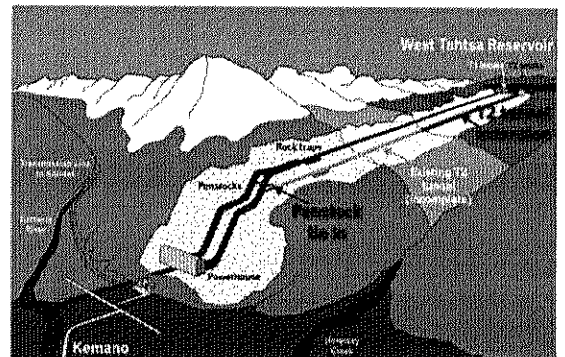
Back-up tunnel project

Context:

- Modernization of smelter is well under way. It will be energized in Q2 2014 and fully operational by year end 2014. **\$3.3bn spend, secures about 1000 solid jobs for up to 50 years.**
- Kemano is our only source of power, now and likely well into the future. The Kemano powerhouse and infrastructure including the tunnel is nearly 60 years old.
- Kemano relies on a single water tunnel to feed the generators.
- The tunnel collapsed in 1958 and was repaired in 1961. Maintenance on the run is not possible without closing the existing smelter.
- The tunnel continues to deteriorate and is showing signs of accelerated wear. **We do not believe the tunnel will last another 20 years never mind 50 years.**
- Two attempts to survey the tunnel with submersibles in 2010 and 2011 have not being conclusive but have highlighted material in the tunnel.

The Project:

- We have a unique opportunity with the T2 Project to **"de risk"** the tunnel and therefore the modernized smelter for the long term future.
- **No more water than in the existing license is required and is not being asked for. No additional generation is being added. We connect the new tunnel to the old system, two tunnels then feed one powerhouse.**
- If the tunnel fails before the completion of the second tunnel there is not enough power in the province / region to supply the new smelter.
- The subsequent outage would be considerable — not to mention the impact to environment and water management — there will be a direct economic risk to 1000 jobs and multiple indirect jobs.
- The timing of demolition of the old smelter and the building of the new, creates a window in which we can connect the old tunnel to the partially completed tunnel.
- The construction work to tie the two tunnels together is timed to take place during two summers (2012 and 2013) in order to work within two very specific fisheries windows.
- CEAA, BC.EAO, Water controller, DFO have signed off on the Back Up Tunnel project. We have received Federal approval and the screening decision suggested non-significant environmental impacts.
- Public presentations have been generally well accepted, letter of support from Cheslatta and Haisla First Nations have been received.
- Residents and communities along the Nechako River from Kenney Dam to Vanderhoof and Prince George currently benefit from flood mitigation provided by Rio Tinto Alcan operations; tunnel collapse would result in sever flooding - completion of the second tunnel reduces flood this risk



Kemano Powerhouse System showing the T2 Project in red.

An amendment to the Water License is required:

- Legal teams in both government and company agree that we need to change the Final water license description of the **"works"** in the paragraphs that detail the Kemano system infrastructure.
- The proposed amendment will add the completed tunnel, second intake and penstock tie-in to the definition of **"works"**.
- The proposed amendment does not contemplate a change in water flow, storage or capacity. No change in water flow, storage or Capacity, **No new generation is being added.**

Timing:

- **Time is critical as we are already in jeopardy of losing one of the two summers we had planned to utilize. Worse case is we have to delay startup of KMP...**

No more water than in the existing license is required and is not being asked for. No additional generation is being added.

From: Gilmore, Christopher JTI:EX
Sent: Thursday, June 14, 2012 9:59 AM
To: Yelovatz, Maureen JTI:EX
Cc: Sekyer, Dean JTI:EX; MacLaren, Les MEM:EX; Davidson, Glen W FLNR:EX; Paulson, Aleesa JTI:EX
Subject: MPB follow-up : Kemano back up (MEM FLNRO input)



Kemano back up
additional inf...

