



FEMA

July 8, 2009

Mr. Elmo E. Collins, Jr.
Regional Administrator
U.S. NRC, Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-4005

Dear Mr. Collins:

Enclosed is a copy of the radiological emergency preparedness final report for the Comanche Peak Nuclear Power Plant (CPNPP) Plume and Ingestion Pathway exercise evaluated on April 7-8, 2009.

There were no Deficiencies and four Areas Requiring Corrective Action (ARCAs) identified during the plume and ingestion exercise. In addition, one ARCA from the 2007 plume exercise remains unresolved. The ARCAs will be scheduled for correction at the next biennial exercise.

Based on the results of this exercise, the offsite radiological emergency response plans and preparedness for the State of Texas 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 Texas site-specific to CPNPP will remain in effect.

A copy of this report was provided to Ms. Lisa Gibney at NRC Headquarters and the NRC Headquarters Document Control Desk. Should you have questions, please contact Lisa Hammond, Regional Assistance Committee Chair, at (940) 898-5199, or Linda Gee, CPNPP Site Specialist, at (940) 898-5368.

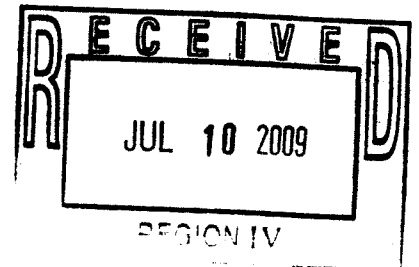
Sincerely,

A handwritten signature in black ink, appearing to read "Gary Jones".

Gary Jones
Acting Regional Administrator

Enclosure

cc: DHS/FEMA HQ – Vanessa Quinn
DHS/FEMA HQ – Craig Fiore
DHS/FEMA HQ – Michelle Ralston
Texas Governor's Division of Emergency Management - Jack Colley
Texas Department of State Health Services, Radiation Control Program - Bob Free
CPNPP – David Fuller



