



FEMA

JAN 13 2015

Ms. Cynthia Pederson
Regional Administrator
U.S. NRC Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4351

Dear Ms. Pederson:

Enclosed is a copy of the final report for the October 23, 2014, Medical Services (MS-1) drill of the offsite radiological emergency response plans site-specific to the Quad Cities Nuclear Power Station (QCNPS). This report was prepared by the Federal Emergency Management Agency (FEMA) Region VII staff. The final report will be provided to the State of Iowa.

No Deficiencies, Areas Requiring Corrective Action (ARCAs) or Planning Issues were identified as a result of the drill.

Based on the results of the exercise, the offsite preparedness and radiological response plans for the State of Iowa (and the affected local jurisdictions site-specific to the QCNPS) can be implemented and are adequate to provide reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public in the event of a radiological emergency at the site. Therefore, the Title 44 CFR, Part 350 approval of the offsite radiological emergency response plans and preparedness for the State of Iowa, site-specific to the QCNPS, granted on March 26, 1986, will remain in effect.

Should you have any questions or concerns regarding the report, please contact Mr. Charles (Chuck) Gregg at (816) 283-7926 or Chuck.Gregg@fema.dhs.gov.

Sincerely,

Beth Freeman
Regional Administrator

Enclosure

cc: Vanessa Quinn, HQ REP w/o enclosure (electronic)
Document Control Desk, NRC HQ
Robert Kahler, NRC HQ NSIR Office, w/o enclosure (electronic)
Alan Barker, NRC Region III, w/o enclosure (electronic)
Lisa Hamilton, HQ REP, w/o enclosure (electronic)

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Quad Cities Nuclear Power Station After Action Report/ Improvement Plan

Drill Date - October 23, 2014

Radiological Emergency Preparedness (REP) Program



FEMA

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Quad Cities Nuclear Power Station After Action Report/Improvement Plan

Published December 23, 2014

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EXECUTIVE SUMMARY

On October 23, 2014 the Federal Emergency Management Agency (FEMA), Region VII, conducted a Medical Services (MS) drill in the plume Emergency-Planning Zone (EPZ) around the Quad Cities Nuclear Power Station (QCNPS). The purpose of the drill was to assess the level of State and local preparedness in responding to a radiological emergency. This drill was held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans and procedures. The previous MS-1 drill for this site was conducted on October 2, 2013 in DeWitt, IA.

FEMA wishes to acknowledge the efforts of the many individuals who participated in this drill. The State of Iowa, Genesis Medical Center and the Genesis Medical Center Ambulance Services participated in the drill. Efforts of Exelon Nuclear should also be 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 wonderful volunteers. Cooperation and teamwork of all the participants were evident during this drill.

The State and local organizations demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. No deficiencies were identified. There were no Areas Requiring Corrective Action (ARCAs) identified as a result of this drill; and no previous ARCAs to be corrected during this drill.

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name

Quad Cities Nuclear Power Station

Type of Exercise

Drill

Exercise Date

October 23, 2014

Program

Department of Homeland Security/FEMA Radiological Emergency Preparedness
Program

Scenario Type

Radiological Emergency

1.2 Exercise Planning Team Leadership

Daniel Kanakares

Site Specialist

FEMA Region VII

Technological Hazards Specialist

9221 Ward Parkway

Kansas City, Missouri, 64114

816-283-7016

Daniel.Kanakares@dhs.gov

Kathy Stodola

State of Iowa Representative

Iowa Homeland Security & Emergency Management

REPP Planning Specialist

Joint Forces Headquarters

6100 NW 78th Ave
Johnston, Iowa, 50131
515-323-4320
kathy.stodola@iowa.gov

Tom Russell
Exelon Representative
Exelon Nuclear MidWest Region
Senior Emergency Preparedness Specialist
4300 Winfield
Warrenville, Illinois, 60555
630-657-4654
Thomas.Russelljr@exeloncorp.com

1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the Quad Cities Nuclear Power Station drill:

State Jurisdictions

Iowa Homeland Security and Emergency Management

Risk Jurisdictions

Scott County Emergency Management

Private Organizations

Genesis Medical Center Davenport

Medic Emergency Medical Services

Exelon Nuclear

Federal Jurisdictions

Federal Emergency Management Agency

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

This simulated medical emergency was conducted in order to exercise the pre-hospital and hospital Emergency Medical Services (EMS) response involving a radioactive plume from the Exelon Nuclear Quad Cities Nuclear Power Station (QCNPS), that was responsible for contaminating an individual who had become injured.

