

**Ministry of Natural
Resources and Forestry**

Engineering Services
Southern Region
Regional Operations Division
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**Ministère des Richesses
naturelles et des Forêts**

Services d'ingénierie
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August 8, 2017

BRA-15-02

MEMORANDUM TO:

Sandra Ausma
Resource Operation Supervisor
Parry Sound District
7 Bay Street
Parry Sound, ON P2A 1S4

**SUBJECT: Application under the *Lakes and Rivers Improvement Act*
North Bala Dam Small Hydro, Phase 1A Temporary Works
3111 Muskoka Road 169, Township of Muskoka Lakes
Lot 33, Concession 7, Geographic Township of Wood and
Lot 14, Concession A, Geographic Township of Medora both now
Township of Muskoka Lakes**

We have reviewed the plans and specifications submitted in connection with the above noted application and find them to be acceptable.

Attached, is our amended phase 1 approval under subsection 14(5) of the *Lakes and Rivers Improvement Act* including the amended Schedule 'F' Conditions.

This amended approval supersedes the original approval BRA-15-02 dated April 17, 2015, the amended approval BRA-15-02 dated April 28, 2016 and the amended approval BRA-15-02 dated April 27, 2017.

A handwritten signature in black ink, appearing to read "Henry Haemel".

Henry Haemel, P. Eng.
Senior Project Engineer
Engineering Services, Southern Region
Attachments

AMENDED SCHEDULE F

CONDITIONS

SUBJECT: Application for approval under the *Lakes and Rivers Improvement Act*
North Bala Dam Small Hydro – Phase 1A Temporary Works
3111 Muskoka Road 169, Township of Muskoka Lakes
Lot 33, Concession 7, Geographic Township of Wood and
Lot 14, Concession A, Geographic Township of Medora both now
Township of Muskoka Lakes
Applicant: Swift River Energy Limited
Consultant: WSP Canada Inc., Gilles Bourgeois, P.Eng.

The plans and specifications for the North Bala Dam Small Hydro – Phase 1A Temporary Works, 3111 Muskoka Road 169, Township of Muskoka Lakes, Lot 33, Concession 7, Geographic Township of Wood and Lot 14, Concession A, Geographic Township of Medora both now Township of Muskoka Lakes, have been approved under subsection 14(5) of the *Lakes and Rivers Improvement Act* (“LRIA”) subject to the following conditions:

1. This approval is given ONLY to the proposed works shown and/or described on the following documents prepared by WSP Canada Inc., CTD Inc. and CRT Construction:
 - 1.1 Application for a Work Permit dated April 22, 2014.
 - 1.2 Dwg No. 131-13550-ENV-01, titled ‘ Existing Conditions and Proposed Layout, General Plan View ‘, sealed and signed by Gilles Bourgeois, P.Eng., dated February 12, 2015.
 - ~~1.3 Dwg No. 131-13550-LRIA-02, titled ‘ Construction Stages, Plan Views (1/3) ‘, sealed and signed by Gilles Bourgeois, P.Eng., dated September 30, 2014.~~
 - ~~1.4 Dwg No. 131-13550-LRIA-05, titled ‘ Temporary Works, Sections ‘, sealed and signed by Gilles Bourgeois, P.Eng., dated September 30, 2014.~~
 - ~~1.5 North Bala Small Hydro Project, Lakes and Rivers Improvement Act Application – Phase 1A: Temporary Works, report signed by Gilles Bourgeois, P.Eng., Revision 2, September 2014.~~
 - 1.6 Dwg No. CRT-17-01A, C01 of 5, titled ‘ Upstream Cofferdam, Plan View, Section ‘, Revision 5, sealed and signed by Pascal Lamy, P.Eng., dated August 3, 2017.
 - 1.7 Dwg No. CRT-17-01, C02 of 5, titled ‘ Upstream Cofferdam, 14’-0” Panel, Details ‘, Revision 5, sealed and signed by Pascal Lamy, P.Eng., dated August 3, 2017.
 - 1.8 Dwg No. CRT-17-01, C03 of 5, titled ‘ Upstream Cofferdam, 10’-0” Panel, Details ‘, Revision 5, sealed and signed by Pascal Lamy, P.Eng., dated August 3, 2017.

