



MINISTER OF
CONSERVATION AND WATER STEWARDSHIP

Legislative Building
Winnipeg, Manitoba, CANADA
R3C 0V8

Client File 5550.00

July 2, 2014

Bruce Barrett, President
Keeyask Hydropower Limited Partnership
360 Portage Ave.
P.O. Box 815, Stn Main
Winnipeg MB R3C 2P4

Dear Mr. Barrett:

Enclosed is Environment Act licence No. 3107 dated July 2, 2014 issued to Keeyask Hydropower Limited Partnership for the construction, operation, maintenance and decommissioning of the Keeyask Generation Station and related dams, dikes, channels, control structures and infrastructure.

In addition to the Licence requirements, it is my intention to ensure that all of the non-licensing recommendations in the Clean Environment Commission report be implemented. In addition to the Clean Environment Commission report, I reviewed and considered the Crown-Aboriginal consultation report before making a licensing decision. Technical staff in my department will contact you in the near future to discuss implementation of the recommendation to investigate and incorporate Aboriginal traditional knowledge and local knowledge of historical "summer resident caribou" to inform the current status and management of this population.

I address the following requirements specifically to Manitoba Hydro:

- As outlined in the Environmental Impact Statement, and exceeding the recommendations in the related Keeyask Clean Environment Commission report, licence conditions have been imposed to ensure that Manitoba Hydro implements a world class, leading edge program to protect the Lake Sturgeon population that may be affected by the construction and operation of this project. We expect that Manitoba Hydro establish and maintain a robust and self-sustaining Lake Sturgeon population in affected areas of the Nelson and Burntwood River systems throughout the life of the project. An expert committee will be formed consisting of Manitoba Hydro, on behalf of the Keeyask Hydropower Limited Partnership, the federal Department of Fisheries and Oceans, and Conservation and Water

Stewardship, and Fisheries Branch whose purpose is to independently review the results of the annual conservation and stocking Lake Sturgeon monitoring program and to recommend adaptive management strategies.

- Manitoba Hydro has stated that once the Keeyask Generating Station is operational, the need for coal-fired emergency generation will be eliminated. This is consistent with government's commitment to clean energy. As such, pursuant to Environment Act licence No. 1703R, Manitoba Hydro must cease coal-fired operations of the Brandon Generating Station Unit 5, as of December 31, 2019. It is expected that there will be no layoffs as a result of this closure and Manitoba Hydro will manage accordingly.
- Manitoba Hydro will be required to invest in educational and/or knowledge transfer programs that promote trapping as well as plant harvesting to affected communities.
- Manitoba Hydro will be required to continue to fund efforts to prevent and manage infestation of zebra mussels and other invasive species which may negatively affect Hydro development.
- By June 2015, Manitoba Hydro is required to undertake a comprehensive review of pesticide use for new development and existing operations with the objective of eliminating or reducing pesticide use and moving to lower risk pesticides.
- Manitoba Hydro is required to seek to rehabilitate the landscape, where possible, including the Sundance town site, unused borrow pits, storage yards, dumps, and other such disturbances.
- The final results of the Regional Cumulative Effects Assessment are due no later than October 31, 2015. Included in the attached licence is a clause that refers to this Assessment and provides the Director authority to require Manitoba Hydro to conduct additional monitoring or corrective action should the results of the Assessment indicate such work would be environmentally beneficial in the project area.
- I understand that Manitoba Hydro has no future development plans for the Seal River. Over the next three years, Manitoba intends to consult on options to protect the Seal River ecosystem as a critical habitat for the beluga whale.

The Keeyask Hydropower Limited Partnership represents a very significant and positive joint venture between Tataskweyak Cree Nation, War Lake First Nation, York Factory First Nation, Fox Lake Cree Nation and Manitoba Hydro, and one which we believe speaks to an ongoing process of partnership and reconciliation.

We are pleased with the work of the Partnership in effectively incorporating both traditional and western scientific knowledge into the Keeyask project Environmental Impact Statement and related filings – this joint approach has produced a deeper and more robust assessment of impacts and mitigation and avoidance strategies. We encourage the Partnership to continue to work toward expanding opportunities for Aboriginal skills training and employment in connection to the Keeyask project.

The Manitoba Government also encourages Manitoba Hydro to continue along this path of reconciliation with all of Manitoba's Aboriginal and northern communities, to recognize the significant effects of earlier hydro development on local communities and the wider environment, and to apply lessons learned from the past to build more positive relationships and partnerships

going forward. Among other initiatives, we encourage Manitoba Hydro to explore with Aboriginal communities the renaming of past development projects to better reflect traditional values, and to continue to increasingly engage aboriginal and local labour in development projects and ongoing operations.