The overall objective was to assess the ability of the Genesis Medical Center Ambulance Services to respond, render pre-hospital emergency care, and transport the contaminated injured patient to Genesis Medical Center Davenport. Subsequently, Genesis Medical Center Davenport received the contaminated patient into their established Radiological Emergency Area (REA), rendered medical care and decontaminated the patient.

The purpose of this drill was to determine the ability of appropriate offsite agencies to respond to an emergency covered by state and local radiological emergency response plans. The scope of the MS-1 drill was limited to demonstrating the ability of local support services to respond to a medical emergency involving a simulated contaminated injured individual.

Pursuant to the Radiological Emergency Preparedness Program Manual (RPM), dated June 2013, a medical emergency drill involving a simulated contaminated, injured, or exposed individual, which contains provisions for participation by the local support services, shall be conducted annually. To fulfill this requirement for calendar year 2014, Genesis Medical Center Davenport and the MEDIC EMS Ambulance Services participated during this drill.

2.2 Exercise Objectives, Capabilities and Activities

Quad Cities Nuclear Power Station (QCNPS) emergency preparedness exercises and drills are conducted to test and provide the opportunity to evaluate emergency plans, associated implementing procedures, facilities, and equipment. This drill tested the QCNPS emergency response organization'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 Quad Cities Nuclear Power Station (QCNPS), Emergency Preparedness Exercise & Drill Program objectives are based on the Federal requirements delineated in 44 CFR 350, and State of

Iowa and Scott County Radiological Emergency Response plans.

Additional guidance provided in FEMA's Radiological Emergency Preparedness Program Manual (RPM), dated June 2013, was utilized in developing these objectives.

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 required the use of measures above those in non-radiological medical care. Ambulance service and the hospital were evaluated based upon the plans and procedure which they have established for use in a radiological emergency.

2.3 Scenario Summary

The following is an excerpt from the actual scenario used for this drill.

"At 1:00 am Quad Cities Nuclear Station declared a General Emergency (GE). A nuclear accident occurred, resulting in a radioactive plume being released from the plant. General area dose rates in the plume have been determined to be approximately 21mR/hr. Scott County, Iowa has set up a registration center in North Scott High School to receive citizens from the surrounding communities that are in the pathway of the plume. This morning, Scott County officials notified all Police/Fire/EMS agencies of the situation. Scott County officials have requested all emergency agencies to be prepared to wear personal dosimetry. The plume is expected to be out of the area by 07:00 a.m.

An individual subject to evacuation had arrived via his private vehicle at the Registration Center at North Scott High School. While riding his motorcycle to the registration center he saw a deer run out in front of him and lost control of his motorcycle. The motorcycle landed on him trapping his left leg under the scalding hot tailpipe. The victim struggled out from under his motorcycle but not before receiving 3rd, 2nd and 1st degree burns on the lower left leg. When he arrived at the registration center he got off his motorcycle and staggered into the center. The

injured person is in extreme pain in the right leg (On a scale of 10: 10/10). The patient has a history of high cholesterol and hypertension. The patient is currently on Zocor and Hydrochlorothiazide and is allergic to Motrin."

SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Drill Evaluation and Results

Contained in this section are the results and findings of the evaluation of participants in the October 23, 2014, Medical Service drill to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Quad Cities Nuclear Power Station. Each functional entity was evaluated on the basis of its demonstration of criteria contained in exercise evaluation areas delineated in FEMA's Radiological Emergency Preparedness Program Manual (RPM), dated June 2013.