- 1.9 Dwg No. CRT-17-01, C04 of 5, titled ' Upstream Cofferdam, Installation ', Revision 5, sealed and signed by Pascal Lamy, P.Eng., dated August 3, 2017.
- 1.10 Dwg No. CRT-17-01, C05 of 5, titled ' Upstream Cofferdam, Sealing Details ', Revision 5, sealed and signed by Pascal Lamy, P.Eng., dated August 3, 2017.
- 1.11 Dwg No. CRT-17-01B, C01 of 2, titled ' Downstream Cofferdam, Plan View, Section A-A ', Revision 3, sealed and signed by Pascal Lamy, P.Eng., dated July 20, 2017.
- 1.12 Dwg No. CRT-17-01B, C02 of 2, titled ' Downstream Cofferdam, Section B-B ', Revision 3, sealed and signed by Pascal Lamy, P.Eng., dated July 20, 2017.
- 1.13 Dwg titled, Tailrace Channel Excavation – Work Plan Sheet 1 – Site Overview ', prepared by Cedric Godbout.
- 1.14 Dwg titled, 'Tailrace Channel Excavation – Work Plan Sheet 2 – Excavation ', prepared by Cedric Godbout.
- 1.15 Dwg No. CRT-GEN-002, titled, 'General Site Plan, Plan View, Step B, Civil Works + Temporary Access ', Revision 1, prepared by Cedric Godbout. Dated June 22, 1017.
- 1.16 Calculation Note for Upstream Steel Cofferdam, sealed and signed by Pascal Lamy, dated May 31, 2017.
- 1.17 Calculation Note for Downstream Sea Cofferdam – before Backfilling, sealed and signed by Pascal Lamy, dated May 31, 2017.
- 1.18 Calculation Note for Downstream Concrete Cofferdam, sealed and signed by Pascal Lamy, dated May 31, 2017.
- 1.19 Calculation Note for Anchor Addition, sealed and signed by Pascal Lamy, dated August 3, 2017.
- 1.20 North Bala Hydropower Project, Upstream Cofferdam Flood Emergency Plan, Revision 01, prepared by Cedric Godbout, dated May 31, 2017.
- 1.21 Letter from CRT Construction to Swift River Energy, prepared by Cedric Godbout, dated July 19, 2017.
- 1.22 Letter from WSP to Ministry of Natural Resources and Forestry, prepared by Gilles Bourgeois, dated July 26, 2017.

This amended approval supersedes the original work permit BRA-15-02 dated April 17, 2015, the amended work permit BRA-15-02 dated April 28, 2016 and the amended work permit BRA-15-02 dated April 27, 2017.

2. Any changes to the design for this project shall require prior review and approval by the Ministry of Natural Resources and Forestry (the "Ministry").
3. In-water work shall not be permitted during the period of April 1st to May 31st unless otherwise approved by the Ministry.

4. Vegetation clearing shall not be permitted during the period of May 24th to July 23rd unless otherwise directed by the Ministry.
5. The approval holder (Swift River Energy Limited or their successor) shall provide the Ministry, Southern Region Engineering Services, Peterborough with stamped and signed engineering drawings for the ~~proposed temporary~~ emergency plan cofferdam ~~upstream of the north dam~~ in accordance with all applicable legislation (i.e. OHSA, PEO, etc.) prior to the construction of the temporary cofferdam.
6. The Ministry reserves the right to direct the approval holder or its agents to ~~lower or~~ remove the temporary cofferdam upstream of the north dam at any time for the purpose of flood mitigation. The temporary cofferdam shall have a removable portion sufficient to convey the 100 year flow event estimated to be 163m³/s at the north dam. ~~The removable portion of the cofferdam shall consist of a minimum 32 metres wide section removed to an elevation of 223.50 metres in accordance with North Bala Small Hydro Project, Lakes and Rivers Improvement Act – Phase 1A: Temporary Works Report, WSP, September 2014, Section 5.3.1.2, pages 18-19.~~
7. Upon issuance of a Flood Watch by the Ministry, Parry Sound District, Bracebridge Field Office, IRM Technical Specialist (705) 646-5531, the approval holder shall mobilize the equipment and persons necessary to remove the removable portion of the cofferdam within twenty-four (24) hours of receiving the Flood Watch notification. Subsequent to the Flood Watch notification, the Ministry, Parry Sound District, Bracebridge Field Office, IRM Technical Specialist (705) 646-5531 will then indicate when to proceed with the removal of the removable portion of the cofferdam.
8. The Ministry's dam operators shall be permitted unencumbered access to any work site to inspect, maintain and operate the Bala North dam and Bala South dam for water level and flow management as per the Lake Muskoka annual operating plan of the Muskoka River Water Management Plan.
9. The temporary cofferdam upstream of the north dam shall be placed after May 31st, 2017 and removed prior to March 1st, 2018. The approval shall obtain written permission from Canadian Pacific Railways for any portion of the cofferdam that will encroach on Canadian Pacific Railway lands.
10. The approval holder's engineer shall inspect the condition of the existing dam piers and the bedrock following the placement of the upstream cofferdam and after de-watering the area in order to verify the stability of the existing piers and make recommendations to stabilize the piers if required.
11. The approval holder's engineer shall provide sufficient protection to the District Municipality of Muskoka Road 169 bridge piers from construction activities and equipment.

