



FEMA

November 13, 2008

Elmo E. Collins
Regional Administrator
U.S. Nuclear Regulatory Commission, Region IV
612 East Lamar Blvd., Suite 400
Arlington, Texas 76011-4125

Dear Mr. Collins:

Enclosed is a copy of the final report for the September 30, 2008, out-of-sequence drill of the off-site radiological emergency response plans site-specific to the Wolf Creek Nuclear Generating Station. The state of Kansas and Coffey County, Kansas participated during the drill. The report was prepared by the Federal Emergency Management Agency (FEMA) Region VII staff. Copies of the final report will be provided to the state of Kansas.

There were no Deficiencies and no Areas Requiring Corrective Action (ARCAs) identified. Based on the results of these drills, the offsite radiological emergency response plans and preparedness for the state of Kansas and the affected local jurisdiction, site-specific to the Wolf Creek Nuclear Generating Station, 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 off-site radiological emergency response plans and preparedness for the state of Kansas, site-specific to the Wolf Creek Nuclear Generating Station; granted on April 4, 1989, will remain in effect.

If you have questions or concerns regarding the report, please contact Sharron McDuffie at (816) 283-7052.

Sincerely,



Richard Hamje
Regional Administrator

Enclosure

cc: Vanessa Quinn, Hq REP w/o enclosure
Lisa Banks-Robinson, Hq REP w/o enclosure
Bill Maier, NRC IV w/o enclosure
NRC Headquarters, Document Control Desk
Lisa Gibney, NRC Hq (electronic cy)

