

September 8, 1987



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Mr. Eldan Testa
U.S. Nuclear Regulatory Commission
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101 Marietta Street
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1987 SEP 25 A 9 46
USNRC-DS

Dear Eldan:

SURRY SCENARIO REVIEW

Attached are the comments resulting from our review of the subject scenario. The scenario should support a reasonable demonstration of the licensee's Emergency Response capability. No major deficiencies were noted.

The comments are classified as follows:

Major Deficiencies - Those which may have a serious negative impact on the overall conduct of the exercise - e.g., prevent an adequate demonstration of the licensee's Emergency Response capability.

Minor Deficiencies - Those items which, individually, may degrade the demonstration of certain parts of the licensee's capability, but should not significantly detract from the overall success of the exercise.

Other Deficiencies/Questions - Items such as minor deficiencies or inconsistencies in scenario data, or matters of clarity which the licensee may wish to examine or explain prior to the exercise.

If you have any questions concerning these comments, please contact me on FTS (509) 375-3782, or Eva Hickey on FTS (509) 375-2065.

Sincerely,

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cc: DB Matthews, w/enclosure

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SCENARIO REVIEW

for

SURRY EMERGENCY PREPAREDNESS EXERCISE, OCTOBER 8, 1987

Major Deficiencies:

None.

Minor Deficiencies:

1. The Medical Drill Scenario has a victim that is seriously injured and should be transported immediately to a hospital. There should be no attempt to decontaminate the individual, and even at the hospital, life-saving steps would take priority over health physics concerns. A less serious apparent injury would better demonstrate the coordinated medical and health physics response objectives.
2. The plant data and messages lack realism and detail in several important respects:
 - The purpose of scenario message #10 is not clear. It is, in fact, an "instruction to players" and not an exercise message.
 - Scenario message 10A looks more like a "walkthrough" discussion scenario than a message depicting plant conditions, to which players are supposed to respond.
 - Reactor power (neutron power, 0-100%) is not one of the data points provided on the plant data sheets).
 - The events and conditions of 1555-1605 are not clearly depicted by the data sheets and messages. If the exercise is to support any evaluation of the operations response to this event (emergency detection, recognition, classification, mitigation) the data and messages for this time period must be enhanced in number and detail.
 - Message 10D seems out of place in the scenario and also quite confusing. This message should be carefully reviewed to make sure that it says what was intended, and also the time window and conditions under which it is to be issued should be clarified.
 - On the 1645 plant data sheet the RCS delta-T is not consistent with the values given for T-Hot T-Cold.
 - It is not clear why RVLIS values continue to drop from 1610-1700 when pressure is normal and core exit temperature is well below saturation.

- More detailed data concerning the "A" steam generator is needed to allow the operations staff to respond to the event and to provide the TSC with information from which to compute the source term. Individual steam generator pressures, feed flows, safety valve positions, MSIV positions and steam flows should be provided every few minutes while the release is in progress.

Other Deficiencies/Questions:

1. It is very unrealistic that there is a hurricane coming on shore only a hundred miles or so away and the meteorological conditions do not change at all during a 13 hour period!
2. There is a series of particulate and Iodine data in the Section "In plant" for various locations outside the plant that have no times associated with them. Sample times should be given for all data.
3. Under "Radiological Monitoring Data" there is an equation and conversion table for finding CPM from the $\mu\text{Ci/ml}$ I-131 equivalence, however, it is not clear where the $\mu\text{Ci/ml}$ data is obtained. "In Plant" data provides a nuclide breakdown, indicating a more complete analysis than would be possible with an air sample and RM-14. The "On-Site" and "Off-Site" data provide the appropriate I-131 equivalent activity.
4. General Comment - The exercise is so long and drawn out with little operations action for the first 6-8 hours that the players may have little enthusiasm for participating.
5. The messages reporting the air plane crash at 1345 give the switchyard as the location of the crash. Although the plant data sheets reflect no immediate damage to the incoming power lines, the plant staff will probably want to start diesels and reduce reactor power in anticipation of loss of some offsite power sources. Controllers should be prepared to intervene with realistic information to keep the scenario moving according to the prepared data.