



# Wolf Creek Generating Station After Action Report/ Improvement Plan

Drill Date – August 9, 2016

Radiological Emergency Preparedness (REP) Program



**FEMA**

*Published August 24, 2016*

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## **EXECUTIVE SUMMARY**

On August 9, 2016, the Federal Emergency Management Agency (FEMA) evaluated a medical services drill in the plume exposure pathway emergency planning zone (EPZ) around the Wolf Creek Generating Station (WCGS). The purpose of the medical services drill was to assess the ability of offsite agencies in responding to a radiological emergency involving a simulated medical injury to a person with radiological contamination. These events were held in accordance with FEMA policies and guidance concerning the exercise of State and local radiological emergency response plans and procedures.

The previous medical drill at this site was conducted on October 29, 2015. The qualifying emergency preparedness exercise was conducted on November 7, 1984.

FEMA wishes to acknowledge the efforts of the many individuals who participated in this drill including the State of Kansas, and the risk jurisdiction of Coffey County. The efforts of the utility should also be commended for their work on the scenario development and medical drill preparation.

Protecting the public health and safety is the full-time job of some of the medical drill 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 was evident during this medical drill.

The State and local organizations demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were no Level 1 (Previously known as a Deficiency) or Level 2 (Previously known as an Area Requiring Corrective Action) findings as a result of this medical drill. There were no previous Level 2 findings to be corrected from the previous medical drill.

## SECTION 1: EXERCISE OVERVIEW

### 1.1 Exercise Details

**Exercise Name**

Wolf Creek Generating Station

**Type of Exercise**

Drill

**Exercise Date**

August 9, 2016

**Program**

Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

**Scenario Type**

Radiological Emergency

### 1.2 Exercise Planning Team Leadership

Jeff Clark

Technological Hazards Program Specialist

FEMA

9221 Ward Parkway

Kansas City, MO, 64114

(816) 283-7946

jeffrey.clark3@fema.dhs.gov

Jacob Henry

Nuclear Facilities Exercise Specialist/Planner

Kansas Division of Emergency Management

Kansas Adjutant General's Department

2800 SW Topeka Blvd

Topeka, KS, 66611

(785) 274-1620

jacob.r.henry3.nfg@mail.mil

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Jessie Snook  
Exercise Controller  
Kansas Department of Health & Environment  
Supervisor Environmental Monitoring & Emergency Preparedness Program  
1000 SW Jackson, Suite 130  
Topeka, KS, 66612  
785-296-6342  
jsnook@kdheks.gov

Jeanne Dagenette  
Utility Representative  
Wolf Creek Nuclear Operating Corporation  
Senior Emergency Planning Technologist  
P.O. Box 411  
Burlington, KS, 66839  
(620) 364-8831  
jedagen@wcnoc.com

### **1.3 Participating Organizations**

Agencies and organizations of the following jurisdictions participated in the Wolf Creek Generating Station medical drill:

**Risk Jurisdictions**

Coffey County Emergency Medical Services  
Coffey County Hospital  
Coffey County Radiological Officer

**Private Organizations**

Wolf Creek Generating Station

## **SECTION 2: EXERCISE DESIGN SUMMARY**

### **2.1 Exercise Purpose and Design**

Wolf Creek Generating Station (WCGS) Emergency Plan describes WCGS's capability to respond effectively to a radiological emergency at the site, and provides a detailed description of WCGS's interaction with Federal, State, and local government agencies as well as private organizations. The Emergency Plan provides for continuous emergency preparedness including the conduct of annual exercises and preparatory drills

The purpose of the August 9, 2016 medical drill was to activate and evaluate portions of the Coffey County emergency plans and associated implementing procedures, in accordance with 44 CFR 350. Further, this drill tested the WCGS 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 this drill provided additional training for emergency response organization personnel and a means to further enhance WCGS emergency response capability.

The scenario was utilized by the exercise controllers/evaluators as the control mechanism for the conduct of the medical drill. WCGS Emergency Planning personnel developed the scenario with input from Kansas Division of Emergency Management staff and was reviewed and approved by FEMA Region VII.

### **2.2 Exercise Objectives, Capabilities and Activities**

Wolf Creek Generating Station (WCGS) exercises and drills are conducted to test and provide the opportunity to evaluate emergency plans, associated implementing procedures, facilities, and equipment. This medical drill tested the WCGS offsite response organizations' ability to assess and respond to emergency conditions as well as coordinate efforts with other agencies for protection of the health and safety of the public.

The WCGS 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 emergency preparedness plans for the State of Kansas and Coffey County. Additional guidance provided in NUREG-0654, NUREG-0696, and NUREG-0737, was utilized in developing these objectives.

The objective of this medical services drill was to test the implementation of the plans and procedures of participating agencies, along with the capability of these agencies to conduct operations in accordance with these plans. This objective is further defined by the criteria evaluated for each participating location.

