



NRC Emergency Preparedness Counterpart Meeting

Arlington, Texas

July 30, 2001



Topics for Discussion

- **Opening remarks - introductions**
A. Nelson
- **Industry's focus on identifying lessons learned from inspection reports**
A. Nelson
- **ROP/PI issues, lessons learned - Walt Lee**
- **Industry's approach to what is a release - Jim Jones**
- **Revisit 50.54(q) - Bill Renz**
- **Inspection Consistency - A. Nelson**
- **Summary and discussion - A. Nelson**





Industry Trends

Alan Nelson

Nuclear Energy Institute



Industry Trends and Lessons Learned- NRC

- Maintaining Equipment
- Emergency Action Levels
- Communications



Industry Trends and Lessons Learned - NRC

- Augmentation
- Effective Training
- Procedure Control
- Critiques
- 50.54(q)



Industry Trends and Lessons Learned - FEMA

- Management Control
- Facility Operations
- Notification
- Communications
- Protective Measures
- Dose Assessment



Industry Trends and Lessons Learned - FEMA

- Monitoring Teams
- Medical
- Equipment
- Exercise Objectives
- Procedures
- Staffing/training





Questions ?





ROP/PI EP Issues

Walter H. Lee

Southern Nuclear Operating Company



DEP - Timeliness

- Timeliness concerns are in two areas:
 - Dose Assessment
 - ◆ When is data available from dose assessment to start the classification and PAR development 15 minute clock?
 - Multiple Notifications
 - ◆ How should notifications be made for rapidly escalating conditions?

Timely means:

classifications are made consistent with the goal of 15 minutes once **available** plant parameters reach an Emergency Action Level (EAL)

– PARs are **developed-made consistent with in the goal of 15 minutes once data is available.**
– ~~data availability.~~

offsite notifications are initiated (~~verbal contact~~) within 15 minutes of event classification and/or PAR development (**see clarifying notes**)



Dose Assessment - Classification

- Example 1:

Initial Conditions: PWR at 100% power

- Time=0 - Condenser air ejector radiation monitor alarms
- Time=0 - On-shift dose assessment started based on effluent monitor alarm
- Time=15 - ED completes plant condition EAL review - no classification req'd
- Time=15 - ED provided data from dose assessment calculation results

A) Time=30 - ED completes EAL review and declares NOUE...Timely? Y/N

B) Time=31 - ED completes EAL review and declares NOUE....Timely? Y/N



Dose Assessment - PARs

- Example 2:

Initial Conditions: Site Area due to LOCA with fuel damage (two barriers)

- Time=0 - Vent stack monitors alarm indicating potential loss of CTMT barrier
- Time=0 - EOF dose assessment starts based on effluent monitor alarm
- Time=5 - ED completes plant condition EAL review, classifies event as GE, and issues automatic minimum PARs
- Time=15 - ED provided data from dose assessment calculation results

A) Time=30 - ED completes PAR development and upgrades PARs...Timely? Y/N

B) Time=31 - ED completes PAR development and upgrades PARs...Timely? Y/N



Multiple Event Notifications

■ Example 3:

Initial Conditions: NOUE due to RCS leakage > EAL, shutdown in progress

- Time= 0 - ED completes plant condition EAL review & declares ALERT due to indicated increased RCS leakage
- Time= 5 - RCS activity sample data provided to ED
- Time=10 - ED completes plant condition EAL review and declares SAE due to indicated loss of two barriers

A) Time=15 - SAE Notification noting ALERT declaration...Timely? Y/N

B) Time=25 - SAE Notification noting ALERT declaration...Timely? Y/N



NUREG-1022, Revision 1

- **Event Reporting Guidelines: 10 CFR 50.72 & 50.73**
 - **Event conditions may change rapidly such that the event has occurred and the conditions requiring declaration no longer exist prior to the 15 minute declaration clock being exceeded**
 - **Section 3.1.1 (Immediate Notification Rqmts) provides notification options**
 - ◆ **Declare and immediately terminate OR**
 - ◆ **Just make ENS notification to NRC Operations Center**
 - **Opportunity? Y/N**

Occasionally, a licensee may discover that an event or condition had existed which met the emergency plan criteria but that no emergency had been declared and the basis for the emergency class no longer exists at the time of this discovery. This may be due to a rapidly concluded event or an oversight in the emergency classification made during the event or it may be determined during a post-event review. Frequently, in cases of this nature, which were discovered after the fact, licensees have declared the emergency class, immediately terminated the emergency class and then made the appropriate notifications. However, the staff does not consider actual declaration of the emergency class to be necessary in these circumstances; an ENS notification (or an ENS update if the event was previously reported but misclassified) within one hour of the discovery of the undeclared (or misclassified) event will provide an acceptable alternative.