Comanche Peak Nuclear Power Plant

Exercise Report - 2009-04-07

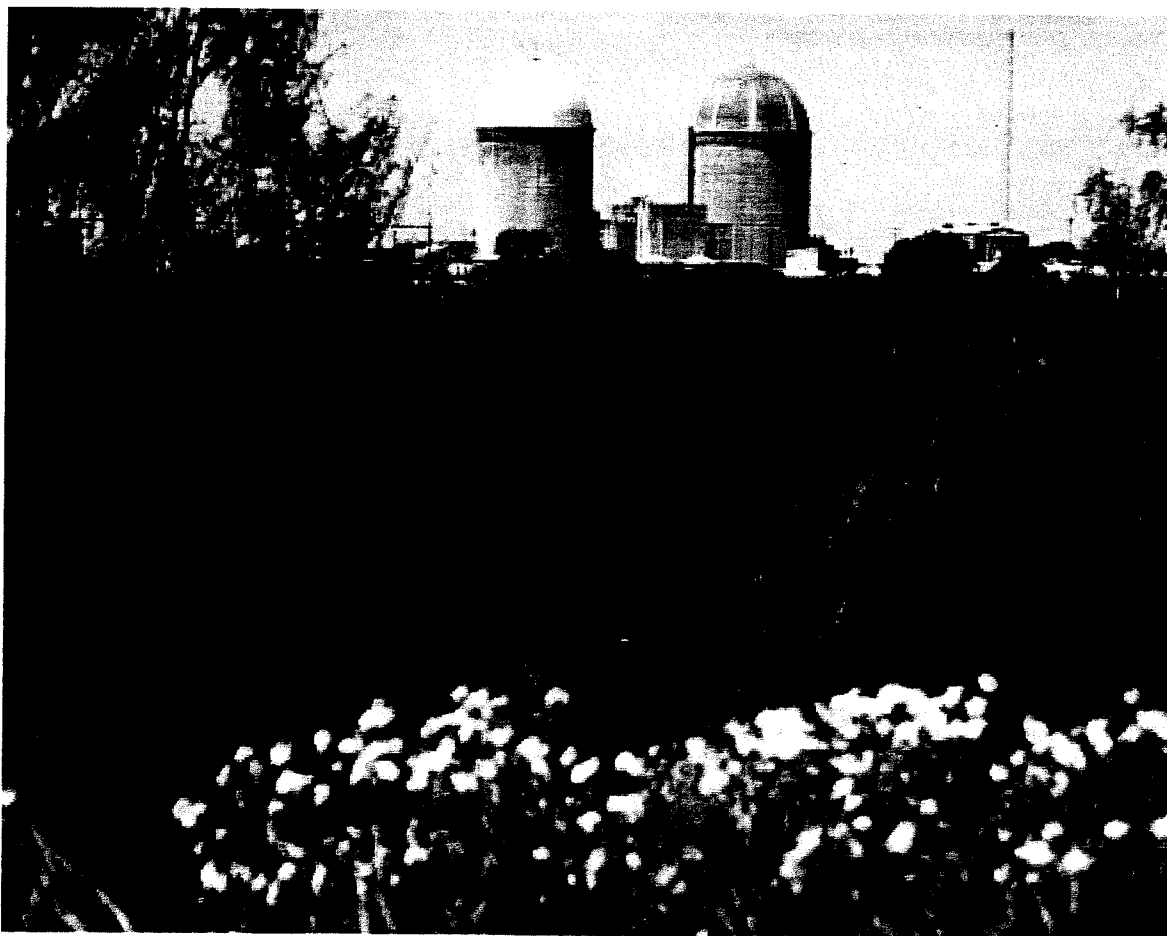
Final Report - Radiological Emergency

Preparedness (REP) Program

2009-07-08



FEMA





FEMA

Exercise Report

Comanche Peak Nuclear Power Plant

Exercise Date: 2009-04-07

Report Date: 2009-07-08

U.S. DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

REP Program

800 North Loop 288

Denton, TX 76209

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1. Executive Summary

On April 7th and 8th, 2009 a Radiological Emergency Preparedness (REP) exercise was conducted at Comanche Peak Nuclear Power Plant (CPNPP) located near Glen Rose, Texas. This exercise consisted of both an emergency phase response within the ten mile emergency planning zone (EPZ) and post plume response within the 50 mile ingestion planning zone (IPZ). The purpose of the exercise was to assess the level of preparedness of state and local responders to a simulated emergency at CPNPP. This exercise was conducted in accordance with U.S. Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA) policy and guidance concerning implementation of state and local emergency preparedness plans and procedures.

The 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, 2009, there have been eleven FEMA Region VI evaluated exercises and 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.

This report contains the final written evaluation of the biennial exercise. The state and local organizations, except where noted in this report, demonstrated knowledge of the emergency plans and procedures and properly implemented them. There were no Deficiencies, four Areas Requiring Corrective Action (ARCAs) and six Plan Issues identified during this exercise. Additionally, one ARCA from the 2007 exercise remains unresolved.

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 Homeland Security/FEMA (DHS/FEMA)
- 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 REP exercise was evaluated on April 7-8, 2006, by FEMA Region VI to assess the capabilities of state and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving Comanche Peak Nuclear Power Plant (CPNPP). The purpose of this exercise report is to present the exercise 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 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 April 7 and 8, 2009, Comanche Peak Nuclear Power Plant (CPNPP) exercise to test the offsite response capabilities in the area surrounding the 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 Comanche Peak Nuclear Power Plant (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 emergency planning zone (EPZ) include portions of 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 exposition center, and Dinosaur Valley State Park.

The EPZ is divided into 27 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

- Governor's Division of Emergency Management
- Texas Department of State Health Services
- Texas Animal Health Commission
- Texas Commission on Environmental Quality
- Texas Department of Criminal Justice
- Texas Department of Public Safety (DPS)
- Texas Department of Transportation
- Texas Parks and Wildlife Department
- Texas State Guard
- Texas Railroad Commission

Risk Jurisdictions

- City of Granbury
- City of Granbury Police Department
- Hood County
- Hood County Sheriff Office
- Hood County Judge
- Hood County Fire & Rescue
- Hood County Fire Marshall
- Hood County Animal Control
- City of Glen Rose
- Glen Rose Fire Marshall
- Glen Rose Independent School District
- Somervell County
- Somervell County Fire Department
- Somervell County Judge
- Somervell County Sheriff's Department
- Somervell County Expo Center
- Tolar Volunteer Fire Department

Support Jurisdictions

- Radio Amateur Civil Emergency Service (RACES)

Private Jurisdictions

- Comanche Peak Nuclear Power Plant
- American Red Cross
- WBAP Radio Station

Federal Jurisdictions

- U. S. Department of Agriculture
- U. S. Department of Energy
- U. S. Department of Homeland Security/FEMA
- U. S. Environmental Protection Agency
- U. S. Nuclear Regulatory Commission

3.3. Exercise Timeline

Table 1 on the following page, presents the times at which key events occurred during the CPNPP (emergency phase) exercise conducted on April 7-8, 2009.

