

The review team was composed of eight members who are currently or were formerly licensed or certified, and represented LGS, PECO Energy Company's Peach Bottom Atomic Power Station, Northeast Utilities - Millstone, and GPU Nuclear - Oyster Creek. The visiting site personnel were selected because of their utility's reputation for excellent JPM processes as identified by the NRC and the Institute of Nuclear Power Operations. Process support to the team was supplied by PECO's Nuclear Strategic Support Team.

The review process was designed to have several short meetings with PECO participants to define the review process and schedule. This was followed by an intensive, four day period at LGS with all team members participating. The four day period included JPM process orientation, observations of JPMs in the simulator and the plant, the conduct of focus groups with personnel involved with JPMs, the performance of information analysis, and development of conclusions and root cause.

A variety of data and information collection and analysis techniques were used during the review process. JPMs were observed by team members with specific team criteria used for evaluation to augment the actual JPM process and documents. Individuals observed as evaluators and JPM performers were familiar with the NRC inspection process as well as PECO criteria for performance and evaluation of JPMS. Interviews or focus groups were conducted with operations, training and station management personnel using a series of open-ended questions developed to elicit information about the JPM process.

Information and data analysis techniques included the use of: the Total Quality Management's problem statement model, the Management Oversight and Risk Tree process as a background for fault tree analysis, PECO's root cause categories for fault tree analysis and as a check for completeness, PECO's Antecedent/Behavior/Consequence model to analyze a particular behavior observed during the process and a difference analysis between utilities and other aspects of the LGS JPM process. Category delineation and multi-voting were used to prioritize various results of data reduction. Consensual decision making was applied by the group to determine the root causes.

At the conclusion of the four day period, the team performed a documented self-assessment of the review process.

Root Causes of the Findings

The following root causes were identified as a result of the team review of the JPM process at LGS:

- 1) procedure human factors were on occasion not conducive to procedure compliance and it was perceived that the procedures could not easily be revised,
- 2) there was a lack of training and standards for persons giving and taking JPM training,
- 3) there was a lack of independent oversight of the JPM process by operations and training management, and
- 4) the application of a monetary bonus for JPM performance evaluations affected evaluator and operator JPM performance due to added pressure.

Corrective Actions

Improved procedure writing guidance will be developed and implemented by April 29, 1994. In addition, a Procedures Partnership Program has been implemented at LGS which pairs an operator with each system manager. This program is intended to serve primarily as an opportunity to include operations personnel in the procedure writing function, and offers the operators an easier way of ensuring that their ideas for procedure improvements are implemented. This program has been in limited operation, and will be enhanced by April 29, 1994, to increase operator input.

To improve JPM development and usage, a draft JPM writer and examiner guideline has been developed. This guideline is expected to be approved by April 29, 1994. This guideline will include provisions for imbedding management expectations in the JPMs, and will also include critical task selection criteria. As an immediate corrective action, a training module on JPM performance expectations has been included in Cycle 2 (the current six week training cycle) of licensed operator requalification (LOR) training which is scheduled to be completed by April 29, 1994. In addition, JPM training is scheduled for all licensed operators in all LOR training cycles for 1994.

To improve the independent oversight by operations and training management, a JPM monitoring program will be established. This monitoring program will be incorporated into the operations strategic training agreement by April 29, 1994. The strategic training agreement provides a mechanism to formalize mutual expectations between training and functional line management. In addition, observations from the monitoring program will be summarized and included in the Cycle Assessment Report following each six week LOR training cycle.