Wolf Creek Generating Station

Drill Report - 2008-09-30

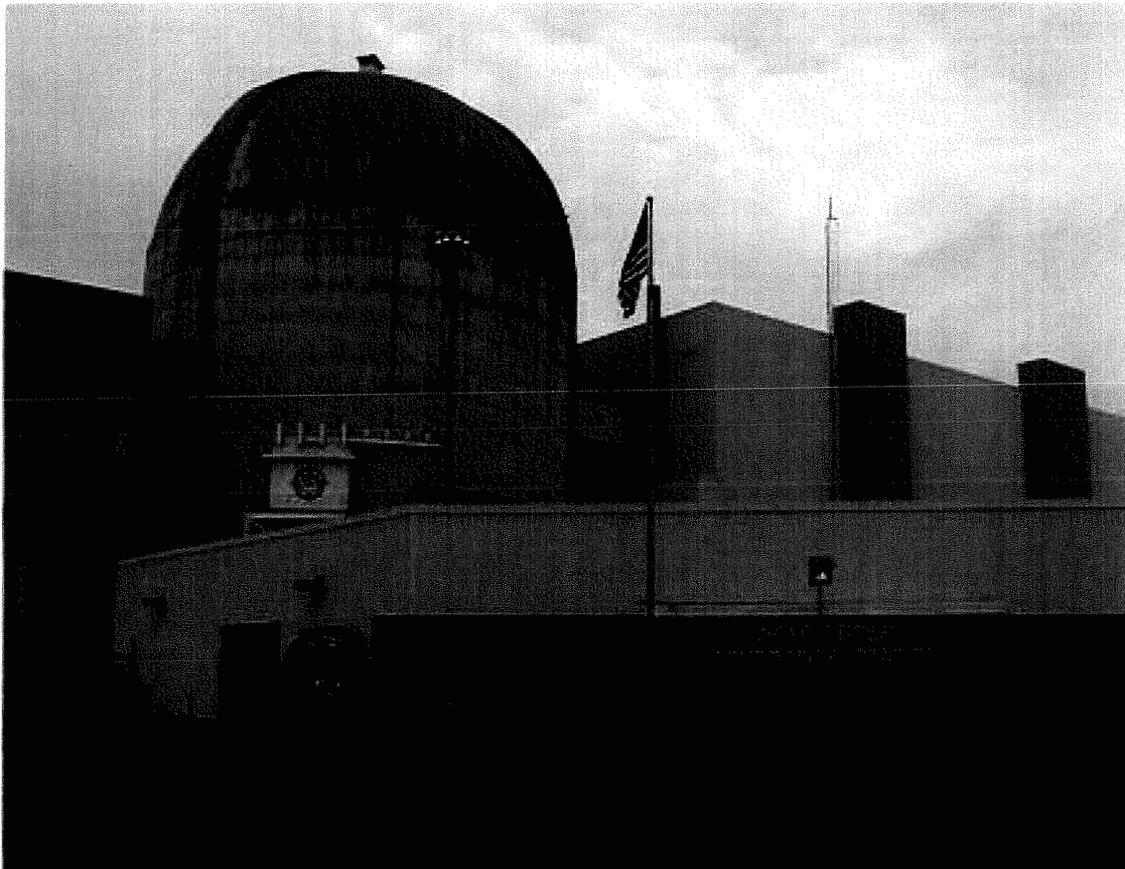
Final Report - Radiological Emergency

Preparedness (REP) Program

2008-11-12



FEMA





FEMA

Drill Report

Wolf Creek Generating Station

Drill Date: 2008-09-30

Report Date: 2008-11-12

U.S. DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

REP Program

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Table of Contents

Chapter 1 Executive Summary

Chapter 2 Introduction

Chapter 3 Drill Overview

Section 3.1 EPZ Description

Section 3.2 Drill Participants

Chapter 4 Drill Evaluation and Results

Section 4.1 Summary Results of Drill Evaluation

Section 4.2 Status of Jurisdictions Evaluated

4.2.1 Risk Jurisdictions

4.2.1.1 Coffey County Ambulance

4.2.1.2 Coffey County Hospital - EPZ

Appendices

Appendix 1 - Drill Evaluators and Team Leaders

Appendix 2 - Drill Evaluation Areas and Extent of Play Agreement

1. Executive Summary

On September 30, 2008, the Federal Emergency Management Agency (FEMA) evaluated a Medical Drill in the plume exposure pathway emergency planning zone (EPZ) around the Wolf Creek Nuclear Generating Station. The purpose of the medical 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. This medical drill was 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 May 23, 2006. The qualifying emergency preparedness medical drill 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 county 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 were 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 Deficiencies or Areas Requiring Corrective Action (ARCAs) identified as a result of this medical drill. Planning issues that were identified during the medical drill will be forwarded under a separate correspondence. There were no Previous ARCAs to be corrected during this medical drill from 2006.

2. Introduction

On December 7, 1979, the President directed 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. FEMA'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).

- * 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
- U.S. Department of the Interior

Representatives of these agencies serve as members of the FEMA Region VII Regional Assistance Committee (RAC), which is chaired by FEMA.

Formal submission of the RERPs for the Wolf Creek Nuclear Generating Station to the RAC by the State of Kansas and involved local jurisdictions was followed by a critique and evaluation of these plans. Formal approval of the plans and the Alert and Notification System was granted by FEMA on April 4, 1989.

A REP Medical Drill was evaluated on September 30, 2008, by FEMA Region VII to assess the capabilities of State and local offsite emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving the Wolf Creek Nuclear Generating Station. The purpose of this report is to present the medical drill results and findings on the performance of the offsite response organizations (OROs) 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 FEMA Region VII RAC Chairperson and approved by the Regional Administrator.

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 Methodology as published in the Federal Register on September 12, 2001, and April 25, 2002.

Section III of this report, entitled "Exercise Overview," presents basic information and data relevant to the drill.

Section IV of this report, entitled "Exercise Evaluation and Results," presents basic information on the demonstration of applicable exercise 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 (if any), 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.

3. Drill Overview

Contained in this section are data and basic information relevant to the September 30, 2008, Medical Drill that tested the offsite emergency response capabilities in the area surrounding the Wolf Creek Nuclear Generating Station. This section of the exercise report includes a description of the plume EPZ, and a listing of all participating jurisdictions and functional entities that were evaluated.

3.1. EPZ Description

The Wolf Creek Nuclear Generating Station is located in the State of Kansas in Coffey County, about four miles northeast of Burlington, Kansas. The topography of the 10-mile or plume EPZ is relatively flat. The plume EPZ is divided into twenty-two sub zones containing a total population of 8,865 (2000 Census), all within Coffey County, Kansas. With the exception of Burlington (population 2,790) and three other population clusters, the population density of the effective 10-mile EPZ is quite low - approximately 13 persons per square mile. Most of the seasonal or daily shifts in population are associated with recreational areas around John Redmond Reservoir and Coffey County Lake. Approximately 70% of the annual visitors to the John Redmond Reservoir and Coffey County Lake come to the area during the summer months. Sparsely populated farmland comprises the majority of the effective 10-mile EPZ. Other than the Wolf Creek Nuclear Generating Station, there are not any large industries in the area.

3.2. Drill Participants

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

Risk Jurisdictions

Coffey County Hospital

Coffey County Ambulance

4. Drill Evaluation and Results

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities, which participated in the September 30, 2008, drill event to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Wolf Creek Nuclear Generating Station.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of the 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. Detailed information on the exercise criteria and the extent-of-play agreement for this exercise is found in Appendix 2 of this report.

