

Appendix A

U. S. Nuclear Regulatory Commission  
Region IV

Report: 50-298/82-11

Docket: 50-298

License: DPR 46

Licensee: Nebraska Public Power District  
P. O. Box 499  
Columbus, Nebraska 68601

Facility Name: Cooper Nuclear Station

Inspection at: Cooper Nuclear Station, Nemaha County, Nebraska

Inspection conducted: March 11 and March 22-23, 1982

Inspectors: E. H. Johnson 4/8/82  
E. H. Johnson, Reactor Inspector  
Reactor Project Section A Date

Lorenzo Wilborn 4/8/82  
L. Wilborn, Radiation Specialist  
Facilities Radiation Protection Section Date

Reviewed: Blaine Murray 4/8/82  
B. Murray, Chief  
Facilities Radiation Protection Section Date

Approved: T. F. Westerman 4/8/82  
T. F. Westerman, Chief  
Reactor Project Section A Date

Inspection Summary

Inspection Conducted March 11 and March 22-23, 1982 (Report 50-298/82-11)

Areas Inspected: Special unannounced inspection of the capability of the emergency warning system to promptly notify the population within the plume exposure pathway of the emergency planning zone as contained in 10 CFR 50, Appendix E.4.d and follow up on the licensee's corrective actions on the emergency warning system. The inspection involved 37 inspector-hours by two NRC inspectors.

Results: Within the areas inspected, one apparent violation was identified (violation-lack of capability for providing prompt public notification of a portion of the emergency warning system paragraph 2).

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Details1. Persons ContactedColumbus General Office Personnel-NPPD

- \*R. Buntain, Division Manager Operations
- \*C. Jones, Assistant General Manager-Operations
- \*R. Kamber, Senior Division Manager-Operations
- \*J. Pilant, Division Manager Licensing and Quality Assurance
- \*J. Weaver, Licensing Manager

Cooper Nuclear Station

- \*+L. Lessor, Station Superintendent
- \*J. Sayer, Emergency Planning Coordinator
- G. Smith, QA Specialist

Other Personnel

- T. Curttright, Nemaha, NE, Volunteer Fire Dept. Chief <sup>1/</sup>
- B. Hardy, Peru, NE, Volunteer Fire Dept. Chief <sup>1/</sup>
- W. Hart, Brownville, NE, Volunteer Fire Dept. Chief
- E. Kerr, Rockport, MO, Volunteer Fire Dept. Asst. Chief
- D. Larsen, Watson, MO, Volunteer Fire Dept. Chief
- T. Shafer, Shubert, NE, Volunteer Fire Dept. Chief
- G. Boan, Nemaha County Sheriff
- G. Littles, Atchison County Deputy Sheriff
- L. Brown, Atchison County Deputy Sheriff

NRC Personnel Present at the Enforcement Conference March 11, 1982

- J. Collins, Regional Administrator, Region IV
- E. Johnson, Reactor Inspector, Region IV
- C. Hackney, Emergency Preparedness Analyst, Region IV
- D. Rohrer, Emergency Preparedness Analyst, NRR
- D. DuBois, Senior Resident Reactor Inspector, Region IV

In addition, the inspectors contacted other clerical and administrative personnel.

\*Present at enforcement conference on March 11, 1982

+Present at exit interview on March 23, 1982

<sup>1/</sup> Contacted by telephone

## 2. Emergency Warning System

In his letter of January 2, 1981 (NPPD: J. M. Pilant to NRC: H. R. Denton), the licensee proposed to meet the prompt public notification requirements of Appendix E to 10 CFR Part 50 with an emergency warning system (EWS) consisting of 9 fixed sirens and 12 mobile sirens. The mobile siren units were described as skid mounted sirens that could be carried in the bed of a pickup truck. In a letter dated June 30, 1981 (NPPD: J. M. Pilant to NRC: H. R. Denton), the licensee indicated that the plans for the mobile portion of the EWS had been changed to bar mounted siren units which could be carried on the roof of a vehicle. The number of mobile sirens had been changed to 32 portable sirens carried by volunteer firemen and 6 sirens in sheriff's vehicles, all to be driven over rural routes that are out of range of the fixed sirens.

As set out in Appendix E to 10 CFR 50, the required completion date for installation and testing of the EWS was February 1, 1982. By letter dated February 8, 1982 (NPPD: J. M. Pilant to NRC: J. T. Collins), the licensee informed the USNRC that the EWS was installed and operational.

On March 9, 1982, an NRC Review Team visited the site in preparation for the emergency preparedness exercise scheduled for March 10, 1982. In a meeting to discuss the EWS on March 9, 1982, two of the NRC Review Team members, Mr. C. Hackney (Emergency Preparedness Analyst, Region IV) and Mr. D. Rohrer (Emergency Preparedness Analyst, NRR) were again told by licensee representatives that the EWS was installed and operational. For the mobile portion of the system, the licensee indicated that the siren units had been distributed as follows:

Nebraska:	Peru	5 units
	Brownville	5 units
	Nemaha	5 units
	Shubert	2 units
Missouri:	Rockport	10 units
	Watson	5 units

To demonstrate that the early warning system was installed, an NRC representative accompanied an NPPD representative to Nemaha, Nebraska, on March 9, 1982. It was discovered that one portable siren was still packaged in its original container.

