



FEMA

DEC 08 2011

Mr. Elmo E. Collins
Regional Administrator
U.S. NRC Region IV
612 East Lamar Boulevard
Arlington, Texas 76011-4125

Dear Mr. Collins:

Enclosed is the final report for the August 30-31, 2011 medical services drill of offsite radiological emergency response plans in support of the Fort Calhoun Nuclear Station. The participants in this drill were the Nebraska Emergency Management Agency, Washington County and the town of Fort Calhoun in Nebraska; and the Iowa Homeland Security & Emergency Management Division, Pottawattamie County and the City of Council Bluffs in Iowa. The report was prepared by Federal Emergency Management Agency Region VII staff. Copies of the final report will be provided to the states of Nebraska and Iowa.

There were no deficiencies or areas requiring corrective action (ARCA's) identified. There were no ARCAs or deficiencies from previous exercises to be addressed in this drill. There was one planning issue identified, and it has been closed.

The drill results provide reasonable assurance that the State of Nebraska, State of Iowa, and local jurisdictions can take appropriate measures to protect the health and safety of the public surrounding the Fort Calhoun Nuclear Station.

Therefore, the Title 44 CFR, Part 350 approval of the offsite radiological emergency response plans and preparedness for the states of Nebraska and Iowa, in support of the Fort Calhoun Nuclear Station, granted on July 22, 1981, will remain in effect.

Mr. Elmo E. Collins

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If you have any questions or concerns regarding the report, please contact Mr. Ronald L. McCabe, Regional Assistance Committee Chair, at 816-283-7007 or by email ron.mccabe@fema.dhs.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Beth Freeman".

Beth Freeman
Regional Administrator

Enclosure

cc: Vanessa Quinn, HQ REP w/o enclosure (electronic)
Document Control Desk, NRC HQ
NRC NSIR (electronic)
Bill Maier, NRC IV w/o enclosure (electronic)
Lisa Hamilton, HQ REP w/o enclosure (electronic)



FEMA

DEC 08 2011

Al Berndt, Assistant Director
Nebraska Emergency Management Agency
1300 Military Road
Lincoln, Nebraska 68508-1090

Dear Mr. Berndt:

On August 30-31, 2011, FEMA evaluated two medical services drills in Nebraska, in support of the Fort Calhoun Nuclear Station. During these drills, all criteria were adequately demonstrated with no deficiencies or areas requiring corrective action (ARCA's) identified. There were no ARCA's or deficiencies from previous exercises to be addressed during this drill. One planning issue was identified for the University of Nebraska Medical Center, and that issue has been closed.

Our official report with details of the evaluation is enclosed. Additionally, an electronic copy of this report has been forwarded to Mr. Jon Schwarz of your staff, which may be distributed to other Offsite Response Organizations at your discretion.

If you have any questions or concerns regarding this report, please contact Mr. Ronald L. McCabe, Regional Assistance Committee Chair, at 816-283-7007 or by email ron.mccabe@fema.dhs.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Beth Freeman".

Beth Freeman
Regional Administrator

Enclosure

cc: Vanessa Quinn, HQ REP w/o enclosure (electronic)
Lisa Hamilton, HQ REP, w/o enclosure (electronic)
Bill Maier, NRC IV, w/o enclosure (electronic)



FEMA

DEC 08 2011

Mr. Mark Schouten, Administrator
Iowa Homeland Security and Emergency Management Division
7105 N.W. 70th Avenue
Camp Dodge Building W-4
Johnston, Iowa 50131

Dear Mr. Schouten:

On August 30, 2011, FEMA evaluated a medical services drill in Iowa, in support of the Fort Calhoun Nuclear Station. During this drill, all criteria were adequately demonstrated with no deficiencies or areas requiring corrective action (ARCA's) identified. There were no ARCA's or deficiencies from previous exercises to be addressed during this drill.

Our official report with details of the evaluations is enclosed. Additionally, an electronic copy of this report has been forwarded to Ms. Kathy Stodola of your staff, which may be distributed to other Offsite Response Organizations at your discretion.

