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OCAN110303

November 21, 2003

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

Subject: Response to NRC Request for Additional Information Regarding Inspection
Report 50-313,368/03-11
Arkansas Nuclear One, Units 1 & 2
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6

Dear Sir or Madam:

In a 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. By letter dated October 6, 2003, Entergy provided its perspectives on the facts and assumptions used by the NRC to arrive at the finding and its significance.

Following review of Entergy's October 6, 2003, letter, the NRC staff requested clarifying information. The attachments contain Entergy's responses to two staff questions. Should you have questions or comments, please contact Mr. Glenn Ashley at (479) 858-4617.

This letter contains no regulatory commitments.

Sincerely,

A handwritten signature in cursive script that reads "Sherrie R. Cotton".

Sherrie R. Cotton
Director, Nuclear Safety Assurance

SRC/dwb

Attachments:

1. Responses to NRC Questions Regarding Inspection Report 50-313,368/03-11
2. Quality Assurance Observation Checklist O2C-ANO-2003-0076

IEO1

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Attachment 1

Responses to NRC Questions Regarding Inspection Report 50-313,368/03-11

Responses to NRC Questions Regarding Inspection Report 50-313,368/03-11

NRC Question 1

What is the approximate amount of time that it would take to complete the supplemental notification process?

ANO Response

Documentation could not be found that could clearly substantiate the length of time required to perform supplemental notifications. This included searches of Federal Emergency Management Agency (FEMA) reports associated with reviews of State and local emergency plans and graded exercises. Nevertheless, this process has been a part of the county emergency response plans for many years and has been evaluated by FEMA via the "table-top" method during full-scale emergency drills and exercises. FEMA reports document a tabletop discussion of the Logan County supplemental route alerting process during the 1994, 1996 and 1998 graded exercises and Pope County's during the 2000 graded exercise.

Entergy interviewed two volunteer fire chiefs and four county Office of Emergency Management (OEM) Directors in an attempt to quantify the expected length of time to perform the supplemental notification process. In every case, the individual stated that they believed they could complete supplemental notifications in the non-siren coverage areas within the prescribed 45-minute time frame.

Recently, a drill was conducted by the Arkansas Department of Health (ADH) to evaluate the capability of a fire department to perform specific route alerting to compensate for the failure of a single siren or loss of the National Oceanic and Atmospheric Administration (NOAA) Tone Alert Weather Radio System. This was an element of our November 5, 2003, full-scale emergency preparedness drill. The objective of this portion of the drill was to test portions of the recently revised ADH siren testing procedure. The Crow Mountain Volunteer Fire Department performed the route alerting task in seventeen minutes using two of four fire trucks and six of sixteen personnel. The area alerted via route alerting during this drill is roughly equivalent to the non-siren coverage area within the fire district. The drill results are documented in Quality Assurance Audit Report O2C-ANO-2003-0076 which is included as Attachment 2 to this letter.

The following section provides a sample of fire department resources and personnel that would be utilized to perform the supplemental notification process. These examples account for six of sixteen fire departments located within the 10-mile emergency planning zone (EPZ). These six were selected because their districts cover the largest geographical areas with the highest populations within the 10-mile EPZ. Resources of the Russellville and Dardanelle City Fire Departments are not included because the population in both towns is covered entirely by fixed sirens.

**Pope County (Crow Mountain, Linker Mountain, London, Dover Rural, and Bayliss
Volunteer Fire Departments and Russellville and Dover City Fire
Departments)**

Crow Mountain Volunteer Fire Department

- 4 trucks
- 16 personnel
- District covers approximately 23 square miles, 15 within the 10-mile EPZ; approximately 2 square miles are outside of siren coverage.*

Linker Mountain Volunteer Fire Department

- 4 trucks
- 14 personnel
- District covers approximately 12 square miles; approximately 6 square miles are outside siren coverage*

London Volunteer Fire Department

- 8 trucks
- 22 personnel
- District covers approximately 64 square miles; approximately 10 square miles are outside siren coverage*

Johnson County (Flat Rock, Knoxville and Rural #7 Volunteer Fire Departments)

Flat Rock Volunteer Fire Department

- 5 Trucks
- 27 Personnel
- District covers approximately 13 square miles; approximately 10 square miles are outside siren coverage*

Logan County (Delaware and New Blaine Volunteer Fire Departments)

Delaware Volunteer Fire Department

- 6 Trucks
- 17 Personnel
- District covers approximately 32 square miles; approximately 20 square miles are outside siren coverage*

**Yell County (Dardanelle Rural, Mt. Nebo and Chickalah Volunteer Fire Departments
and Dardanelle City Fire Department)**

Dardanelle Rural Volunteer Fire Department

- 6 Trucks
- 20 Personnel plus assistance from the Yell County Mounted Patrol which has 24 active members, 7 senior members and 2 vehicles
- District covers approximately 30 square miles; approximately 18 square miles are outside siren coverage*

* These estimates were derived from maps of the fire districts. Some estimates were taken from maps with defined section lines or natural boundaries and some were estimated by measurements using map legends.