In addition to the enclosed Licence requirements, please be informed that all other applicable federal, provincial and municipal regulations and by-laws must be complied with. A Notice of Alteration must be filed with the Minister for approval prior to any alteration to the Development as licensed.

Pursuant to Section 27 of *The Environment Act*, this licensing decision may be appealed by any person who is affected by the issuance of this Licence within 30 days of the date of the Licence.

Yours truly,

Original Signed By

Gord MackIntosh

The Environment Act

Enc.

c: Don Labossiere, Director, Environmental Compliance and Enforcement
Pierce Roberts, Director, Regional Services
Public Registries, Public Distribution List

NOTE: Confirmation of Receipt of this Licence No. 3107 (by the Licensee only) is required by the Director of Environmental Approvals. Please acknowledge receipt by signing in the space provided below and faxing a copy (letter only) to the Department by July 18, 2014.

On behalf of the Keeyask Hydropower Limited Partnership

Date

****A COPY OF THE LICENCE MUST BE KEPT ON SITE AT THE DEVELOPMENT AT ALL TIMES****

Keeyask Generation Project – Public Distribution List

Public Interest Law Centre
Ian RJ Brown
Manitoba Wildlands
The Manitoba Métis Federation
Nisichawayasihk Cree Nation
Pimicikamak Okimawin
Peguis First Nation
Clean Environment Commission

Manitoba Environment
The Environment

LICENCE

Licence No. / Licence n° 3107
Issue Date / Date de délivrance July 2, 2014

In accordance with *The Environment Act* (C.C.S.M. c. E125) /
Conformément à la *Loi sur l'environnement* (C.P.L.M. c. E125)

Pursuant to Section 12(1) / Conformément au Paragraphe 12(1)

THIS LICENCE IS ISSUED TO : / CETTE LICENCE EST DONNÉE À :

KEYYASK HYDROPOWER LIMITED PARTNERSHIP;
"the Licencee"

for the Development being the Keeyask Generation Project, a 695-megawatt hydroelectric generating station, located on the lower Nelson River, approximately 180 km northeast of Thompson. The Development involves the construction, operation, maintenance and decommissioning of the Keeyask Generating Station, and related dams, dikes, channels, control structures and infrastructure, including roads, in accordance with the Proposal filed under *The Environment Act*, dated December 9, 2011, and the Environmental Impact Statement (EIS), dated July 6, 2012, and additional information dated November 19, 2012, April 24, 2013, April 26, 2013, July 12, 2013, July 22, 2013 and August 23, 2013, and in consideration of the April 2014 Clean Environment Commission Report on Public Hearings, and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence:

"affected area" means a geographical area, excluding the property of the Development;

"aggregate" means any crushed stone or slag, crushed or uncrushed gravel, sand or mineral filler;

"approved" means approved by the Director or Environment Officer in writing;

"Director" means an employee so designated pursuant to *The Environment Act*;

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"Environment Officer" means an employee so designated pursuant to *The Environment Act*;

"Offsetting Programs" means programs that are intended to provide appropriate replacements, substitutions and opportunities to compensate for unavoidable effects associated with the Development on practices, customs and traditions integral to the distinctive cultural identity of each of the Keeyask Cree Nations;

"opacity" means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background;

"PIT tags" means Passive Integrated Transponder tags, consisting of an integrated circuit chip, capacitor, and an encased antenna coil used for tracking individual organisms;

"particulate matter" means any finely divided liquid or solid matter other than water droplets;

"particulate residue" means that part or portion of an atmospheric emission which is deposited onto a surface;

"point source" means any point of emission from the Development where pollutants are ducted into the atmosphere;

"riparian area" means an area of land on the banks or in the vicinity of a waterbody, which due to the presence of water supports, or in the absence of human intervention would naturally support, an ecosystem that is distinctly different from that of adjacent upland areas (*The Water Protection Act 2005*);

"study area" means the geographical limits within which effects on an element of the environment or key topic is assessed in the Environmental Impact Statement for the Development;

"summer resident caribou" as identified in the Environmental Impact Statement, means a population of caribou that uses a smaller range than migratory caribou, and is more likely to use calving and rearing habitat that occurs within the Keeyask region;

"waterbody" means any body of flowing or standing water, whether naturally or artificially created, and whether the flow or presence of water is continuous, intermittent or occurs only during a flood, including but not limited to a lake, river, creek, stream, and wetland (slough, marsh, swamp, etc.), including ice on any of them (*The Water Protection Act 2005*); and

"wetland" means land that is saturated with water long enough to promote wetland or aquatic processes as indicated by poorly drained soils, hydrophytic vegetation, and

various kinds of biological activity which are adapted to a wet environment. They are generally less than approximately 2 metres in depth (National Wetland Working Group 1997).

