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SEPTEMBER 18, 1979

PGOR ORIGINAL

NOTE TO: Roger Mattson

FROM: Leo Beltracchi

SUBJECT: MEETING MINUTES AIF CONTROL ROOM CONSIDERATIONS SUBCOMMITTEE

At the request of the subcommittee, the undersigned met with them on Thursday, September 13, 1979. The purpose of the meeting was to inform the subcommittee on the nature and status of the L²TF long term recommendations regarding the control room and human factors. After presenting the information, the discussion focused on the following:

1. Implementation Schedules
2. Safety status monitoring of the plant, ^A discussion was also held regarding communication links between nuclear power plants and the NRC.

The subcommittee was concerned with all of the tentative dates that were stated regarding implementation schedule. The lack of resources was stated as a main reason why schedules could not be achieved. It was also stated that their "best people" were currently committed in responding to and implementing B₂OTF and L²TF short term recommendations. They requested that the NRC consider "staging" of the requirements in order to allow industry time to best utilize resources. As input to our decision making process, I requested that they provide us with a schedule they feel they can meet.

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The subcommittee was also concerned with the requirement for a minimum set of plant parameters that define the safety status of the plant process. While they understood the need to concentrate the information, and not to evaluate plant safety from one parameter alone, it was implied that this might require extensive modifications to achieve, especially for older plants. However, in recognition of the problem, they referenced the

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following statement made in response to a question from the TMI-2 presidential commission:

"There is no one modification that is best for all situations but we believe there are actions that can be taken to present more clearly data and alarm conditions of those plant parameters considered to be most critical for safety, namely:

- Reactivity Control
- Reactor Coolant System Pressure
- Reactor Coolant Inventory
- Reactor Coolant Flow (core heat removal)
- Heat Removal from Primary System (heat sink)
- Containment integrity

The presentation of these critical parameters and attendant controls and alarms should be organized and arranged such that they are easily monitored and understood by the supervising/senior reactor operator."

Upon evaluating the above defined parameters, I conclude that they are insufficient for what I would define as a safety state vector:

A SAFETY STATE VECTOR OF THE NUCLEAR PLANT: A MINIMUM SET OF PLANT PARAMETERS (VARIABLES) WHICH IS SUFFICIENT TO EVALUATE THE SAFETY STATUS OF THE PLANT PROCESS.

With this basis, radiation monitoring of the primary coolant and possibly subcooling of the core coolant should also be considered. Furthermore, I would restrict the vector only to plant variable. The monitoring of safety systems, such as containment integrity will be done through a backfit of R.G. 1.47.

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As a final note, the use of a computer data link, from a nuclear plant to the NRC, is highly unpopular in the industry. It was grudgingly admitted that radiation data would be useful to the NRC, but the industry saw no need to transmit plant parameters. I suspect that this will be a "lively" subject in the weeks to come.


Leo Beltracchi

cc: R. Tedesco
J. Milhoan

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