

1 **Re: 2009 Capital Projects \$200,000 - \$500,000 p. D-3 - Condensate Drains -**  
2 **Holyrood**

3 Q. a) Has condensation ever been induced into the high pressure turbine at Unit  
4 1, Holyrood?

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6 b) If the answer to a) is yes, has the induction of such condensate ever  
7 caused damage, or otherwise required the unit to undergo maintenance?

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9 c) How long has Unit 1 operated without drain pots?

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12 A. a) Yes, there have been incidents at the Holyrood Plant whereby condensate  
13 has been introduced into the high pressure turbine of Unit 1 through the  
14 reheat steam piping during start-ups and has required urgent manual  
15 opening of the existing cold reheat drain valves to remove the condensate.  
16 The frequency and times when this has occurred has not been documented.

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18 b) Maintenance records indicate that there has been no turbine damage that  
19 can be attributed to the induction of condensate into the turbine through the  
20 cold reheat steam lines at Holyrood. Hydro may have been fortunate in this  
21 regard. Such damage has occurred in the past at other thermal generating  
22 stations as noted in FM Global Recommendations, Part B: The Hazard on  
23 page D-6 of the 2009 Capital Budget Application.

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25 c) Unit 1 has operated without drain pots since the original construction in  
26 1970. However, as stated in the Capital Budget Proposal, our insurer has  
27 identified water induction as a major potential hazard, and installation of drain  
28 pots is now necessary.