GENERAL TERMS AND CONDITIONS

This Section of the Licence contains requirements intended to provide guidance to the Licencee in implementing practices to ensure that the environment is maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

Compliance

1. The Licencee shall adhere to the commitments made in the Proposal, supporting information filed in association with the Proposal, and plans submitted and approved pursuant to this Licence during construction, maintenance, operation and decommissioning of the Development.

Additional Permits

2. The Licencee shall, prior to commencing construction of the Development, apply for and obtain all land tenure allocations and Work Permits as required from the appropriate Conservation and Water Stewardship district office and shall comply with the conditions of all permits.
3. The Licencee shall, prior to commencing construction of the Development, obtain all permits and agreements as required by Manitoba Infrastructure and Transportation.

Environmental Inspection

4. The Licencee shall, during construction of the Development, employ qualified environmental inspectors to monitor the work on a daily basis to ensure that all the environmental practices outlined in the Proposal, supporting information, and the plans submitted pursuant to this Licence are carried out.

Additional Reporting

5. The Licencee shall, in addition to any of the specifications, limits, terms and conditions specified in this Licence, upon the request of the Director:
 - a) sample, monitor, analyse or investigate specific areas of concern regarding any segment, component or aspect of the Development for such duration and at such frequencies as may be specified;
 - b) determine the environmental impact associated from the Development;

- c) conduct specific investigations in response to the data gathered during environmental monitoring programs; or
- d) provide the Director, within such time as may be specified, with such reports, drawings, specifications, analytical data, descriptions of sampling and other information as may from time to time be requested.

Reporting Format

6. The Licencee shall submit all information required to be provided to the Director or Environment Officer under this Licence, in writing, in such form (including number of copies) and of such content as may be required by the Director or Environment Officer, and each submission shall be clearly labelled with the Licence Number and Client File Number associated with this Licence.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Notification

7. The Licencee shall, prior to beginning construction of the Development, provide notification to the Environment Officer responsible for the administration of this Licence of the intended start date of construction and the name of the contractor(s) responsible for the construction.
8. The Licencee shall, prior to construction, provide a copy of this Licence to the contractor(s) and subcontractor(s) involved in the Development.

Access Routes

9. The Licencee shall not create or improve roads or short access routes for construction and/or maintenance of the Development without written approval from the Northeast Region Integrated Resource Management Team (IRMT) of Conservation and Water Stewardship.
10. The Licencee shall submit an access route inventory and decommissioning and rehabilitation plan for all access routes created or improved in association with the Development, upon completion of construction of the Development, as required by the Northeast Region IRMT.

Local Aboriginal Language

11. The Licencee shall submit a plan for approval of the Director, prior to November 30, 2014, describing how locations and road signs will include local language and nomenclature.

Air Quality

12. The Licencee shall minimize the burning of slash generated during clearing of the Development where smoke may affect residences. In such cases, the Licencee shall dispose of slash using environmentally suitable methods such as chipping and mulching, where feasible.
13. The Licencee shall undertake dust control measures during construction. Water required for dust control during construction shall be obtained from a source other than waste water treatment facilities.

Blasting

14. The Licencee shall, during construction of the Development, undertake blasting associated with construction, demolition and aggregate preparation activities in accordance with guidelines prepared by the federal Department of Fisheries and Oceans.

Borrow Pits

15. The Licencee shall construct borrow pits in connection with the Development to minimize environmental and aesthetic impacts. Borrow pit designs shall be approved in writing by the IRMT prior to construction, and subject to the requirements of a Quarry Permit. Reclamation of individual borrow pits shall occur as they are no longer in use for the Development, unless otherwise approved by the Director.

Environmental Protection Plans

16. The Licencee shall submit Environmental Protection Plans for the approval of the Director prior to commencing construction of the Development. These plans shall describe the approach to be used by the Licencee to ensure that mitigative measures are applied systematically, and in a manner consistent with the commitments made in the EIS. Separate plans may be submitted for different components of the Development. Specifically, the plans shall:
 - a) incorporate both western science and Aboriginal Traditional Knowledge;
 - b) describe the environmental management system;
 - c) provide field construction personnel with clear instructions on the mitigation measures to be implemented and on the appropriate lines of communication and means of reporting to be followed throughout the life cycle of the project;
 - d) summarize environmental sensitivities and mitigation actions and emergency response plans and reporting protocols;
 - e) describe the protocol for reporting on compliance monitoring; and
 - f) include, as a minimum, the following components:
 - i) Generating Station Environmental Protection Plan;
 - ii) South Access Road Environmental Protection Plan.