On March 11, 1982, a special inspection was conducted by two NRC inspectors to verify the status of the mobile siren units that had been distributed to volunteer fire departments as indicated above. The NRC inspectors visited each of the indicated communities and made contact with the chief or other representative of the volunteer fire department to verify the portable siren status. Paragraph 1 shows the persons contacted.

The inspectors discovered that the status of the 32 units was as follows:

Peru	3 units installed on volunteer fire department members' vehicles 2 units still in the shipping carton
Brownville	3 units mounted on municipal fire department trucks 2 units stored at the fire house and rigged for quick installation on any vehicle
Nemaha	1 unit mounted on municipal fire department truck 3 units installed on volunteer fire department members' vehicles 1 unit still in the shipping carton
Shubert	2 units still in the shipping carton
Rockport	All 10 units installed on volunteer fire department members' vehicles (this information was given to the NRC inspectors by the assistant fire chief, who thought it to be correct; however, it was later learned that one unit was still in its original carton while a second unit had recently been turned in by a person who had just left the volunteer fire department).
Watson	4 units installed on volunteer fire department members' vehicles 1 unit missing a component

Following this special inspection, an enforcement conference was held at the Cooper Nuclear Station with the licensee to discuss these findings. The licensee was represented by those persons denoted in paragraph 1. Mr. John T. Collins, Regional Administrator, NRC Region IV, and other members of the USNRC staff as indicated in paragraph 1, represented the Commission. The licensee was informed that the inoperability of 6 mobile siren units (later determined to be 8) out of 32 mobile units rendered this portion of the EWS inoperable and was an apparent violation of 10 CFR 50, Appendix E.

Since this system was required by regulation to be capable of providing prompt public notification from February 1, 1982, and had been reported to the NRC as such, Mr. Collins indicated that he was greatly concerned and he solicited an immediate response from the licensee representatives as to their plans for restoring the EWS to operability. Mr. Jones stated that the EWS would be restored to its designed notification capability by March 20, 1982.

In the interim, Mr. Collins indicated that contingency measures must be established from that evening to assure that notification of the surrounding population could be made. The licensee agreed to do this. The licensee further indicated that NPPD had, similarly, been looking into the operability of the mobile units that morning and had made a finding similar to that of the NRC inspectors. They stated that although the mobile units were distributed as indicated above, there was built-in excess in the system in that the actual number of required units for some locations (determined from the number of rural routes to be covered) was less than the number of units distributed to that station (except Shubert, Nebraska). This did not excuse the fact, they admitted, that insufficient operable units were in place in all locations to accomplish notification, as required.

Mr. Collins acknowledged the licensee's commitments for restoring the EWS to operability and said that a letter confirming these actions would be sent to the licensee the next day.

On March 12, 1982, a Confirmatory Action Letter was sent to the licensee (Mr. J. T. Collins, USNRC RIV to NPPD: J. M. Pilant) acknowledging that the licensee intended to take corrective actions as follows:

- "1. The licensee shall make 31 early warning system mobile siren units operable (installed on a vehicle or ready for immediate [5 minutes] installation), with parts on order for the remaining unit. Each unit shall be functionally tested on the vehicle for which it was intended.
- "2. The licensee shall provide an analysis of the minimum number of mobile siren units (in addition to the fixed sirens) necessary for emergency notification, for each of the following areas: Peru, Brownville, Nemaha, Shubert, Rockport, and Watson.
- "3. The licensee shall provide revised route maps to reflect the minimum number of necessary mobile sirens identified in item 2 above.
- "4. The licensee shall develop and implement procedures or methods and provide necessary training to assure the following:
  - (a) that for each area in item 2 above, primary and alternate individuals responsible for emergency notification are identified for each route, this list is to be maintained current;
  - (b) that each primary or alternate individual identified in item 4(a) will receive positive notification of the necessity to warn the public; and

(c) that no less than the minimum number of mobile siren units for each of the areas identified in item 2 will be continuously available for dispatch.

"5. The licensee shall implement methods to assure that the 32 mobile siren units remain operable, including periodic maintenance and testing."

Items 1, 4, and 5 were to be accomplished by March 20, 1982. For items 2 and 3, involving longer range reanalysis which could not be completed by March 20, 1982, the licensee would indicate his plans for accomplishing these items by that date.

Prior to leaving the site on March 11, 1982, the NRC inspectors verified that the licensee had established interim measures for accomplishing notification in those geographic areas not having a sufficient number of operable mobile sirens.

3. Follow up on Licensee Actions in Response to the Confirmatory Action Letter of March 12, 1982

The licensee's response to the Confirmatory Action Letter was sent to the NRC in a letter dated March 19, 1982 (NPPD: J. M. Pilant to NRC: J. T. Collins). This letter indicates the actions taken to complete items 1, 4, and 5 of the Confirmatory Action Letter. The response indicates that the reanalysis and necessary revisions to complete items 2 and 3 will be made by April 20, 1982.

