Nebraska Public Power District

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NLS8900404
October 31, 1989

Dr. Blair Spitzberg
U.S. Nuclear Regulatory Commission
Region IV, Suite 1000
611 Ryan Plaza Drive
Arlington, Texas 76011

Dear Dr. Spitzberg:

Attached are the critique items from the 1989 Cooper Nuclear Station Emergency Exercise. The items are categorized by emergency response facility and characterized as either a deficiency, weakness, improvement item, or observation. Definitions for these terms appear on the attached pages.

The total number of critique items is 39. As the Nebraska Public Power District defines these items there are no deficiency items, 4 weakness items, 14 improvement items, and 21 observation items. The items classified as deficiency, weakness, or improvement require action to be taken to improve emergency response. These action items are assigned to responsible individuals and tracked until they are satisfactorily completed.

If you have any questions regarding these critique items, please contact us at your earliest convenience.

Sincerely,

G. A. Trevors
Division Manager
Nuclear Support

GAT:KMK:rg
Attachment

IE35
1/1

89-1779

DEFINITIONS

CRITIQUE ITEMS

DEFICIENCY	Items that were demonstrated and observed inadequacies, whether a single isolated case or a collection of observations, that indicate the state of emergency preparedness is not adequate to protect the health and safety of the public.
WEAKNESS	Items that were demonstrated and observed inadequacies, that require corrective action, but when considered by themselves do not adversely impact the health and safety of the public.
IMPROVEMENT ITEM	Items that were demonstrated and observed problem areas that are not considered to adversely affect the health and safety of the public, but correction would enhance the level of preparedness.
OBSERVATION	Items which may be reviewed for potential benefits; these include positive and negative comments, no immediate corrective action is required.

This is the Nebraska Public Power District's (NPPD) initial assessment of the emergency exercise held at Cooper Nuclear Station on October 25, 1989.

I. Not specific to a single emergency response facility.

A. Deficiencies

1. None

B. Weaknesses

1. The accomplishment of the notification requirements of 10CFR50 Appendix E, D.3 "A licensee shall have the capability to notify responsible state and local governmental agencies within 15 minutes after declaring an emergency" was weak as illustrated by the following:

a. Initial notification of state and local governmental agencies upon the declaration of a Site Area Emergency was not accomplished within the required time frame as per EPIP 5.7.6.

b. The person making initial notifications from the Control Room used a crib sheet containing phone numbers for offsite notifications to assist in completion of notifications as per EPIP 5.7.6.

c. The order in which notifications to the state and local agencies are made as per EPIP 5.7.6 needs to be evaluated.

d. Missouri contacted the Control Room for verification of the declaration of a Site Area Emergency by NPPD. The TSC was operational at this time and verification should have been done through the TSC Offsite Communicator. (This requires further investigation).

e. Initial notification form, Attachment A of EPIP 5.7.6, did not contain the reason for the declaration of a General Emergency.

f. Corporate Duty Officer (CDO) was initially notified by the CNS Communicator that a NOUE had been declared, when in fact an ALERT had been declared. The CDO verified several times and the Communicator still said that it was a NOUE.

C. Improvement Items

1. None

II. Control Room

A. Deficiencies

1. None

B. Weaknesses

1. None

C. Improvement Items

1. Periodic briefings and big picture updates need to be done for the benefit of the Control Room staff.

2. Station operators need to be debriefed upon their return to the Control Room. This needs to be done to avoid the possibility of confusion with erroneous information or loss of vital information. For example:

   a. The HPCI leak was reported to be in different locations by different people.

D. Observations

1. Periodically both Control Room Operators were on the phone at the same time leaving no one at the control panels.

2. The use of a white board in Control Room to list problem areas and repair status would be beneficial to the Control Room staff.

3. Station procedure 2.4.2.3.2 should be evaluated for inspection of all ADS/SRV fuses. This procedure does not currently list all of the ADS/SRV fuses.

4. Two objectives for the Control Room were not demonstrated (Met/RAD data analysis and off-site dose projection) because associated actions were performed by the TSC and were therefore not applicable. All other objectives for the Control Room were met.

5. NRC evaluators at times distracted operators by asking questions at inappropriate times.

III. TSC

A. Deficiencies.

1. None.

B. Weaknesses.

1. The EALs are not specific on indicators of fuel cladding loss. More definition in the pertinent EALs on core damage vs. clad failure for both the Operations and Radiological groups is needed.

a. Further clarification of the EAL and the relationship between the terms or concepts "Fuel Cladding Loss", "Fission Product Barrier Loss", and "Core Degraded" would greatly reduce or even eliminate the problem encountered at the exercise.

As currently stated, several EALs concerning the condition of the fuel cladding have only two indicators; namely radiation levels at the Steam Jet Air Ejectors and Iodine concentrations in the reactor coolant. In most occurrences resulting in fuel damage neither of these indicators would be valid because first, the MSIVs would isolate on three times normal radiation, effectively isolating the SJAE monitors, and second exact iodine concentrations in the reactor coolant would not be immediately available. Therefore the person(s) making the classification decision must make a judgment call as to the condition of the fuel cladding. Obviously, the conservative thing to do is to declare this barrier "breached". This turns out to be fine if only the cladding is involved, but when subsequently declaring the other barrier(s) breached, problems occur.

The real crux of the problem became evident when dose assessment calculations began. A parameter in the dose assessment models (ADAM and CNS-DOSE) asks the question "Core Degraded (Yes/No)?". This caused a problem with initial dose assessment at the Site Area Emergency. Using the indicators given, the dose assessment personnel postulated about 1% fuel damage, therefore answering the core degraded question "No". At 1952 dose assessment calculation was made using the 1945 scenario data. This action was "timely". Answering the core degraded question "No" was not the predicted action the scenario development group expected.