Environmental Management Plans

17. The Licencee shall submit Environmental Management Plans for the approval of the Director prior to commencing construction of the Development. These plans shall describe the mitigative measures that will be employed during construction and operation to reduce the environmental impact of the Development. They shall describe the approaches to be taken by the Licencee and shall be consistent with the commitments made in the EIS. Specifically, the plans shall:
- a) incorporate both western science and Aboriginal Traditional Knowledge;
 - b) describe the specific measures to be installed/undertaken;
 - c) outline the communication and reporting protocol on implementation progress;
 - d) describe contingency measures, if mitigation is not working as anticipated;
 - e) include a plan to establish a self-sustaining lake sturgeon population and include, as a minimum the following:
 - i) a conservation stocking plan for lake sturgeon for 50 years or until a self-sustaining lake sturgeon population is proven to be re-established in the following areas:
 - a. in the Nelson River from Kelsey Generation Station to Kettle Generation Station; and,
 - b. in the Burntwood River below First Rapids.
 - ii) a plan to resume the conservation stocking plan at any time if the lake sturgeon population declines as a result of the Development until the Development is decommissioned, or as otherwise approved by the Director;
 - iii) a plan to incorporate, at a minimum, the following in the adaptive management of lake sturgeon:
 - a. the results of lake sturgeon monitoring developed pursuant to Clause 18; and
 - b. committee recommendations developed pursuant to Clause 21.
 - iv) a description of how other facilities and other jurisdictions were consulted with in order to collect and evaluate the most successful techniques in fish culture for rearing and releasing lake sturgeon and how these techniques will be implemented;
 - f) include, as a minimum, the following components:
 - i) In-Stream Construction Sediment Management Plan;
 - ii) Fish Habitat Compensation Plan;
 - iii) Access Management Plan;
 - iv) Heritage Resources Protection Plan;
 - v) Vegetation Rehabilitation Plan;
 - vi) Terrestrial Mitigation Implementation Plan;
 - vii) Waterways Management Plan; and
 - viii) Reservoir Clearing Plan.

Environmental Monitoring Plans

18. The Licencee shall submit, for the approval of the Director, a report on monitoring programs to be undertaken in connection with the plans approved pursuant to Clauses 16 and 17. The report shall be submitted no later than June 30, 2015. Specifically, the report shall:
- a) incorporate both western science and Aboriginal Traditional Knowledge;
 - b) compare and describe the pre-development baseline conditions to projected or predicted conditions and the actual conditions during the different phases of the Development;
 - c) define the parameters to be measured and the methods to be used to evaluate the environment effects of the Development;
 - d) describe how the performance and effectiveness of the recommended mitigation measures will be evaluated during implementation;
 - e) include a plan for ensuring monitoring and follow-up are implemented correctly;
 - f) provide a plan to describe how adverse effects will be adaptively managed;
 - g) assess effects of the Development on the local and regional bald eagle population and include, as a minimum, the following component:
 - i) a comprehensive bald eagle nest monitoring program to assess the location, number and reproductive success of bald eagle nests within the study area prior to construction and annually for a minimum of five years after operation begins;
 - h) include a plan to assess effects of the Development on the local and regional gull and tern populations and include, as a minimum, the following components:
 - i) a baseline survey to determine the current number and location of gull and tern colonies and their nesting success in the affected area;
 - ii) a monitoring program to assess the establishment of new colonies or the expansion of existing colonies within the affected area; and
 - iii) an evaluation of the feasibility of creating replacement gull and tern nesting habitat, by modifying existing islands or creating new islands, as soon as possible after construction begins;
 - i) include a plan to monitor the lake sturgeon population and the associated conservation stocking program, developed pursuant to Clause 17, until the project is decommissioned, or as otherwise approved by the Director and include, as a minimum:
 - i) a plan to uniquely identify and track, using PIT tags or other best technology, individual lake sturgeon and to distinguish natural from stocked individuals to help evaluate the success of the lake sturgeon stocking program, approved pursuant to Clause 17;
 - j) include a plan to assess construction effects of the Development on the habitat and relative abundance and distribution of the olive-sided flycatcher and rusty

