

# 1. Executive Summary

On August 29, 2007, a biennial Radiological Emergency Preparedness (REP) exercise was conducted in the Plume Exposure Pathway Emergency Planning Zone (EPZ) around the Comanche Peak Nuclear Power Plant (CPNPP), Glen Rose, Texas. Personnel from the U.S. Department of Homeland Security/FEMA (DHS/FEMA) Region VI, evaluated all activities. The purpose was to assess the level of preparedness of state and local responders to react to a simulated radiological emergency at the CPNPP. It was held in accordance with FEMA's policies and guidance concerning the implementation of state and local REP plans and procedures.

The final qualifying exercise to satisfy FEMA rule 44 Code of Federal Regulations (CFR) 350 requirements for Nuclear Regulatory Commission (NRC) licensing to operate the facility was conducted in July 1989. Including the exercise on August 29, 2007, there have been ten DHS-FEMA Region VI evaluated exercises plus several drills conducted since that time.

FEMA Region VI wishes to acknowledge the dedicated participation of many individuals in the State of Texas and Somervell and Hood Counties. Some of these participants are paid civil servants whose full-time job is to protect the health and safety of the public within the jurisdictions they serve. Many more are volunteers who make themselves available to perform a service to the community in which they live. Their participation is particularly noteworthy.

The report includes the identification of any exercise issues and recommendations for corrective action where appropriate.

All state and local organizations, except where noted in this report, demonstrated an adequate knowledge of the emergency plans and procedures and properly implemented them. There was one Deficiency and two Areas Requiring Corrective Action (ARCAs) identified during this exercise. No planning issues were identified.

## 2. Introduction

On December 7, 1979, the President directed FEMA to assume the lead responsibility for all offsite nuclear power facility planning and response. The FEMA activities are conducted pursuant to 44 CFR 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 government 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 Fixed Nuclear Facility Radiological Emergency Response Planning include:

- Taking the lead in off-site emergency response planning and in the review and evaluation of state and local government emergency plans, ensuring that the plans meet the federal criteria set forth in NUREG-0654/FEMA REP-1, Rev.1 (November 1980).
- Determining whether the state and local emergency response plans can be implemented on the basis of observation and evaluation of an exercise conducted by the appropriate emergency response jurisdictions.
- Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated June 17, 1993 (Federal Register, Vol. 58, No. 176, September 14, 1993); and
- Coordinating the activities of volunteer organizations and other involved Federal agencies. Representatives of these agencies, listed below, serve as members of the Regional Assistance Committee (RAC), which is chaired by FEMA.
  - U.S. Nuclear Regulatory Commission (NRC)
  - U.S. Environmental Protection Agency (EPA)
  - U.S. Department of Energy (DOE)
  - U.S. Department of Health and Human Services (DHHS)

- U.S. Department of Transportation (DOT)
- U.S. Department of Agriculture (USDA)
- U.S. Department of Interior (DOI)
- U.S. Food and Drug Administration (FDA)

The findings presented in this report are based on the federal evaluation team's assessment of the participants' response to a simulated radiological incident at the Comanche Peak plant that affected the offsite population. The RAC Chair made the final classification of any issues identified, and FEMA Headquarters approved the report.

The criteria used in the 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);
- Interim REP Program Manual, including the Radiological Emergency Preparedness Exercise Evaluation Methodology (August 2002).

Section III of this report entitled "Exercise Overview" presents basic information and data relevant to the exercise. This section contains a description of the emergency planning zone, a listing of all participating jurisdictions, which were evaluated, and a tabular presentation of the times 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 criterion at each jurisdiction or functional entity in a jurisdiction-based format. This section also contains descriptions of all Deficiencies and ARCAs assessed during the exercise and recommended corrective actions, as well as descriptions of ARCAs assessed during previous exercises and the current status of each.

## 3. Exercise Overview

This section contains data and basic information relevant to the August 29, 2007, plume exercise, to test the offsite response capabilities in the area surrounding the Comanche Peak Nuclear Power Plant (CPNPP). This section of the report includes a description of the Emergency Planning Zone (EPZ), a listing of all participating jurisdictions, which were evaluated, and a tabular presentation of the times of actual occurrence of key exercise events and activities.

### 3.1. EPZ Description

The area within 10 miles of CPNPP is located in the State of Texas within the confines of Hood and Somervell Counties. This area is referred to as the EPZ. Incorporated cities in Hood County within the EPZ include Granbury, located 9.9 miles north of CPNPP, and Tolar, located 9.9 miles northwest of CPNPP. The only incorporated city in Somervell County is Glen Rose, located 5.0 miles south of CPNPP. The rest of the EPZ consists of unincorporated farmland, rural housing developments, and recreation areas.

