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October 6, 2003

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Subject: Response to NRC Inspection Report 50-313,368/03-11
Arkansas Nuclear One
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6

Dear Sir or Madam:

By letter dated September 4, 2003, the U.S. Nuclear Regulatory Commission (NRC) notified Arkansas Nuclear One (ANO) of its conclusion that the method used to contact new residents to the ANO 10-mile emergency planning zone was inadequate and had been classified as a preliminary white finding in accordance with the NRC Emergency Preparedness Significance Determination Process.

Entergy agrees with the NRC regarding its finding that ANO had not kept certain new resident contact lists up to date since September 1999 as required by the Alert and Notification System design report approved by the Federal Emergency Management Agency. However, Entergy does not agree that this deficiency warrants a white finding.

Based on recent interviews with ANO and Arkansas Department of Health personnel, Entergy believes that information regarding the supplemental notification process was not clearly communicated to the inspector during the inspection or in subsequent conversations following the inspection. Due to this miscommunication, it appears that ANO received no credit for supplemental notification in the staff's evaluation of this finding. Entergy believes that a 99.55% initial notification capability, coupled with supplemental notification, satisfies the regulatory requirements and guidance for prompt notification of the public. Entergy's position concerning the finding is provided in the attachment for your consideration in determining the final significance of the issue. Based on the discussion in the attachment, Entergy requests reconsideration of the characterization of the finding and reclassification of the preliminary finding to no greater than green.

This letter contains no regulatory commitments.

IEOI
AD45

Should you have questions or comments, please contact Mr. Glenn Ashley at (479) 858-4617.

Sincerely,



Sherrie R. Cotton
Director, Nuclear Safety Assurance

SRC/dwb
Attachment

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Introduction

NRC Inspection Report 50-313,368/03-11 dated September 4, 2003, discusses a finding involving the failure of Arkansas Nuclear One (ANO) to maintain the primary emergency preparedness alert and notification system. The NRC believes the finding has a low to moderate safety significance. Further, the NRC stated that Entergy took immediate corrective actions to issue National Oceanic and Atmospheric Administration (NOAA) radios to the identified residences and took extensive actions to restore the administrative controls of the NOAA radio program to those approved in the Alert and Notification System (ANS) design report. This letter contains information not previously provided to the NRC.

Entergy has reviewed the information in the inspection report and agrees with the NRC's finding that ANO failed to request the Federal Emergency Management Agency's (FEMA) review and approval of a change to the ANO ANS design report regarding methods of identifying new residents within the emergency planning zone (EPZ). However, Entergy disagrees with the characterization of the issue as an apparent violation of 10 CFR 50.54(q) as it relates to planning standard 10 CFR 50.47(b)(5).

Entergy agrees that a violation of 10 CFR 50.54(q) occurred, but in a different manner than characterized in the inspection report. Entergy believes the issue should be characterized as a violation of 10 CFR 50.54(q) for failure to meet the requirements of Planning Standard 10 CFR 50.47(b)(16) instead of §(b)(5). Entergy agrees that the decision to discontinue utilizing the computerized listings of new contacts deviated from the requirement contained in the ANS design report approved by FEMA. The failure to obtain FEMA review and approval before making a significant change to this process was a violation of FEMA regulation 44 CFR 350.14. Further, the ANO Emergency Plan also should have been revised to reflect the change to the ANS document. The failure to do so constituted a violation of 10 CFR 50.47(b)(16) for failure to update the ANO Emergency Plan and certify it to be current on an annual basis. Although ANO failed to comply with the requirements of 44 CFR 350.14 and 10 CFR 50.47(b)(16) when the ANS document was revised, this error did not cause a loss or degradation of Risk Significant Planning Standard 10 CFR 50.47(b)(5).

Planning Standard 10 CFR 50.47(b)(16), a non-risk significant planning standard, requires each organization to update its plan and agreements as needed, and to review and certify them to be current on an annual basis. ANO failed to recognize that, as a result of changes made to the ANS document, an update to the ANO Emergency Plan was required to revise the statement regarding the issuance of radios to new-connects by the local Entergy Arkansas, Inc. business office. Based on the guidance contained in NRC Inspection Manual Chapter 0609, Appendix B, *Emergency Preparedness Significance Determination Process*, this item should be characterized as no greater than green.

The following discussion provides a basis for this conclusion.