- blackbird populations;
- k) include a plan for a three year aerial reconnaissance survey to identify and delineate the current range of summer resident caribou in consultation with Conservation and Water Stewardship, Wildlife Branch;
- l) include a public information program to encourage residents to report the sightings of caribou and moose, including caribou road kills along project access roads and PR 280 during construction of the Development within the study area;
- m) include a plan for mercury monitoring in fish within the Keeyask reservoir, Stephens Lake, and Long Spruce and Limestone forebays, and other waterbodies as may be required, until mercury concentrations return to background or until it can be determined that there is no further effect from the Development, unless otherwise approved by the Director and in consultation with Conservation and Water Stewardship, Fisheries Branch. This may or may not also include sediment and water quality monitoring;
- n) include a mercury and human health risk management plan to identify, assess, respond to, communicate and monitor risks to human health from increased methylmercury in the environment as a result of the Development;
- o) include a plan to conduct baseline mercury concentration monitoring in fish in Gull Lake and Stephens Lake for a minimum of two years, prior to reservoir impoundment;
- p) include a plan to monitor road-based traffic incidents associated with the increase in traffic to and from the Development during construction, considering, at a minimum, the following:
 - i) traffic data collected by Manitoba Infrastructure and Transportation on traffic-related incidents on PR 280;
 - ii) use of personal vehicles to commute to and from the Development; and
 - iii) actual traffic volumes with predicted traffic volumes;
- q) include timely provision of monitoring information to the Split Lake, Fox Lake and York Factory Resource Management Boards and to Conservation and Water Stewardship, as requested, with respect to the management and administration of offsetting programs that involve resource management, resource harvesting and resource use activities within the respective resource management areas and submit an annual report to the respective resource management board and include, at a minimum, the annual outcomes of project monitoring for offsetting programs, including effects on resource use;
- r) include a plan to monitor, identify and adaptively manage fish passage requirements during operation of the Development in consultation with Conservation and Water Stewardship, Fisheries Branch and the federal Department of Fisheries and Oceans;
- s) include a plan to monitor and adaptively manage impacts to the Development associated with zebra mussels and participate with the Government of Manitoba on treatment programs within the Keeyask reservoir; and
- t) include, as a minimum, the following components:

- i) Physical Environment Monitoring Plan;
- ii) Aquatic Effects Monitoring Plan;
- iii) Terrestrial Effects Monitoring Plan;
- iv) Socio-Economic Monitoring Plan;
- v) Resource Use Monitoring Plan; and
- vi) Zebra Mussel Monitoring Plan.

19. The Licencee shall implement the plans approved pursuant to Clauses 16, 17 and 18 of this Licence.

Annual Reporting

20. The Licencee shall report annually, before June 15th of each calendar year, to the Director on the results of monitoring plans, as approved pursuant to Clause 18 of this Licence and shall include sufficient detail that assessments can be made as to the accuracy of predictions, success of mitigation actions and commitment to future actions. These reports will provide assessments of any trends detected over the entire reporting period.

Lake Sturgeon Advisory Committee

21. The Licencee shall establish a committee consisting of Manitoba Hydro (on behalf of the Keeyask Hydropower Limited Partnership), the federal Department of Fisheries and Oceans, and Conservation and Water Stewardship, Fisheries Branch to review the results of the annual conservation lake sturgeon stocking monitoring program submitted pursuant to Clause 20. The committee, at a minimum, shall:

- a) meet once annually before April 30th of each calendar year, until the project is decommissioned, or as otherwise approved by the Director;
- b) provide copies of meeting minutes and recommendations on adaptive management of lake sturgeon stocking to the Director.

Dangerous Goods Storage and Handling

22. The Licencee shall comply with all the applicable requirements of:

- a) *Manitoba Regulation 188/2001*, or any future amendment thereof, respecting *Storage and Handling of Petroleum Products and Allied Products*.
- b) *The Dangerous Goods Handling and Transportation Act*, and regulations issued thereunder, respecting the handling, transport, storage and disposal of any dangerous goods brought onto or generated at the Development; and
- c) the Office of the Fire Commissioner – Province of Manitoba.

23. The Licencee shall establish any fuel storage areas required for the construction and operation of the Development a minimum distance of 100 metres from any waterbody.

24. The Licencee shall, during construction and maintenance of the Development, operate, maintain, and store all materials and equipment in a manner that prevents any deleterious substances including fuel, oil, grease, hydraulic fluid, coolant, and other similar substances from entering any waterbody. An emergency spill kit for in-water use shall be readily available on site during construction.

Spill Response

25. The Licencee shall, in the case of physical or mechanical equipment breakdown or process upset where such breakdown or process upset results or may result in the release of a pollutant in an amount or concentration, or at a level or rate of release, that causes or may cause a significant adverse effect, immediately report the event by calling 204-944-4888 (toll-free 1-855-944-4888). The report shall indicate the nature of the event, the time and estimated duration of the event and the reason for the event.
26. The Licencee shall, following the reporting of an event pursuant to Clause 25,
- a) identify the repairs required to the mechanical equipment;
 - b) undertake all repairs to minimize unauthorized discharges of a pollutant;
 - c) complete the repairs in accordance with any written instructions of the Director; and
 - d) submit a report to the Director about the causes of breakdown and measures taken, within one week of the repairs being done.
27. The Licencee shall, in a manner approved by the Environment Officer, remove and dispose of all spilled dangerous goods.
28. The Licencee shall, following construction of the Development, verify that terrestrial contamination of the environment has not occurred in work areas of the Development. Any areas of contamination shall be remediated to the satisfaction of the Environment Officer.

Heritage Resources

29. The Licencee shall, during construction and operation of the Development, apply measures to protect heritage resources, as directed by the Historic Resources Branch of Manitoba Tourism, Culture, Heritage, Sport, and Consumer Protection.

