

Attachment 1 of Enclosure 2  
NRC Handout  
Meeting Summary of the October 14, 2010 Meeting with NEI  
**DATED October 25, 2010**

ML102940310

**3 SPECIFIC REPORTING GUIDELINES 3.1 General Requirements 3.1.1 Immediate Notifications § 50.72(a) General Requirements<sup>1</sup>**

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**Discussion**

Appendix E to 10 CFR Part 50, Section IV (C), "Activation of Emergency Organization," establishes four emergency classes for nuclear power plants: Notification of Unusual Event, Alert, Site Area Emergency, and General Emergency. NUREG-0654/FEMA-REP-1, ~~Revision 1~~, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants", (March 1987), and more recently, NUMARC/NESP-007, Revision 2, "Methodology for Development of Emergency Action Levels" (January 1992), and NEI 99-01, "Methodology for Development of Emergency Action Levels", provide the basis for these emergency classes and numerous examples of the events and conditions typical of each emergency class. Licensees use this guidance in preparing their emergency plans. Use of these four emergency classification terms in the ENS notification helps the NRC recognize the significance of an emergency. Time frames specified for notification in § 50.72(a) use the words "immediately" and "not later than one hour" to ensure the Commission can fulfill its responsibilities during and following the most serious events.

Occasionally, a licensee discovers that a condition existed which met the emergency plan criteria but no emergency was 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 when the plant conditions that would have initiated the classification and notifications are no longer present, licensees have declared the emergency class, immediately terminated the emergency class and then made the appropriate notifications.

However, the NRC staff does not consider actual declaration of the emergency class to be necessary in these circumstances; If the licensee does not declare an emergency under these circumstances, an ENS notification (or an ENS update if the event was previously reported but miss-classified) within one hour of the discovery of the undeclared (or miss-classified) event provides an acceptable alternative.<sup>2</sup> Nonetheless, if the licensee does declare an emergency then all notifications required by 10 CFR 50.47(b)(5), 10 CFR 50.72, and Part 50 Appendix E §IV.D.3) are to be made.

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<sup>1</sup> Other requirements for immediate notification of the NRC by licensed operating nuclear power reactors are contained elsewhere in this chapter, in particular, §§ 20.1906, 20.2202, 50.36, 72.216 and 73.71.

<sup>2</sup> ~~Notification of the~~ The licensee should inform State and local offsite response organizations ~~should be made of~~ such events in accordance with the arrangements made between the licensee and offsite organization.

### 3.2.13 Loss of Emergency Preparedness Capabilities

If not reported under § 50.72(a), (b)(1), or (b)(2), an ENS notification is required under (b)(3) for a major loss of their emergency assessment, offsite response, or offsite communications capability.

#### Discussion

This reporting requirement pertains to events that would result in a major loss of emergency assessment capability, offsite response capability, or offsite communications capabilities. The loss of these capabilities could substantially impair a licensee's, or offsite officials', ability to respond to deal with an accident or an emergency if one were to occur, or has occurred. The focus of this reporting requirement is in the loss of capabilities to perform functions identified in the respective emergency plan. Failures of individual systems or facilities that comprise these capabilities are reportable only to the extent that these failures meet the above threshold.

Notifying the NRC of these events ~~may permits~~ the NRC to consider implementing compensatory take some compensating measures and to more completely assess the consequences of such a loss should it occur during an accident or emergency. The following are examples of equipment or facilities that may be encompassed by this reporting requirement:

~~Examples of events that this criterion is intended to cover are those in which any of the following is not available:~~

#### Emergency Assessment Capabilities

- Safety parameter display system (SPDS)
- Emergency response facilities (ERFs)
- Plant monitors necessary for accident assessment

#### Offsite Response Capabilities

- Public prompt notification system(s) including sirens (primary system)

#### Offsite Communication Capabilities

- Emergency notification system (ENS)
  - Other emergency communications facilities and equipment including the emergency notification system (ENS) used between the licensee's onsite and offsite ERFs, and between the licensee and offsite officials.
- ~~• Public prompt notification system including sirens~~  
~~• Plant monitors necessary for accident assessment~~

Losses of the above equipment These and other situations should be evaluated for reportability as discussed below.

