

Cooper Nuclear Station Full Scale Exercise

July 19, 2006

Final Report - Radiological Emergency Preparedness Program
September 28, 2006



Homeland
Security





Homeland Security

Exercise Report

Cooper Nuclear Station

Licensee: **Nebraska Public Power District**
Exercise Date: **July 19, 2006**
Report Date: **September 28, 2006**

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PREPAREDNESS & PROTECTION DIVISION
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I. Executive Summary

On July 19, 2006, the Department of Homeland Security (DHS)\Chemical and Nuclear Preparedness and Protection Division (CNPPD) Kansas City Field Office, evaluated an exercise in the plume exposure pathway emergency planning zone (EPZ) around the Cooper Nuclear Station. In addition, out-of-sequence drills were conducted on June 20-22, 2006. The purpose of the exercise and drills was to assess the level of State and local preparedness in responding to a radiological emergency. This exercise was held in accordance with CNPPD's policies and guidance concerning the exercise of State and local radiological emergency response plans and procedures.

The previous exercise at this site was conducted on September 21, 2004. The qualifying emergency preparedness exercise was conducted on April 6, 1983.

DHS\CNPPD wishes to acknowledge the efforts of the many individuals who participated in this exercise. In the State of Missouri, the risk county of Atchison and the host county of Nodaway participated along with the State government. In the State of Nebraska, the risk counties of Nemaha and Richardson, and the host county of Otoe participated along with the State government.

Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork of all the participants were evident during this exercise.

The State and local organizations except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them.

There were eight Areas Requiring Corrective Action (ARCAs) identified during this exercise and the out-of-sequence drills. Five of these ARCAs were corrected during the exercise and drills and one was corrected on August 16, 2006. There were two previous open ARCAs that were closed during the exercise.

This report contains the evaluation of the biennial Full-Scale Exercise conducted on July 19, 2006. Medical Drills were conducted on June 22, 2006, for the Fairfax Community Hospital and the Nemaha County Hospital. Other out of sequence Drills were conducted as follows:

June 20, 2006	Lamkin Gym RCC
June 21, 2006	Otoe County RCC
June 22, 2006	Atchison-Holt Ambulance
	Nodaway County Ambulance
	Nemaha County Ambulance
	Auburn Rescue Squad

The final Protective Action Decision (PAD) in Nebraska during the emergency phase was evacuation of Sub areas 11, 14, and 15 and emergency workers to ingest KI. The evacuated areas included the towns of Brownville, Nemaha, Howe, and Peru. The evacuation also included the public areas of Brownville State Recreation Area and the Steamboat Trace Trail. Approximately 2,545 residents and transients in Nebraska were affected by the evacuation.

The final Protective Action Decision (PAD) in Missouri during the emergency phase was evacuation of Sub areas 1, 2, 3, and 4. The evacuated area included the towns of Phelps City, Langdon, Watson, Rock Port, and Nishnabotna. The evacuation also included the Brickyard Wildlife Area. Approximately 2,451 Missouri residents and transients were affected by the evacuation.

II. Introduction

On December 7, 1979, the President directed the Federal Emergency Management Agency (FEMA) to assume lead responsibility for all offsite nuclear planning and response. FEMA's activities are conducted pursuant to 44 Code of Federal Regulations (CFR) Parts 350, 351, and 352. These regulations are a key element in the Radiological Emergency Preparedness (REP) Program that was established following the Three Mile Island Nuclear Station accident in March 1979.

FEMA Rule 44 CFR 350 establishes the policies and procedures for FEMA's initial and continued approval of State and local governments' radiological emergency planning and preparedness for commercial nuclear power plants. This approval is contingent, in part, on State and local governments' participation in joint exercises with licensees.

DHS\CNPPD's responsibilities in radiological emergency planning for fixed nuclear facilities include the following:

- * Taking the lead in offsite emergency planning and in the review and evaluation of radiological emergency response plans (RERP) and procedures developed by State and local governments.
- * Determining whether such plans and procedures can be implemented on the basis of evaluation of exercises of the plans and procedures conducted by State and local governments.
- * Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA (Federal Register, Vol.58, No.176, September 14, 1993); and
- * Coordinating the activities of the following Federal agencies with responsibilities in the radiological emergency planning process:

- U.S. Department of Commerce,
- U.S. Nuclear Regulatory Commission,
- U.S. Environmental Protection Agency,
- U.S. Department of Energy,
- U.S. Department of Health and Human Services,
 - U.S. Food and Drug Administration
 - U.S. Public Health Service
- U.S. Department of Transportation,
- U.S. Department of Agriculture, and
- U.S. Department of the Interior.

Representatives of these agencies serve on the DHS\CNPPD Kansas City Field Office Regional Assistance Committee (RAC), which is chaired by DHS\CNPPD.

Formal submission of the RERPs for the Cooper Nuclear Station to FEMA Region VII occurred on May 11, 1983, for the State of Nebraska and on May 26, 1983, for the State of Missouri. Formal approval of these RERPs for both States was granted by FEMA on July 2, 1984, under 44 CFR 350. The alert and notification system was approved by FEMA on May 26, 1987.

A joint REP exercise was evaluated on July 19, 2006, by DHS\CNPPD to assess the capabilities of State and local offsite emergency preparedness organizations in implementing their RERPs and procedures to protect the public during a radiological emergency involving the Cooper Nuclear Station. The purpose of this exercise report is to present the exercise results and findings on the performance of the offsite response organizations (ORO) during a simulated radiological emergency.

The findings presented in this report are based on the evaluations of the Federal evaluator team, with final determinations made by the DHS\CNPPD RAC Chairperson and approved by the DHS\CNPPD Director.

The criteria utilized in the FEMA evaluation process are contained in:

- * NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980.
- * Radiological Emergency Preparedness Exercise Evaluation Areas and Criteria, as published in the Federal Register, September 12, 2001 and April 25, 2002.

Section III of this report, entitled "Exercise Overview," presents basic information and data relevant to the exercise. This section of the report contains a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities that were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

Section IV of this report, entitled "Exercise Evaluation and Results," presents basic information on the demonstration of applicable exercise evaluation criteria at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues only format. This section also contains: (1) descriptions of all Deficiencies and ARCAs assessed during this exercise, recommended corrective actions, and the State and local governments' Schedule of Corrective Actions for each identified exercise issue; and (2) descriptions of ARCAs assessed during previous exercises and the status of the OROs' efforts to resolve them.

III. Exercise Overview

Contained in this section are data and basic information relevant to the July 19, 2006, exercise to test the offsite emergency response capabilities in the area surrounding the Cooper Nuclear Station. This section of the exercise report includes a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities that were evaluated, and a tabular presentation of the time of the actual occurrence of key exercise events and activities.

A. Plume EPZ Description

The Cooper Nuclear Station is located on the Missouri River approximately 3 miles south of Brownville, in Nemaha County, Nebraska. The major north-south highway, U.S. Highway 75, lies just outside of the EPZ to the west. State Highway 67 is a hard surface road, which enters the area from the south and connects Nemaha, Brownville, and Peru before joining U.S. Highway 75 to the west of Peru. U.S. Highway 136 crosses the Missouri River at Brownville and proceeds west through Auburn, which is located just outside the 10 mile EPZ. Highway 136 provides the only exit from the area across the Missouri River into Missouri. Except for this one crossing point, the Missouri River serves as an effective natural barrier to movement east.

The topography of the 10-mile EPZ varies from relatively flat east and north of the site, to rolling hills to the west and south of the site.

The 10-mile EPZ contains a total population of 5,200 within three counties; Atchison County in Missouri, and Nemaha and Richardson Counties in Nebraska. The land use within the EPZ is predominantly diversified agricultural production. There are four state recreational areas in the EPZ; Brownville State Recreation Area, Steamboat Trace Trail, and Indian Cave State Park in Nebraska, and Brickyard Hill State Wildlife Area in Missouri. The area is served by various forms of transportation. U.S. Highway 136 passes within three miles to the north of the site and Interstate Highway 29 passes within five miles to the northeast. The Burlington Northern Railroad and the Union Pacific Railroad both transect the EPZ.