Table 1 - Exercise Timeline
DATE: 2009-04-07, SITE: Comanche Peak Nuclear Power Plant, TX

Emergency Classification Level or Event	Time Utility Declared	GDEM-SOC	DPS Disaster District 4, Garland	DSHS-HQ	DSHS-EOF	JIC	Hood County EOC & T/ACP
Unusual Event	0758	0824	0807	0912	0903	NA	0810
Alert	0839	0915	0845	0927	0903	NA	0853
Site Area Emergency	1023	1046	1033	1033	1024	1030	1034
General Emergency	1058	1123	1107	1107	1058	1100	1108
Simulated Rad. Release Started	0956	1058	1034	1045	1000	1034	1034
Simulated Rad. Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		1050	0815	0825	1055	0944	0850
Declaration of State of Emergency		1100				1245	1118
Exercise Terminated		1500	1400			1357	1352
Early Precautionary Actions:							0908
1st Protective Action Decision:							1058
1st Siren Activation (Hood County Activated)							1110
1st EAS or EBS Message							1108
2nd Protective Action Decision:							1118
2nd Siren Activation (Somervell County activated)							1120
2nd EAS or EBS Message							1124
KI Administration Decision (time of decision to issue to Emergency Workers):					1240		1128

Table 1 - Exercise Timeline
DATE: 2009-04-07, SITE: Comanche Peak Nuclear
Power Plant, TX

Emergency Classification Level or Event	Time Utility Declared	Somervell County EOC & T/ACP	EAS-WBAP
Unusual Event	0758	0809	
Alert	0839	0850	
Site Area Emergency	1023	1028	1059
General Emergency	1058	1103	1124
Simulated Rad. Release Started	0956	1047	
Simulated Rad. Release Terminated	N/A	N/A	
Facility Declared Operational		0909	
Declaration of State of Emergency		1100	
Exercise Terminated		1352	
Early Precautionary Actions:		0925/1029	
1st Protective Action Decision:		1120	
1st Siren Activation (Hood County Activated)		1110	
1st EAS or EBS Message		1108	1108
2nd Protective Action Decision:		1118	
2nd Siren Activation (Somervell County activated)		1120	
2nd EAS or EBS Message		1124	1128
KI Administration Decision (time of decision to issue to Emergency Workers):		1034	

4. Exercise 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 exercise conducted April 7 - 8, 2009, exercise to test the offsite emergency response capabilities of state and local governments in the 10-mile emergency planning zone (EPZ) and the 50-mile ingestion planning zone (IPZ) surrounding the Comanche Peak Nuclear Power Plant (CPNPP).

Each jurisdiction and functional entity was evaluated on its demonstration of criteria contained in exercise evaluation areas delineated in the Federal Register, Vol. 67, No. 80, "FEMA - Radiological Emergency Preparedness: Exercise Evaluation Methodology" (April 25, 2002). Detailed information on the exercise criteria and the extent-of-play agreements for this exercise are in Appendix 3 of this report.

4.1. Summary Results of Exercise Evaluation

The matrix presented in Table 2 on the following page presents the status of all exercise criteria which were scheduled for demonstration during this exercise at all participating jurisdictions and functional entities. Exercise criterion are listed by number and the demonstration status of those criterion are indicated by the use of the following letters:

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

D - Deficiency assessed

A - ARCAs assessed or unresolved ARCAs from previous exercises

N - Not Demonstrated (Reason explained in subsection 4.2)