Onsite Wastewater Disposal

30. The Licencee shall, during construction of the Development, dispose of all wastewater from on-site sanitary facilities in accordance with *Manitoba Regulation 83/2001*, or any future amendment thereof, respecting *Onsite Wastewater Management Systems*.

Pesticide Application

31. The Licencee shall not use herbicides in association with the construction of transmission components of the Development and shall eliminate the use of herbicides during operation of the Development unless there are no other feasible means available. If herbicides are used, the Licencee shall adhere to the *Manitoba Regulation 47/2004*, or any future amendment thereof, respecting *Pesticides*.

Signage

32. The Licencee shall, during construction of the Development, post appropriate warning signage to advise traffic of construction activity, the presence of structures, water conditions and potential for collision with caribou and moose on access roads. Signs shall be in English and the local Aboriginal language in accordance with the plan submitted pursuant to Clause 11 of this Licence.

Waste Disposal

33. The Licencee shall dispose of non-reusable construction debris and solid waste from the construction and maintenance of the Development at a waste disposal ground operating under the authority of a permit issued under *Manitoba Regulation 150/91*, or any future amendment thereof, respecting *Waste Disposal Grounds*, or a licence issued pursuant to *The Environment Act*.

Water Crossings

34. The Licencee shall, during construction and maintenance of the Development, adhere to the general recommendations on design, construction, and maintenance of stream crossings as specified in the Manitoba Department of Natural Resources guidelines titled *Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat, May 1996*, and the current versions of applicable federal Department of Fisheries and Oceans Operational Statements.

Riparian Areas

35. The Licencee shall, during construction and maintenance of the Development within riparian areas associated with fish-bearing and potentially fish-bearing waterbody crossings:
- a) clear trees that must be removed using only low impact methods including, where possible, hand clearing;
 - b) prohibit the application of herbicides during construction clearing;
 - c) stabilize and re-vegetate disturbed soils with biodegradable erosion control materials and, where possible, a seed mix native to the area;

- d) where possible, maintain 30 metres from the high water mark of creeks, streams and rivers;
- e) minimize in-stream construction time to reduce sedimentation;
- f) avoid use of organic soil, silt, or clay in temporary winter stream crossings; and
- g) remove all materials used in the construction of ice bridges from the watercourse or water body prior to spring thaw.

Sedimentation and Erosion

36. The Licencee shall, during construction and maintenance of the Development, take all appropriate measures to prevent erosion and the deposition of sediment into any waterbodies except within the impoundment area. Construction adjacent to waterbodies, except within the impoundment area, shall not occur during high rainfall events if construction activities will result in increased erosion and sediment disposition in the adjacent waterbody.

Instream Works

37. The Licencee shall only conduct construction activities in connection with the Development in fish bearing waters or potentially fish bearing waters in accordance with Environmental Management Plans, pursuant to Clause 17 of this Licence and in accordance with applicable federal *Fisheries Act* Authorizations. The Licencee shall notify Conservation and Water Stewardship, Fisheries Branch, if an application is made to the federal Department of Fisheries and Oceans to work outside the prescribed in-stream work timing windows.

Water Intakes

38. The Licencee shall, during construction of the Development, maintain water intakes for construction water supplies in compliance with the "Freshwater Intake End-of-Pipe Fish Screen Guideline" published by the federal Department of Fisheries and Oceans.

Wetlands

39. The Licencee shall not, during construction, clear, compact, grade or fill any wetlands or native upland habitat, which are not required for the Development.
40. The licencee shall, prior to March 31, 2015, provide a plan, for approval by the Director, to demonstrate how the licencee will manage to offset drained wetlands in accordance with requirements set out in the forthcoming no net loss of wetland benefits provisions of the drainage regulation that is being reviewed as stated in the Towards Sustainable Drainage consultation document. If drainage of the wetland cannot be avoided, the plan shall provide quantification of the area of the drained wetland to be lost due to the construction and operation of the development, and a plan as to how that loss will be

offset by at least a three to one ratio of area of restored wetlands to the area of those lost through drainage.

Live Salvage Fish

41. The Licencee shall salvage live fish in dewatered areas. A Live Handling Permit is required from Conservation and Water Stewardship for fish salvage operations.

Habitat Fragmentation

42. The Licencee shall limit fragmentation of habitat and disturbance of summer resident caribou, where possible, by decommissioning roads and trails required for construction.
43. The Licencee shall only conduct clearing associated with the Development in accordance with the Environmental Protection Plans, pursuant to Clause 16 of this Licence.

Migratory Birds

44. The Licencee shall not, unless otherwise approved by Environment Canada under the federal *Migratory Birds Convention Act*, disturb migratory bird nests during construction and maintenance of the Development.

