

ENHANCING FUEL HANDLING SYSTEM SURVEILLANCE THROUGH AUTOMATED LOG MONITORING

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ABSTRACT:

The Fuel Handling (F/H) Log Data generated at Darlington NGS contains valuable information relating the parameters and problems encountered during day-to-day fuel handling operations. The types of information identified in this data include: actual component positions, conditions and operating durations; stop occurrences and reasons; encoder errors; alarms and abnormal conditions; software errors; system component trips; and actuating relay pick-up/release errors. Retrieving and interpreting this information, performed manually, has been a tedious and time-consuming process.

GE Canada, the designer of the F/H system at Darlington, and the F/H Operations group at the site recognized that PC access to the log data provides a means for easy archival storage. Using software-based tools to automatically analyze the information would greatly enhance the value of this data in providing system health and performance monitoring services. GE Canada has developed an automated system that collects and analyses Log Data, OPDATA, XYZ Position Data, Bundle Position & Reporting Data as well as Hardware Diagnostic Data.

The new log monitoring system offers Darlington F/H the following advantages:

- Identifies equipment & system problems before breakdown
- Establishes trends and call-ups for maintenance
- Permits the analysis of data using analytical and statistical tools
- Improves the quality and accuracy of system health reports
- Performs configuration management checks
- Trouble shoots equipment & system problems
- Provides a tool to improve the reliability and availability of the F/H system