TABLE 2

	EMERGENCY OPNS MANAGEMENT										PROTECTIVE ACTION DECISION-MAKING				PROTECTIVE ACTION IMPLEMENTATION				FIELD MEASUREMENT & ANALYSIS				EMERG NOTIF & PUBLIC INFO		SUPPORT								
	1a1	1b1	1c1	1d1	1e1	2a1	2b1	2c1	2d1	2e1	3a1	3b1	3c1	3d1	3e1	3f1	4a1	4a2	4a3	4b1	4c1	5a1	5a2	5a3	5b1	6a1	6b1	6c1	6d1				
<p>COOPER NUCLEAR STATION</p> <p>July 19, 2006</p>	Mobilization																																
	Facilities																																
	Direction & Control																																
	Communications Equipment																																
	Equipment & Supplies to Support Operations																																
	Emergency Worker Exposure Control																																
	Rad Assmt PARs Based on Avail Information																																
	Rad Assmt PADs for General Public																																
	Prot Action Decisions for Special Populations																																
	Rad Assmt & Decision Making for Ingest Exposure																																
Rad Assmt & Dec Making for Relo/Re-entry/& Return																																	
Implementation of Emergency Wkr Exposure Control																																	
Implementation of KI Decision																																	
Implementation of PADs for Special Populations																																	
Implementation of PADs for Schools																																	
Implementation of Traffic Access & Control																																	
Impediments to Evac & Traf are Identified & Resolved																																	
Implementation of Ingestion Pathway Decisions																																	
Impl of IP Decisions Show Strat & Instr Material																																	
Impl of Relocation/Re-entry/Return Decisions																																	
Piume Phase Measurement & Analysis Equip																																	
Piume Phase Field Measurement & Analysis Mgmt																																	
Piume Phase Fid Measurements & Analysis Proced																																	
Post Piume Phase Field Measurements & Sampling																																	
Laboratory Operations																																	
Activation of Prompt Alert & Notification																																	
Activation Prompt Alert & Notif 15 Min (Fast Breaker																																	
Activation Prompt Alert & Notif in Exception Areas																																	
Emerg Info & Instructions for the Public & Media																																	
Monitoring/Decon/Registration of Evacuees & EWS																																	
Monitoring & Decon of Emerg Worker Equipment																																	
Temporary Care of Evacuees																																	
Trans & Treatment of Contam Injured Individuals																																	

MISSOURI STATE OPERATIONS

Emergency Operations Center
 Dose Assessment & FTC
 Field Monitoring Teams
 Joint Information Center (JIC)
 Forward Command Post/EOF
 EAS Station - KFEQ

MISSOURI COUNTY OPERATIONS

Atchison County EOC
 Fairfax Community Hospital
 Atchison-Holt Ambulance
 Nodaway County Ambulance
 Lamkin Gym RCC

M - Met (No Deficiency or ARCA(s) Assessed and no Unresolved ARCAs from Prior Exercises
 N - Not Demonstrated as Scheduled (Reason Explained in Section IV.B)

A - ARCA(s) Assessed or Unresolved ARCA(s) from Prior Exercises

A¹ - ARCA(s) Assessed & Corrected Immediately
 D - Deficiency

TABLE 2

	EMERGENCY OPNS MANAGEMENT			PROTECTIVE ACTION DECISION-MAKING				PROTECTIVE ACTION IMPLEMENTATION				FIELD MEASUREMENT & ANALYSIS				EMERG NOTIF & PUBLIC INFO			SUPPORT OPN/FACILITIES												
	1a1	1b1	1c1	1d1	1e1	2a1	2b1	2c1	2d1	2e1	3a1	3b1	3c1	3d1	3d2	3e1	3e2	3f1	4a1	4a2	4a3	4b1	4c1	5a1	5a2	5a3	5b1	6a1	6b1	6c1	6d1
NEBRASKA STATE OPERATIONS																															
Emergency Operations Center																															
Dose Assessment & FTC																															
Field Monitoring Teams																															
EAS Station - KFAB																															
Joint Information Center (JIC)																															
Forward Command Post/EOF																															
National Weather Service (NWS)																															
NEBRASKA COUNTY OPERATIONS																															
Nemaha County EOC																															
Nemaha County Hospital																															
Nemaha County Ambulance																															
Auburn Rescue Squad																															
Richardson County EOC																															
Otoe County RCC																															

M - Met (No Deficiency or ARCA(s) Assessed and no Unresolved ARCA(s) from Prior Exercises

N - Not Demonstrated as Scheduled (Reason Explained in Section IV.B)

Blank - Not Scheduled for Demonstration

A - ARCA(s) Assessed or Unresolved ARCA(s) from Prior Exercises

A¹ - ARCA(s) Assessed & Corrected Immediately

D - Deficiency

B. Status of Jurisdictions Evaluated

This subsection provides information on the evaluation of each participating jurisdiction and functional entity, in a jurisdiction based, issues only format. Presented below is a definition of the terms used in this subsection relative to criteria demonstration status:

Met - Listing of the demonstrated exercise evaluation criteria under which no Deficiencies or ARCAs were assessed during this exercise, and under which no ARCAs assessed during prior exercise(s) remain unresolved.

Deficiency - Listing of the demonstrated exercise evaluation criteria under which one or more Deficiencies were assessed during this exercise. Included is a description of each Deficiency and recommended corrective actions.

Area Requiring Corrective Actions (ARCA) - Listing of the demonstrated exercise evaluation criteria under which one or more ARCAs were assessed during the current exercise. Included is a description of the ARCA(s) assessed during this exercise and the recommended corrective action(s) to be demonstrated before or during the next biennial exercise.

Not Demonstrated - Listing of the exercise evaluation criteria which were not demonstrated as scheduled during this exercise, and the reason they were not demonstrated.

Prior Issues - Resolved - Description of ARCAs assessed during previous exercises, which were resolved in this exercise, and the corrective actions demonstrated.

Prior Issues - Unresolved - Descriptions of ARCAs assessed during prior exercises, which were not resolved in this exercise. Included is the reason the ARCAs remain unresolved and recommended corrective actions to be demonstrated before or during the next biennial exercise.

The following are definitions of the two types of exercise issues that are discussed in this report.

- * A **Deficiency** is defined as "...an observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant."

- * An ARCA is defined as "...an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety."

DHS\CNPPD has developed a standardized system for numbering exercise issues (Deficiencies and ARCAs). This system is used to achieve consistency in numbering exercise issues among DHS\CNPPD Field Offices and site-specific exercise reports within each Office. It is also used to expedite tracking of exercise issues on a nationwide basis.

The identifying number for Deficiencies and ARCAs includes the following elements, with each element separated by a hyphen (-).

- * **Plant Site Identifier** - A two-digit number corresponding to the Utility Billable Plant Site Codes.
- * **Exercise Year** - The four digits of the year the exercise was conducted.
- * **Evaluation Criteria Number** - A three-digit number corresponding to the criteria in the Exercise Evaluation Areas.
- * **Issue Classification Identifier** - (D = Deficiency, A = ARCA). Only Deficiencies and ARCAs are included in exercise reports.
- * **Exercise Issue Identification Number** - A separate two (or three) digit indexing number assigned to each issue identified in the exercise.

1. STATE OF NEBRASKA

1.1. State Emergency Operations Center

The State Emergency Operations Center (EOC) is located in the Nebraska Military Department complex in Lincoln, Nebraska. The EOC staff demonstrated exceptional knowledge of their plans. They worked together well, showing outstanding teamwork and initiative while keeping close and continuous coordination with the Emergency Operations Facility (EOF).

- a. **MET:** Criteria 1a1, 1c1, 1d1, 1e1, and 5b1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs - RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

1.2. Dose Assessment and Field Team Coordination (FTC)

This function is located in the Nebraska Public Power District (NPPD) Emergency Operations Facility (EOF) in Auburn, Nebraska. The Field Team\Dose Assessment team used innovative coordination with utility staff to complete the mission. They demonstrated great Command and Control and proactive projections.

Recommendation: It is recommended that a 10 mile EPZ map with sampling locations be mounted in the Nebraska radio room for use by the field team coordinator. This map should be covered with a material that will allow for use of erasable pens for plotting the plume location and team movements. This will allow for easier tracking of team movements including traverses while tracking the plume.

- a. **MET:** Criteria 1a1, 1d1, 1e1, 2a1, 2b1, 2b2, 3a1, 3b1, and 4a2
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs - RESOLVED:** None

f. **PRIOR ARCAs - UNRESOLVED:** None

1.3. Radiological Field Monitoring Teams.

The field teams were dispatched from the parking lot of the EOF in Auburn, Nebraska. The teams were extremely knowledgeable of their radiological monitoring equipment and showed outstanding chain-of-custody control.

a. **MET:** Criteria 1a1, 1d1, 1e1, 3a1, 3b1, 4a1, and 4a3

b. **DEFICIENCY:** None

c. **AREAS REQUIRING CORRECTIVE ACTION:** None

d. **NOT DEMONSTRATED:** None

e. **PRIOR ARCAs - RESOLVED:** None

f. **PRIOR ARCAs - UNRESOLVED:** None

1.4. EAS Station – KFAB

The primary Emergency Alert System (EAS) station for Nemaha & Richardson Counties, Nebraska is radio station KFAB, located in Omaha, Nebraska. The staff is knowledgeable, eager, and dedicated to assisting the public. Operations personnel showed excellent Emergency Alert System\Emergency Public Information (EAS\EPI) equipment knowledge.

a. **MET:** Criteria 5a1 and 5b1

b. **DEFICIENCY:** None

c. **AREAS REQUIRING CORRECTIVE ACTION:** None

d. **NOT DEMONSTRATED:** None

e. **PRIOR ARCAs - RESOLVED:** None

f. **PRIOR ARCAs - UNRESOLVED:** None

1.5. Joint Information Center (JIC)

This function is located in the Nebraska Public Power District Building in Columbus, Nebraska. The small rumor control (Hotline) staff effectively fielded 190 calls in 4 hours. There was excellent cooperation between state partners,

excellent verbal briefings to Hot line staff, and outstanding media briefings performed.

- a. **MET:** Criteria 1a1, 1d1, 1e1, and 5b1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs - RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

1.6. Forward Command Post\EOF

The Nebraska Forward Command Post functions from the Cooper Nuclear Station (CNS) EOF in Auburn, Nebraska. The Nebraska Governor's Authorized Representative (GAR) and staff maintained effective coordination with Missouri and operated using an excellent incident operations plan.

- a. **MET:** Criteria 1a1, 1b1, 1c1, 1d1, 1e1, 2a1, 2b1, 2b2, 3a1, 3b1, and 5b1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs - RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

1.7. National Weather Service (NWS)

This facility is located in Valley, Nebraska. The NWS staff was professional, cooperative, and very efficient in their duties.