On March 22 and 23, 1982, two NRC inspectors visited the Cooper Nuclear Station to verify the licensee's corrective actions.

On item 1 of the Confirmatory Action Letter, the licensee determined that the minimum number of units needed at each location (see paragraph 2) was as follows:

Peru	4
Brownville	4
Nemaha	4
Shubert	2
Rockport	7
<u>Watson</u>	<u>4</u>

Total                    25 (yields 7 spare mobile siren units)

This is based on the number of actual routes assigned to each volunteer fire department. (This does not include three sheriff's vehicles which are also required for notification.)

To meet this need, the licensee decided to make at least the above number of units available at the fire house in each location. The licensee's response reported that the following status had been achieved:

Peru	3 units mounted on fire trucks 2 units ready-to-mount and stored in the fire house <sup>+</sup>
Brownville	3 units mounted on fire trucks 2 units ready-to-mount and stored in the fire house <sup>+</sup>
Nemaha	1 unit mounted on a fire truck 4 units ready-to-mount and stored in the fire house <sup>+</sup>
Shubert	2 units ready-to-mount and stored in the fire house <sup>+</sup>
Rockport	7 units mounted on volunteer fire department members' vehicles 3 units ready-to-mount and stored in the fire house <sup>+</sup>
Watson	2 units mounted on fire trucks 3 units ready-to-mount and stored in the fire house <sup>+</sup>

+ Ready-to-mount units are prepared for quick installation on almost any vehicle with battery terminal clips included.

The NRC inspectors visited the fire houses in Nemaha, Shubert, Rockport, and Watson and found that the status of the mobile units was as indicated above. In addition, the licensee has purchased 10 additional mobile units as spares. On March 23, 1982, the NRC inspectors observed that three of these additional units were being installed on fire trucks in the Rockport, Missouri, fire house bringing the total number of units available in that fire house to six. The NRC inspectors observed the operational test of these units performed by a member of the licensee's Quality Assurance Department. The licensee indicated that a seventh unit in a ready-to-mount condition would be provided to the Rockport fire house in the near future. The Rockport volunteer fire department members normally wear pagers in order to be alerted by the Atchison County Sheriff's Department. The NRC inspectors verified this in discussions with two deputy sheriffs from this department.

The licensee's program to provide at least the minimum number of required mobile units at the fire house either mounted on fire trucks or in a ready-to-mount condition satisfies the requirements of items 4(a) and 4(c). A preliminary review of the route maps by the licensee has revealed that the current number of routes (25, as noted above) is conservative and that reevaluation and reassignment of routes may result in a lower number of routes. This will provide additional spare mobile siren units at each location as the licensee indicated the intention to maintain the number of available units at fire houses at its present level (including the seventh unit at Rockport).

To assure that the volunteer firemen receive notification of the necessity to warn the public (item 4(b) of the Confirmatory Action Letter), the licensee has drafted a new Emergency Plan Implementing Procedure 5.7.27 "Early Warning System." This procedure includes the individual procedures for each of the two sheriff departments (Atchison County and Nemaha County) who will be directed by state authorities to activate the emergency warning system, and the procedures for the volunteer fire departments which spell out how they are to carry out their portion of the notification. The NRC inspectors reviewed the draft of procedure 5.7.27 and verified that the volunteer fire departments had received their individual procedures. The NRC inspectors were informed that procedure 5.7.27 would be finalized when comments were received back from the fire departments. In the meantime, it was implemented in its draft form.

The NRC inspectors visited the Nemaha County Sheriff Department with a licensee representative to observe the discussions on the requirements of procedure 5.7.27. Similar discussions were held between the NRC inspectors and deputy sheriffs of the Atchison County Sheriff Department. The NRC inspectors satisfied themselves that these individuals understood their responsibilities for the operation of emergency warning system. The licensee indicated that he would continue to conduct discussions and training for the sheriffs and the volunteer fire departments on the emergency warning system.

To assure continued operability of the mobile units (item 5 of the Confirmatory Action Letter) the licensee has received agreement from the volunteer fire departments that they will do operability checks on the mobile units during their routine meetings (normally monthly). In addition, the licensee's QA staff will perform surveillance testing of each mobile unit every 4 months. The NRC inspectors reviewed records of the testing of all mobile units performed by the QA staff during the week of March 15, and observed the testing of all six units in the Rockport fire house on March 23, 1982. The NRC inspectors also determined that this surveillance is scheduled to be repeated during July 1982 and November 1982. For any inoperable unit discovered by either the firemen or the CNS QA staff, procedures require that Cooper Nuclear Station be notified (emergency planning coordinator during working hours or shift supervisor during off hours). The inoperable unit will then be immediately repaired or replaced from station spares.

#### 4. Exit Interview

At the end of the follow-up visit, the NRC inspectors met with the CNS Plant Superintendent to review the follow-up findings. The NRC inspectors indicated that they had found that the licensee had completed the actions relative to items 1, 4, and 5 of the Confirmatory Action Letter, and that the response to items 2 and 3 would be reviewed when received on April 20, 1982.