If you have any questions or concerns regarding this report, please contact Mr. Ronald L. McCabe, Regional Assistance Committee Chair, at 816-283-7007 or by email ron.mccabe@fema.dhs.gov.

Sincerely,

A handwritten signature in black ink that reads "Beth Freeman".

Beth Freeman
Regional Administrator

Enclosure

cc: Vanessa Quinn, HQ REP w/o enclosure (electronic)
Lisa Hamilton, HQ REP, w/o enclosure (electronic)
Bill Maier, NRC IV, w/o enclosure (electronic)



Fort Calhoun Nuclear Station

After Action Report/ Improvement Plan

Drill Date - August 31, 2011

Radiological Emergency Preparedness (REP) Program



FEMA

Published December 08, 2011

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Fort Calhoun Nuclear Station After Action Report/Improvement Plan

Published December 08, 2011

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EXECUTIVE SUMMARY

On August 30-31, 2011, the Federal Emergency Management Agency (FEMA), Region VII, conducted out-of-sequence medical drills in the plume emergency planning zone (EPZ) around the Fort Calhoun Nuclear Station. The purpose of these drills was to assess the level of State and local preparedness in responding to a radiological emergency. These drills were held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans and procedures.

The previous medical drills at these sites were conducted on July 21, 2009, for Fort Calhoun Fire and Rescue and Council Bluffs Ambulance; and September 15, 2010, for the University of Nebraska Medical Center. The qualifying emergency preparedness exercise for this Power Plant was conducted on July 22, 1981.

FEMA wishes to acknowledge the efforts of all who participated in and supported these drills. In the State of Nebraska, the Risk County of Washington and the University of Nebraska Medical Center participated. In the State of Iowa, the Risk County of Pottawattamie participated. The efforts of the utility, the State of Iowa and the State of Nebraska are also commended for their work on training and drill preparation.

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. A special thank you is once again extended to those invaluable volunteers. Cooperation and teamwork of all the participants were evident during these drills.

The State and local organizations demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. No Areas Requiring Corrective Action (ARCAs) or Deficiencies were identified as a result of these drills. There were no previous ARCAs, nor any Deficiencies to be corrected during these drills.

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name

Fort Calhoun Nuclear Station

Type of Exercise

Drill

Exercise Date

August 31, 2011

Program

Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type

Radiological Emergency

1.2 Exercise Planning Team Leadership

Laurel Ryan

Site Specialist

Federal Emergency Management Agency/ US Dept of Homeland Security

Technological Hazards Program Specialist

9221 Ward Parkway

Suite 300

Kansas City, Missouri, 64114

816-283-7913

laurel.ryan@dhs.gov

Bryan Cook

State of Nebraska REP Planner

Nebraska Emergency Management Agency

Radiological Emergency Preparedness Planner

1300 Military Road
Lincoln, Nebraska, 68508
402-730-6189
bryan.cook@nebraska.gov

Kathy Stodola
State of Iowa REP Planner
Iowa Homeland Security and Emergency Management
Radiological Emergency Preparedness Planner
7105 NW 70th Avenue
Camp Dodge
Johnston, Iowa, 50131
515-323-4320
kathy.stodola@iowa.gov

Mark Reller
Utility Representative
Omaha Public Power District
Senior Emergency Planning Specialist
Fort Calhoun Nuclear Station, FC-2-1
P. O. Box 550
Fort Calhoun , Nebraska, 68023
402-533-7314
mreller@oppd.com

1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the Fort Calhoun Nuclear Station drill:

State Jurisdictions

Nebraska Emergency Management Agency

Iowa Homeland Security and Emergency Management Division

Risk Jurisdictions

Council Bluffs Ambulance

Fort Calhoun Fire and Rescue

Support Jurisdictions

University of Nebraska Medical Center

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

The purpose of the drills conducted in association with the Fort Calhoun Nuclear Station (FCNS) is to test and provide the opportunity to evaluate emergency plans, associated implementing procedures, facilities, and equipment of the emergency responders and supporting entities in the communities in the immediate vicinity of FCNS, specifically within the 10- mile emergency planning zone (EPZ).