4.1. Summary Results of Drill Evaluation

The matrix presented in Table 1, on the following pages, presents the status of all exercise criteria, which were scheduled for demonstration during this exercise, 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(s) from prior exercises)

N - Not Demonstrated (Reason explained in subsection B)

Table 1 - Summary of Drill Evaluation

DATE: 2008-09-30 SITE: Wolf Creek Generating Station, KS A: ARCA, D: Deficiency, M: Met		Coffey County Ambulance	Coffey County Hospital -
Emergency Operations Management			
Mobilization	1a1		
Facilities	1b1		
Direction and Control	1c1		
Communications Equipment	1d1		
Equip & Supplies to support operations	1e1	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
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

4.2. 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 drill criteria under which no Deficiencies or ARCAs were assessed during these drills, and under which no ARCAs assessed during prior drills or exercises remain unresolved.

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

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

Not Demonstrated - Listing of the drill criteria which were not demonstrated as scheduled during these drills and the reason they were not demonstrated.

Prior ARCAs - Resolved - Description of ARCAs assessed during previous drills, which were resolved in these drills, and the corrective actions demonstrated.

Prior ARCAs - Unresolved - Descriptions of ARCAs assessed during prior drills, which were not resolved in these drills. 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 drill issues, which are discussed in this report.

* A Deficiency is defined by FEMA as ". . . an observed or identified inadequacy of organizational performance in a drill 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 by FEMA as " . . . an observed or identified inadequacy of organizational performance in a drill that is not considered, by itself, to adversely impact public health and safety."

FEMA has developed a standardized system for numbering drill and exercise issues (Deficiencies and ARCAs). This system is used to achieve consistency in numbering drill and exercise issues between FEMA Regions and site-specific drill and exercise reports within each Region. It is also used to expedite tracking of drill and 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 three-digit number corresponding to the Utility Billable Plant Site Codes.

* Exercise Year - The four digits of the year the drill or exercise was conducted.

* Criterion Number - A three-digit number corresponding to the criteria numbers in FEMA Exercise Evaluation Areas.

* Issue Classification Identifier - (D = Deficiency, A = ARCA). Only Deficiencies and ARCAs are included in drill or exercise reports.

* Drill or Exercise Issue Identification Number - A separate two (or three) digit indexing number assigned to each issue identified in the drill or exercise.

4.2.1. Risk Jurisdictions

4.2.1.1. Coffey County Ambulance

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

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

4.2.1.2. Coffey County Hospital - EPZ

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

APPENDIX 1

DRILL EVALUATORS AND TEAM LEADERS

DATE: 2008-09-30, SITE: Wolf Creek Generating Station, KS

LOCATION	EVALUATOR	AGENCY
Coffey County Ambulance	Marynette Herndon	ICF
Coffey County Hospital - EPZ	Gianne Howard	ICF
* Team Leader		

APPENDIX 2

EXERCISE EVALUATION AREAS AND EXTENT OF PLAY

There are no areas requiring corrective action from previous drills or exercises that require demonstration during this drill. The drill begins at 08:00 a.m. on September 30, 2006, with the Coffey County Hospital, and then picks up with the Coffey County EMS Ambulance Crew.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Evaluation Criterion 1.e.1. – Equipment and Supplies to Support Operations: 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 dosimeters and KI supplies.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Evaluation Criterion 3.a.1. – Implementation of Emergency Worker Exposure Control: 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

Evaluation Criterion 3.b.1. – Implementation of KI Decision: 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 is maintained. (NUREG-0654, E. 7., J. 10. e., f.)
If the decision to recommend the use of KI is made during this exercise the recommendation must be appropriately disseminated to all personnel including those deployed (or simulated deployed) for traffic and access control and other missions. However, if the decision to recommend the use of KI is not required by the scenario, all emergency workers, at all facilities, will be expected to demonstrate this evaluation criterion through an interview of their knowledge of procedures for the authorization and 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.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Evaluation Criterion 6.b.1 – Monitoring and Decontamination of Emergency Worker Equipment: 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)

This will be demonstrated at the Coffey County Hospital and supported by the Coffey County Ambulance and / or other County resources as identified in the plan. Appropriate procedures for monitoring and decontamination of emergency worker equipment, including vehicles, must be demonstrated. A minimum of one (1) vehicle must be monitored and decontamination procedures may be simulated.

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.

Immediate Correction of Issues:

In the event that during an out-of-sequence or exercise demonstration an evaluator identifies an exercise issue, the evaluator will discuss it with the Team Leader, Controller, and Trainer (State Representative). If possible, the trainer will provide immediate instruction and a re-demonstration will occur to correct the issue. The exercise report will reflect the exercise issue and that it has been corrected.