NRC Question 2

Step 5 of Standard Operating Procedure #6, *County EOC Emergency Class Checklist for General Emergency* states, "Implement backup notification procedures." Step 8 says to "Check and secure evacuated areas." Further, Step 2 of the discharge of specific duties section of Standard Operating Procedure #8, *Rural and Municipal Fire Departments* states, "Establish door to door plan for notification to supplement sirens and tone alert radio messages. Since no corresponding implementing procedures exist, describe how these steps are implemented.

ANO Response

Consistent with the requirements of 10CFR50, Appendix E, the capability of ANO's prompt public notification system ranges from immediate notification of the public (within 15 minutes of the time that State and local officials are notified that a situation exists requiring urgent action) to the more likely events where there is substantial time available for the State and local government officials to make a judgment whether or not to activate the public notification system. The following discussion addresses both situations.

County Emergency Operations Centers Operational

For the more likely slower-developing events, the county Emergency Operations Centers (EOCs) should be fully staffed before the need for public notification arises. Entergy officials will make a protective action recommendation to State officials who are co-located within the near-site Emergency Operations Facility (EOF). The Entergy EOF Director will issue a protective action recommendation to the State Technical Operations Control Center Director who reviews the utility's recommendation and selects the appropriate protective action advisory (PAA) and contacts the EOCs to obtain concurrence from the appropriate county judge(s) to issue the PAA. The county judge is the chief executive officer of the county and has the responsibility and authority for authorizing the issuance of protective actions in their respective county. This contact is

made via the DEF/VS¹ communications system to each county EOC. Normally, this communications link, including the decision-making and notification process associated with issuance of PAAs, is exercised during full-scale drills and graded exercises.

For scenarios that result in issuance of PAAs involving evacuation or other protective measures, and the activation of the prompt Alert and Notification System, the decision to invoke the supplemental notification process is automatically made. The county judge and/or OEM director in the county EOC will direct the fire departments to discharge their supplemental notification duties pursuant to Standard Operating Procedure #8.

Once a PAA is issued involving evacuation or some other protective measure, the notification of fire department personnel occurs via the county's 911, or equivalent, dispatcher. Three of the four counties within the 10-Mile EPZ have 911 systems in place. Yell County's 911 system will soon be operational. Yell County's dispatcher operates from the Yell County Sheriff's Office.

The dispatcher "tones out" the fire department personnel by activating the radio pagers. The dispatcher has the capability to tone out individual fire departments located inside their county's portion of the 10-mile EPZ or all departments county-wide simultaneously using the "all-call" feature. At an Alert, or higher, emergency class, fire department personnel are directed to report to their fire station and remain on standby, or as otherwise directed by the county judge and/or the office of emergency management (OEM) director in the county EOC. A representative of the County Fire Association is notified to report to the county EOC.

Once the fire department personnel arrive at the fire station, they obtain their potassium iodide packets, dosimetry, tracking forms, etc. and make assignments for supplemental alerting. Upon the direction of the county judge and/or OEM director in the county EOC, fire department personnel drive designated routes to alert the public. They alternate sounding the vehicle siren and making announcements via the vehicle's public address system. If necessary, fire department personnel use private vehicles equipped with sirens to complement the department's equipment. Once the supplemental notification process has been completed, fire department personnel will notify the county EOC. This notification typically occurs via radio. The response to question 1 lists the resources of several fire departments within the 10-mile EPZ. The same supplemental notification process is used for a PAA involving evacuation or any other protective measure. The personnel would simply make an announcement corresponding to the PAA that is issued.

County Emergency Operations Centers Not Operational (Fast-Breaking Events)

In a fast-breaking event requiring immediate notification of the public, Entergy transmits the initial notification message to State and local government officials via the DEF/VS. The message is received simultaneously by the Arkansas Department of Health's Communications Center in Little Rock, Arkansas Department of Emergency Management Office in Conway, each of the five county warning points (i.e., the county

¹ The Dedicated Emergency Facsimile/Voice System (DEF/VS) is a network of dedicated circuits which provide the capability to effect secure facsimile and voice communications between the utility and state/local governments.

sheriff's offices/911 dispatch centers) and EOCs located within the 10-mile EPZ (i.e., Pope, Johnson, Logan, Yell and Conway Counties). Conway County is actually located outside the 10-mile EPZ, but also receives the notification because a designated care center resides in that county. Upon receipt of the message from Entergy, the dispatchers located in the county warning points will notify the county judge, OEM director, fire departments and other EOC staff members and agencies. Fire department personnel will report directly to their fire station and obtain their potassium iodide packets, dosimetry, tracking forms, etc. and make assignments for supplemental alerting. Direction will be provided by the county judge and/or the OEM director who are in contact with the dispatch center.

Authorization to activate the prompt public notification system and issue a PAA is pre-approved. ADH personnel in the Communications Center in Little Rock will activate the prompt public notification system upon receipt of the appropriate message from Entergy. The protective action recommendation included in Entergy's initial notification message is pre-approved as the PAA for issuance to the public.

