

Mr. Q. B. (Jordan) Chou
Ontario Hydro
700 University Avenue
Toronto, Ontario M5G 1X6 Canada

Dear Jordan:

Once again I want to thank you and Ontario Hydro for your hospitality and all the information you provided us on the development of safety software for the Darlington Plant.

At our exit meeting Mr. Sniezek asked if it was possible for two engineers from NRC to visit Ontario Hydro for a couple of weeks to understand the development process of the safety software in more detail. The following is a list of subjects where we would benefit from more detail at the working level with the design engineers:

- Software Verification and Validation
- Trip computer software structure and diversity
- System integration testing and random testing
- Methodology used for the SDS formal walkthrough procedure
- Development history for Programmable Logic Controller
- Communication techniques (fiber optics) with PLC's
- Current working group for standard development
- Fault tolerant and fail safe design
- Program revisions -- Program Function and Linkage Tables
- Hazard Analysis and results

The purpose of this visit would be to gain firsthand information from Ontario Hydro on their experience with the above subjects. Based on earlier discussions with you and Mr. Joyce of my staff, it is my understanding that March, 1991 may be a good time for our engineers to visit Ontario Hydro.

At the present time NRC is looking for consultants to assist us in performing a review and audit of a PLC application in a safety system. Ontario Hydro is considered by several sources to be among the leading utilities for introducing PLC's into commercial power reactors. Please contact Mr. Joyce if one of your OH-180 experts desires to contract with the NRC as a consultant.

Thank you for your help in these matters and we look forward to hearing from you.

Scott Newberry, Chief
Instrumentation & Control Systems Branch
Division of Systems Technology

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