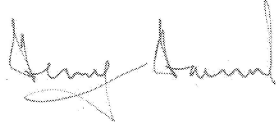
12. The approval holder shall maintain the riparian right of access to water in the vicinity of the temporary cofferdam.
13. All six (6) sluices from the north dam shall be unobstructed on both the upstream and downstream locations following an issue of a Flood Watch by Parry Sound District, Bracebridge Field Office.
14. The approval holder shall report any species at risk encountered at the project site to the Ministry's Resource Project Coordinator, Parry Sound District, Manager, Bracebridge Field Office (705-646-5553) within forty-eight (48) hours of the time of observation.
15. A Licence to Collect Fish for Scientific Purposes shall be required for any fish transfers.
16. The approval holder shall require that the construction of the aforementioned work shall be inspected by the design engineer, WSP Canada Inc., or his/her representative, as frequently as may be required to ensure compliance with the plans and specifications and conditions of approval. The approval holder shall provide bi-weekly progress updates during construction consisting of photos with captions to Parry Sound District, IRM Technical Specialist (705) 646-5531.
17. The approval holder shall be responsible for periodic and regular inspection, maintenance, operation and repair of the works in accordance with the approved plans and specifications to ensure structural integrity and functional performance.
18. The approval holder shall not allow any deleterious substance, (as defined in the *Canada Fisheries Act*) caused by his/her activity, to enter or re-enter the water body.
19. All fill placed in the water shall be free of fines capable of being suspended and transported outside of the work area, unless effectively isolated by sediment control measures.
20. Sediment control measures shall be installed, maintained and monitored as necessary to achieve suspended sediment and turbidity objectives specified in the Erosion and Sediment Control Plan documented in Appendix 4 of North Bala Small Hydro Project, Lakes and Rivers Improvement Act – Phase 2: Permanent Structures, Rev. 01 Report, WSP, November 2016.
21. The approval holder shall submit a detailed erosion and sediment control plan to Ministry, Southern Region Engineering Services prior to commencing construction. Appropriate siltation control device(s) e.g., a silt/sediment fence, dewatering trap, etc. shall be installed and maintained at the site during the construction period for

any in-water works. If erosion and sediment control measures are ineffective or not in place, the approval holder shall immediately notify the Ministry, Parry Sound District, Project Coordinator, Bracebridge Field Office (705)-646-5553, and take action to ensure that appropriate controls are installed.

22. Upon completion of construction, the approval holder shall require the design engineer to certify, in writing, to the Ministry, Parry Sound District, Project Coordinator, Bracebridge Field Office (705)-646-5553, that the work was completed in accordance with the approved plans or identify aspects of the work which were modified and provide a set of as-constructed drawings.
23. Immediately after construction, all disturbed surfaces shall be stabilized, sodded or seeded to guard against erosion.
24. The approval is only for the works described in the reports and drawings in condition 1 above as ~~Phase 1A~~. The applicant shall be required to make a separate application under the *LRIA* for subsequent work. The permit applies to the period of time from permit issuance until April 30, 2018.
25. The issuance of this approval does not confer authorization to the approval holder to enter or use the property of third parties without permission of the land owner(s).
26. The issuance of this approval does not relieve the approval holder from the responsibility of acquiring any other approvals as may be required by law nor does it relieve the approval holder from any other legal requirements.
27. The approval holder shall provide the Ministry, Southern Region Engineering Services, Peterborough (705) 755-3245, with a copy of the contract specification for the proposed works prior to commencing construction.
28. The approval holder shall contact Parry Sound District, Bracebridge Field Office, IRM Technical Specialist (705) 646-5531, twenty-four (24) hours prior to District staff attending the site for the purpose of north dam operations to accommodate construction.
29. The approval holder shall contact Parry Sound District, IRM Technical Specialist (705) 646-5531, forty-eight (48) hours prior to the construction start-up meeting and any regularly scheduled site meetings between the contractor and the approval holder's engineer. The Ministry reserves the right to attend any construction meetings.
30. The approval holder shall contact Parry Sound District, IRM Technical Specialist (705) 646-5531, forty-eight (48) hours prior to commencement of the work in order that inspections may be arranged.

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Schedule 'F' - Conditions
Approval BRA-15-02

Approved
Under subsection 14(5) of the *Lakes and Rivers Improvement Act*.



Engineer Under the Act
Engineering Services, Southern Region