The ADH Communications Center dispatcher uses the Rapid Warning System Activation Checklist and determines if ADH Nuclear Planning & Response Program personnel in Russellville are available to complete the notification function. If not, the ADH Communications Center dispatcher records Entergy's protective action recommendation information on the appropriate PAA forms. This information is transmitted to the National Weather Service. The reception of the message is immediately verified by the ADH Communications Center via the National Warning System network (NAWAS)².

The ADH Communication Center dispatcher assumes broadcast control of Russellville radio station KXRJ and boosts the station's output to allow the National Weather Service to broadcast emergency messages via KXRJ and the NOAA weather network. The ADH Communications Center dispatcher then alerts additional radio stations and transmits the PAA messages to them for broadcast. This process ensures that emergency instructions can be broadcast to the public as soon as the sirens and tone alert radios are activated. This information is found in the Guidelines for Activation and Operation of the Emergency Warning System, which is an attachment to the Alert and Notification System Report.

² NAWAS is a 24-hour continuous private line telephone system used to convey warnings of natural and technological disasters (including nuclear incidents) to Federal, State and local governments, as well as the military and civilian population. NAWAS allows issuance of warnings to all stations nationwide or to selected stations as dictated by the situation.

Attachment 2

**Quality Assurance Observation Checklist O2C-ANO-2003-0076
Emergency Planning Route Alerting Drill @ Crow Mountain Fire Station**

Quality Assurance Observation Checklist O2C-ANO-2003-0076

Date Performed: November 5, 2003

Duration: 5 hours

Activity: Emergency Planning Route Alerting Drill @ Crow Mountain Fire Station

Reference Audit Area: Emergency Plan

Reference Scope Element: Alert and Notification System Testing (Mandatory)

This oversight observation was conducted to review the conduct of the route alerting drill conducted by the Crow Mountain Fire department during the November 5, 2003, ERO drill at ANO.

A review was conducted of the Pope County Emergency Response Program Plan, Standard Operations Procedure #08, "Rural and Municipal Fire Departments," and NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" prior to the drill by the observer.

Interviews were conducted with the ANO Manager, Emergency Planning, the Assistant Fire Chief, Crow Mountain Fire Department (Randy Pitts), and Arkansas Department of Health (ADH), Nuclear Planning and Response Program (NP&RP) Trainer and Licensed FEMA Evaluator (Butch Baker), prior to and/or during the drill.

It was noted in the interviews that route alerting training had been conducted by ADH NP&RP on Monday, November 3, 2003, for the fire chiefs. It was also noted that this was to be a "route alerting" drill in response to a siren out of service as opposed to a "supplemental alerting" drill which is a general area alerting procedure. Additionally, it was advised by NP&RP that tabletop supplemental alerting drills had been conducted in each county at approximate 2-year intervals and that this was the first drill where alerting routes were run.

It was observed that the ADH was notified of a Notice of Unusual Event (NUE) at 0830 at the NP&RP office. Per ANO Emergency Planning, a General Emergency was declared at 1015 with offsite notification for evacuation made at 1026. A radio announcement from the county EOC was made at 1030 alerting the "Atkins Fire Department" to respond. This was corrected at 1032, alerting the Crow Mountain Fire Department. It was explained that the first announcement did not activate the Atkins fire department because a different radio setting would have been required to do so. "This is a drill" was stated in the announcement.

Four volunteer firemen arrived at the station within two minutes of the announcement. The supply box was opened, KI packets and dosimeters were distributed, the siren footprint diagram for siren 2z22 was reviewed, a pre-job briefing was held and fire truck #'s 407 and 409 departed the station at 1036. The NP&RP representative accompanied the firemen in truck #407. The assistant fire chief arrived at the station at 1035 and a fifth volunteer fireman arrived at 1037. The assistant fire chief manned the radio at the station during the drill.

It was noted that the 2z22 siren footprint included approximately 50% of its area outside of the 10-mile EPZ. Although the alerting area was to include area within the 10-mile EPZ, the route taken by the fire station included all accessible areas of the footprint. The two trucks split the alerting area. The evacuation announcements from the trucks were simulated. Actual event procedure would include a truck siren alert followed by a public address announcement from the trucks. Activation of the siren and public address systems for truck #407 was demonstrated for the observer in the station. Runners to knock on doors and advise people to leave was not drilled. Placards with the evacuation message were observed to be mounted inside the fire trucks.

The trucks returned to the station by 1048. This represented a cycle time of 18 minutes from notification of the station by the county EOC and 22 minutes from offsite evacuation notification from ANO. This meets the 45 minute limit for notification per NUREG-0654/FEMA-REP-1 Appendix 3, section B.2.c. Upon arrival at the station, the firemen took dosimeter readings and completed associated documentation. All supplies were accounted for and returned to the supply box.

The above drill was observed by the NP&RP representative. Upon completion of drill activities, a critique was conducted by the NP&RP representative with the fire department staff. Overall drill performance was judged to be satisfactory by the participants and the NP&RP representative. No significant issues were identified. Feedback on minor improvement items was discussed. Interaction between the NP&RP representative and the fire department staff was very good.

The overall results of this oversight observation were determined to be satisfactory.