David Schulze

From:	Liette L.B. Boudreau [greffe.conseil@ekuanitshit.ca]
Sent:	April-30-12 9:08 AM
To:	Bernard Lafontaine; INapess; Jean-Charles J-C.P. Piétacho; Rita R.M. Mestokosho; Vincent VN. Napish
Cc:	David Schulze; Andras Mak
Subject:	TR: LCP Application to WRMD#1 - Three Stream Crossings (C7, C8 & C9) for South Side Access Road
Attachments:	Three Stream Crossings (C7, C8 and C9) for South Side Access Road - WRMD#1.pdf

De : Marie-Elda M-E.M. Mestokosho
Envoyé : 30 avril 2012 09:03
À : Jean-Charles J-C.P. Piétacho; Vincent VN. Napish
Cc : Liette L.B. Boudreau
Objet : TR: LCP Application to WRMD#1 - Three Stream Crossings (C7, C8 & C9) for South Side Access Road

De : McLean, Clyde [mailto:ClydeMcLean@gov.nl.ca]
Envoyé : 30 avril 2012 08:59
À : bacgeo@[redacted]; Carter, Paul A.; cmontaque@labradormetis.ca; conseil.de.bande@[redacted]; Marie-Elda M-E.M. Mestokosho; Harvey, Brian; kawawa@naskapi.ca; ken.rock@[redacted] Khan, Haseen; linnes@oktlaw.com; mcgagnon@[redacted]; McLean, Clyde; nadir.andre@[redacted] Peter Madden; preid@innu.ca; realmck@[redacted] Rebello, Krista; reception@pakuashipu.net; Steve Pellerin; tom_sheldon@nunatsiavut.com
Cc : Cleary, Bas
Objet : LCP Application to WRMD#1 - Three Stream Crossings (C7, C8 & C9) for South Side Access Road

April 30, 2012

I write further to my correspondence of March 29, 2012, in which I provided a copy of Nalcor Energy's Application for **LCP Application to WRMD#1 - Three Stream Crossings (C7, C8 & C9) for South Side Access Road** and requested that you provide any comments in relation to that Application within **30** days.

We have now proceeded to issue the regulatory approval related to that Application, and have enclosed a copy of same for your information.

The official language of the Government of Newfoundland and Labrador is English. As such, this signed letter, in English, is the official and authoritative communication from the Government of Newfoundland and Labrador to your organization. The unsigned French translation of this letter, which is attached hereto, is for your convenience only.

Please do not hesitate to contact the undersigned should you have any questions or concerns regarding the information or documentation included herewith.

Sincerely,

Clyde McLean, P.Eng
Manager, Water Investigations Section
Water Resources Management Division
Department of Environment and Conservation
4th Floor Confederation Bldg W
PO Box 8700
St. John's NL A1B 4J6

Tel: (709) 729-5713
Fax (709) 729-0320
Email: ClydeMcLean@gov.nl.ca
Web: www.env.gov.nl.ca/Env/water

cc. Steve Pellerin, Nalcor Energy
Brian Harvey, IGAA

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le 30 avril 2012

TRADUCTION NON OFFICIELLE

Je vous écrit à la suite de ma correspondence du **le 29 mars 2012**, dans laquelle je fournis une copie du Demande de Nalcor Energy concernant **LCP Application to WRMD#1 - Three Stream Crossings (C7, C8 & C9) for South Side Access Road**; j'ai demandé que vous fournissez des commentaires à l'égard de cette demande dans les **30** jours de la date de cette lettre.

Nous avons procédé à l'émission de l'autorisation à l'égard de cette demande visée, et ont joint une copie de même pour votre information.

La lange officielle du governement de Terre-Neuve-et-Labrador est l'anglais. En conséquence, la lettre signée en anglais, à qui cette lettre est jointe, comprend la communication autorité du gouvernement de Terre-Neuve-et-Labrador à votre organisation; cette traduction française non officielle est pour plus de commodité seulement.

S'il vous plaît communiquer avec le soussigné si vous avez des questions ou des préoccupations à l'information ou la documentation ci-jointe.