#### Loss of Emergency Assessment Capability

A major loss of emergency assessment capability ~~would~~ includes those events that would significantly impair the licensee's safety emergency assessment capability if an emergency were to occur. Some engineering judgment is needed to determine the significance of the loss of particular equipment, ~~e.g., loss of only the SPDS for a short period of time need not be reported, but loss of SPDS and other assessment equipment at the same time may be~~

reportable. For example, the loss of the SPDS alone may not need not be reported, but loss of SPDS concurrent with other plant indicators or annunciators being unavailable should be reported if the licensee would be unable to assess, or monitor, an accident or transient in progress. Examples of events that should be evaluated against this threshold for reportability include, but are not limited to:

- A The staff considers the loss of a significant portion of control room indication including annunciators or monitors, or the loss of all plant vent stack radiation monitors, as examples of a major loss of emergency assessment capability which should be evaluated for reportability. In evaluating the reportability of such events, only those display systems, indicators, and annunciators that are relied upon in abnormal operating procedures; emergency operating procedures; and in emergency plan implementing procedures addressing classification, assessment, or protective actions; need to be considered.
- A significant degradation in the licensee's ability to perform accident assessment functions assigned to a licensee ERF by the emergency plan. Typically, this would be the Technical Support Center (TSC), but may include the Emergency Operations Facility (EOF). However, a planned maintenance outage of the ERF, or its supporting systems, need not be reported if (1) the ERF's assessment capabilities could be restored to service promptly in the event of an accident or the licensee had implemented viable compensatory actions<sup>3</sup>, and (2) the planned outage is not expected to, and subsequently did not, exceed 72 hours.

#### Loss of Offsite Response Capability

A major loss of offsite response capability includes those events that would significantly impair the fulfillment ability of the licensee's approved emergency plan for other than a short time. Loss of offsite response capability may typically include the loss of plant access. Emergency offsite response facilities<sup>4</sup>, or public prompt notification system, including sirens and other alerting systems, or offsite officials, to implement the functions of their respective emergency plans if an emergency were to occur. Examples of events that should be evaluated against this threshold for reportability include, but are not limited to:

- If The occurrence of a significant natural hazard (e.g., earthquake, hurricane, tornado, flood, major winter storms, etc.) or other event causes that would:
  - Prevent State and local jurisdictions from maintaining evacuation routes to be impassible passable, or from maintaining other parts of the response infrastructure to be impaired to the extent that the State and local governments are rendered incapable of fulfilling their responsibilities in the emergency plan for the plant, then the NRC must be notified. available, to the extent that these jurisdictions would be unable to implement the public protective measures called for in their emergency plan, and/or,

<sup>3</sup> "Promptly" means within the licensee's emergency plan requirements for facility activation time. A "viable" compensatory action is one that (1) can restore the required function in a reasonably comparable manner, and (2) is proceduralized prior to an event.

<sup>4</sup> Performing maintenance on an offsite emergency response facility is not reportable if the facility can be returned to service promptly in the event of an accident.

- Restrict access to the licensee's site, or its offsite ERFs, such that the licensee would not be able to augment its onshift staff or activate its ERFs as required by the emergency plan. Offsite response support relied upon in the emergency plan such as fire departments, local law enforcement, and ambulance services would not be able to access the site.

~~This does not apply in the case of Routine traffic impediments, such as fog, snow and ice, which do not render the state and local governments incapable of fulfilling their responsibilities. It should generally not be reported if they are within the respective capabilities of the licensee, State, or local officials to resolve or provide a compensatory action. Rather, the reporting requirement is intended to apply to more significant cases such as the conditions around the Turkey Point plant after Hurricane Andrew struck in 1992 or the conditions around the Cooper station during the Midwest floods of 1993.~~

~~If the alert systems, e.g., sirens, are owned and/or maintained by others, the licensee should take reasonable measures to remain informed and must notify the NRC if a large number of sirens fail. Although the loss of a single siren for a short time is not a major loss of offsite response capability, the loss of a large number of sirens, other alerting systems (e.g., tone alert radios), or more importantly, the lost capability to alert a large segment of the population for 1 hour would warrant an immediate notification.~~

- Failures in the primary public alerting systems (e.g., sirens, tone alert radios, etc.), for whatever reason, that result in the loss of the capability to alert a large segment of the population in the EPZ for more than one hour. The licensee should take reasonable measures to remain informed of the status of the primary public alerting system, regardless who maintains the system, and must notify the NRC if the established thresholds are exceeded. A planned outage of the primary public alerting system need not be reported if (1) the licensee had arranged for the implementation of FEMA-approved backup alerting methods should public alerting become necessary, and, (2) the planned outage is not expected to, and subsequently did not, exceed 24 hours.

