

SPURIOUS ALARMED REMEDIATION AT BEAVER VALLEY

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ABSTRACT

The operation of a modern nuclear power plant depends on the collection of data from literally thousands of points throughout the plant. Many of these data collection systems are designed to evaluate the data and provide the operator with an alarm if a reading is outside of normal limits.

Designers of these systems must carefully select component and setpoints to reliably discriminate between true problems and transient conditions that may briefly masquerade as a problem, or simply upset the equipment so that an incorrect reading is obtained.

Duquesne Light engineers at the Beaver Valley Power Station identified 24 common alarm situations that appeared to be related to transmission system transients, switchyard switching, or unit trips at other plants. A power quality-monitoring program was established to assist in tracking down the cause and cure for these spurious alarm conditions.

The monitoring identified certain problems, led to the identification of alarm causes, and suggested the solution in some cases. The monitoring also established baseline data for future reference. If some new problem arises in the future, the measurements may be repeated and results compared. Any change in power quality might be associated with the new problem.

This report provides a plain language general overview of the project and the results. Specific details are presented in a report prepared by Duquesne Light for internal use.