Table 2 - Summary of Exercise Evaluation

DATE: 2009-04-07 SITE: Comanche Peak Nuclear Power Plant, TX A: ARCA, D: Deficiency, M: Met, N: Not Demonstrated		GDEM-SOC	DPS Disaster District 4, Garland	DSHS-HQ	DSHS-EOF	DSHS-RCP FMT 1	DSHS-RCP FMT 2	DSHS Lab	JIC	Hood County EOC & T/ACP	Granbury ISD	Somervell County EOC & T/ACP	EAS-WBAP
Emergency Operations Management													
Mobilization	1a1	M	M	M	M				M	M		M	
Facilities	1b1		M										
Direction and Control	1c1	M	M	M	M					M		M	
Communications Equipment	1d1	M	M	M	M	M	M		M	M		M	
Equip & Supplies to support operations	1e1	M	M	M	M	M	M	A	M	M		M	
Protective Action Decision Making													
Emergency Worker Exposure Control	2a1				M					M		M	
Radiological Assessment and PARs	2b1			M	M								
Decisions for the Plume Phase -PADs	2b2				M					M		M	
PADs for protection of special populations	2c1									M		M	
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1				M								
Rad Assessment and Decision making concerning Relocation, Reentry, and Return	2e1				M					M		M	
Protective Action Implementation													
Implementation of emergency worker exposure control	3a1				M	M	M	M		M	M	M	
Implementation of KI decision	3b1				M	M	M			M		M	
Implementation of protective actions for special populations - EOCs	3c1									M		M	
Implementation of protective actions for Schools	3c2										M		
Implementation of traffic and access control	3d1									M		M	
Impediments to evacuation are identified and resolved	3d2									M		M	
Implementation of ingestion pathway decisions - availability/use of info	3e1	M			M								
Materials for Ingestion Pathway PADs are available	3e2	M			M								
Implementation of relocation, re-entry, and return decisions.	3f1	M								M		M	
Field Measurement and Analysis													
Adequate Equipment for Plume Phase Field Measurements	4a1					M	M						
Field Teams obtain sufficient information	4a2				M								
Field Teams Manage Sample Collection Appropriately	4a3					M	M						
Post plume phase field measurements and sampling	4b1					M	M						
Laboratory operations	4c1							M					
Emergency Notification and Public Info													
Activation of the prompt alert and notification system	5a1									A		A	M
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								M	M		A	
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												

4.2. Status of Jurisdictions Evaluated

4.2.1. Texas Jurisdictions

4.2.1.1. Governor's Division of Emergency Management-State Operations Center

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.e.1, 3.e.2, 3.f.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. Department of Public Safety, Disaster District 4, Garland

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

4.2.1.3. Department of State Health Services, Radiation Control Program - Headquarters

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None
- f. PRIOR ISSUES - UNRESOLVED: None

4.2.1.4. Department of State Health Services - Radiation Control Program at the Emergency Operations Facility

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2, 2.d.1, 2.e.1, 3.a.1, 3.b.1, 3.e.1, 3.e.2, 4.a.2.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None
- f. PRIOR ISSUES - UNRESOLVED: None

4.2.1.5. Department of State Health Services - Radiation Control Program Field Monitoring Team One

- a. MET: 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.a.1, 4.a.3, 4.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None
- f. PRIOR ISSUES - UNRESOLVED: None

4.2.1.6. Department of State Health Services - Radiation Control Program Field Monitoring Team Two

- a. MET: 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.a.1, 4.a.3, 4.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None
- f. PRIOR ISSUES - UNRESOLVED: None

4.2.1.7. Department of State Health Services Mobile Laboratory

- a. MET: 3.a.1, 4.c.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: 1.e.1.

ISSUE NO.: 14-09-1e1-A-02

CRITERION: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations.

CONDITION: The survey meters staged for use did not have a range of readings sticker affixed indicating the appropriate range of readings to be observed during source check of the meters. The range of readings sticker is required to verify that the meters were measuring correctly prior to use.

POSSIBLE CAUSE: Unfamiliarity with the requirement for a range of readings sticker on instruments used to measure activity.

REFERENCE: Criterion 1.e.1, Interim REP Program Manual, August 2002.

EFFECT: The requirement for a range of readings sticker applies specifically to instruments that are used to measure activity and it specifically applies (by the criterion) to instruments used in radiological laboratories. The inability to verify that the meter is measuring correctly (within its range of readings to a known source) would have the potential to invalidate the readings taken.

RECOMMENDATION: Provide a known source for checking these survey meters. Determine the appropriate range of readings for the source check based on the instrument efficiency and apply a range of readings sticker to the instruments as required. Ensure that personnel are trained on verifying response within the range of readings provided prior to instrument use.

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

4.2.1.8. Joint Information Center, Granbury

- a. MET: 1.a.1, 1.d.1, 1.e.1, 5.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None
- f. PRIOR ISSUES - UNRESOLVED: None

4.2.2. Risk Jurisdictions

4.2.2.1. Hood County Emergency Operations Center and Traffic/Access Control Point

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 2.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1, 3.d.2, 3.f.1, 5.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: 5.a.1.