Further, these drills test the FCNS emergency response community's ability to assess and respond to emergency conditions and coordinate efforts with other agencies for protection of the health and safety of the public.

The conduct and evaluation of these drills provide additional training for emergency response organization personnel as a means to enhance FCNS emergency response capability.

The purpose of these particular drills was to activate and evaluate portions of the Washington and Pottawattamie County Emergency Plans, and associated implementing procedures, in accordance with 44 CFR 350.

The scenario for this drill was developed by personnel at the Fort Calhoun Nuclear Station, then was reviewed and approved for use by FEMA Region 7. The scenario was utilized by the exercise controllers and evaluators as the control mechanism for the conduct of the drill. The scenario for this drill was designed to depict a sequence of events during a radiological accident simulation at the Fort Calhoun Nuclear Station, located near Fort Calhoun, in Washington County, Nebraska, that resulted in the need for the assessment and care of injured, and potentially contaminated victims.

The scenario design provided the basis to observe and evaluate the capabilities and effectiveness of the Emergency Response Plans for Council Bluffs Ambulance, Fort Calhoun Fire and Rescue, and the University of Nebraska Medical Center.

2.2 Exercise Objectives, Capabilities and Activities

The Fort Calhoun Nuclear Station (FCNS) Emergency Preparedness Exercise & Drill Program objectives are based on the Federal requirements delineated in 44 CFR 350, as well as on the priorities and procedures detailed in the Radiological Emergency Preparedness plans for the State of Nebraska; the State of Iowa; Washington County in Nebraska; and Pottawattamie County in Iowa. Additional guidance provided in NUREG-0654, NUREG-0696, and NUREG-0737, was utilized in developing these objectives. Fort Calhoun Nuclear Station (FCNS) emergency plan describes FCNS' capability to respond effectively to a radiological emergency at the site, and provides a detailed description of FCNS' interaction with Federal, State, and local government agencies and private organizations. The emergency plan provides for continuous emergency preparedness including the conduct of an annual exercise and preparatory drills.

The objective of this drill was to test the implementation of the plans and procedures of the participating agencies, and the capability of these agencies to conduct operations in accordance with these plans. This objective is further defined by the criteria evaluated for each participant. These criteria are listed in Table 3.1.

The capabilities tested in this drill were related to medical care rendered during a radiological emergency, during which actual or possible radiological contamination requires the use of measures above those in non-radiological medical care. Each ambulance service and the hospital were evaluated based upon the plans and procedures which they have established for use in a radiological emergency.

These drills were performed out-of-sequence, which is not concurrent to a full scale exercise, nor in synchronized time with other sites. To compensate for the artificiality of an out-of-sequence drill, the activities for each evaluation included an allowance for simulation. This allowed for the evaluators to focus on the activities specified in the drill criteria, which are usually those least familiar to the exercise players. For example, each ambulance service was permitted to simulate the location of the accident site, and demonstrated all treatment at their ambulance stations, up to loading the patient into the ambulance, and short of actual transport to another site. These teams drive their vehicles to real emergency accident sites on a daily basis; their capabilities in this area were not in the focus of the evaluation.

All other aspects of treatment were performed, unless the controller and evaluator agreed to

allow simulation. An example of this was the agreement to allow for the simulation of the removal of the victim's clothing, even though this is the action that would have taken place in a real world scenario. The evaluator confirmed this through interview, thus sparing the volunteer victim of an unnecessary and potentially embarrassing discomfort. None of the simulations compromised the ability to demonstrate and evaluate the objective of the drill.

