

## Attachment

### Report of Change and Summary of 50.54(q) Analysis – Emergency Plan Implementing Procedure 5.7.27, Revision 18

#### Change Description

Emergency Plan Implementing Procedure (EPIP) 5.7.27 describes the Alert and Notification System established within the Emergency Planning Zone (EPZ) of Cooper Nuclear Station (CNS) and its activation, testing, and maintenance. Revision 18 of EPIP 5.7.27 is considered a total rewrite of the procedure in accordance with new procedure writer's guidelines. Two of the major changes included:

- Added a NOTE stating "National Oceanic and Atmospheric Administration/Emergency Alert System radio receivers are pre-tuned to an EAS station and are automatically activated when NOAA/EAS is activated. Pre-arranged messages are used when instructing general public on what actions should be taken. Approximately 15 minutes will be required to notify public from time decision has been made to activate system to time required to broadcast a message."
- Changed the upper sound level output of the fixed sirens.

Other changes associated with the rewrite included step sequence changes, changing notes with actions into procedure steps, rewriting of steps to improve human performance, deleting redundant steps, and changing the level of use classification from "Reference Use" to "Information Use."

#### Change Summary of Analysis (10 CFR 50.54(q) evaluation)

##### Licensing Basis Affected by Change:

Emergency Plan (E-Plan), Section 6.5, discusses protective actions during a declared emergency. This section also describes the Alert and Notification System including a description of notification sirens and radio receivers.

E-Plan, Appendix A, describes procedures that implement the E-Plan, including EPIP 5.7.27.

##### How Change Complies with Regulations and Previous Commitments:

10 CFR 50, Appendix E, Section IV.D.1, requires that administrative and physical means for notifying local, State, and Federal officials and agencies and agreements reached with these officials and agencies for the prompt notification of the public and for public evacuation or other protective measures, shall be described.

10 CFR 50, Appendix E, Section IV.D.3, requires that each nuclear power reactor licensee shall demonstrate that administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway EPZ.

10 CFR 50.47(b)(5) requires that procedures are established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and follow-up messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway EPZ have been established.

10 CFR 50.47(b)(10) requires that a range of protective actions has been developed for the plume exposure pathway EPZ for emergency workers and the public.

There are no regulatory commitments related to the Alert and Notification System.

The changes to EPIP 5.7.27 do not reduce CNS' ability to meet the above regulatory requirements.

Affected Emergency Planning Functions/Impact on Effectiveness of Emergency Planning Functions:

10 CFR 50.47(b)(5); Function - Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway.

This change is consistent with the planning standard above and associated NUREG 0654 planning standards. The change enhances implementation of E-Plan alert and notification requirements and continues to comply with applicable regulations. As such, this change is not considered a reduction in the effectiveness of the CNS E-Plan.

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**Other Changes**

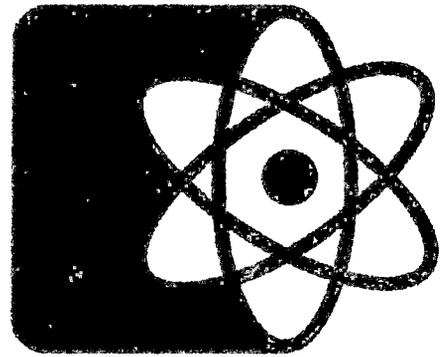
Alert and notification sirens in CNS' 10-mile plume exposure pathway were upgraded to a newer generation of sirens. Because of the higher degree of sound output, some sirens were removed and some relocated to provide better coverage. EPIP 5.7.27, Revision 18, revised the number and locations of the alert and notification sirens based upon the FEMA-approved revision to the CNS Alert and Notification System Design Report. This is also a conforming change to that of CNS' E-Plan (Revision 69) and did not require a full 10 CFR 50.54(q) evaluation.

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**Enclosure**

**Emergency Plan Implementing Procedure 5.7.27, Revision 18**

**COOPER  
NUCLEAR  
STATION**



**Operations Manual  
Emergency Preparedness**

**EMERGENCY PLAN IMPLEMENTING PROCEDURE**

**5.7.27**

**ALERT AND NOTIFICATION SYSTEM**

**Level of Use: INFORMATION**

**Quality: QAPD RELATED**

**Effective Date: 2/28/17**

**Approval Authority: ITR-RDM**

**Procedure Owner: EP OFF-SITE COORDINATOR**

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## 1. ENTRY CONDITION

- 1.1 Activation, testing, or maintenance is required for the Alert and Notification System within Emergency Planning Zone of Cooper Nuclear Station.

## 2. INSTRUCTIONS

### 2.1 ALERT AND NOTIFICATION SYSTEM ACTIVATION

**NOTE** – National Oceanic and Atmospheric Administration/Emergency Alert System (NOAA/EAS) radio receivers are pre-tuned to an EAS station and are automatically activated when EAS is activated. Pre-arranged messages are used when instructing general public on what actions should be taken. Approximately 15 minutes will be required to notify public from time decision has been made to activate system to time required to broadcast a message.

