

1 Q. Indicate the specific wording of the extract from the Certificate of Approval
2 attached to the answer IC-10 which supports Hydro's assertion that Hydro is
3 in violation of the Regulations. Indicate the source of the ammonia, the
4 permitted level under the regulation and why the presence of ammonia was
5 not detected at an earlier time. Further to the request made in IC-10 and
6 Hydro's response, please confirm that the Certificate of Approval provided
7 represents all correspondence with any environmental authority within the
8 past five years related to the discharge of waste streams at Holyrood.

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11 A. There is no wording in the Certificate of Approval that specifically supports
12 Hydro's assertion that Hydro is in violation of the Regulations. Page 9 of 20
13 of Appendix "A" of the Certificate of Approval states that the demineralizer
14 regeneration waste water flows may be directed to the seal pit associated
15 with Units #1 and #2 during such times that at least one cooling water pump
16 is active. However, *Environmental Control Water and Sewer Regulations*,
17 *2003, Newfoundland and Labrador Regulations 65/03* prohibit the discharge
18 into a body of water any sewage or effluent having a pH value less than 5.5
19 or greater than 9.0. On this basis the agreement to discharge regeneration
20 wastes with seawater dilution has always been seen as an interim approval
21 and led Hydro to budget Capital funds for the installation of equipment to
22 neutralize the regeneration wastes pH. As a precaution, it was considered
23 prudent to characterize the regeneration wastes to fully determine if pH was
24 the only constituent under the regulations being violated. This
25 characterization confirmed that pH values were being exceeded, but also
26 identified that the concentration of ammonia in the waste water stream
27 constituted an exceedance of the regulatory limit for discharge of
28 ammoniacal nitrogen specified in these same regulations. The permitted

1 level of ammoniacal nitrogen under the regulations is 2 parts per million
2 (ppm).

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4 The level of ammonia identified is also a concern in relation to compliance
5 with the deposition of deleterious substance requirements of the *Fisheries*
6 *Act, 1985*. The source of the ammonia is chemical addition to the boiler feed
7 water system for chemistry (pH) control that is ultimately extracted during the
8 regeneration process. The ammonia was not detected at an earlier time
9 because the waste discharge was thought to have only a pH problem. Due
10 diligence led to the decision to further characterize the waste and ultimately,
11 the discovery of the regulatory exceedance related to ammonia and the
12 concern associated with the Fisheries Act.

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14 The Certificate of Approval is not the only correspondence related to the
15 discharge of wastewater streams that Hydro has had with the Regulator in
16 the last five years. The Plant provides monthly data to the Department of
17 Environment and Conservation related to the sampling of waste water
18 streams that Hydro is required to monitor and report on, including the waste
19 water treatment plant and solid waste disposal site leachate collection
20 systems. Notwithstanding routine communication, the Certificate of Approval
21 is the last correspondence with any environmental authority within the past
22 five years related to the discharge of wastewater streams at Holyrood.