2.3 Scenario Summary

Due to a declaration of a General Emergency at the Fort Calhoun Nuclear Station, evacuations have been implemented in both Washington and Pottawattamie Counties. During the evacuation in Pottawattamie County, an emergency worker is struck by a vehicle driven by another emergency worker assisting in the evacuation. The worker has no life threatening injuries, but requires medical assistance. The sub-area in which the worker was stationed is in the plume release pathway and radiological contamination is suspected. Council Bluffs Ambulance is the responding agency, providing initial care and transporting the victim to the University of Nebraska Medical Center.

Meanwhile, a member of the Fort Calhoun Fire Department who was fighting a fire in the switchyard at the Fort Calhoun Station twisted his left knee and fell, possibly breaking his left wrist while bracing his fall. The Fort Calhoun switchyard is in the plume release pathway and radiological contamination is suspected. Fort Calhoun Fire and Rescue is the responding agency, providing initial care and transporting the victim to the University of Nebraska Medical Center.

SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Drill Evaluation and Results

Following are the results and findings of the evaluation for all off-site jurisdictions and functional entities which participated in the August 30-31, 2011 drill events in support of the Fort Calhoun Nuclear Station.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria contained in exercise evaluation areas delineated in Emergency Preparedness: Exercise Evaluation Methodology as printed in the Federal Register September 12, 2001 and April 25, 2002.

3.2 Summary Results of Drill Evaluation

Drill criteria are listed by number and the demonstration status of those criteria is indicated by the use of the following letters:

M - Met (No Deficiency or ARCAs assessed and no unresolved ARCAs from prior drills)

D - Deficiency assessed

A - Area Requiring Corrective Action (ARCA) assessed or unresolved ARCA(s) from prior drills)

N - Not Demonstrated (Reason explained in subsection B)

Criteria with no corresponding letter were not evaluated in this drill.

Table 3.1 - Summary of Drill Evaluation

<p style="text-align: center;">DATE: 2011-08-31 SITE: Fort Calhoun Nuclear Station, NE M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated</p>			Council Bluffs Amb.	Univ. of NE Med. Ctr.	FC Fire/ Rescue
Emergency Operations Management					
Mobilization	1a1				
Facilities	1b1				
Direction and Control	1c1				
Communications Equipment	1d1				
Equip & Supplies to support operations	1e1	M	M	M	
Protective Action Decision Making					
Emergency Worker Exposure Control	2a1				
Radiological Assessment and PARs	2b1				
Decisions for the Plume Phase -PADs	2b2				
PADs for protection of special populations	2c1				
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1				
Rad Assessment and Decision making concerning Relocation, Reentry, and Return	2e1				
Protective Action Implementation					
Implementation of emergency worker exposure control	3a1	M	M	M	
Implementation of KI decision	3b1	M		M	
Implementation of protective actions for special populations - EOCs	3c1				
Implementation of protective actions for Schools	3c2				
Implementation of traffic and access control	3d1				
Impediments to evacuation are identified and resolved	3d2				
Implementation of ingestion pathway decisions - availability/use of info	3e1				
Materials for Ingestion Pathway PADs are available	3e2				
Implementation of relocation, re-entry, and return decisions.	3f1				
Field Measurement and Analysis					
Adequate Equipment for Plume Phase Field Measurements	4a1				
Field Teams obtain sufficient information	4a2				
Field Teams Manage Sample Collection Appropriately	4a3				
Post plume phase field measurements and sampling	4b1				
Laboratory operations	4c1				
Emergency Notification and Public Info					
Activation of the prompt alert and notification system	5a1				
Activation of the prompt alert and notification system - Fast Breaker	5a2				
Activation of the prompt alert and notification system - Exception areas	5a3				
Emergency information and instructions for the public and the media	5b1				
Support Operations/Facilities					
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1				
Mon / decon of emergency worker equipment	6b1				
Temporary care of evacuees	6c1				
Transportation and treatment of contaminated injured individuals	6d1	M	M	M	

3.3 Criteria Evaluation Summaries

3.3.1 Support Jurisdictions

3.3.1.1 Council Bluffs Ambulance

The Council Bluffs Ambulance crew demonstrated strong knowledge of dosimetry and radiation exposure control procedures.