- a. **MET:** 5a1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None

e. **PRIOR ARCAs - RESOLVED:** None

f. **PRIOR ARCAs - UNRESOLVED:** None

2. NEBRASKA RISK JURISDICTION

2.1. Nemaha County

2.1.1. Emergency Operations Center

This facility is located in the Community Center in Auburn, Nebraska. The Director has a knowledgeable and professional EOC staff. There was effective Direction and Control demonstrated by the County Commissioners and Director and good coordination between the County and State in making and implementing Protective Action Decisions.

a. **MET:** Criteria 1a1, 1c1, 1d1, 1e1, 2a1, 2b2, 2c1, 3a1, 3c1, 3c2, 3d1, 3d2, 5a1, 5a3, and 5b1

b. **DEFICIENCY:** None

c. **AREAS REQUIRING CORRECTIVE ACTION:** 3b1

Issue Number: 16-2006-3b1-A-01

Description: Implementation of the potassium iodide (KI) ingestion decision was not properly demonstrated. There was no simulated notification from the Nemaha County Emergency Operations Center (EOC) to emergency workers in the field recommending that they ingest KI after the recommendation was received from the appropriate state authority. In addition, there were no records completed at the EOC of any emergency workers' ingestion or refusal to ingest KI.

Recommendation: Modify either Attachment 6 or Attachment 9 to Annex F of the Nemaha County RERP or develop a new attachment to document at the EOC the ingestion of KI by emergency workers in the field. The implementation of the KI ingestion recommendation, including notification to applicable emergency workers in the field, must be re-demonstrated during the next biennial exercise.

Schedule of Corrective Actions: The State of Nebraska and Nemaha County agree with the comments made. The Nemaha County RERP, Annex F will include a new procedure for implementing the issuance of KI (potassium iodide). The Nemaha County Sheriff has determined that, after review, their department will follow guidelines setup by the Nemaha County Emergency Management Director. This criterion will be re-demonstrated at the 2008 Cooper Nuclear Station Exercise.

- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs - RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

2.1.2. Nemaha County Hospital

The Nemaha County Hospital is located in Auburn, Nebraska and was evaluated out-of-sequence from the full-scale exercise on June 22, 2006. The hospital staff demonstrated a quick and complete setup of the treatment area. They showed very good contamination awareness and control and excellent knowledge of decontamination techniques.

- a. **MET:** Criteria 1e1, 3a1, and 6d1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs - RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

2.1.3. Nemaha County Ambulance

The Nemaha County Ambulance is located in Auburn, Nebraska and was evaluated out-of-sequence from the full-scale exercise on June 22, 2006. The ambulance crew demonstrated excellent knowledge of their procedures.

- a. **MET:** Criteria 1e1, 3a1 and 3b1, and 6d1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None

Issue Number: 16-2006-6d1-A-02

Description: An ambulance team member used a radiation source to check the survey instrument to be used by the team for detecting contamination responded, but did not compare the digital readout with the expected range of readings listed on a sticker on the side of the instrument.

Corrective Action Demonstrated: After additional training, the staff demonstrated the proper procedure for checking the survey instrument. This issue was corrected on the spot and is closed.

- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs - RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

2.1.4. Auburn Rescue Squad

The Auburn Rescue Squad is located in Auburn, Nebraska and was evaluated out-of-sequence from the full-scale exercise on June 22, 2006. The team demonstrated good emergency worker exposure control procedures and was very professional and knowledgeable.

- a. **MET:** Criteria 1e1, 3a1, 3b1, and 6d1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs - RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

2.2. Richardson County

2.2.1. Emergency Operations Center

This function is located in the Richardson County Courthouse in Falls City, Nebraska. The EOC utilized great integration of new equipment & technologies along with new written procedures. Effective leadership was demonstrated by the Emergency Management Director and the County Commissioners.

Recommendation: It would be helpful for the radiological officer's briefing to be organized and delivered as a PowerPoint (or similar) presentation. Inasmuch as the emergency worker briefings are planned to be conducted at the EOC, this would provide a consistent means of delivery and ensure uniform content using available computer resources. Off-site briefings could, in turn, be delivered using printed copies of the presentation.

Recommendation: More emphasis should be placed on the ongoing recruitment and training of staff for the Emergency Operations Center. The development of some type of rewards\incentives for meeting readiness objectives could be useful in this effort.

a. **MET:** Criteria 1a1, 1c1, 1d1, 1e1, 2a1, 2b2, 2c1, 3a1, 3b1, 3c1, 3c2, 3d1, 3d2, 5a1, 5a3, and 5b1

b. **DEFICIENCY:** None

c. **AREAS REQUIRING CORRECTIVE ACTION:** None

d. **NOT DEMONSTRATED:** None

e. **PRIOR ARCAs - RESOLVED:** 2b2

Issue No.: 16-2004-2b2-A-02

Description: Richardson County did not make a timely decision concerning the evacuation of sub areas 13E and 13W. The NEMA liaison in the county EOC notified the county EMD at 1228 that a General Emergency had been declared at the plant and that a recommendation to evacuate sub areas 13E and 13W was being discussed. The county received a faxed hard copy of the recommendation from the Governor's Authorized Representative (GAR) to evacuate sub areas 13E and 13W at 1240. The EMD initially mistakenly indicated to the EOC staff that the GAR's recommendation did not include the Richardson County sub areas 13E and 13W. Once the mistake was realized and it became clear that 13E and 13W were in the GAR's recommendation, the EOC staff still deliberated at some length about whether to evacuate those sub areas. Much of the discussion centered on concerns that the evacuation decision was being dictated by other jurisdictions. The county did not make a decision to concur on the evacuation recommendation until 1303. The fact that the state proceeded on with issuing an EAS message that included the evacuation of sub areas 13E and 13W, to the public at 1237, prevented the untimely county concurrence from affecting public health and safety. However, the County's delay in concurring delayed their efforts to begin the evacuation process including establishing traffic and access control points. (NUREG-0654, J.9, 10.f.,m.)

Recommendation: It is strongly recommended that the telephone device employed by the state liaison be used as a speakerphone for the conference established between the two counties, the State EOC, the Field Command Post, and the Media Center. That would allow the counties and the State to talk directly with each other concerning critical protective actions instead of having to go through the liaisons. Use of this method should allow the State and the two risk counties to rapidly discuss and reach concurrence on protective action decisions.

The county's ability to coordinate protective action recommendations and reach a timely decision must be demonstrated during the next biennial exercise.

Schedule of Corrective Actions: The State of Nebraska concurs with the contents of the report. During annual EOC training with Richardson County, emphasis will be put on timely decision-making and the importance of the responsibility for the health and safety of the public. This criterion will be re-demonstrated at the 2006 Cooper Nuclear Station Exercise.

Corrective Actions Demonstrated: The County Commissioners, Emergency Management Director, and operations staff were very aware of the importance in making quick decisions and concurrence on issues affecting the safety and health of the public. During all phases of this exercise, all decisions\concurrences were made quickly and without delay.

f. **PRIOR ARCAs - UNRESOLVED:** None

3. NEBRASKA HOST JURISDICTION

3.1. Otoe County

3.1.1. Otoe County Reception and Care Center (RCC)

The Otoe County RCC is located in Nebraska City, Nebraska, Middle School and evaluated out-of-sequence from the full-scale exercise on June 21, 2006. Ample equipment and supplies were available and the center was well organized. The process for American Red Cross registration was very well done.

a. **MET:** Criteria 1a1, 1c1, 1d1, 1e1, 3a1, and 6a1

b. **DEFICIENCY:** None

c. **AREAS REQUIRING CORRECTIVE ACTION:** None

Issue Number: 16-2006-1e1-A-03

Description: The monitoring team in the male decontamination area was unable to properly verify the operability of their survey meter. The team used an Eberline ASP2 (serial # 0765) as the primary monitoring device. The calibration due date on the ASP2 was 5/18/07 as indicated on the calibration sticker. A CD V-777 was available as a backup instrument if needed. The male decon team performed the operational checks of the ASP-2 prior to use. All checks were within acceptance criteria except as noted below. According to ASP-2 Survey Meter Set-Up Procedure, step 23 on page 9-9 of the Otoe County Emergency Management Agency "Reception and Care Center LOI" manual the ASP-2 should respond to the source check as follows: "The digital meter should average

a reading between the two numbers on the side of the Meter. These two numbers are plus or minus 20% of the cpm read when the instrument was calibrated". The team verified that the meter alarmed as required when using the source but they did not confirm that the meter readout was within the 20% of the calibrated value. The meter was declared operational. The "numbers on the side of the meter" were not on the meter. This was also true of the other three ASP-2's used in the reception center. Because of this condition the meters could not be confirmed to be within correct operating parameters. All other checks of the meter indicated proper operation. This was discussed with state personnel who were aware of the requirement and they stated it was an oversight and would be corrected.

Recommendation: Place the appropriate calibration 20% range sticker on the meters in this facility and any other facility under this jurisdiction. Train monitoring individuals on the new process of operability checks in Otoe County Emergency Management Agency "Reception and Care Center LOI" manual, Section titled "ASP-2 Survey Meter Set-Up Procedure". In particular, emphasize step 23 on page 9-9.

Schedule of Corrective Actions: The State of Nebraska agrees with the comments made. The state calibration manager has put the correct 20% range stickers on the said ASP-2 meters to reflect the correct calibration measurements. Furthermore, the Otoe County Emergency Management Director will include in his files an SOP for operational checks of all instruments. Further training will also be included within the next radiological training cycle.

