

1 Q. Re page B-18: indicate for what period of time the current practice of
2 discharging waste water streams to the environment has violated the
3 Environmental Control Water and Sewage Regulations and why this project
4 is required to be done in 2007. Provide copies of all correspondence with
5 any environmental regulatory authority within the past five years related to
6 the discharge of waste water streams at Holyrood. Provide an order of
7 magnitude estimate for the eventual cost of modification to the existing
8 treatment plant as referred to under the heading "Future Plans".
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11 A. This current practice has been in place since 1984, when the only concern
12 was the avoidance of high and low pH values. Prior to 1984 these waste
13 streams flowed through a neutralizing tank, within which the alternating high
14 and low pH waste streams could mix and partially neutralize before being
15 discharged. When the buried neutralizing tank collapsed, the Department of
16 the Environment allowed the waste streams to be discharged, provided that
17 sea water from one of the plant's cooling water pumps is used for dilution.
18 Also, recent analysis of the waste stream indicates the presence of levels of
19 ammonia, which is toxic to fish, in excess of that permitted by the regulations.
20 The presence of ammonia was unknown to Hydro and the regulator before
21 these recent tests were performed. The pilot project will be used to identify
22 and optimize the method of waste water treatment.

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24 An excerpt from Hydro's Certificate of Approval is attached.

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26 Until the trial is completed and the least costly treatment process determined,
27 a reasonable order of magnitude cost estimate to modify existing waste
28 water treatment facilities cannot be provided.



GOVERNMENT OF
NEWFOUNDLAND AND LABRADOR
Department of Environment and Conservation

CERTIFICATE OF APPROVAL

Pursuant to the Environmental Protection Act, SNL 2002 c E-14.2 Section 83

Issue Date: *February 2, 2006*

Approval No. AA06-025458

Expiration: *February 2, 2011*

File No. 716.008

Proponent: **Newfoundland and Labrador Hydro**
P.O. Box 29
Holyrood, NL
A0A 2R0

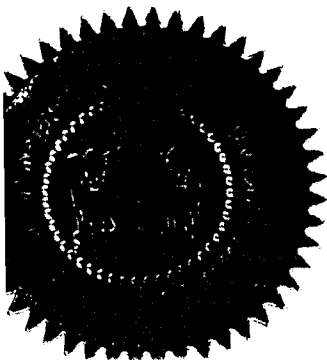
Attention: **Mr. Wayne Rice, Environment and Performance Manager**

Re: **Holyrood Thermal Generating Station**

Approval is hereby given for: the operation of a thermal generating station, including power house, waste water treatment plant, hazardous waste landfill and associated works located at Holyrood, NL.

This certificate of approval does not release the proponent from the obligation to obtain appropriate approvals from other concerned provincial, federal and municipal agencies. Nothing in this certificate of approval negates any regulatory requirement placed on the proponent. Where there is a conflict between conditions in this certificate of approval and a regulation, the condition in the regulation shall take precedence. Approval from the Department of Environment and Conservation shall be obtained prior to any significant change in the design, construction, installation, or operation of the facility, including any future expansion of the works. This certificate of approval shall not be sold, assigned, transferred, leased, mortgaged, sublet or otherwise alienated by the proponent without obtaining prior approval from the Minister.

This certificate of approval is subject to the terms and conditions as contained in Appendix 'A' attached hereto, as may be revised from time to time by the Department. Failure to comply with any of the terms and conditions may render this certificate of approval null and void, may require the proponent to cease all activities associated with this certificate of approval, may place the proponent and its agent(s) in violation of the *Environmental Protection Act*, and will make the proponent responsible for taking such remedial measures as may be prescribed by the Department. The Department reserves the right to add, delete or modify conditions to correct errors in the certificate of approval or to address significant environmental or health concerns.




MINISTER

Waste Water Flows and Treatment

27. The thermal generating station's once-through cooling water shall be obtained from Indian Pond, and shall be discharged directly to Conception Bay.
28. The thermal generating station's south-east floor drains shall be routed through an oil/water separator and then to Indian Pond through the storm water collection system;
29. The thermal generating station's south-west floor drains shall be routed through a grease trap and an oil/water separator and then to the cooling water discharge piping associated with Units # 1 & 2;
30. The thermal generating station's north-east and north-west floor drains shall be routed through a grease trap and an oil/water separator and then to a 900 m³ equalization basin (continuous basin).
31. All oil/water separators shall be checked routinely to ensure they are working properly. A log of these checks shall be maintained.
32. Waste water streams resulting from daily operations, including raw water clarification, filter backwashes, boiler blowdown and other similar activities shall be directed to the continuous basin. Any flow or drainage from the continuous basin shall be discharged to Indian Pond.
33. Demineralizer regeneration waste water flows may be directed to the seal pit associated with Units # 1 & 2, during such times that at least one cooling water pump is active.
34. Waste water streams resulting from periodic events where water is used to clean boiler fireside equipment, including air preheater wash flows, fireside boiler wash flows and boiler acid wash flows, shall be directed to a 900 m³ equalization basin (periodic basin). Any flow or drainage from the periodic basin shall be directed to the waste water treatment plant.
35. Any flow or drainage from the waste water treatment plant shall be discharged to the cooling water intakes for Units # 1 & 2.
36. Effluent from the dewatering of filter cake shall be re-cycled through the waste water treatment plant.
37. All solid waste generated from the waste water treatment plant operations shall be directed to the hazardous waste landfill.