Sincèrement,

Clyde McLean, P.Eng
Manager, Water Investigations Section
Water Resources Management Division
Department of Environment and Conservation
4th Floor Confederation Bldg W

PO Box 8700
St. John's NL A1B 4J6

Tel: **(709) 729-5713**
Fax **(709) 729-0320**
Email: **ClydeMcLean@gov.nl.ca**
Web: **www.env.gov.nl.ca/Env/water**

cc. Steve Pellerin, Nalcor Energy
Brian Harvey, IGAA

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Environment and Conservation
Water Resources Management Division

PERMIT TO ALTER A BODY OF WATER

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, Section(s) 48

Date: **APRIL 30, 2012**

File No: **536-12**
Permit No: **ALT6271-2012**

Proponent: **Nalcor Energy**
500 Columbus Drive
PO Box 12800
St. John's NL A1B 0C9

Attention: **Peter Madden**

Re: **Lower Churchill Muskrat Falls – Three Stream Crossings (C7, C8 & C9) for South Side Access Road**

Permission is hereby given for: **the construction of three structures for stream crossings C7, C8, C9 and associated activities required to provide access to the project site of the Muskrat Falls generation facility via South Side Access Road, with reference to the applications dated January 23, 2012.**

- This permit does not release the proponent from the obligation to obtain appropriate approvals from other concerned provincial, federal and municipal agencies.
- The proponent must obtain the approval of the Crown Lands Division of the Department of Environment and Conservation if the project is being carried out on Crown Land.
- This permit is subject to the terms and conditions indicated in Appendix A (attached).
- It should be noted that prior to any significant changes in the design or installation of the proposed works, or in event of changes in ownership or management of the project, an amendment to this permit must be obtained from the Department of Environment and Conservation under Section 49 of the *Water Resources Act*.
- Failure to comply with the terms and conditions will render this permit null and void, place the proponent and their agent(s) in violation of the *Water Resources Act* and make the proponent responsible for taking any remedial measures as may be prescribed by this Department.

MINISTER

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Environment and Conservation

Permit No: ALT6271-2012

APPENDIX A

Terms and Conditions for Environmental Permit

Lower Churchill Muskrat Falls – Three Stream Crossings (C7, C8 & C9) for South Side Access Road

Bridge Construction

1. The use of creosote treated wood is strictly prohibited within 15 metres of all bodies of fresh water in the province.

2. Drainage ditches must collect and transport surface runoff in a manner that does not cause flooding, erosion or sedimentation of adjacent land or receiving waters.

3. Bridge abutments must be set back 0.5 metres from the normal edge of a watercourse to prevent constriction during high flow conditions.

4. Infilling must not cause increased water elevation upstream or increase flow velocity downstream of the site. Reduction of the natural cross sectional area of any watercourse is not permitted.

5. The upstream and downstream sides of abutments must be protected with rip-rap, concrete or heavy timber to prevent erosion and scouring.

6. Abutments and piers must be constructed in the dry and during times of low flow.

7. Roadside embankments near the watercourse must be adequately protected from erosion by sodding, seeding or placing of rip-rap.

8. Adequate erosion protection must be provided where roadside ditches discharge into watercourses near bridges.

Bridge Design

9. A 15.24 metre bridge may be constructed across C7 (5+800) at Caroline's Brook, near Muskrat Falls.

10. The bridge must have the following minimum dimensions:

Bridge span	15.24 m
Waterway opening	37.0 m^2
Height above high water level	2.0 m

11. The crossing structure must provide adequate capacity to safely discharge flood flows without causing backwater effects upstream or increased flow velocity downstream.

12. To safely convey peak flows the bridge must be designed according to the following hydraulic criteria:

Design return period	100 years
Minimum flow capacity	52.0 m^3/s
Maximum flow velocity	0.83 m/s

Temporary Bridge

13. The temporary stream crossing must be removed once the permanent crossing is in place. The proponent must dismantle and remove all constructed works and restore the site to its original condition. All material placed in the stream must be completely removed.

Fording

14. Except for single passenger all terrain vehicles, crossings by other vehicles or construction equipment shall be limited to one trip in and one trip out.

15. Timbers or rocks shall be placed in streams to facilitate crossing or to minimize damage to the channel sections provided the streams are not unnecessarily constricted or backed up.

16.

	Description of	Amount of	Channel Width	Channel Depth

Stream Crossing	Streambed	Vegetation	(m)	(m)
C7 (5+800) Caroline's Brook	Cobble, Boulder	Sparse	7.8	1.00

17. Alteration of the natural minimum streamflow is not permitted in order to preserve aquatic life.

18. Stream banks at fording sites that contain loose or erodible material must be adequately stabilized before crossing to minimize any siltation of streams.

19. The natural course of any stream must not be altered.

20. The fording sites must be located at shallow sections of the channels where there are low approach grades, and where the channels consists of stable non-erodible rock or cobbles.

21. Fording shall only be carried out during periods of low water levels.

22. When the fording sites are no longer required, the proponent must dismantle and remove all constructed works and restore the sites to their original condition. All material placed in streams must be completely removed.