Corrective Actions Demonstrated: Otoe County ASP-2 instrument s/n: 0765 was shown to to be labeled as required during the Radiological Assistance Committee (RAC) meeting held at the Kansas City Field Office on August 16, 2006. This ARCA is closed.

Issue Number: 16-2006-6a1-A-04

Description: The personnel staffing the portal monitor did not properly perform the operational check of the portal monitor.

Corrective Actions Demonstrated: After additional training, the staff demonstrated the proper procedure for checking the portal monitor. This issue was corrected on the spot and is closed.

Issue Number: 16-2006-6a1-A-05

Description: A method for proper handling of contaminated personal effects and/or valuables was not demonstrated. The container for temporary storage of personal contaminated clothing was improperly placed and was not labeled as "Contaminated" or "Radioactive". The monitoring person was unaware of the decontamination action level and the level is not specified in the current procedure.

Corrective Actions Demonstrated: After additional training was provided on-site, the criterion was demonstrated successfully. This issue is closed.

d. NOT DEMONSTRATED: None

e. PRIOR ARCAs - RESOLVED: None

f. PRIOR ARCAs - UNRESOLVED: None

4. STATE OF MISSOURI

4.1. State Emergency Operations Center

This function is located in the Missouri National Guard Headquarters in Jefferson City, Missouri. This facility had a highly proficient and professional Control room and support staff.

- a. **MET:** Criteria 1a1, 1c1, 1d1, and 1e1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs - RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

4.2. Dose Assessment and Field Team Coordination

The Dose Assessment staff and Field Team Coordination perform their functions from the Cooper Nuclear Station (CNS) EOF in Auburn, Nebraska. This team was very knowledgeable, had an effective Field Team Coordinator, and exhibited great interaction between team members.

- a. **MET:** Criteria 1a1, 1d1, 1e1, 2a1, 2b1, 2b2, 3a1, 3b1, and 4a2
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs - RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

4.3. Radiological Field Monitoring Teams

The field teams are dispatched from the Atchison County EOC in Rock Port, Missouri. The field teams demonstrated excellent knowledge of their written procedures, were well organized, and had excellent organization of their equipment and supplies.

- a. MET: Criteria 1a1, 1d1, 1e1, 3a1, 3b1, 4a1, and 4a3
- b. DEFICIENCY: None
- c. AREAS REQUIRING CORRECTIVE ACTION: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ARCAs - RESOLVED: None
- f. PRIOR ARCAs - UNRESOLVED: None

4.4. Joint Information Center (JIC)

This function is located in the Nebraska Public Power District (NPPD) Building in Columbus, Nebraska. The small rumor control (Hotline) staff effectively fielded 190 calls in 4 hours. There was excellent cooperation between state partners, excellent verbal briefings to Hot line staff, and outstanding media briefings performed.

- a. MET: Criteria 1a1, 1d1, 1e1, 5b1
- b. DEFICIENCY: None
- c. AREAS REQUIRING CORRECTIVE ACTION: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ARCAs - RESOLVED: None
- f. PRIOR ARCAs - UNRESOLVED: None

4.5. Forward Command Post\EOF

The Forward Command Post\EOF performs their functions from the Cooper Nuclear Station (CNS) EOF in Auburn, Nebraska. The Missouri GAR and staff demonstrated great coordination with Missouri Health & the Nebraska GAR. The Missouri GAR was proactive in offering earthquake recovery assistance to Nebraska.

- a. MET: Criteria 1a1, 1b1, 1c1, 1d1, 1e1, 2a1, 2b2, 3a1, and 3b1
- b. DEFICIENCY: None
- c. AREAS REQUIRING CORRECTIVE ACTION: None

- d. NOT DEMONSTRATED: None
- e. PRIOR ARCAs - RESOLVED: None
- f. PRIOR ARCAs - UNRESOLVED: None

4.6. EAS Station - KFEQ

The primary Emergency Alert System (EAS) station for Atchison County, Missouri is radio station KFEQ, located in St. Joseph, Missouri. Operators of KFEQ have excellent knowledge of their EAS duties. The station recently installed new emergency power production equipment in support of emergency operations.

- a. MET: Criteria 5a1 and 5b1
- b. DEFICIENCY: None
- c. AREAS REQUIRING CORRECTIVE ACTION: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ARCAs - RESOLVED: None
- f. PRIOR ARCAs - UNRESOLVED: None

5. MISSOURI RISK JURISDICTION

5.1. Atchison County

5.1.1. Emergency Operations Center

This function is located within the 10-mile Emergency Planning Zone (EPZ) in Rock Port, Missouri. The Emergency Management Director (EMD) of the Atchison County EOC has updated internal EOC functions to a modern electronic environment. The staff made excellent use of the computerized message board\log. The PIO made excellent use of procedures while the EMD provided excellent direction and control to all staff.

- a. MET: Criteria 1a1, 1c1, 1d1, 1e1, 2a1, 2b2, 2c1, 3a1, 3b1, 3c1, 3c2, 3d1, 3d2, 5a1, and 5a3
- b. DEFICIENCY: None
- c. AREAS REQUIRING CORRECTIVE ACTION: 5b1

Issue Number: 16-2006-5b1-A-06

Description: Atchison County did not release any public information messages to inform the public about protective actions being taken for the special populations, including the Pleasant View Care Center and the Atchison County Jail.

Recommendation: Additional training should be provided to the Atchison County Public Information Officer and the local procedure/job aide should be revised to ensure that all pertinent Public Information messages are released to the general public.

Schedule of Corrective Actions: The Missouri Emergency Management Agency concurs with the recommendations. This criterion will be re-demonstrated at the 2008 Cooper Nuclear Station Exercise.

d. **NOT DEMONSTRATED:** None

e. **PRIOR ARCAs – RESOLVED:**

Issue Number: 16-2004-5b1-A-04

Description: The staff of the Atchison County EOC sent multiple emergency information and instructional messages for the public and the news media to the National Weather Service (NWS) before the Site Area Emergency was declared. Although all the information apparently made it to the proper locations, the confusion caused the NWS to react in ways that conflict with their normal operations. According to the Plan and the Extent of Play agreement, only the initial EAS message is sent to the NWS. All other informational and news release messages should have been sent to KFEQ Radio Station. (NUREG-0654, E.5.)

Recommendation: An EAS/Public Information message flow chart should be developed and incorporated into the Plan. Extensive training should be accomplished for the EOC staff with emphasis on the flow of information to the NWS and the Radio Station. Also the FAX machine in the Atchison County EOC should be reprogrammed to omit the NWS from any information distribution except the initial EAS message.

Schedule of Corrective Actions: Missouri staff has initiated the flow diagram. It will be incorporated into the Missouri Nuclear Accident Plan and the Atchison County Radiological Emergency Response Plan upon approval by FEMA. A training session with the Atchison County PIO has already been held and an additional training session will be held once the flow diagram has been approved. The Atchison County Emergency Management Director has already reprogrammed the facsimile machine to exclude NWS from messages that they do

not need to receive. All training will be completed by December 31, 2004. This criterion will be re-demonstrated during the 2006 Cooper Nuclear Station exercise.

Corrective Actions Demonstrated: Issue number 16-2004-5b1-A-04 concerned the transmission of multiple emergency information messages, for the public and news media, to the National Weather Service (NWS) prior to the Site Area Emergency. This caused the NWS to respond in ways that conflicted with their procedures. For this exercise, in accordance with procedures, only the initial EAS message was sent to the NWS. All other messages were sent to the KFEQ radio station. This issue is now closed.

f. PRIOR ARCAs – UNRESOLVED: None

5.1.2. Fairfax Community Hospital

The Fairfax Community Hospital is located in Fairfax, Missouri. This evaluation was conducted out-of-sequence on June 22, 2006. The hospital staff made excellent use of their well written procedures. All staff displayed an enthusiastic attitude and made good use of limited space.

a. MET: Criteria 1e1, 3a1, and 6d1

b. DEFICIENCY: None

c. AREAS REQUIRING CORRECTIVE ACTION: None

d. NOT DEMONSTRATED: None

e. PRIOR ARCAs RESOLVED: None

f. PRIOR ARCAs - UNRESOLVED: None

5.1.3. Atchison-Holt Ambulance

This function is located in Tarkio, Missouri. This demonstration was conducted out-of-sequence on June 22, 2006. The very professional crew members made excellent use of their communications. They demonstrated effective contamination control procedures. They rapidly identified that one of their instruments was not working properly and replaced it with the backup.

a. MET: Criteria 1e1, 3a1, 3b1, and 6d1

b. DEFICIENCY: None

c. AREAS REQUIRING CORRECTIVE ACTION: None

- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs - RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

6. MISSOURI HOST JURISDICTION

6.1. Nodaway County

6.1.1. Nodaway County Ambulance

This function is located in Rock Port, Missouri. This demonstration was conducted out-of-sequence on June 22, 2006. The crew demonstrated excellent knowledge of the plans and procedures. Their contamination control procedures were especially noteworthy.

- a. **MET:** Criteria 1e1, 3a1, 3b1, and 6d1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None
- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ARCAs - RESOLVED:** None
- f. **PRIOR ARCAs - UNRESOLVED:** None

6.1.2. Lamkin Gym Reception and Care Center (RCC)

The Lamkin Gym RCC is located on the Northwest Missouri State University Campus in Maryville, Missouri. This demonstration was conducted out-of-sequence on June 20, 2006. The Lamkin Gym is well suited for RCC activities. The large RCC staff, made up mostly of volunteers, demonstrated great enthusiasm for their duties.