Based on the 2000 census, the total population of the EPZ is 29,908.

The Santa Fe east-west railroad crosses the extreme northwestern portion of the EPZ through the cities of Tolar and Granbury. A spur of that railroad serves CPNPP and crosses the northwest quadrant of the EPZ from Tolar to CPNPP. Major highways within the EPZ are US 377, running east to west through Granbury and Tolar; US 67, running east to west through Glen Rose; and State Highway 144, running north to south from Granbury through Glen Rose to the southernmost point in the EPZ.

Public institutions, aside from schools and churches within the EPZ, include two hospitals, an amphitheater, an Expo Center, and Dinosaur Valley State Park.

The EPZ is divided into 31 zones for the purpose of emergency response planning and implementation of protective actions.

### 3.2. Exercise Participants

Agencies and organizations of the following jurisdictions participated in the Comanche Peak Nuclear Power Plant exercise:

State Jurisdictions

- Texas Department of State Health Services
- Governor's Division of Emergency Management
- Texas Department of Public Safety
- Texas Commission on Environmental Quality
- Brazos River Authority
- Texas Animal Health Commission
- Texas Department of Parks and Wildlife
- Texas Department of Transportation
- Texas Forest Service
- Texas Railroad Commission
- Texas Department of Criminal Justice
- Radio Amateur Civil Emergency Services

Risk Jurisdictions

- Hood County
- Hood County Sheriff's Office
- Hood County Volunteer Fire Department
- City of Granbury
- Granbury Police Department
- Somervell County
- Somervell County Sheriff's Office
- Somervell County Clerk's Office
- Somervell County Volunteer Fire Department
- City of Glen Rose
- Glen Rose Fire Department
- Glen Rose Police Department
- Glen Rose Independent School District

Private Jurisdictions

- Comanche Peak Nuclear Power Plant
- WBAP 820 AM Radio Station
- Glen Rose Medical Center
- Lake Granbury Medical Center
- American Red Cross
- Salvation Army

### 3.3. Exercise Timeline

Table 1 on the following page presents the times at which key events and activities occurred, or were noted, during the Comanche Peak exercise held on August 29, 2007.

Table 1 - Exercise Timeline  
DATE: 2007-08-29, SITE: Comanche Peak Nuclear Power Plant, TX

Emergency Classification Level or Event	Time Utility Declared	DD-6A-EOC	DSHS-HQ	DSHS-EOF	JIC	Hood County EOC & T/ACP	Somervell County EOC & T/ACP
Unusual Event	0747	0747	0758	0802	0818	0755	0755
Alert	0821	0821	0833	0835	0827	0833	0829
Site Area Emergency	0958	0958		1000	0958	1008	1009
General Emergency	1048	1048		1048	1048	1103	1056
Simulated Rad. Release Started	1048	0911		1048		1103	1056
Simulated Rad. Release Terminated				1345			
Facility Declared Operational		0750	0800	1000	0916	0854	0844
Declaration of State of Emergency		1051				1022	1020
Exercise Terminated		1316		1313	1312	1315	1311
Early Precautionary Actions: Hood Co: Evac of Schools Somervell Co: Evac of 2A, GISD, Med Facility						0927	1015
1st Protective Action Decision:						1020	1020
1st Siren Activation						1032	1032
1st EAS or EBS Message						1038	1038
2nd Protective Action Decision:						1113	1109
2nd Siren Activation						1120	1120
2nd EAS or EBS Message							
KI Administration Decision:				1128		1135	1142

Table 1 - Exercise Timeline  
 DATE: 2007-08-29, SITE: Comanche Peak  
 Nuclear Power Plant, TX

Emergency Classification Level or Event	Time Utility Declared	EAS-WBAP
Unusual Event	0747	
Alert	0821	
Site Area Emergency	0958	
General Emergency	1048	
Simulated Rad. Release Started	1048	
Simulated Rad. Release Terminated		
Facility Declared Operational		
Declaration of State of Emergency		
Exercise Terminated		
Early Precautionary Actions: Hood Co: Evac of Schools Somervell Co: Evac of 2A, GISD, Med Facility		
1st Protective Action Decision:		
1st Siren Activation		
1st EAS or EBS Message		1038
2nd Protective Action Decision:		
2nd Siren Activation		
2nd EAS or EBS Message		
KI Administration Decision:		