ISSUE NO.: 14-09-5a1-A-05

CRITERION: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite officials to notify the public of an emergency situation. (10 CFR Part 50, Appendix E & NUREG-0654, E.1.,4.,5.,6.,7.)

CONDITION: EAS message CP-1 was faxed to EAS radio station WBAP at 1058. The radio station received the message at 1101. Hood County called and confirmed receipt of the message at 1106, and transmission of the EAS message commenced (simulated) at 1108. The sirens were sounded for the evaluator at the Hood County EOC at 1110 and the evaluator confirmed the time with the individual that had demonstrated the siren sounding. Hood County contends that the siren sounding at 1110 was for demonstration purposes only and that the official time for the alert was 1101.

The process for EAS delivery requires that the alert signal precedes the instructional message. Using the timeframes as observed by the evaluator, the instructional message preceded the alert signal and would not have been

in compliance with current guidance. In the timeframes submitted by the county the sirens were sounded at 1101 and the radio station commenced broadcast of the message at 1108. Using these times, the transmission of the instructional message falls outside of the five minute requirement contained in the REP Program Manual (page I-38). Both scenarios result in an EAS process that falls outside of the program standards.

POSSIBLE CAUSE: Hood County did not maintain clear and direct lines of communication between the protective action decision making authority, the preparer of the emergency broadcast message, and the person responsible for activation of the EAS and actual delivery of the message. The REP Program Manual requires that "all parties involved in the alert and notification process should closely coordinate their activities relative to the activation of the alerting system and development and dissemination of the EAS message" (page I-34).

REFERENCE: 10 CFR Part 50, and the Interim REP Program Manual Section I, pages 33-38.

EFFECT: In both scenarios it is probable that members of the public would not have received the instructional message that was broadcast. Using the 1110 timeframe for sounding the alert signal, the message would have been broadcast before members of the public were aware of the need to tune in to the EAS station. Using the 1101 times, the public that was alerted to tune to the EAS station might have believed that the sirens were sounded in error as the EAS message was not broadcast immediately following the alert signal (within five minutes).

RECOMMENDATION: Review the county plans and procedures to ensure the EAS process is in compliance with current REP guidance. Provide training to EOC staff involved on the EAS process as contained in the procedures, and the need to ensure the required timeframes for the EAS process are in compliance with published guidance.

ISSUE NO.: 14-09-5a1-A-06

CRITERION: Activities associated with primary alerting and notification of the

public are completed in a timely manner following the initial decision by authorized offsite officials to notify the public of an emergency situation. (10 CFR Part 50, Appendix E & NUREG-0654, E.1.,4.,5.,6.,7.)

CONDITION: The Emergency Alert System message did not properly identify the state or local government organization and the official with the authority for providing the EAS alert and notification message.

POSSIBLE CAUSE: The use of the sample format identified in the Hood County Manual of Emergency Procedures for incidents involving Comanche Peak Nuclear Power Plant, Attachment P (January, 2009) was not followed. The appropriate template would have ensured the required information was included in the Emergency Alert System message.

REFERENCE: Reference: NUREG-0654, FEMA-REP-1, Rev 1, Appendix 3, Means for Providing Prompt Alerting and Notification of Response Organizations and the Public.

EFFECT: The public would not have been informed regarding what government organization or official has the authority to make protective action decisions.

RECOMMENDATION: The Hood County Emergency Operations Center Public Information Officer should use the sample formats identified in the Manual for Emergency Procedures for incidents at Comanche Peak Nuclear Power Plant, Attachment P (January, 2009). This template has all of the FEMA required information for an Emergency Alert System message. Out-dated templates should be removed from the EOC.

- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: 5.b.1.

ISSUE NO.: 14-07-5b1-A-01

ISSUE: The Hood County Emergency Operations Center (EOC) did not release any messages informing the parents of the Granbury Independent School District (GISD) school evacuations at the Early Precautionary

Decision and General Emergency. Hood County was designated to release the EAS message which was intended to contain information about both counties. No reference or specific information on Somervell County was contained in the EAS message.