- 2.1.1 Responsible county authorities **PERFORM** following per instructions from State and County Emergency Response Plans:

- 2.1.1.1 Promptly **ACTIVATE** NOAA/EAS System sirens at Site Area Emergency and General Emergency Classifications.

- 2.1.1.2 **REQUEST** transmission of appropriate EAS message over NOAA/EAS radio via National Weather Service.

### 2.2 ALERT AND NOTIFICATION SYSTEM TESTING AND MAINTENANCE

**NOTE** – Methods and responsibilities for testing and maintenance of Alert and Notification System equipment is defined in current approved revision of Cooper Nuclear Station Alert and Notification System Design Report.

- 2.2.1 **REFER** to EPIP 5.7.27.1 to perform following:

- Reporting of NOAA/EAS radio receiver malfunctions.
- Actions to correct malfunctions to NOAA/EAS radio receivers.
- Documentation of testing and repairs.

- 2.2.2 **REFER** to EPIP 5.7.27.2 for specific guidance and instructions for responding to false activation of CNS Alert and Notification System.

**1. PURPOSE**

- 1.1 Describes Alert and Notification System established within Emergency Planning Zone (EPZ) of Cooper Nuclear Station and its activation, testing, and maintenance.

**2. PRECAUTIONS AND LIMITATIONS**

- 2.1 Alert and Notification System is to be activated only in the event of emergencies or for testing.

**3. DISCUSSION**

- 3.1 The system has been established to meet prompt public notification requirements for CNS per 10CFR50.47(b) and 10CFR50 Appendix E. Prompt notification of the public is required by State and Local Radiological Emergency Response Plans at SITE AREA and GENERAL EMERGENCY classifications.
- 3.2 The Alert and Notification System consists of fixed sirens covering areas of high population density, digital National Oceanic and Atmospheric Administration/Emergency Alert System (NOAA/EAS) radio receivers in the low population density rural areas, and associated equipment to activate and monitor siren status. The system's operation and function is defined in the CNS Alert and Notification Design Report. Responsible authorities in Atchison County, Missouri, and Nemaha County, Nebraska have the equipment necessary to activate the Alert and Notification System sirens in Atchison County, Missouri, and also Nemaha and Richardson County in Nebraska. Activation of digital NOAA/EAS radio receivers and broadcast of the appropriate EAS message must be requested via the National Weather Service by responsible county authorities per their respective County Radiological Emergency Response Plans.

3.3 Fixed siren system is composed of 21 pole mounted sirens located in or near following locations:

3.3.1 Nebraska

- Peru - Two sirens in town.
- Brownville - One siren in town.
- Nemaha - One siren in town.
- Shubert - One siren in town.
- Indian Cave State Park - Three sirens throughout park.
- Missouri River - Two sirens; one siren near Peru boat ramp and one siren at CNS South Owner Controlled Area.

3.3.2 Missouri

- Watson - One siren near town.
- Rock Port - Three sirens in town.
- Nishnabotna - One siren 1 3/4 mile south.
- Intersection of US-136 and I-29 - One siren near this intersection.
- Brickyard Hill Wildlife Area - Two sirens throughout the area.
- Missouri River - Three sirens; one siren 3/4 mile north of mile marker 521, one siren 1/2 mile north of mile marker 539, and one siren 3/4 mile northeast of mile marker 526.

3.4 Fixed sirens are capable of producing 128 to 129 decibel of sound. Digital NOAA/EAS radios are made available to residences located within the rural EPZ areas outside effective hearing range of fixed sirens. These radio receivers are pre-tuned to NOAA/NWS radio transmitter KWN41 (162.5 Mhz) located at Shubert, Nebraska. The receivers are constantly monitoring the broadcast frequency of the digital NOAA/EAS transmitter station. Prior to the broadcast of an EAS message, a digital message is transmitted from the station which activates each receiver. The emergency audio message is then broadcast through the receiver's speaker after the alerting siren has sounded for ~ 8 seconds, the Light Emitting Diode (LED) has started flashing to indicate the alert level, and the appropriate visual message has been printed on the Liquid Crystal Display (LCD). These radios also have battery backup power. Operating instructions are provided with each receiver issued. Each receiver is labeled with a CNS telephone number to call for replacement if the receiver should fail to operate properly. The telephone extension is manned 24 hours per day. Upon receipt of a call, the person answering the telephone will record the caller's name, telephone number, address, and pertinent information concerning the malfunction. This information is forwarded to the CNS Emergency Preparedness Department and appropriate corrective action will be taken.

#### 4. REFERENCES

##### 4.1 CODES AND STANDARDS

- 4.1.1 10CFR50 Appendix E.
- 4.1.2 CNS Alert and Notification Design Report.
- 4.1.3 NPPD Emergency Plan for CNS.
- 4.1.4 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.

##### 4.2 PROCEDURES

- 4.2.1 Emergency Plan Implementing Procedure 5.7.27.1, NOAA/EAS Radio Malfunction.
- 4.2.2 Emergency Plan Implementing Procedure 5.7.27.2, False Activation of Alert and Notification System.

4.3 MISCELLANEOUS

4.3.1 QA Observation 93-05A.