

POWER PLANT AND LABORATORY INTERFACE AND DATA MANAGEMENT IN THE ELECTRONIC WORLD

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Abstract

Utilities in the nuclear industry strive for 0% errors in all aspects of their programs. One common problem is incorrect data entry/transfer. One of the critical areas where mistakes can happen is when information is transferred between the power plant and the laboratory. Manual transcription and review has typically been very cumbersome, time consuming and costly.

When Exelon was beginning the process of issuing a new REMP contract for their four Exelon-East nuclear plants in 2001, one of their goals was to streamline the paperwork and reduce errors. Another goal was to make the four plants as procedurally uniform as possible. Teledyne was already working on their own projects to improve laboratory processes from sample receipt through data reporting. When TBE was chosen as Exelon's laboratory vendor and Normandeau as the sampler collectors, the three companies began to work together to incorporate and expand on this concept.

Improvements incorporated by Normandeau, Exelon and TBE:

Normandeau developed an in-house computer data sheet for field data and calculations for the Limerick REMP program.

Using Limerick's computer data sheet as a model, TBE and Normandeau personnel began to create a new data sheet (chain of custody). When the bugs were worked out, this data sheet became the template for standardizing the chain of custody used by Normandeau sample collectors at the four Exelon-East power plants. The process allowed Normandeau to complete sample collection processing in less time and with more accuracy, with a similar impact on the laboratory.

During this time, Exelon was developing specifications for their electronic data deliverables.

Normandeau and TBE began to exchange data by email and eventually over FTP sites, which allowed TBE to program direct download of data from Normandeau's data sheets to TBE LIMS and eventually generate reports and electronic files required by Exelon.

This presentation will describe the process and problems encountered in developing and standardizing the electronic transfer of sample information and report generation. The associated benefits and cost savings for all three companies will also be discussed.