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The medical drill included participation by Coffey County Emergency Medical Services and Coffey County Hospital. A summary of the specific criteria evaluated for each of the participating organizations is listed in Table 3.1.

### **2.3 Scenario Summary**

The following is the scenario provided by Wolf Creek Generating Station (WCGS) and approved by Department of Homeland Security/FEMA for use during the medical services drill which took place on August 9, 2016.

The patient is a 40 year-old male Coffey County fire fighter in Burlington, Kansas who has reported to the fire station during a Wolf Creek emergency. It is known that a release is in progress.

As others began to arrive, he slipped and fell and in the process slid under a truck and his foot was run over.

Patient originated from affected area, therefore possibility of radioactive contamination exists. Contamination levels upon initial monitoring are 20,000 cpm on right elbow and 30,000 cpm on the patient's right hand.

## **SECTION 3: ANALYSIS OF CAPABILITIES**

### **3.1 Exercise Evaluation and Results**

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the August 9, 2016 out-of-sequence medical services drill. The drill tested the offsite emergency response capabilities of state and local governments in the 10-mile plume emergency planning zone surrounding the Wolf Creek Nuclear Generating Station.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of the criteria delineated in FEMA's Radiological Emergency Preparedness Program Manual, dated January 2016.

### **3.2 Summary Results of Exercise Evaluation**

Table 3.1 presents all the exercise criteria which were successfully demonstrated during this medical drill, at all participating jurisdictions and functional entities. Any findings and/or planning issues are addressed in Section 3.3: Criteria Evaluation Summaries. The types of findings/issues are:

L1 – Level One Finding (Previously known as a Deficiency).

L2 – Level Two Finding (Previously known as an Area Requiring Corrective Action).

P - Plan Issue

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Tables 3.1 - Summary of Exercise Evaluation

**Exercise Evaluation – Criteria Met**

Date: 08/09/2016 Site: Wolf Creek Generating Station		
Location	Criteria Title	Criteria
Coffey County EMS	Equipment and Supplies	1e1
Coffey County EMS	EW Exposure Control Implementation	3a1
Coffey County EMS	Contaminated Injured Transport & Care	6d1
Coffey County Hospital	Equipment and Supplies	1e1
Coffey County Hospital	EW Exposure Control Implementation	3a1
Coffey County Hospital	Contaminated Injured Transport & Care	6d1

## 3.3 Criteria Evaluation Summaries

### 3.3.1 Risk Jurisdictions

#### 3.3.1.1 Coffey County Emergency Medical Services

Coffey County Emergency Medical Services is located in Burlington, Kansas. The ambulance team did an excellent job in communicating patient information to the hospital. They displayed teamwork and were sensitive to potential cross contamination issues.

All three criteria were adequately demonstrated in accordance with the plans, procedures and extent of play agreement.

In summary, the status of DHS/FEMA criteria for the support county jurisdiction is as follows:

- a. LEVEL 1 FINDINGS: NONE
- b. LEVEL 2 FINDINGS: NONE
- c. PLAN ISSUES: NONE
- d. PRIOR ISSUES – RESOLVED: NONE
- e. PRIOR ISSUES – UNRESOLVED: NONE

#### 3.3.1.2 Coffey County Hospital

Coffey County Hospital is located in Burlington, Kansas. Hospital staff demonstrated excellent teamwork and leadership in setting up the Radiation Emergency Area (REA). The Emergency Room team displayed good meter skills and peer checks was observed.

All three criteria were adequately demonstrated in accordance with the plans, procedures and extent of play agreement.

In summary, the status of DHS/FEMA criteria for the support county jurisdiction is as follows:

- a. LEVEL 1 FINDINGS: NONE
- b. LEVEL 2 FINDINGS: NONE
- c. PLAN ISSUES: NONE
- d. PRIOR ISSUES – RESOLVED: NONE
- e. PRIOR ISSUES – UNRESOLVED: NONE

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## **SECTION 4: CONCLUSION**

Based on the results of the August 9, 2016 medical services drill, the offsite radiological emergency response plans and preparedness for the State of Kansas and 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 Kansas, site-specific to the Wolf Creek Generating Station, will remain in effect.

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**APPENDIX A: DRILL EVALUATORS AND TEAM LEADERS**

DATE: 08/09/2016

SITE: Wolf Creek Generating Station

LOCATION	TEAM LEADER	AGENCY
Coffey County Emergency Medical Services	Cara Christianson-Riley	FEMA R7
Coffey County Hospital	Jeff Clark	FEMA R7

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## APPENDIX B: ACRONYMS AND ABBREVIATIONS

Acronym	Description
CFR	Code of Federal Regulations
DHS	Department of Homeland Security
DRD	Direct Reading Dosimeter
EMS	Emergency Medical Service
EPZ	Emergency Planning Zone
EW	Emergency Worker
FEMA	Federal Emergency Management Agency
KDEM	Kansas Division of Emergency Management
KDHE	Kansas Department of Health & Environment
REA	Radiological Emergency Area
WCGS	Wolf Creek Generating Station

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