- a. **MET:** Criteria 1a1, 1c1, 1d1, 1e1, 3a1, 6a1, and 6b1
- b. **DEFICIENCY:** None
- c. **AREAS REQUIRING CORRECTIVE ACTION:** None

Issue Number: 16-2006-6a1-A-07

Description: The receptacle for contaminated clothing was not in its proper place, the clean Tyvek coveralls were not properly placed to be readily available, and a considerable degree of indecision regarding how the simulated evacuee would exit the female decontamination station was evident during the first attempt at demonstration.

Corrective Actions Demonstrated: The female decontamination operations personnel were trained on the spot for the appropriate layout, setup, and required elements of the section. They were able to perform the duties adequately during the re-demonstration, closing the issue.

Issue Number: 16-2006-6a1-A-08

Description: The monitoring of simulated evacuees using the portal was halted after the portal alarmed. The potentially contaminated person was surveyed at the portal location. Evacuees were not processed through the portal while the survey was being conducted. Therefore, the rate at which evacuees were monitored at the portal was not sufficient to meet the requirement to process 20% of the expected population in 12 hours.

Corrective Actions Demonstrated: After this was brought to the attention of the chief of operations, persons identified as contaminated were taken directly to the appropriate male or female decontamination area. This allowed the portal line to operate uninterrupted and achieve processing 20% of the expected population in 12 hours. The issue is closed based on the re-demonstration.

d. **NOT DEMONSTRATED:** None

e. **PRIOR ARCAs - RESOLVED:** None

f. **PRIOR ARCAs - UNRESOLVED:** None

V. Appendice

Appendix 1 - Acronyms and Abbreviations

ARC	American Red Cross
ARCA	Area Requiring Corrective Action
ARM	Area Radiation Monitor
ATWS	Anticipated Transit without SCRAM
CFR	Code of Federal Regulations
CNPPD	Chemical & Nuclear Preparedness & Protection Division
CNS	Cooper Nuclear Station
CS	Core Spray
CS-137	Cesium 137
DHS	Department of Homeland Security
DOH	Department of Health
DOT	U.S. Department of Transportation
DW	Drywell
EAL	Emergency Action Level
EAS	Emergency Alert System
ECL	Emergency Classification Level
ED	Emergency Declaration
EMD	Emergency Management Director
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	U.S. Environmental Protection Agency

EPI	Emergency Public Information
EPIP	Emergency Plan Implementing Procedure
EPZ	Emergency Planning Zone
ERO	Emergency Response Organization
EW	Emergency Worker
FCP	Field\Forward Command Post
FEMA	Federal Emergency Management Agency
FTC	Field Team Coordination
GAR	Governor's Authorized Representative
GPS	Global Positioning System
ICF	FEMA Contractor
JIC	Joint Information Center
JPIC\MRC	Joint Public Information Center\Media Release Center
KI	Potassium Iodide
LCO	Limiting Condition of Operation
LPCI	Low Pressure Coolant Injection
mR	Milliroentgen
NEMA	Nebraska Emergency Management Agency
NOUE	Notice of Unusual Event
NPPD	Nebraska Public Power District
NRC	U.S. Nuclear Regulatory Commission
NUREG-0654	Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants (NUREG-0654/FEMA-REP-1, Rev. 1).

NWS	National Weather Service
ODAM	Offsite Dose Assessment Manual
OOS	Out of Service
OPPD	Omaha Public Power District
ORO	Offsite Response Organization
PAD	Protective Action Decision
PAR	Protective Action Recommendation
PIO	Public Information Officer
R	Roentgen
RAC	Regional Assistance Committee
RCC	Reception and Care Center
RCIC	Reactor Core Isolation Cooling
RCS	Reactor Coolant System
REA	Radiological Emergency Area
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RPV	Reactor Pressure Vessel
SM	Site Manager
TDD	Telecommunications Device for the Deaf
TL	Team Leader

Appendix 2 - Exercise Evaluators and Team Leaders

Eleven federal agency personnel and eleven ICF contract staff evaluated the Cooper Nuclear Station exercise on July 19, 2006. Events marked with an asterisk were evaluated out-of-sequence on June 20-22, 2006. Evaluator Team Leaders are indicated by the letters 'TL' after their names. The organization which each evaluator represents is indicated by the following abbreviations:

EPA - U. S. Environmental Protection Agency
 FEMA - Federal Emergency Management Agency
 DOT - Department of Transportation

FDA - Food & Drug Administration
 ICF - FEMA Contractor
 NRC - Nuclear Regulatory Commission

EVALUATION SITE	EVALUATOR	ORGANIZATION
STATE OF NEBRASKA		
State EOC	Robert Duggleby	ICF
Dose Assessment FTC	Bob Dye	EPA
Field Monitoring Teams	Gary Goldberg - TL Reggie Cope	ICF FDA
EAS Station - KFAB	Gary Bolender	ICF
Joint Information Center	Roy Smith	ICF
Forward Cmd. Post EOF	Norm Valentine	DHS\CNPPD
National Weather Service	Judy Dodgen	DHS\CNPPD
Nemaha County EOC	Al Lookabaugh - TL Bill Maier	ICF NRC
*Nemaha County Hospital	Lyle Slagle	ICF
*Nemaha Co. Ambulance	Jim Hickey	ICF
*Auburn Rescue Squad	Al Lookabaugh	ICF
Richardson County EOC	David Smith - TL Dan Feighert	DHS\CNPPD FEMA
*Otoe County RCC	Ray Wood - TL Gary Goldberg Jim Hickey Lyle Slagle Alan Bevan	ICF ICF ICF ICF ICF

EVALUATION SITE	EVALUATOR	ORGANIZATION
STATE OF MISSOURI		
State EOC	Robert Fernandez	ICF
Dose Assessment & FTC	Jim Hickey	ICF
Field Monitoring Teams	Lyle Slagle - TL Scotty Hargrave	ICF FDA
Joint Information Center	Carl McCoy	ICF
Forward Command Post	Joe Schulte	DHS\CNPPD
EAS Station – KFEQ	Alan Bevan	ICF
Atchison County EOC	Rex Jennings – TL Jeff McSpaden	DHS DOT
*Fairfax Community Hospital	Al Lookabaugh	ICF
*Atchison-Holt Ambulance	Alan Bevan	ICF
*Nodaway County Ambulance	Gary Goldberg	ICF
*Lamkin Gym RCC	Jim Hickey – TL Ray Wood Lyle Slagle Gary Goldberg Alan Bevan	ICF ICF ICF ICF ICF

Appendix 3 - Exercise Criteria and Extent of Play Agreement

This appendix lists the exercise criteria, which were scheduled for demonstration during the Cooper Nuclear Station plume exercise on July 19, 2006, and out-of-sequence drills on June 20-22, 2006.

Site-specific information was negotiated in the extent-of-play agreements approved by DHS\CNPPD for the States of Nebraska and Missouri on April 10, 2006.

The exercise criterion, contained in Exercise Evaluation Areas and Criterion as published in the Federal Register September 12, 2001 and April 25, 2002, represent a functional translation of planning standards and evaluation criteria of NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980.

Because the exercise criteria are intended for use at all nuclear power plant sites and because of variations among offsite plans and procedures, an extent-of-play agreement was prepared by DHS\CNPPD and provided to the States of Nebraska and Missouri for further clarification of expected demonstration of the criteria.

Listed below are the REP criteria scheduled for demonstration during this exercise and the site-specific extent-of-play agreement, if applicable.

EXERCISE CRITERION and EXTENT-OF-PLAY

State of Nebraska

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. (NUREG-0654, A.4, D.3, 4, E.1, 2, H.4)

All telephone calls to mobilize personnel or place them on standby must actually be made. A copy of who was notified will be provided to the evaluator. Pre-positioning of staff is not authorized, except as written below or by written approval from this office prior to the exercise. Your request must include which staff positions will be pre-positioned and which facility (ies) will be affected.

The following locations may pre-position as follows: Nebraska State EOC only personnel already at their normal duty station, Richardson & Nemaha County EOCs, Nebraska GAR at the EOF, JPIC in Columbus, and Dose Assessment may not report to their duty station until one hour after the Alert is declared. The field teams will meet at the Nemaha County EOC in Auburn at 0800 for equipment checks.

The demonstrations at the Otoe County Reception Center, Nemaha County Hospital, Auburn Rescue Squad, and the Nemaha County Ambulance will occur out of sequence. Therefore, all personnel at these facilities may be pre-positioned. The issuance of

radiological instrumentation and operability checks, where applicable, must not be accomplished prior to evaluator arrival.

Current rosters must be presented identifying the individuals who will maintain around the clock operation (all shifts) at all evaluated facilities.

Criterion 1.b.1: Facilities are sufficient to support the emergency response. (NUREG-0654, H)

The Emergency Operations Facility in Auburn is a new facility and will be evaluated with this criterion.

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible. (NUREG-0654, A.1.d., 2.a., b.)

No Modifications

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations. (NUREG-0654, F.1., 2.)

All facilities, including field teams that are evaluated must demonstrate communications capability. The evaluators will request copies of all messages and logs of message traffic at each site.

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654, H., J.10.a.b.e.f.j.k., 11, K.3.a.)