CORRECTIVE ACTION DEMONSTRATED: At 1018, the Hood County Judge made the determination to implement a precautionary evacuation of all schools in the impacted area. This decision was relayed to the JIC by telephone by the PIO. The first message from Hood County to EAS radio station WBAP regarding the relocation of school children, was faxed at 1018, received at the radio station at 1028, and simulated broadcast at 1031. This message included the following schools: Mambrino students relocated to Action Middle School; Brawner students relocated to Granbury Middle School; Emma Roberson students relocated to Crossland 9th Grade Center. This is a voluntary evacuation by the School District. This information was also included in the second Press Briefing at the Joint Information Center at 1100.

- f. **PRIOR ISSUES - UNRESOLVED:** None

4.2.2.2. Granbury Independent School District

- a. **MET:** 3.a.1, 3.c.2.
- b. **AREAS REQUIRING CORRECTIVE ACTION:** None
- c. **DEFICIENCY:** None
- d. **NOT DEMONSTRATED:** None
- e. **PRIOR ISSUES - RESOLVED:** None
- f. **PRIOR ISSUES - UNRESOLVED:** None

4.2.2.3. Somervell County Emergency Operations Center and Traffic/Access Control Point

- a. **MET:** 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 2.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1, 3.d.2, 3.f.1.
- b. **AREAS REQUIRING CORRECTIVE ACTION:** 5.a.1.

ISSUE NO.: 14-09-5a1-A-10

CRITERION: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite officials to notify the public of an emergency situation. (10 CFR Part 50, Appendix E & NUREG-0654, E.1.,4.,5.,6.,7.)

CONDITION: The Emergency Alert System message did not properly identify the state or local government organization and the official with the authority for releasing the EAS alert and notification message.

POSSIBLE CAUSE: The use of the sample format identified in the Manual of Emergency Procedures for incidents involving Comanche Peak Nuclear Power Plant, Attachment P (January, 2009) was not used. The appropriate template would have ensured the required information was included in the Emergency Alert System message.

REFERENCE: NUREG-0654, FEMA-REP-1, Rev 1, Appendix 3, Means for Providing Prompt Alerting and Notification of Response Organizations and the Public.

Somervell County Manual of Emergency Procedures for incidents involving Comanche Peak Nuclear Power Plant, Attachment P (January, 2009).

EFFECT: The public would not have understood what government organization or official has the authority to make protective action decisions.

RECOMMENDATION: The Somervell County Emergency Operations Center Public Information Officer should use the sample formats identified in the Manual for Emergency Procedures for incidents at Comanche Peak Nuclear Power Plant, Attachment P (January, 2009). This template includes all of the FEMA required information for an Emergency Alert System message. Out-dated templates should be removed from the EOC.

- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None
- f. PRIOR ISSUES - UNRESOLVED: 5.b.1.

ISSUE NO.: 14-07-5b1-A-03

ISSUE: The Somervell County Emergency Operations Center (EOC) and the Hood County EOC coordinated and designated Hood County to release the EAS message which was intended to contain information on both counties. No reference or specific information on Somervell County was contained in the message. The Somervell County EOC released a supplemental special news broadcast message following the EAS message. The supplemental message did not contain required information concerning the precautionary action decision to evacuate the Glen Rose Independent School District schools.

REASON UNRESOLVED: The parents were not notified of the relocation of school children. The pre-scripted Emergency Alert System (EAS) messages for the relocation of children were never utilized. No supplemental messages were issued by the Somervell Emergency Operations Center (EOC). The news releases issued by the Joint Information Center (JIC) did not contain information on the school children. Therefore, Issue #14-07-5b1-A-03 remains open.

4.2.3. Private Jurisdictions

4.2.3.1. EAS Radio Station WBAP

- a. MET: 5.a.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

ACRONYMS AND ABBREVIATIONS

AAC	Accident Assessment Coordinator
CA	Clean Area
CC	Communications Center
CDE	Committed Dose Equivalent
CPAMPEDE	Comanche Peak Assessment Model Projecting Estimated Dose Evaluation
cpm	Counts per Minute
CPNPP	Comanche Peak Nuclear Power Plant
CS	Communications Supervisor
DDC	Disaster District Committee
DRD	Direct Reading Dosimeter
DVSP	Dinosaur Valley State Park
EAS	Emergency Alert System
EBS	Emergency Broadcasting Station
ECL	Emergency Classification Level
EMD	Emergency Management Director
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
EW	Emergency Worker
FAA	Federal Aviation Administration
FMT	Field Monitoring Team
FMTL	Field Monitoring Team Leader
GE	General Emergency
GISD	Granbury Independent School District
GM	Geiger Muller
GPS	Global Positioning System
HP	Health Physicist
IC	Incident Commander
ICS	Incident Command System
IPZ	Ingestion Planning Zone
ISD	Independent School District
JIC	Joint Information Center
LV	Laboratory Vehicle
MRAP	Mutual Radiological Assistance Program
MRL	Mobile Radiological Laboratory
NCIC	National Crime Information Computer
NMF	Notification Message Form
NRC	Nuclear Regulatory Commission
OSL	Optically Stimulated Luminescence
PAD	Protective Action Decision
PAG	Protective Action Guide
PAR	Protective Action Recommendation