Basis to Support Entergy's Contention that §(b)(5) was Neither Degraded nor Lost

The NRC cites the following example from Appendix B to NRC Inspection Manual Chapter 0609 to contend that Risk Significant Planning Standard 10 CFR 50.47(b)(5) was degraded:

Loss of the capability to notify 100% of the population in the plume exposure pathway Emergency Planning Zone (EPZ) through the primary alert notification system and/or sirens, and compensatory measures (e.g., backup route alerting) take longer than 45 minutes.

The following information is offered to demonstrate that no loss of function or degradation of Risk Significant Planning Standard §(b)(5) occurred. Entergy believes that ANO's public prompt notification system satisfies the regulatory requirements.

10 CFR 50.47(b) requires that the onsite emergency response plans for nuclear power reactors must meet each of 16 planning standards. Standard (5) requires that the means to provide early notification and clear instruction to the populace within the plume exposure pathway EPZ have been established. The ANO Emergency Plan describes the means to provide early notification and instruction to the populace within the plume exposure pathway EPZ and includes the use of tone alert radios and emergency sirens.

The Significance Determination Process (SDP) guidance for planning standard 10 CFR 50.47(b)(5) references informing criteria found in Section II.E of NUREG-0654, *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants*. In particular, NUREG-0654 Section II.E.6 refers to Appendix 3, *Means for Providing Prompt Alerting and Notification of Response Organizations and the Population*. The second paragraph of Appendix 3 states, in part:

This design objective does not, however, constitute a guarantee that early notification can be provided for everyone with 100% assurance or that the system when tested under actual field conditions will meet the design objective in all cases.

In addition, Item B.2 of Appendix 3 to NUREG-0654/FEMA-REP-1 states:

The initial notification system will assure direct coverage of *essentially* [emphasis added] 100% of the population within 5 miles of the site.

Further, 10 CFR 50, Appendix E, Section IV. D. 3 states, in part, that the design objective of the prompt public notification system shall be to have the capability to *essentially* [emphasis added] complete the initial notification of the public within the plume exposure pathway EPZ within about 15 minutes.

Some flexibility is built into the regulations based on the premise that it is virtually impossible to guarantee 100% notification of the public. At the time of the finding, based on the data available, Entergy believes ANO possessed the ability to notify 99.55% of the EPZ as part of the initial notification and this satisfies the design objective of the prompt notification system as delineated in 10 CFR Part 50 Appendix E.IV.D.3,

NUREG-0654/FEMA-REP-1 Appendix 3.B.2. FEMA letter dated December 12, 1986, from Richard Krimm to Edward Jordan (NRC) further substantiates that no 100% initial notification requirement exists. This letter addresses generic safety concerns raised by the Shearon Harris Licensing Board. The following excerpts are taken from the letter:

...Ultimately, the Board held that the Commission's requirement of "essentially 100%" means a notification system capable of alerting greater than 95% of the emergency planning zone (EPZ) residents within the first 5 miles. Thus, the SH [Shearon Harris] Licensing Board interpretation of 10 CFR 50 Appendix E regulatory requirements that the "design objective of the prompt public notification system shall be to have the capability to essentially complete the initial notification of the public within the plume exposure pathway EPZ within about 15 minutes" has been equated to alerting greater than 95% of the population within 5 miles of the site (something less than 90% was acceptable in the 5-10 mile area) under probable worst case conditions within 15 minutes...

...Thus, FEMA's interpretation of the design objective terminology in 10 CFR 50 Appendix E is to assure that the system provides coverage of the population through primary means within 15 minutes with sufficient backup capability to complete the coverage of the non-alerted population as soon as possible thereafter. This interpretation is consistent with the statements of consideration for the Final Rule on Emergency Planning where "the Commission recognize[d] that not every individual would necessarily be reached by the actual operation of such a system under all conditions of system use." This interpretation is reinforced by two pertinent statements in NUREG-0654/FEMA-REP-1, Appendix 3:

- 1) This design objective does not, however, constitute a guarantee that early notification can be provided for everyone with 100% assurance or that the system when tested under field conditions will meet the design objective in all cases; and,
- 2) That special arrangements will be made to assure 100% coverage within 45 minutes of the population who may not have received the initial notifications within the entire plume exposure EPZ....

The Radiological Emergency Response Plans for the counties surrounding ANO provide compensatory measures (i.e., supplemental notification) for the portion of the population that may not have received the initial notification via the siren and/or tone alert radio systems. For an evacuation, the county plans contain instructions for rural and municipal fire departments to:

...Establish a door to door plan for notification to supplement sirens and tone alert radio messages.

Use truck sirens, PA systems and runners to knock on doors and advise people to leave...