Verification of dosimetry and KI supplies, as applicable, will occur at the Nemaha and Richardson County EOCs, Otoe County Reception Center, Auburn Rescue Squad, Nemaha County Ambulance and Hospital, and all other facilities that maintain dosimetry and/or KI supplies in accordance with the plans.

The consolidated Nebraska State Field team's equipment checks will be conducted at 0800 hrs, on July 19, 2006, at the Nemaha County EOC parking lot in Auburn, Nebraska.

Criterion 2.a.1: ORO(s) use a decision-making process, considering relevant factors and appropriate coordination, to insure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654, K.4.)

No Modifications

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions. (NUREG-0654, I.8., 10., 11. and Supplement 3.)

No Modifications

Criterion 2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy). (NUREG-0654, J.9., 10.m.)

No Modifications

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups. (NUREG-0654, J.9., 10.c.d.e.g.)

During the emergency phase of the actual exercise, all appropriate actions (e.g., notifications, EAS messages, etc.) must be demonstrated for any public or private schools or day care facilities affected by protective action recommendations. All notification to public school districts must be actually demonstrated by the county EOC staffs. Simulation of this notification is not allowed.

Telephone calls should be more like a communications check versus relaying the exercise message to simplify and reduce the chance of false alarms.

Criterion 3.a.1: The OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. (NUREG-0654, K.3.)

Emergency workers must wear appropriate direct reading and permanent record dosimeters and have access to a dosimeter charger in accordance with state and local plans and procedures. In addition, they must be able to demonstrate basic knowledge of dosimeters, radiation exposure limits, and turn-back exposure limits through an interview process. Procedures to monitor and record dosimeter readings and to manage radiological exposure control must be demonstrated.

Out-of-Sequence

On June 22, 2006, at 1330 hrs, the responding Auburn Rescue Squad and the Nemaha County Ambulance delivering patients to the Nemaha County receiving Hospital must have dosimeters and a dosimeter charger available for this demonstration and be knowledgeable of procedures for their use and of their exposure limits.

On June 21, 2006, at 1400 hrs, for the Otoe County Reception Center, emergency workers must demonstrate their knowledge of emergency worker exposure control. Workers must have dosimeters and a dosimeter charger available for this demonstration and be knowledgeable of procedures for their use and of their exposure limits.

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained. (NUREG-0654, E. 7., J. 10. e., f.)

Although the decision to recommend the use of KI is not due for demonstration during this exercise, it is possible that the scenario could require it. If the decision to use KI is made, the instructions must be appropriately disseminated to all personnel including those deployed (simulated) for traffic and access control and other missions. However, if the decision to use KI is not required by the scenario, all emergency workers, at all facilities, will be expected to demonstrate this criterion through an interview of their knowledge of the procedures for the authorization and the use of KI. Actual administration of KI will be simulated. *If any emergency workers indicate they would refuse to take KI, procedures must be demonstrated to either take alternative protective measures for the individual(s) or replace them.*

Out-of-Sequence

On June 22, 2006, at 1330 hrs, during the medical drill, both responding ambulance crews must have KI available and be knowledgeable of procedures for the authorization and use of KI.

Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions. (NUREG-0654, E.7., J.9., 10.c.d.e.g.)

Telephone calls to special facilities, individuals with special needs, and transportation providers may be actually made or simulated except as noted below. Actual telephone calls must be made to at least 1/3 of the transportation providers, including special resources for disabled individuals. However, all facilities, individuals with special needs, and transportation providers that are required to be notified must be clearly identified and the actual or simulated contacts appropriately documented. Demonstration of the Telecommunications Device for the Deaf (TDD) will be conducted by interview at each EOC or 911 center(s) equipped with TDD devices. In addition, documentation of the latest test of the device will be provided to the evaluator.

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools. (NUREG-0654, J.10.c., d., g.)

No Modifications

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel. (NUREG-0654, J.10.g., j., k.)

Deployment of traffic and access control personnel to assigned locations will be simulated. However, the locations where traffic and access control would be established must be appropriately documented. Staffing of traffic and access control points must be appropriately coordinated with all involved jurisdictions.

At least two individuals, who would normally perform traffic and access control, must be available at the Nemaha and Richardson County EOCs for interviews to demonstrate knowledge of their roles and responsibilities concerning traffic and access control, as well as appropriate knowledge concerning dosimetry and KI. We recommend that this demonstration take place early in the exercise.

Criterion 3.d.2: Impediments to evacuation are identified and resolved. (NUREG-0654, J.10., k.)

No Modifications

Criterion 4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates. (NUREG-0654, H.10, I.8., 9., 11.)

Radiological detection instruments, equipment, and protective clothing as annotated in the Nebraska Emergency Response Plan for the Nebraska Health and Human Services, Department of Regulation and Licensure, should be available for the demonstration.

When time permits; at least one person will demonstrate donning of protective clothing (protective clothing may be removed after demonstration).

Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure. (NUREG-0654, I.8., 11., J.10.a).

No Modifications

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. (NUREG-0654, I.8., 9., 11.)

Each of the deployed field monitoring teams must take sufficient radiation measurements to identify the plume. Activities related to the use of equipment and procedures for the collection and transport of samples including any transfer of custody requirement from

areas that received deposition from the airborne plume may be explained by interview to the evaluator.

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP guidance. (10 CFR Part 50, Appendix E & NUREG-0654, E. 1., 4., 5., 6., 7.)

An evaluator will be assigned at the National Weather Service office in Valley, Nebraska for the initial EAS message and to KFAB EAS radio station to observe the procedures for broadcasting all exercise related messages. We expect to see the actual receipt of the messages from the State or Nemaha County EOC. Following receipt at the NWS and radio station, procedures to broadcast the message must be fully demonstrated up to the point of transmission. Actual broadcasts of the messages or EAS test messages are not required. The REP evaluator will remain at the EAS station until the termination of the exercise to observe receipt and broadcast procedures for all EAS messages and Public Information messages. Copies of all EAS messages and Public Information messages will be requested from the facility. The appropriate facility sending messages to the radio station must demonstrate the capability to verify receipt of messages at the radio station. The procedures for siren activation must be demonstrated up to the point of actual activation. Actual siren activation may be simulated. In addition, tone alert radio and/or weather radio activation may be simulated.

The following basic criteria should be included in the initial EAS announcements.

1. Identification of the State or local government organization and the official with authority for providing the alert signal and instructional message.
2. Identification of the commercial nuclear power plant and a statement that an emergency exists at the plant.
3. Reference to Radiological Emergency Preparedness site-specific emergency information (e.g. brochures and/or phone book information) for use by the general public during an emergency.
4. A closing statement asking that the affected and potentially affected populations stay tuned for additional information.

Criterion 5.a.2: RESERVED

Not to be demonstrated at this exercise.

Criterion 5.a.3: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system. (NUREG-0654, E. 6., Appendix 3.B.2.c)

To be demonstrated only if there is a real or simulated failure in the primary alert and notification sequence. By interview, the evaluator will ask questions regarding policy and procedures for backup alerting and notifications.

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner. (NUREG-0654, E. 5.,7., G.3.a., G.4,a.,b.,c.)

All subsequent protective action instructions provided to the public after the initial notification should be disseminated in a timely manner. Messages should be all inclusive by including previously identified protective action areas as well as new areas. Procedures must be demonstrated, if appropriate, to ensure that EAS messages and Public Information messages containing Protective Action Recommendation(s) (PARs) that have been changed are rescinded and not repeated by the EAS station. In addition, procedures must be demonstrated to ensure that EAS messages and Public Information messages containing current PARs are repeated at pre-established intervals.

Media briefings, public information, and the public inquiry hotline (rumor control) will be coordinated at the Joint Information Center/Media Release Center (JIC/MRC) in Columbus, Nebraska. Sufficient and timely media briefings should be conducted from this location.

Each public inquiry hotline staff member must demonstrate the capability to respond to an average of at least six calls per hour throughout the emergency phase. Any trends in rumors identified by public inquiry hotline staff must be addressed by the JIC/MRC in news releases and/or media briefings. At least one message should address a false or misleading rumor for which measures should be taken.

Evaluators will be assigned to the JIC/MRC to monitor public information and public inquiry hotline activities. Copies of all messages, message logs, news releases, and public information statements will be provided to the evaluators at each site.

Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-0654, J.10.h.; K.5.b.)

Out-of-Sequence

On June 21, 2006, at 1400 hrs, the number of evacuees that must be monitored within twelve hours at the Otoe County reception center is 334 (20% of the evacuees assigned to the center). According to the plan, one portal monitor will be available at this facility and will require one monitoring team to operate it. At least one monitoring team with an ASP-2 must be available, pursuant to the plan, as a backup in the event the portal monitor cannot be used for some reason. Two (2) additional monitoring teams must be available for evacuee (male/female) decontamination. Therefore, at least five (4) teams must be available for demonstration. According to the plan, the Otoe County radiological monitoring volunteers provide the monitors for this facility. Therefore, the monitoring resources should be from their volunteer pool.

The facilities at the Nebraska City Middle School utilized for monitoring and decontamination of evacuees must be fully set up to receive evacuees for evaluation. This will require full staffing of personnel required to accomplish monitoring and decontamination of evacuees. At least six evacuees per monitoring station must be processed to demonstrate registration, monitoring, and decontamination capabilities. Monitoring and decontamination procedures should be initiated for at least one male and one female evacuee. Decontamination may be simulated (explained through an interview process). In accordance with the plan and procedures, the use of protective clothing must be demonstrated. At least one person must demonstrate the use and wear of protective clothing.