ERO - Communicator

- Confusion over who should be included in population
 - Person who only reads/faxes the notification form to the agencies? Y/N
 - Person who fills out the MET/dose data? Y/N
 - Person who collects the MET/dose data? Y/N
 - Person who fills out the EAL number/event description? Y/N
 - Person who fills out the PARs section? Y/N
 - Person who approves the notification form? Y/N

The communicator is the key ERO position that fills out the notification form, seeks approval and usually communicates the information to off site agencies. Performance of these duties is assessed for accuracy and timeliness and contributes to the DEP PI. Senior managers who do not perform these duties should not be considered communicators even though they approve the form and may supervise the work of the communicator. However, there are cases where the senior manager actually collects the data for the form, fills it out, approves it and then communicates it or hands it off to a phone talker. Where this is the case, the senior manager is also the communicator and the phone talker need not be tracked. The communicator is not expected to be just a phone talker who is not tasked with filling out the form. There is no intent to track a large number of shift communicators or personnel who are just phone talkers.



Siren Data Duplicate Reporting

- Reporting Requirements
 - NRC PI reporting is an operability percentage
 - ◆ Number of Successful Tests / Number of Tests
 - ◆ 4 quarter running total
 - FEMA ALC reporting is an operability percentage
 - ◆ Number of sirens tested, number of sirens operable, and percentage of sirens operable
 - ◆ Immediately preceding 12-month period

The purpose of the ANS PI is to provide a uniform industry reporting [availability](#) approach and is not intended to replace the FEMA Alert and Notification reporting requirement at this time.





Definition of a radiological “release”

James D. Jones

Nine Mile Point Nuclear Station



Why is this issue important?

- The public views any release of radioactive material from a nuclear reactor as bad
- Recent events at Indian Point 2 and at Diablo Canyon involved issues of release characterization



Issues surrounding release characterization

- Release magnitude must be *rapidly* assessed as it is a required component of offsite notification
- Instrumentation that measures releases is typically set to alarm at some fraction or multiple of *technical specifications*



Issues surrounding release characterization

- Once release is characterized, this assessment is sent to offsite authorities, who may not be able to translate this information into a risk to the public



Issues surrounding release characterization

- Any information on a nuclear power plant emergency is disseminated to the public very rapidly by the media (usually, quicker than the licensee can explain the events)
- It is difficult to explain the concept of release magnitude versus risk to the public



Issues surrounding release characterization

- It is easy to unintentionally confuse the public
 - for example: stating “no release” in the presence of a release of process effluent
 - for example: time lag between when events occur and when the JNC briefs the media on those events



Industry status

- Inconsistent definition of a release
- Typically...
 - linked to the event
 - linked to technical specifications
 - are capable of being measured
 - sometimes linked to EPA PAG's



Industry status

- Recognition of the need to rapidly provide explanation to the public and the media of any releases



Proposed Actions

- Develop a standard set of release characterizations that meet the intent of NUREG 0654 section II.E that are:
 - easily observed in the Control Room
 - can be rapidly assessed
 - use terminology understandable to offsite authorities



Proposed Actions

■ Example...

Release of radioactive materials due to the classified event:

- No release
- Release **BELOW** federally approved operating limits (technical specification)
- Release **ABOVE** federally approved operating limits (technical specification)
- Unmonitored release requiring evaluation



Proposed actions

- Verify that Public Information personnel are well acquainted with...
 - release characterization method and terms
 - link between releases and emergency classification level
 - immediate access to health physics personnel



Proposed actions

- Assess the timelines of methods for clarifying and providing information:
 - technical/radiological liaisons to offsite agencies
 - Joint News Center operations and procedures
 - technology solutions



Proposed actions

- It may be appropriate to form an industry task force for this issue
 - comprised of
 - ◆ licensee EP, HP and Communications staff
 - ◆ NRC
 - ◆ FEMA
 - ◆ State





Questions?



Revisit 10 CFR 50.54(q)

Bill Renz

Dominion Resources Services



10 CFR 50.54(q)

Background / Intent of regulation

Need to clarify guidance on test for
decrease threshold

Industry intent to establish task force



10 CFR 50.54(q)

Industry Goals:

- Effective use and application
- Liberal application of change in basis
- Timely implementation
- Tie to equivalent level of response
- Tie to risk significance





Inspection Consistency

Alan Nelson

Nuclear Energy Institute



Inspection Consistency

- Interactions with Licensee Senior Management
- Focus recommendations on safety
 - No Violation of Regulations
 - Opinions can be different from region to region inspector to inspector



Inspection Consistency

- Proven programs inspected by new inspectors give a program a fresh look
- Different views are valuable





Questions ?