#### Loss of Offsite Communications Capability

~~A major loss of communications capability may include the loss of ENS, HPN and/or other offsite communication systems. The other offsite communication systems may include a dedicated telephone communication link to a State or a local government agency and emergency offsite response facilities, in-plant paging and radio systems required for safe plant operation, or commercial telephone lines. those events that would significantly impair the ability of the licensee to implement the functions of its emergency plans if an emergency were to occur. With the exception of the ENS, failures of individual communications systems are reportable only to the extent that these failures meet this threshold. A loss of the ENS shall be reported as a major loss of communication capability.<sup>5</sup> For the remaining systems, the failure of a single communication system need not be reported if there are viable alternative methods<sup>6</sup> of communicating information regarding the emergency.~~

<sup>5</sup> The loss of the ENS is considered to be a major loss of communication capability since the NRC relies upon this capability to alert licensees of threat-related information, as well as means to receive notifications.

<sup>6</sup> A "viable" alternative method (or compensatory action) is one that (1) can perform the required function in a reasonably comparable manner, and (2) is proceduralized prior to an event.

## NRC DRAFT MARK-UP

~~NRC Regulatory Issue Summary 2000-11, June 30, 2000, discusses the NRC Emergency Telecommunications System (ETS). The ETS provides seven communication functions to nuclear power reactor emergency response facilities. Included in these functions are the ENS, the Health Physics Network (HPN) and the ERDS. ETS service is currently provided using direct access lines to the Federal Government's long distance network, FTS 2000. These dedicated lines provide a direct connection to FTS 2000 and are not switched at the local central office. In the future, the Federal Government will adopt a new long distance network, FTS 2001. ETS functions will either be provided by the NRC in the form of direct access lines to the Federal Government's new long distance network, FTS 2001, or, alternatively, by licensee telecommunications capabilities that provide access to long distance networks without switching at the local central office.~~

~~If FTS 2001 is used to provide ETS functionality at a site and either or both of the emergency communications subsystems (ENS and HPN) fail, the NRC Operations Center should be so informed over normal commercial telephone lines. When notifying the NRC Operations Center, licensees should use the backup commercial telephone numbers provided. This satisfies the guidance provided in previous Information Notices 85-44 "Emergency Communication System Monthly Test," dated May 30, 1985 and 86-97 "Emergency Communications System," dated November 28, 1986, to test the backup means of communication when the primary system is unavailable as well as the reporting requirements of § 50.72(b)(2)(xii). If the Operations Center notifies the licensee that an ENS line is inoperable, there is no need for a subsequent licensee notification. Loss of either ENS or HPN does not generate an event report. The Operations Center contacts the appropriate repair organization.~~

~~In a similar manner, if the NRC supplied telephone line or modem used for ERDS is inoperable, the NRC operations center should be informed so that repairs can be ordered. However, this does not generate an event report.~~

~~If ETS functionality is provided using licensee corporate communications systems, the NRC Operations Center should be informed through any means available of any communication system failures which render ETS communication functions unavailable. This does not apply to minor interruptions in portions of the site or corporate telecommunications systems. It is intended to apply to serious conditions during which the telecommunications system can no longer fulfill the communications requirements of the emergency plan or provide ETS functionality.~~

This reporting requirement only addresses those communication systems that enables a licensee to make notifications and provide follow up information to Federal, State, and local officials located offsite. Examples of communication systems whose failures should be evaluated against the above threshold for reportability include, but are not limited to:

- Emergency response data system (ERDS)
- Emergency notification system (ENS)
- Health physics network (HPN), and,
- Other offsite communication systems, including,
  - dedicated telephone communication link to State or local officials.

- dedicated voice and data links between the site and emergency offsite response facilities,
- radio system for communicating with offsite field monitoring teams, and,
- commercial telephone lines that are relied upon for use in emergency response.

Each site's communications system will be different, and the significance of the loss of any one communication system may differ from site to site. This reporting requirement is intended to apply to serious conditions during which the telecommunications system can no longer fulfill the communications requirements of the emergency plan.

Excluding ENS, a planned maintenance outage of a communication system need not be reported if (1) the communication system could be restored to service promptly in the event of an accident or the licensee had implemented viable compensatory actions<sup>7</sup>, and (2) the planned outage is not expected to, and subsequently did not, exceed 72 hours.

Although an ENS notification may not be required under 10 CFR 50.72(b)(3)(xiii) in the event of a loss of the HPN or ERDS because of the availability of viable alternative communication means, the licensee should inform the NRC Operations Center of any failure of these systems so that the NRC may arrange for repair of NRC-supplied communications equipment. When informing the NRC Operations Center, licensees should use the backup commercial telephone numbers provided in Information Notices 85-44 "Emergency Communication System Monthly Test," dated May 30, 1985 and 86-97 "Emergency Communications System," dated November 28, 1986. If the Operations Center notifies the licensee that an ENS line is out of service, there is no need for a subsequent licensee ENS notification. No LER is required because there are no corresponding 10 CFR 50.73 requirements.