The individuals who perform monitoring must demonstrate an operational check of the instruments, utilizing a check source, prior to monitoring. Information on the proper reading or range of readings should be attached to or accompany the instrument.

All organizations that, per the plans, provide support of registration center activities must be present for evaluation at the Otoe County Reception Center. This would include The American Red Cross, Otoe County Emergency Management, and members of the volunteer monitoring pool.

Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG-0654, F.2, H.10., K.5.a.b., L.1., 4.)

The use of flashing lights and sirens are not necessary during this exercise. A non-specialized vehicle may be used to transport the simulated victim to the medical facility. However, should the ambulance portion of the drill terminate prior to actual

transportation to the medical facility, communications between the ambulance and the receiving medical facility must be demonstrated.

Before using a monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation. All monitoring activities should be completed, as they would be in an actual emergency. Appropriate contamination control measures should be demonstrated.

The ambulance and crew must be monitored before release back into service. In addition, the crew will be interviewed as to their knowledge of where monitoring and decontamination of their vehicle will be accomplished.

Out-of-Sequence

On June 22, 2006, at 1330 hrs, the Nemaha County Ambulance, Auburn Rescue Squad, and Nemaha County Hospital will be demonstrated. Communications must be established with the hospital that would receive the patient. The Ambulance demonstrations will be terminated once the patient is unloaded and the Ambulance and crew are checked for contamination. To satisfy evaluation of protective clothing, only one person from each of the Ambulance crews must dress out. Only one ambulance will transport their victim for the hospital to perform their demonstration. This decision should be made by the Emergency Management Director in advance of the demonstration.

State of Missouri

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. (NUREG-0654, A.4, D.3, 4, E.1, 2, H.4)

All telephone calls to mobilize personnel or place them on standby must actually be made. A copy of who was notified will be provided to the evaluator. Pre-positioning of staff is not authorized except as noted below or by written approval by this office prior to the exercise. Your request must include which staff positions will be pre-positioned and which facility (ies) will be affected.

The demonstrations at the Fairfax Community Hospital, Atchison-Holt Ambulance, Nodaway County Ambulance, and the Lamkin Gym RCC will occur out of sequence. Therefore, all personnel at these facilities may be pre-positioned. The issuance of radiological instrumentation and operability checks, where applicable, must not be accomplished prior to evaluator arrival.

The Missouri SEMA and Missouri Department of Health and Senior Services personnel that will be assigned to the EOF and Radiological sampling teams are allowed to preposition to St. Joseph, Missouri. Both agencies are not to report to their duty locations prior to one hour after the Alert Level is declared.

Current rosters must be presented to the evaluator identifying the individuals who will maintain around the clock operation (all shifts) at all evaluated facilities.

Criterion 1.b.1: Facilities are sufficient to support the emergency response. (NUREG-0654, H)

The Emergency Operations Facility in Auburn is a new facility and will be evaluated with this criterion.

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible. (NUREG-0654, A.1.d., 2.a., b.)

No Modifications

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations. (NUREG-0654, F.1., 2.)

All facilities and field teams that are evaluated must demonstrate communications capability. The evaluators will request copies of all messages and logs of message traffic at each site.

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654, H., J.10.a.b.e.f.j.k., 11, K.3.a.)

Verification of dosimetry and KI supplies, as applicable, will occur at the Atchison County EOC, Fairfax Community Hospital, Atchison-Holt Ambulance, Nodaway County Ambulance, and all other facilities that maintain dosimetry and/or KI supplies in accordance with the plans.

Field team equipment checks will be conducted approximately one hour after the Alert condition is received at the Atchison County Emergency Operations Center parking lot.

Criterion 2.a.1: ORO(s) use a decision-making process, considering relevant factors and appropriate coordination, to insure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654, K.4.)

No Modifications

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions. (NUREG-0654, I.8., 10., 11. and Supplement 3.)

No Modifications

Criterion 2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy). (NUREG-0654, J.9., 10.m.)

No Modifications

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups. (NUREG-0654, J.9., 10.c.d.e.g.)

During the emergency phase of the actual exercise, all appropriate actions (e.g., notifications, EAS messages, etc.) must be demonstrated by the county EOC staffs for any public or private schools or day care facilities affected by protective action recommendations. All notification to public school districts must be actually demonstrated. Simulation of this notification is not allowed.

Telephone calls should be more like a communications check versus relaying the exercise message to simplify and reduce the chance of false alarms.

Criterion 3.a.1: The OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. (NUREG-0654, K.3.)

Emergency workers must wear appropriate direct reading and permanent record dosimeters and have access to a dosimeter charger in accordance with state and local plans and procedures. In addition, they must be able to demonstrate basic knowledge of dosimeters, radiation exposure limits, and turn-back (DHSS administrative dose rate) limits through an interview process. Procedures to monitor and record dosimeter readings and to manage radiological exposure control must be demonstrated.

Out-of-sequence

On June 22, 2006, at 0830 hrs, during the medical drill, the responding Atchison-Holt Ambulance and Nodaway County Ambulance must have dosimeters and a dosimeter charger available for this demonstration and be knowledgeable of procedures for their use and of their exposure limits.

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained. (NUREG-0654, E. 7., J. 10. e., f.)

Although the decision to recommend the use of KI is not due for demonstration during this exercise, it is possible that the scenario could require it. If the decision to use KI is made, the instructions must be appropriately disseminated to all personnel including those deployed (simulated) for traffic and access control and other missions. However, if the decision to use KI is not required by the scenario, all emergency workers, at all facilities, will be expected to demonstrate this criterion through an interview of their knowledge of the procedures for the authorization and the use of KI. Actual administration of KI will be simulated. *If any emergency workers indicate they would refuse to take KI, procedures must be demonstrated to either take alternative protective measures for the individual(s) or replace them.*

Out-of-sequence

On June 22, 2006, at 0830 hrs, during the medical drill, the responding ambulance crews must have KI available and be knowledgeable of procedures for the authorization and use of KI.

Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions. (NUREG-0654, E.7., J.9., 10.c.d.e.g.)

Telephone calls to special facilities, individuals with special needs, and transportation providers may be actually made or simulated except as noted below. Actual telephone calls must be made to at least 1/3 of the transportation providers, including special resources for disabled individuals. However, all facilities, individuals with special needs, and transportation providers that are required to be notified must be clearly identified and the actual or simulated contacts appropriately documented. Demonstration of the Telecommunications Device for the Deaf (TDD) will be conducted by interview at each EOC or 911 center(s) equipped with TDD devices. In addition, documentation of the latest test of the device will be provided to the evaluator.

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools. (NUREG-0654, J.10.c., d., g.)

No Modifications

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel. (NUREG-0654, J.10.g., j., k.)

Deployment of traffic and access control personnel to assigned locations will be simulated. However, the locations where traffic and access control would be established must be appropriately documented. Staffing of traffic and access control points must be appropriately coordinated with all involved jurisdictions.

At least two individuals, who would normally perform traffic and access control, must be available at the Atchison County EOC for interviews to demonstrate knowledge of their roles and responsibilities concerning traffic and access control, as well as appropriate knowledge concerning dosimetry and KI. We recommend that this demonstration take place early in the exercise.

Criterion 3.d.2: Impediments to evacuation are identified and resolved. (NUREG-0654, J.10., k.)

No Modifications

Criterion 4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates. (NUREG-0654, H.10, I.8., 9., 11.)

Radiological detection instruments, equipment, and protective clothing as annotated in the Missouri Nuclear Accident Plan for the Missouri Department of Health and Senior Services should be available for the demonstration.

When time permits; at least one person will demonstrate donning of protective clothing (protective clothing may be removed after demonstration).

Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure. (NUREG-0654, I.8., 11., J.10.a).

No Modifications

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. (NUREG-0654, I.8., 9., 11.)

Each of the deployed field monitoring teams must take sufficient radiation measurements to identify the plume. Activities related to the use of equipment and procedures for the collection and transport of samples including any transfer of custody requirements from areas that received deposition from the airborne plume may be explained by interview to the evaluator during the plume phase.

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP guidance. (10 CFR Part 50, Appendix E & NUREG-0654, E. 1., 4., 5., 6., 7.)

An evaluator will be assigned at the National Weather Service office in Valley, Nebraska for the initial EAS message to KFEQ EAS radio station to observe the procedures for broadcasting all exercise related messages. We expect to see the actual receipt of the messages from the State or the Atchison County EOC. Following receipt at the NWS and radio station, procedures to broadcast the message must be fully demonstrated up to the point of transmission. Actual broadcasts of the messages or EAS test messages are not required. The FEMA evaluator will remain at the EAS station until the termination of the exercise to observe receipt and broadcast procedures for all EAS messages and Public Information messages. Copies of all EAS messages and Public Information messages will be requested from the facility. The appropriate facility sending messages to the radio station must demonstrate the capability to verify receipt of messages at the radio station. The procedures for siren activation must be demonstrated up to the point of actual activation. Actual siren activation may be simulated. In addition, tone alert radio and/or weather radio activation may be simulated.

The following basic criteria should be included in the initial EAS announcements.

1. Identification of the State or local government organization and the official with authority for providing the alert signal and instructional message.
2. Identification of the commercial nuclear power plant and a statement that an emergency exists at the plant.
3. Reference to Radiological Emergency Preparedness site-specific emergency information (e.g. brochures and/or phone book information) for use by the general public during an emergency.
4. A closing statement asking that the affected and potentially affected population stay tuned for additional information.