Endangered or Threatened Species

45. The Licencee shall not remove, destroy or disturb species pursuant to *Manitoba Regulation 25/98*, or any future amendment thereof, respecting *Threatened, Endangered and Extirpated Species*, and species listed as endangered or threatened in the federal *Species at Risk Act*.

Foreign Species

46. The Licencee shall, during construction and maintenance of the Development, take measures to prevent the introduction and spread of foreign aquatic and terrestrial biota.

Revegetation

47. The Licencee shall revegetate soil in areas of the Development exposed by construction with a mixture of native or introduced grasses or legumes. Native species shall be used to revegetate areas where native species existed prior to construction. Exposed areas shall be revegetated as quickly as possible following construction to prevent soil erosion and the establishment of noxious weeds.

Respecting Operation of the Generation Station

48. The Licence shall, during normal operation of the Development, regulate Keeyask Generating Station to maintain a maximum reservoir level in the immediate forebay of 159 m above sea level and a minimum operating level of 158 m above sea level.
49. The Licence shall, during operation of the Development, operate the Keeyask Generation Station in accordance with the Water Power Licence issued pursuant to the *The Water Power Act*.

Education and Training Opportunities

50. The Licencee shall seek to provide continued education and training opportunities for northern residents employed at the Development, which may include workers trained through the Hydro Northern Training and Employment Initiative.

Respecting Concrete Batch Plant Operation During Construction

51. The Licencee shall comply with the "Manitoba Heavy Construction Association Best Environmental and Safety Management Practice Redi-Mix Concrete Facilities" manual, © 2000, or future versions thereof.
52. The Licencee shall operate the concrete batch plant only at a location approved by the Director.
53. The Licencee shall not emit particulate matter from the concrete batch plant of the Development such that:
 - a) particulate matter:
 - i) exceeds 0.23 grams per dry standard cubic metre calculated at 25 degrees Celsius and 760 millimetres of mercury, corrected to 12 percent carbon dioxide for processes involving combustion, from any point source of the concrete batch plant of the Development;
 - ii) exhibits a visible plume with an opacity of greater than 5 percent at any point beyond the property line of the Development; or
 - iii) results in the deposition of visible particulate residue at any time beyond the property line of the Development; or
 - b) opacity of any point source of the concrete batch plant of the Development equals or exceeds:
 - i) 20 percent as an average of any 24 consecutive opacity observations taken within 15 second intervals;
 - ii) 20 percent for more than 16 individual opacity observations within any one hour period; or
 - iii) 40 percent for any individual opacity observation.
54. The Licencee shall direct all air streams from the concrete batch plant, which contain a pollutant(s) of concern to the Director, to a pollution control device which has been

designed for and demonstrated to be capable of reducing, altering, eliminating or otherwise treating the pollutant(s).

55. The Licencee shall submit for the Director's approval, within 90 days of the issuance of this Licence, a standard operating procedural manual and a maintenance schedule for each air emission pollution control device based on the manufacturer's specifications and recommendations.
56. The Licencee, upon receiving the Director's approval as required in Clause 55 of this Licence, shall not operate any process directing an emission to an air pollution control device for the concrete batch plant of the Development unless:
 - a) the operating and maintenance measures and status of the device are in full compliance with the approved procedures and timetables;
 - b) all emissions from the process are directed to the fully operational air pollution control device;
 - c) all discharges of treated emissions from the air pollution control devices are immediately directed to a stack; and
 - d) the emissions do not contain concentrations of pollutants which:
 - i) are in violation of any other applicable legal instrument including an Act, Regulation or by-law; or
 - ii) otherwise create a significant negative environmental or health impact in the affected area.
57. The Licencee shall maintain a log book of the most recent 24 month period to record any downtime of an air pollution control device due to either the breakdown or maintenance of that air pollution control device. The log book shall be kept at the Development and shall be available upon request for inspection by an Environment Officer. The log book shall record, at minimum, the following information:
 - a) identification of the air pollution control device and the process(es) it serves;
 - b) time/date of log entry;
 - c) nature of event;
 - d) duration of event; and
 - e) the accumulated downtime of this air pollution control device for the events for each calendar year.
58. The Licencee shall handle, store and dispose of all pollutants collected by the air pollution control equipment in a manner suitable to their characterization as type of waste or dangerous good.
59. The Licencee, upon written request from the Director, shall provide a stack or stacks including all necessary sampling facilities for the sampling of air emissions at the concrete batch plant of the Development. The stack or stacks shall be provided:
 - a) at a location(s) and within a time frame satisfactory to the Director; and