3.2 Summary Results of Drill Evaluation

The matrix presented in Table 3.1, on the following page, presents the status of all exercise criteria, which were scheduled for demonstration during this drill, at all participating jurisdictions and functional entities. Exercise 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 exercises)

D - Deficiency assessed

A - Area Requiring Corrective Action (ARCA) assessed, or unresolved ARCA from prior exercises

N - Not Demonstrated

P - Planning Issue

Table 3.1 - Summary of Drill Evaluation

DATE: 2014-10-23 SITE: Quad Cities Nuclear Power Station, IA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		Genesis Med. Ctr.	Medic Emg. Med.
Emergency Operations Management			
Mobilization	1a1		
Facilities	1b1		
Direction & Control	1c1		
Communications Equipment	1d1		
Equipment and Supplies	1e1	M	M
Protective Action Decision Making			
EW Exp. Control Decisions	2a1		
PARs	2b1		
PADs	2b2		
PADs for Disabled/Functional Needs	2c1		
Ingestion PADs	2d1		
RRR Decisions	2e1		
Protective Action Implementation			
EW Exp. Control Implementation	3a1	M	M
KI Public/Institutionalized	3b1		
PAD Imp. Disabled/Functional Needs	3c1		
PAD Imp. Schools	3c2		
TACP Establishment	3d1		
Impediments to Evacuation	3d2		
Implementation of Ingestion PADs	3e1		
Ingestion Strategies and Information	3e2		
Imp. of RRR Decisions	3f1		
Field Measurement and Analysis			
RESERVED	4a1		
Field Team Management	4a2		
Field Team Operations	4a3		
Field Team Sampling	4b1		
Laboratory Operations	4c1		
Emergency Notification and Public Info			
Initial Alert & Notification	5a1		
RESERVED	5a2		
Backup Alert & Notification	5a3		
Exception Area Alerting	5a4		
Subsequent Public Information	5b1		
Support Operations/Facilities			
Reception Center Operations	6a1		
EW Monitoring & Decon	6b1		
Congregate Care	6c1		
Contaminated Injured Transport & Care	6d1	M	M

3.3 Criteria Evaluation Summaries

3.3.1 Support Jurisdictions

3.3.1.1 Genesis Medical Center - Davenport

Genesis Medical Center - Davenport staff demonstrated techniques in cross contamination awareness and patient care. Three criteria were evaluated during the drill and all were demonstrated successfully. All staff involved were familiar with equipment and utilized established step-by-step guidelines and job aides.

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

3.3.1.2 Medic Emergency Medical Services

The Medic Emergency Medical Services Davenport ambulance crew worked well together and displayed professionalism in their patient care. Three criteria were evaluated during the drill and all were demonstrated successfully. Ambulance personnel were well versed in dosimetry use, turn back values and Potassium Iodide (KI).

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

SECTION 4: CONCLUSION

Based on the results of this drill, the offsite radiological emergency response plans and preparedness for the State of Iowa and the affected local jurisdictions are deemed adequate to provide Reasonable Assurance (RA) 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 Iowa, site-specific to the Quad Cities Nuclear Power Station, will remain in effect.

APPENDIX A: DRILL EVALUATORS AND TEAM LEADERS

DATE: 2014-10-23, SITE: Quad Cities Nuclear Power Station, IA

LOCATION	EVALUATOR	AGENCY
Genesis Medical Center - Davenport	*Edward Golinski	FEMA RV
Medic Emergency Medical Services	*Daniel Kanakares	FEMA RVII
* Team Leader		

APPENDIX B: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
ARCA	Area Requiring Corrective Action
EMS	Emergency Medical Services
EPZ	Emergency Planning Zone
EW	Emergency Workers
FEMA	Federal Emergency Management Agency
KI	Potassium Iodide
QCNPS	Quad Cities Nuclear Power Station
REA	Radiological Emergency Area
REP	Radiological Emergency Preparedness

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