In summary, the status of DHS/FEMA criteria for this location is as follows:

- a. MET: 1.e.1, 3.a.1, 3.b.1, 6.d.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.2 Nebraska Jurisdictions

3.3.2.1 University of Nebraska Medical Center

University of Nebraska Medical Center exhibited a strong commitment to patient care through the professionalism of its knowledgeable medical and technical staff, along with its well designed and supplied decontamination facility. The technical evaluator identified some challenges that the team had in calibrating the portal monitor, and described techniques that will resolve those problems.

In summary, the status of DHS/FEMA criteria for this location is as follows:

- a. MET: 1.e.1, 3.a.1, 6.d.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: 6.d.1.

ISSUE NO.: 25-11-6d1-P-01

CRITERION: 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)

CONDITION: The staff assigned to the portal monitoring initially had difficulty getting the portal to successfully pass the operability check with the check source.

POSSIBLE CAUSE: There were approximately 5 people standing in close proximity to the portal monitor during this process, and the check source which was used was also kept in close proximity (within 2 feet). A distance of approximately six feet should be kept between the portal and other people and the check source during the operability check process. The operability check included walking the check source through the portal at head, waist and feet level, along with placing the check source on the detectors on each side of the portal.

REFERENCE: NUREG-0654, K.1.c., K.5.a., K.5.b.; UNMC Procedure for Radiation Monitoring Portal Set Up and Operability Check

EFFECT: By keeping the check source in close proximity to the portal in between source checks the background the portal was detecting would be increased, which could cause it to fail to detect the check source.

CORRECTIVE ACTION DEMONSTRATED: The State of Nebraska and the University of Nebraska Medical Center revised their procedures to correct this issue, and retraining has been conducted. The revision includes:

1) Step 3 of the procedure has been revised to indicate that when performing the background count of the system, ensure that the check source be kept at least six (6) feet away from the portal monitor detectors.

2) The following notes have been added to Step 4 of the procedure pertaining to the operational check of the system:

NOTE 1: Ensure that other individuals maintain a distance of at least 6 feet away from the detectors for this testing.

NOTE 2: After each check, ensure that the check source is kept away at least 6 feet

from the detectors for at least 10 seconds to allow the portal monitor to reset to background radiation levels.

The individuals designated for performing the portal monitor setup have been trained on these revisions to the procedure.

Based on the information above, this planning issue is closed.

- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.3 Risk Jurisdictions

3.3.3.1 Fort Calhoun Fire and Rescue

Fort Calhoun Fire and Rescue personnel demonstrated excellent knowledge and practice of the procedures to use to provide patient care and transport while minimizing the risk of spreading contamination from the plume exposure area. Their enthusiasm and commitment as volunteers is commendable.

In summary, the status of DHS/FEMA criteria for this location is as follows:

- a. MET: 1.e.1, 3.a.1, 3.b.1, 6.d.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

SECTION 4: CONCLUSION

Based on the results of these drills, the offsite radiological emergency response plans and preparedness for the State of Nebraska and the State of Iowa and the affected local jurisdictions are deemed adequate to provide reasonable assurance that appropriate measures can be taken to protect the health and safety of the public in the event of a radiological emergency. Therefore, 44 CFR Part 350 approval of the offsite radiological emergency response plans and preparedness for the State of Nebraska and the State of Iowa, site-specific to the Fort Calhoun Nuclear Station, will remain in effect.

APPENDIX A: DRILL EVALUATORS AND TEAM LEADERS

DATE: 2011-08-31, SITE: Fort Calhoun Nuclear Station, NE

LOCATION	EVALUATOR	AGENCY
University of Nebraska Medical Center	*Laurel Ryan Kim Steves	FEMA RVII Kansas Dept of Health
Fort Calhoun Fire and Rescue	*Laurel Ryan Kim Steves	FEMA RVII Kansas Dept of Health
Council Bluffs Ambulance	*Laurel Ryan Kim Steves	FEMA RVII Kansas Dept of Health
* Team Leader		

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