Criterion 5.a.2: RESERVED

Not to be demonstrated at this exercise.

Criterion 5.a.3: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system. (NUREG-0654, E. 6., Appendix 3.B.2.c)

To be demonstrated only if there is a real or simulated failure in the primary alert and notification sequence. By interview, the evaluator will ask questions regarding policy and procedures for backup alerting and notifications.

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner. (NUREG-0654, E. 5.,7., G.3.a., G.4,a.,b.,c.)

All subsequent protective action instructions provided to the public after the initial notification should be disseminated in a timely manner. Messages should be all inclusive by including previously identified protective action areas as well as new areas. Procedures must be demonstrated, if appropriate, to ensure that EAS messages and Public Information messages containing Protective Action Recommendation(s) (PARs) that have been changed are rescinded and not repeated by the EAS station. In addition, procedures must be demonstrated to ensure that EAS messages and Public Information messages containing current PARs are repeated at pre-established intervals.

Media briefings, public information, and the public inquiry hotline (rumor control) will be coordinated at the Joint Information Center/Media Release Center (JIC/MRC) in Columbus, Nebraska. Sufficient and timely media briefings should be conducted from this location.

Each public inquiry hotline staff member must demonstrate the capability to respond to an average of at least six calls per hour throughout the emergency phase. Any trends in rumors identified by public inquiry hotline staff must be addressed by the JIC/MRC in news releases and/or media briefings. At least one message should address a false or misleading rumor for which measures should be taken.

Evaluators will be assigned to the JIC/MRC to monitor public information and public inquiry hotline activities. Copies of all messages, message logs, news releases, and public information statements will be provided to the evaluators at each site.

Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-0654, J.10.h.; K.5.b.)

Out-of-Sequence

On June 20, 2006, at 1300 hrs, the number of evacuees that must be monitored within twelve hours at the Lamkin Gym reception center is 527 (20% of the evacuees assigned to the center). According to the plan, one portal monitor will be available at this facility and will require one monitoring team to operate it. At least one monitoring team with a CDV-700 must be available, pursuant to the plan, as a backup in the event the portal monitor cannot be used for some reason. Two additional monitoring teams must be available for evacuee (male/female) decontamination. Therefore, at least four teams must

be available for demonstration. According to the plan, MoRET, National Guard, Nodaway County Ambulance District, and Fairfax, Tarkio, West Atchison, and Polk Township Volunteer Fire Departments provide the monitors for this facility. Therefore, the monitoring resources should be from these organizations.

The facilities at the Lamkin Gym utilized for monitoring and decontamination of evacuees must be fully set up to receive evacuees for evaluation. This will require full staffing of personnel required to accomplish monitoring and decontamination of evacuees and vehicles. At least six evacuees must be processed to demonstrate registration, monitoring, and decontamination capabilities. Monitoring and decontamination procedures should be initiated for at least one male and one female evacuee. Decontamination may be simulated (explained through an interview process). In accordance with the plan and procedures, the use of protective clothing must be demonstrated. At least one person must demonstrate the use and wear of protective clothing.

The individuals who perform monitoring must demonstrate an operational check of the instruments, utilizing a check source, prior to monitoring. Information on the proper reading or range of readings should be attached to or accompany the instrument.

All organizations that, per the plans, provide support of registration center activities must be present for evaluation at the Lamkin Gym Reception Center. This would include the Division of Family Services, American Red Cross, Campus Police, and Maryville Public Safety.

Criterion 6.b.1: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment including vehicles. (NUREG-0654, K.5.b)

Out-of-Sequence

On June 20, 2006, at 1300 hrs, this criterion must be demonstrated by the Lamkin Gym RCC & EWMDS. Monitoring of at least one emergency worker vehicle must be demonstrated. Decontamination may be conducted by interview.

Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG-0654, F.2, H.10., K.5.a.b., L.1., 4.)

The use of flashing lights and sirens are not necessary during this exercise. A non-specialized vehicle may be used to transport the simulated victim to the medical facility. However, should the ambulance portion of the drill terminate prior to actual transportation to the medical facility, communications between the ambulance and the receiving medical facility must be demonstrated.

Before using a monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation. All monitoring activities should be completed, as they would be in an actual emergency. Appropriate contamination control measures should be demonstrated.

The ambulance and crew must be monitored before release back into service. In addition, the crew will be interviewed as to their knowledge of where monitoring and decontamination of their vehicle will be accomplished.

Out-of-sequence

On June 22, 2006, at 0830 hrs, the Atchison-Holt Ambulance, Nodaway County Ambulance, and the Fairfax Community Hospital will be demonstrated. Communication must be established with the hospital that would receive the patient. The Ambulance demonstrations will be terminated once the patient is unloaded and the Ambulance and crew are checked for contamination. To satisfy evaluation of protective clothing, only one person from each of the Ambulance crews must dress out. Only one ambulance will transport their victim for the hospital to perform their demonstration. This decision should be made by the Emergency Management Director in advance of the demonstration.

Appendix 4 – Exercise Scenario

This appendix contains a summary of the simulated sequence of events – Exercise Scenario – that was used as the basis for invoking emergency response actions by OROs during the Cooper Nuclear Station full-scale exercise conducted on July 19, 2006.

The times listed below are those contained in the scenario. Actual times of key events are documented in Table 1 of the Exercise Timeline.

The exercise scenario was initially submitted by Cooper Nuclear Station on June 6, 2006, and, following some modifications, was approved by DHS\CNPPD on June 19, 2006.

The scenario was based on a seismic event which causes damage that result in a direct release to the environment.

NARRATIVE SUMMARY

INITIAL PLANT CONDITIONS

CNS is mode 1 at end of cycle (EOC) day 131 of continuous operation.

"A" Loop of RHR is inoperable for maintenance (currently tagged out and drained). Day 3 of 7 =day LCO. Expected back in 3 days.

"B" SGT is inoperable for replacement of charcoal bed and fan belt. Day 1 of 7 day LCO. Expected back in 3 days.

Seismic Monitor Panel (SMA-3) is INOP due to power supply failure.

On-line risk is yellow. Division 2 is protected.

Summer weather conditions with wind from the East at »5 mph. Weather forecast calls for winds 5-10 mph from the East-South East. Front expected to pass through in the morning and possibility of rain.

Siren 1112(CNS #) F-10(ANS #) Nemaha, NE, is out of service for scheduled maintenance.

ALERT (0745)

Alert will occur based on seismic event (sensed ground motion) with monitoring equipment OOS. The seismic event (magnitude 5 located 40 miles west of Brownville) will result in the following events:

- At CNS, "B" SAC will trip due to oil leak and "A" RPS MG set will trip due to generator voltage regulator perturbation. The crew will restore "A" RPS on

alternate supply. The crew will also commence plant inspections for possible damage to SSC's.

- Missouri State Officials will be informed that the bridge over I-29 in Rockport Missouri has collapsed (I-29 and Highway 136) making both roads impassable.
- Nebraska State Officials will be informed that the bridge over the Nemaha River North of Auburn, Nebraska (Highway 75 North) has collapsed making it impassable.
- Both States will be informed that there was other structural damage to homes in the area. No damage to local hospitals has been noted.

The ERO will be activated and is expected to be staffed by approximately 0810. The States will arrive at the EOF/JIC by approximately 0830. Rumor calls will commence at approximately 0850.

SAE (0900)

Power is lost to Startup Transformer resulting in trip of the "B" RR pump and small steam leak in the DW. The crew will scram the reactor. When DW pressure reaches the ECCS initiation setpoint, the "B" RHR pump will develop a fault in the breaker causing an explosion of the "F" bus (critical bus). The crew is expected to declare a SAE on EAL 8.3.2 for the explosion affected Safe Shutdown Equipment with the plant in Modes 1, 2 or 3.

The crew will take action to mitigate the consequences of the loss of critical power and DW steam leak using Emergency Procedures.

Siren 2113(CNS #) F-4(ANS #) Phelps City, MO, will fail during the scenario when sirens are activated.

GE (1000)

Just prior to 1000, the steam leak will cause the crew to spray the DW using "B" loop RHR. The Torus to DW vacuum breakers will fail to open resulting in rapid pressure drop in the DW. This results in failure of the Torus downcomer and bypass of the pressure-suppression capability of the DW. The remaining RHR pump trips as a result of the suction valve limit switch failing. With the loss of spray capability, DW pressure will rapidly increase. The crew will emergency depressurize the RPV and DW pressure will require venting to maintain containment integrity. The loss of the RHR pump also results in loss of adequate core cooling and core damage will result.

RELEASE COMMENCES DUE TO VENTING (1030)

Venting is expected to take approximately 20-30 minutes to commence and will require venting for approximately one hour. Release rates will reach approximately $4e7 \mu\text{Ci}/\text{Sec}$ and based on the Met conditions will require CNS to recommend evacuation out to 10 miles. The States of Missouri and Nebraska use the same model assumptions and are expected to concur with the recommendation.

WIND SHIFT CHANGE TO PAR (1100)

The wind will shift from 110° to 245° causing the release to affect Missouri. The release rate will remain at a level requiring CNS to recommend evacuation out to 10 miles in the affected zones.

RELEASE ENDS (1130)

The release ends when the crew lowers DW pressure below the design pressure limit of 62 psig. The plume continues to drift towards Rockport, Missouri.

EXERCISE TERMINATED (1230)

The exercise will be terminated with concurrence of FEMA/NRC Evaluators.