No changes have been made to the supplemental notification process. These contingency features were part of the emergency plans prior to the process changes for identifying new residents in the EPZ who might not hear the sirens or tone alert radio systems.

Due to a misunderstanding on Entergy's part, information regarding the supplemental notification process was not communicated to the inspector during the inspection or in subsequent conversations following the inspection. This information wasn't recognized as crucial information until receipt of the inspection report. Since the issue was characterized in the inspection report as a degradation of Risk Significant Planning Standard 10 CFR 50.47(b)(5), Entergy concluded that the NRC apparently was not crediting ANO's use of the supplemental notification process to satisfy item 2 above. During the inspection, ANO's focus was on the process error that occurred when the ANS design report was revised without first obtaining regulatory approval. It wasn't until receipt of the inspection report that Entergy recognized the importance of the route alerting information as it pertained to the inspection.

In summary, Entergy believes that a 99.55% EPZ initial notification capability, coupled with supplemental notification, satisfies the regulatory requirements and guidance for prompt notification of the public. No loss of function or degradation¹ of Risk Significant Planning Standard §(b)(5) occurred. ANO's use of supplemental notification is consistent with the guidance in NUREG-0654/FEMA-REP-1, Revision 1. It is also consistent with FEMA's interpretation of the standards for alert and notification systems as delineated in their letter dated December 11, 1986, and referenced previously in this attachment. Although ANO deviated from the ANS requirement to use new-connect reports to contact new residents to the EPZ, the capability to provide early notification and instructions to the public within the 10-mile EPZ remained adequate and was in compliance with the regulations.

Background Information for Decision to Change Radio Distribution Method

During a September 1999 monthly meeting between ADH and ANO personnel, a change to the reporting capabilities of one of the two local electric utilities was discussed. Entergy Arkansas, Inc. indicated that in the future they would not be able to supply a new-connect report due to a change in their customer service computer software. As a result of this information, a decision to use alternative means of identifying new residents within the EPZ was made with the belief that such methods provided a comparable method of communication. A February 21, 1998, internal FEMA memorandum from William Wark to Joe Dominguez played an instrumental role in the decisions that were ultimately made regarding discontinuation of the new-connect reports.

The FEMA memorandum, which was provided to ADH personnel by FEMA, states that, "Means for accomplishing this dissemination may include, but are not necessarily limited to: information in the telephone book; periodic information in utility bills; posting in public areas; and publications distributed on an annual basis." It further states, "In essence, the Planning Standard is saying that the means for disseminating public information

¹ The Emergency Preparedness Significance Determination Process defines degradation of a risk-significant planning function as a condition where the "PROGRAM ELEMENTS are not adequate or are noncompliant, but the function of the RSPS, although degraded, is still met..."

materials is flexible, and that it is not so much the format of the information that is important, but that the content of the information be derived from what is stated in NUREG-0654."

Although this information is directed at annual distribution of public information in general, it came at a time when ANO's focus was on modifying the Emergency Instructions Booklet due to the pending loss of the utility new-connect report from Entergy Arkansas. The FEMA memorandum contributed to the conclusion that an alternative means of identifying new residents would be acceptable.

Entergy agrees that the ANS document should have been revised and submitted to FEMA for review and approval. The failure to do so constituted a violation of 44 CFR 350.14 in that a change was made without FEMA review and approval. Further, as a result of the change to the ANS design document, a corresponding change should have been made to the ANO Emergency Plan pursuant to NUREG-0654/FEMA-REP-1, Rev.1, Criterion II.P.4. The failure to make such a change to the plan constitutes a violation of Planning Standard 10 CFR 50.47(b)(16).

Extent of Condition

The alternate means of identifying new residents, while different than the method required in the ANS design report, did not significantly decrease the effectiveness of the emergency plan. The following information provides a basis for this statement.

Based on historical information, the average number of radios issued each year is approximately 107. The radio distribution for the last seven years is as follows:

2003 - 37 radios issued between 1/1 and 5/28/03 (prior to the mass mailing campaign)
- 205 radios issued between 5/28 and 10/2/03 (after the mass mailing campaign)
2002 - 106
2001 - 120
2000 - 97
1999 - 204*
1998 - 184*
1997 - 1872*

* These three years are elevated due to the switch from tone alert radios to NOAA weather radios. The average number of new radios issued in the three year period from 2000 – 2002 was 107.