23. A complete oil spill clean-up kit must be on site at all times when gasoline or fuel powered equipment is being used or refuelled. The kit must contain the following:
    - One hand operated fuel pump
    - One recovery container such an empty 205 litre drum
    - One shovel
    - One pick ax
    - Five metres of containment boom
    - Five absorbent pads
    - Twenty-five litres of loose absorbent material

24. Within 30 days after expiry of this permit, the proponent must submit to the department a report confirming that each fording location was left in as good or better condition than prior to proponents fording activities. This report should include detailed pictures of each site before and after project activities.

Culvert Design

25. A 36 metre long - 1200 mm diameter CSP culvert may be installed at crossing C8 (7+590). A 32 metre long - 1200 mm diameter CSP culvert may be installed at crossing C9 (10+678).

26. The crossing structures must provide adequate capacity to safely discharge flood flows without causing backwater effects upstream or increased flow velocity downstream.

27. To safely convey peak flows the 36m long culvert installation at C8 (7+590) crossing must be designed according to the following hydraulic criteria:

    Design return period 100 years
    Maximum flow capacity 1.41 m^3/s
    Maximum flow velocity n/a m/s

    To safely convey peak flows the 32m long culvert installation at C9 (10+678) crossing must be designed according to the following hydraulic criteria:

    Design return period 100 years
    Maximum flow capacity 1.19 m^3/s
    Maximum flow velocity n/a m/s

Culvert Installation

28. Drainage ditches must collect and transport surface runoff in a manner that does not cause flooding, erosion or sedimentation of adjacent land or receiving waters.

29. Inlet and outlet areas of culvert installations must be adequately protected from erosion by placing rip-rap, fitted stone, or concrete headwalls.

30. Culvert installations must follow the stream channel gradient to the maximum extent possible and placed in line with the direction of the main flow to minimize disturbance to the channel. Culverts must not disrupt the flow of water or cause ponding at the upstream side of the installation.

31. In multiple culvert installations, one culvert must be set a minimum of 150 mm lower than the others to provide adequate water depth and velocity for fish passage during low flow conditions. In addition, multiple culverts must be installed within 0.6 to 0.9 metres apart for maximum stability.

32. Where pumping is used to bypass flow, cofferdams must be installed both above and below areas of construction. The proponent must provide pumps with sufficient capacity to prevent washout of cofferdams.

33. Cofferdams must be properly designed and constructed of suitable materials to prevent leakage and to resist loss of any material as a result of erosion. Cofferdams must be removed upon completion of their intended function. All material must be removed carefully to prevent disturbance of the water body and to prevent water quality degradation.

34. All work involving minor alteration to the stream channel to permit culvert placement must be carried out at a time of low flow, and in a manner that prevents downstream siltation and unnecessary alteration of the channel.

35. Grading and finishing of roadways or road embankments must not cause damage to culverts or allow road material to enter the watercourse.

36. Roadside embankments near the watercourse must be adequately protected from erosion by sodding, seeding or placing of rip-rap.

37. Culverts must be inspected regularly so that immediate action can be taken to clear blockages caused by ice or debris or to undertake repairs as required.

38. The inlet and outlet of culverts must be clearly marked so that operators of road grading and snow clearing equipment can avoid blocking culverts.

39. Any damage to culverts during installation or due to inadequate capacity and/or improper construction must be reported to this Department. Damaged culverts must be replaced immediately to prevent overtopping, erosion, or flooding.

40. If a culvert is installed in natural fish habitat it must be embedded a minimum of 150 mm below the natural streambed (up to a maximum of 1/3 of the culvert diameter).

General Alterations

41. Any work that must be performed below the high water mark must be carried out during a period of low water levels.

42. Water pumped from excavations or work areas, or any runoff or effluent directed out of work sites, must have silt and turbidity removed by settling ponds, filtration, or other suitable treatment before discharging to a body of water. Effluent discharged into receiving waters must comply with the *Environmental Control Water and Sewage Regulations, 2003*.

43. All operations must be carried out in a manner that prevents damage to land, vegetation, and watercourses, and which prevents pollution of bodies of water.

44. The use of heavy equipment in streams or bodies of water is not permitted. The operation of heavy equipment must be confined to dry stable areas.

45. All vehicles and equipment must be clean and in good repair, free of mud and oil, or other harmful substances that could impair water quality.

46. During the construction of concrete components, formwork must be properly constructed to prevent any fresh concrete from entering a body of water. Dumping of concrete or washing of tools and equipment in any body of water is prohibited.

47. Wood preservatives such as penta, CCA or other such chemicals must not be applied to timber near a body of water. All treated wood or timber must be thoroughly dry before being brought to any work site and installed.

48. Any areas adversely affected by this project must be restored to a state that resembles local natural conditions. Further remedial measures to mitigate environmental impacts on water resources can and will be specified, if considered necessary in the opinion of the Department.

49. The bed, banks and floodplains of watercourses, or other vulnerable areas affected by this project, must be adequately protected from erosion by seeding, sodding or placing of rip-rap.