- b) to the specifications and in accordance with the most recent version of Conservation and Water Stewardship Guideline, *Guideline for Stack Sampling Facilities*, unless otherwise approved by the Director.
60. The Licencee, upon a written request from the Director, shall submit a detailed plan which is acceptable to and approved by the Director, for the sampling and analysis of potential air pollutants from the concrete batch plant of the Development, released as stationary point and fugitive emissions, including any compounds determined by the Director. The plan shall identify the rationale for the sampling, the ways and means by which the sampling program will be implemented including any special measures or methods which would be necessitated by influencing factors such as unfavourable weather conditions, the need for large or additional sample volumes, the need for multiple sampling runs, the methods used for the sampling and the analysis for each compound, the detection level to be attained, a comprehensive QA/QC program, and other items as may be identified by the Director.
61. The Licencee shall perform all stack sampling in accordance with the most recent version of Conservation and Water Stewardship Report No. 96-07, *Interim Stack Sampling Performance Protocol*, unless otherwise approved by the Director.
62. The Licencee shall arrange the scheduling of the sampling program submitted pursuant to Clause 60 of this Licence such that a representative of Manitoba Conservation is available to monitor and audit the implementation of the sampling program.
63. The Licencee shall complete the sampling of emissions according to the approved plan submitted pursuant to Clause 60 of this Licence, within a timeframe to be determined by the Director.
64. The Licencee shall submit a report, for the approval of the Director, of the completed sampling and analysis plan approved pursuant to Clause 60 of this Licence, within 60 days of the receipt of the analytical results of that sampling plan. The report shall contain at minimum:
- a) the raw data collected;
 - b) a discussion of the sampling and analytical portions of the program including any anomalies of sampling and analysis; and
 - c) a discussion of the significance of the data gathered with specific attention to:
 - i) the significance for potential acute and chronic impacts to health or environment from exposure to concentrations of the compounds detected;
 - ii) the need for risk assessment of the impact of emissions;
 - iii) the need for the establishment of ambient air monitoring stations;
 - iv) the need for dispersion modeling of emissions;
 - v) results and conclusions of the QA/QC program; and
 - vi) other issues as may be determined by the Director.

65. The Licencee, upon the written request of and in a timeframe stipulated by the Director, shall comply with any air emission or ambient air quality criteria specified by the Director for any pollutant of concern.
66. The Licencee shall not release wash water from settling ponds associated with the concrete batch plant of the Development that does not comply with Manitoba *Water Quality Standards, Objectives, and Guidelines* (dated November 28, 2011 or future versions thereof.)

Environmental Audit

67. The Licencee shall, upon completion of construction of the Development, undertake a third-party environmental audit to assess whether commitments made in the EIS and supporting information were met and to assess the accuracy of the assumptions and predictions in these documents. The audit shall be repeated after ten years. Reports on the audits shall be submitted to the Director.

Website

68. The Licencee shall, for the life of the Development, develop and maintain an easily accessible and frequently updated website to contain all relevant and appropriate information related to monitoring and assessing environmental impacts, mitigation and management of the Development. The website shall also include the annual reports on the results of monitoring plans, pursuant to Clause 20 and the reports on third-party environmental audits conducted pursuant to Clause 67 of this Licence.

Regional Cumulative Effects Assessment

69. The Director, in addition to any of the specifications, limits, terms and conditions specified in this Licence, may require additional mitigation, monitoring or corrective action pending the results of the Regional Cumulative Effects Assessment if those results are relevant to the Development.

Watershed Protection

70. Manitoba Hydro shall participate in potential future watershed studies as may be determined by the Director, in cooperation with the Manitoba Government.

Offsetting Programs

71. The Licencee shall submit for the approval of the Director a compensation plan for outfitters impacted by offsetting programs. The compensation plan shall, at a minimum, include:
 - a) a plan to minimize or avoid impacts of the offsetting programs on outfitters, where feasible; and

- b) a plan to provide compensation to outfitters for losses attributable to the offsetting programs and provide an option for disposition of payments.
72. The Licencee shall implement the compensation plan as approved by the Director, pursuant to Clause 71.

Decommissioning or Alteration

73. The Licencee shall rehabilitate decommissioned stream crossings to pre-existing conditions.
74. The Licencee shall, prior to decommissioning of the Development, submit for approval of the Director, a decommissioning plan for the Development.
75. The Licencee shall implement the decommissioning plan as approved pursuant to Clause 74 of this Licence.
76. The Licencee shall obtain approval from the Director for any proposed alteration to the Development before proceeding with the alteration.

REVIEW AND REVOCATION

77. If, in the opinion of the Minister, the Licencee has exceeded or is exceeding or has or is failing to meet the specifications, limits, terms, or conditions set out in this Licence, the Minister may, temporarily or permanently, revoke this Licence.
78. If the Licencee has not commenced construction of the Development within five years of the date of this Licence, this Licence is revoked.
79. If, in the opinion of the Minister, new evidence warrants a change in the specifications, limits, terms or conditions of this Licence, the Minister may require the filing of a new proposal pursuant to Section 12 of *The Environment Act*.

File: 5550.00

Original Signed By

Minister