Good morning Maureen,

Here is the additional information requested by MPB.

If required we can arrange Les, Glen and/or the appropriate staff from their shops to participate in a follow-up briefing if there are remaining concerns on this or more specifically on electricity and/or water issues.

Regards,
Chris

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Supplemental Information for Minister Bell on RTA Water License Amendment OIC

Summary

In June 2011 RTA's plans for a back-up tunnel at the Kemano works became public as they consulted with Canadian Environmental Assessment Agency (CEAA.) CEAA recommended that DFO lead a screening process on this project which commenced.

In late 2011 after a legal review and discussion between RTA and the BC Comptroller of Water Rights, it was decided that for completeness and clarification the wording of *RTA's final water licence* should be amended to reflect this completion and the additional works associated with the construction of a back-up tunnel at the Kemano works.

The RTA Final Water Licence amendment is limited to the wording that describes the Kemano and subsequent assets known as the "works" as this description will be amended to reflect the tie in to the existing penstocks and completion of the tunnel and second intake and confirm that such are within the scope of the Final Water Licence.

No additional power generation capacity is being added. No additional water is required or is being requested. This application does not include any project to dredge Tahtsa Narrows.

Pages 62 through 63 redacted for the following reasons:

S.12, s.13

From: Shum, KT FLNR:EX
Sent: Wednesday, May 2, 2012 4:07 PM
To: MacLaren, Les MEM:EX
Subject: RE: pumped storage by RT Alcan

Good thanks. Please let me know if you'd like more information on Kemano operations. There are monthly numbers from the last couple of years that could provide a crude preliminary analysis.

From: MacLaren, Les MEM:EX
Sent: Wednesday, May 2, 2012 3:58 PM
To: Shum, KT FLNR:EX; Bonnyman, Sue MEM:EX
Cc: Davidson, Glen W FLNR:EX; Fitzpatrick, Brigitte C MEM:EX
Subject: RE: pumped storage by RT Alcan

Thanks KT. I would be interested in a meeting or a call to discuss this further.

I would also be interested in where RTA is at on completion of the second tunnel (just the tunnel, not Kemano Completion). I understood that this was something they were pursuing for reliability of supply to their modernized smelter. If the second tunnel is completed, they can go in and clean up a rock fall in the existing tunnel that limits their ability to fully utilize Kemano's peak capacity (closer to 1,000MW). As BC Hydro has contracted for Kemano capability not required for smelter use, this could contribute to meeting the large requirements for new energy (and supporting capacity) in the Northwest. Beyond Rev 6 and Site C, BCH is also looking at pumped storage in its IRP.

By copy of this note, I will ask Brigitte to set something up.

Les

From: Shum, KT FLNR:EX
Sent: Wednesday, May 2, 2012 3:26 PM
To: MacLaren, Les MEM:EX; Bonnyman, Sue MEM:EX
Cc: Davidson, Glen W FLNR:EX
Subject: pumped storage by RT Alcan

Les and Sue,

I would like to explore the possibility of pumped storage at Kemano/Tahtsa Lake (Nechako) with you. In a recent meeting with RT Alcan, Glen and I were surprised to hear that the idea had not been looked into.

After completion of the ongoing upgrades, smelter use at Kitimat would be around 700 MW and generating capacity at Kemano would be 960 MW. On an average year there would be enough water for an annual average generation of 840 MW only. As smelter use is 24/7, it would appear that BC Hydro could supply electricity to Kitimat during low demand hours and Kemano could generate at capacity during peak hours. If transmission capacity is there, the net result could be an equivalent of up to 260 MW of pumped storage.

While RT Alcan may not be interested in exploring the idea in wet years, it may be in the interest of the province to direct BC Hydro to look into the possibility especially during drier years. All the infrastructure required appears to be already in place.

Please let me know if I could help in pushing this possibility in any way (if the province or BC Hydro has not already decided against it).

KT