Following the inspection, the mass mailing campaign to 12,520 EPZ addresses resulted in the issuance of an additional 205 radios, of which 109 were issued to residents living within the 10-mile EPZ but outside the siren coverage area (0.45% of the 24,321 addresses within the 10-mile EPZ). The mass mailing campaign, coupled with the previously issued Emergency Instructions Booklet to residents in the 10-mile EPZ, was a best-faith effort to ensure that residents had been provided information relating to sirens and NOAA radios. The 109 radios represent the number of EPZ addresses that had potentially been overlooked since discontinuation of the new-connect report in September 1999. Had the alternate means of providing information to new residents been totally ineffective, it is logical to assume that the mass mailings would have

revealed a much larger number of residents who needed a radio but did not have one. The 109 figure quantifies the decrease in the effectiveness of the tone alert radio distribution process caused by the revision of the method of identifying new residents to the EPZ. The special arrangements (i.e., existing supplemental notification process) contained in the county emergency response plans would have provided adequate means for notifying these 109 addresses consistent with Appendix 3 of NUREG-0654/FEMA-REP-1, Rev. 1.

Enforcement

10 CFR 50.54(q) states, in part, that a licensee authorized to possess and operate a nuclear power reactor shall follow emergency plans which meet the standards in §50.47(b).

10 CFR 50.47(b) requires that the onsite emergency response plans for nuclear power reactors meet each of 16 planning standards. Standard (16) requires that responsibilities for review of emergency plans are established. Criterion II.P.4 of NUREG-0654/FEMA-REP-1, Rev.1, states, in part, "Each organization shall update its plan and agreements as needed, review and certify it to be current on an annual basis."

Paragraph Four, Section 3.2.2.2, "Tone Alert Radios (NOAA)," of the FEMA approved ANS design report states that, "Utilities provide computerized listings of all new contacts. These persons are contacted and offered a free NOAA radio if they are in the affected area."

Entergy agrees that the decision to discontinue utilizing the computerized listings of new contacts deviated from the requirement contained in the FEMA approved ANS design report. Not obtaining FEMA approval to make a change to this process is a violation of 44 CFR 350.14 for failing to obtain regulatory approval for a significant change to the ANS design report. The ANO Emergency Plan also should have been revised concurrently with the change to the ANS document. The failure to do so constituted a violation of Planning Standard 10 CFR 50.47(b)(16) and is an apparent violation of 10 CFR 50.54(q).

SDP Analysis

Entergy assessed this finding by applying the "Failure to Comply" branch of the Emergency Preparedness Significance Determination Process. This finding is a program deficiency in that Entergy failed to comply with Planning Standard 10 CFR 50.47(b)(16) by not revising the emergency plan to reflect the change to the ANS document. Further, the revision to the ANS document without FEMA review and approval also constituted a failure to comply with FEMA regulation 44 CFR 350.14. There are no SDP criteria to address FEMA's regulations. Because the finding affects the reactor safety emergency preparedness cornerstone objective, the finding is greater than minor. The finding is determined to have a very low safety significance because it involves non-compliance with a non-risk significant planning standard. According to the SDP guidance for Planning Standard 10 CFR 50.47(b)(16), any failure to comply with this planning standard would not exceed a green finding due to the non-emergency nature of Plan development efforts.

If, contrary to what Entergy believes is a reasonable interpretation of the applicable regulation, the NRC continues to conclude that a violation of Risk Significant Planning Standard §(b)(5) occurred, the significance of this violation would appear to be more correctly classified as a green finding consistent with examples provided for §(b)(5) in Appendix B of Inspection Manual Chapter 0609. In the SDP guidance for planning standard (b)(5), one of the examples allows an individual siren to be available less than 70% of the time over a period of 12 months as a result of inadequate and/or delayed corrective actions. A single siren out of service would affect a significantly larger number of households than the number affected by ANO's tone alert radio issue, yet the significance of the individual siren example would be characterized as green.

Although not directly applicable to the issue identified by the inspector, for comparison purposes, if the finding had been characterized as a design flaw or deficiency in the test program, maintenance program, or procedures that degrade a portion of the system for a significant period from the time of discovery, it would not have risen to the level of a white finding because less than 12% of the ANS was affected.

In summary, as discussed above, Entergy agrees with the NRC regarding its finding that ANO had not kept certain new resident contact lists up to date since September 1999 as required by the ANS design report approved by FEMA. However, for the reasons stated, Entergy does not agree that this deficiency warrants a white finding. The issue is more appropriately characterized as an apparent violation of 10 CFR 50.54(q) for failure to meet the requirements of planning standard 10 CFR 50.47(b)(16) and, therefore, should be classified as no greater than green.