50. All waste materials resulting from this project must be disposed of at a site approved by the Department of Service NL.

51. Sediment and erosion control measures must be installed before starting work. All control measures must be inspected regularly and any necessary repairs made if damage is discovered.

52. Fill material must be of good quality, free of fines or other substances including metals, organics, or chemicals that may be harmful to the receiving waters.

53. The attached Completion Report (Appendix B) for Permit No. 6271 must be completed and returned to this Department upon completion of the approved works.

54. This Permit is valid for two years from the date of issue. Work must be completed by that date or the application and approval procedure must be repeated.

55. The location of the work is highlighted on the Location Map for this Permit attached as Appendix C.

cc: Mr. Clyde McLean, P. Eng.
Manager, Water Investigations Section
Water Resources Management Division
Department of Environment and Conservation

cc: Ms. Kathleen Simms (L)
Area Habitat Biologist - Labrador
Department of Fisheries and Oceans
Bldg. 397, CFB Goose Bay
PO Box 7003, Station A
Happy Valley - Goose Bay, NL A0P 1S0

cc: Ms. Michelle Roberge
Section Head, Habitat Planning and Operations
Marine Environment and Habitat Management Division
Department of Fisheries and Oceans
PO Box 5667
St. John's NL A1C 5X1

cc: Chef François Bellefleur
Conseil des Montagnais de Natashquan
78, rue Mashkush
Natashquan, QC G0G 2E0

cc: Chef Georges Bacon
Conseil de bande des Montagnais d'Unamen Shipu
Carte postale 121
La Romaine, QC G0G 1M0

cc: File Copy for Binder

cc: Chef Jean-Charles Piétacho
Conseil des Innus d'Ekuanishit
35, rue Manitou, C.P. 420
Mingan, QC G0G 1V0

cc: Chef Réal McKenzie
Conseil de la Nation Innu Matimekush-Lac John
172 Pearce Lake
Carte postale 1390
Schefferville, QC G0G 2T0

cc: Chief Louis Einish
Naskapi Nation of Kawawachikamach
1009 Naskapi Road
P.O. Box 5111
Nuchimiyuschiiy, QC G0G 2Z0

cc: Chris Montague
President
NunatuKavut Community Council
P.O. Box 460, Station C
Happy Valley-Goose Bay, NL A0P 1C0

cc: Conseil des Innus de Pakua Shipu
Carte postale 178
Pakua Shipi, QC G0G 2R0

cc: Ken Rock
Innu Takuaikan Uashat mak Mani-Utenam
P.O. Box 8000
265 Boul. Des Montagnais
Uashat, QC G4R 4L9

cc: Larry Innes and Paula Reid

Innu Nation
P.O. Box 119
Sheshatshiu, NL A0P 1M0

cc: Marie-Christine Gagnon
BCF LLP
1100, boul. René Levesque Ouest, 25e étage
Montréal, QC H3B 5C9

cc: Mr. Brian Harvey
Director, Policy and Planning (A), Aboriginal Affairs Branch
Intergovernmental and Aboriginal Affairs Secretariat

cc: Mr. Steve Pellerin
Nalcor Energy
Hydro Place, 500 Columbus Drive
P.O. Box 12800
St. John's, NL A1B 0C9

cc: Mr. Tom Sheldon
Director
Environment Division
Nunatsiavut Government
P.O. Box 70
Nain, NL A0P 1L0

cc: Nadir André
BCF LLP
1100, boul. René Levesque Ouest, 25e étage
Montréal, QC H3B 5C9

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Environment and Conservation
Water Resources Management Division

Appendix B - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, Section(s) 48

Date: **APRIL 30, 2012**

File No: **536-12**
Permit No: **ALT6271-2012**

Proponent: **Nalcor Energy**
500 Columbus Drive
PO Box 12800
St. John's NL A1B 0C9

Attention: **Peter Madden**

Re: **Lower Churchill Muskrat Falls – Three Stream Crossings (C7, C8 & C9) for South Side Access Road**

Permission was given for: **the construction of three structures for stream crossings C7, C8, C9 and associated activities required to provide access to the project site of the Muskrat Falls generation facility via South Side Access Road, with reference to the applications dated January 23, 2012.**

I (the proponent named above or agent authorized to represent the proponent) do hereby certify that the project described above was completed in accordance with the plans and specifications submitted to the Department of Environment and Conservation and that the work was carried out in strict compliance with the terms and conditions of the Permit issued for this project.

Date: _____ Signature: _____

This completion report must be completed and forwarded to the following address upon completion of the approved work.

Department of Environment and Conservation
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Environment and Conservation

Permit No: ALT6271-2012

APPENDIX C

Location Map for Environmental Permit