## **Examples**

### (1) Loss of Primary Public Prompt Notification System

~~ENS notifications of the loss of the emergency sirens or tone alert radios vary according to the licensee's locale and interpretations of "major loss" and have included:~~

The NRC has not established a numerical threshold (e.g., number, percentage or area of failed sirens) for this reporting requirement because the thresholds need to be specific to the particular EPZ. The NRC expects its licensees to establish thresholds that reflect the EPZ-specific population density and distribution, the locations of the sirens or other alerting devices, and the overlap in coverage of adjacent sirens. For example, a loss of 10% of the sirens in a high-density population area may have greater impact than 50% of the sirens lost in a low-density area. Similarly, a loss of 10% of the sirens dispersed across the entire EPZ may not be as significant as losing the same number of sirens in a single jurisdiction. As such, notifications of the loss of the primary public prompt notification system will vary according to the licensee's "major loss" threshold. Previous notifications have included:

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<sup>7</sup> "Promptly" means within the licensee's emergency plan requirements for facility activation time. A "viable" compensatory action is one that (1) can restore the required function in a reasonably comparable manner, and (2) is proceduralized prior to an event.

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- 12 of 40 county alert sirens disabled because of loss of power as a result of severe weather.
- 28 of 54 alert sirens were reported out of service as a result of a local ice storm.
- All offsite emergency sirens were:
  - found ~~inoperable~~ out of service during a monthly test.
  - taken out of service for repair.
  - ~~inoperable~~ out of service because control panel power was lost.
  - ~~inoperable~~ out of service because the county radio transmitter failed.

~~An ENS notification is required because of the major loss of offsite response capability, i.e., the public prompt notification system. However, licensees may use engineering judgment in determining reportability (i.e., a "major loss") based upon such factors as the percent of the population not covered by emergency sirens and the existence of procedures or practices to compensate for the lost emergency sirens. Failures in the primary public alerting systems (e.g., sirens, tone alert radios, etc.), for whatever reason, that result in the loss of the capability to alert a large segment of the population in the EPZ for more than one hour should be reported as a major loss of offsite response capability. However, a planned outage need not need be reported if (1) the licensee had arranged for the implementation of a FEMA-approved backup alerting methods should public alerting become necessary, and, (2) the planned outage is not expected to, and subsequently did not, exceed 24 hours. No LER is required because there are no corresponding 10 CFR 50.73 requirements.~~

### (2) Loss of ENS and Commercial Telephone System

~~The licensee determined that ENS and commercial telecommunications capability was lost to the control room when a fiber optic cable was severed during maintenance. A communications link was established and maintained between the site and the load dispatcher via microwave transmission. Both the ENS and commercial communications capability were restored approximately 90 minutes later.~~

~~An ENS notification is required because of the major loss of communications capability. Although the microwave link to the site was established and maintained during the telephone outage, this in itself does not fully compensate for the loss of communication that would be required in the event of an emergency at the plant. No LER is required because there are no corresponding 10 CFR 50.73 requirements.~~

### (2) Loss of Direct Communication Line to Police

~~The licensee contacted the State Police via commercial telephone lines and reported to the NRC Operations Center that the direct telephone line to the State Police was inoperable for over 1 hour. The licensee notified the NRC Operations Center in a followup ENS call that the line was restored to operability.~~

~~An ENS notification would be required if the loss of the direct telephone line(s) to various police, local, or State emergency or regulatory agencies is not compensated for by other readily available offsite communications systems. In this example, no ENS notification is required since commercial telephone lines to the State Police were available.~~

## NRC DRAFT MARK-UP

The licensee determined that the direct telephone line to the State Police had been out of service. In this example, no ENS notification is required since commercial telephone lines to the State Police were available. An ENS notification would be required if the loss of the direct telephone line(s) to various police, local, or State emergency or regulatory agencies is not compensated for by other readily available offsite communications systems. No LER is required because there are no corresponding 10 CFR 50.73 requirements.

### (3) Loss of ERDS

The licensee determined that the ERDS was out of service due to a failure of licensee owned and maintained equipment. However, ENS was available. Since ERDS is identified as a supplement to ENS in Appendix E, the failure of the ERDS does not constitute a major loss of offsite communication capability provided that the ENS is available. If, however, the failure is determined to be in NRC maintained equipment, the licensee should inform the ERDS help desk of the outage so that the NRC can arrange for repair. No LER is required because there are no corresponding 10 CFR 50.73 requirements.