There was a very careful, objective, decision-making process utilized in arriving at the decision not to call the core degraded for dose assessment purposes. The

players should not be faulted for this. In fact, some of their methodology/rationale should be evaluated as a starting point in providing clarification on this issue.

The above should indicate the need to both clarify the EAL concerning "loss" of a barrier, and also develop some sort of formal forum to allow Health Physics and Operations to agree on (or at least be aware of) how the fuel cladding barrier is being treated by each group. In the situation which occurred at the exercise, there should have been no problem with Operations calling the barrier breached and Health Physics calling it (or rather core condition) non-degraded.

C. Improvement Items

1. The Maintenance/OSC Coordinator was overtaxed. Needs help or delegation of some tasks.

   a. Repair team members were milling about the TSC control table waiting for the Maintenance/OSC Coordinator to brief them. Team members did not report to their designated briefing area.

2. There were no team leaders for teams dispatched in the plant. (This requires further review).

3. Direction and Control immediately following the arrival of the NRC site team needs improvement.

   a. Arrival of NRC Technical Assistance Team created confusion. The NRC team members were milling about and needed directions so they could effectively start working.

4. Integrated Dose Rates and Protective Action Recommendations on the radiological status boards were not updated completely until 2130.

   a. The Offsite communicator uses the information on this board to fill out the power plant update forms, which keeps the offsite agencies informed on the situation at Cooper Nuclear Station.

5. Cross contamination control and outside contaminated area control from the TSC was inadequate.

   a. Directions given to a repair team going to the TSC sent them out the Multi-purpose Facility directly into the plume.

D. Observations

1. The objective to demonstrate the ability to analyze the PASS sample was not performed during the exercise due to time restraints.

2. No announcement of when EOF was activated was made in TSC.

3. Feedback from teams to TSC engineers was not consistent between all teams. As an illustrative example:

   a. Lack of communication between ADS/SRV repair team and TSC/Engineering caused the team to fail to identify the problem.

4. The data supporting the release path through AOG was not clearly understood in the TSC.

5. Continuing accountability requirements were not clear between players and non-players.

   a. At the player briefing make it clear who needs to be continuously accounted for, a) players only or, b) players and all of the controllers, evaluators, etc.

IV. OSC's

A. Deficiencies

1. None

B. Weaknesses

1. None

C. Improvement Items

1. None.

D. Observations

1. The OSC's should be involved in problem evaluation.

V. Survey Teams

A. Deficiencies

1. None

B. Weaknesses

1. None

C. Improvement Items

1. Problem with use of SAM-2 instrument. The SAM-2 is not a good field instrument. (further research on this item is required).

D. Observations

1. None.

VI. EOF

A. Deficiencies

1. None

B. Weaknesses

1. Ongoing accountability in the EOF was not demonstrated.

C. Improvement Items

1. When briefings are held in the EOF, communications responsibilities need to be delegated.

2. The Technical Communicator could not reach the IDT (SPDS display) while wearing his headset on due to the location of the IDT.

3. Communication of off-site PAR's to county versus state needs improvement.

   a. Further investigation on this matter is warranted to assess the impact on the counties protective action implementation.

4. Paper flow off-site needs to be evaluated. There is a lot of redundancy in information being transmitted.

   a. Look at the redundancy of information on Attachment B of EPIP 5.7.23 and Attachment C of EPIP 5.7.6.

D. Observations

1. More frequent and more detailed facility briefings could be given in the EOF.

2. Inventory on a sealed locker uses unnecessary time.

a. Specifically the lockers used by the Downwind Survey Teams are inventoried and sealed. Inventorying a sealed locker appears to be a waste of time.

VII. GOEC/MRC.

A. Deficiencies.

1. None.

B. Weaknesses

1. The Corporate Duty Officer's (CDO) Pager does not go off inside the General Office Building.

a. The CDO begins all notifications for the GOEC and MRC staffs. If the CDO cannot be contacted, activation of the GOEC/MRC cannot take place.

C. Improvement Items

1. Hard copy communications in the offsite emergency response centers bogged down.

a. The MRC FAX was tied up to the extent that News Statements released by the States and NPPD from the MRC could not be transmitted to the GOEC. This is information the GOEC needs to deal with Public and Media calls. What Protective Actions were implemented for the Public.

2. GOEC TIC had a problem obtaining current information because the EOF TIC had to leave the headset to fill in forms, ask questions about things not on status boards, etc.

3. Need to develop a trending board in the General Office Emergency Center (GOEC) for the following critical factors: Drywell Pressure, Drywell Temperature, Release Rate, Reactor Water Level. This would help operations oriented personnel in GOEC know which way things are headed.

4. The GOEC personnel do not need to know what protective actions NPPD recommended to the States.

a. GOEC needs to know what protective actions were actually implemented and description of affected areas as given to Public in EBS Messages, News Statements or Media briefings.

D. Observations

1. GOEC Director was out of touch at times while briefing the CEO

2. The cycle diagram showing the reactor, torus, safety systems was missing from GOEC. This diagram would have been helpful in following the events of this scenario.

3. An easier method to update the Regional Managers and other NPPD Plant Managers is needed.

4. Staffing - all positions need more depth. In a real emergency, we would find ourselves understaffed.

5. Public Assistance Hotline personnel should not give out CNS phone numbers to the public.

6. When Attachment B of EPIP 5.7.23 and Attachment C of EPIP 5.7.6 are sent from EOF, there needs to be a way to indicate which parameter changed if any.

7. Environmental Manager could use an IDT Terminal in GOEC to provide current Dose Assessment information.

8. GOEC Receptionist needs two new phones similar to those that have indicators for open lines and lines in use. Would make transferring of calls easier.