PIO	Public Information Officer
PPE	Personal Protective Equipment
PRD	Permanent Record Dosimeter
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Services
RAR	Radionuclide Analysis Report
RCP	Radiation Control Program
REP	Radiological Emergency Preparedness
RLO	Region Liaison Officer
RO	Radiological Officer
RPC	Radiation Protection Control
SAE	Site Area Emergency
SMRAP	Southern Mutual Radiation Assistance Plan
SOC	State Operation Center
SOP	Standard Operating Procedures
SPV	Sample Preparation Vehicle
TCIC	Texas Crime Information Computer
TEDE	Total Effective Dose Equivalent
UPS	Uninterruptable Power Supply

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEADERS

Radiological Assistance Committee Chair: Lisa Hammond
 Site Specialist: Linda Gee

DATE: 2009-04-07, SITE: Comanche Peak Nuclear Power Plant, TX

LOCATION	EVALUATOR	AGENCY
Governor's Division of Emergency Management-State Operations Center	*Robert Duggleby	ICF
Department of Public Safety, Disaster District 4, Garland	*Bill George	DHS/FEMA
Department of State Health Services, Radiation Control Program - Headquarters	*Adrian Miron	ICF
Department of State Health Services - Radiation Control Program at the Emergency Operations Facility	Johanna Berkey Nan Calhoun *Joseph Keller	FEMA Region X DHS/FEMA ICF
Department of State Health Services - Radiation Control Program Field Monitoring Team One	*Jon Fox	ICF
Department of State Health Services - Radiation Control Program Field Monitoring Team Two	*Michael Henry	ICF
Department of State Health Services Mobile Laboratory	*James Hickey	ICF
Joint Information Center, Granbury	*Bill Bischof Al Lookabaugh Sam Williams	DHS/FEMA ICF FEMA Region 6
Hood County Emergency Operations Center and Traffic/Access Control Point	Brad DeKorte *James McClanahan Carl McCoy Tim Pflieger	DHS/FEMA ICF ICF DHS/FEMA
Granbury Independent School District	*Don Day	USDOT-FAA
Somervell County Emergency Operations Center and Traffic/Access Control Point	*Ernie Boaze David Stuhan Wendy Swygert	ICF ICF ICF
EAS Radio Station WBAP	*Daniel Prevo	ICF
* Team Leader		

Appendix 3

STATE OF TEXAS & COMANCHE PEAK
FEMA EVALUATED EXERCISE – April 7-8, 2009
EVALUATION AREAS AND EXTENT-OF-PLAY (EOP) AGREEMENT

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.a - Mobilization

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. (NUREG-0654, A.4; D.3, 4; E.1, 2; H.4)

Locations:

Governor's Division of Emergency Management (GDEM) State Operation Center (SOC)
Department of Public Safety (DPS) Disaster District 1A Garland (DDC 1A Garland)
Department of State Health Services (DSHS) Radiation Control Program (RCP) Austin
DSHS RCP Emergency Operation Facility (EOF)
Joint Information Center (JIC)
Hood County Emergency Operation Center (EOC) Traffic/Access Control Point (T/ACP)
Somervell County EOC T/ACP

Extent of Play: DSHS personnel will pre-stage at the DSHS staging area in Granbury. The JIC is located in the Granbury City Hall at 116 West Bridge Street Granbury TX, 76048. At Site Area or General Emergency, the SOC will notify agencies that comprise the Emergency Management Council. However, only those agencies on the primary notification list will be requested to send representatives to the SOC. Four (4) DSHS Field Monitoring Teams (FMTs) will be deployed for training purposes. Only (2) FMTs will be evaluated by FEMA. All four DSHS FMTs will need Department of Public Safety (DPS) escorts. Drill evaluators and controllers may be required to travel in separate vehicles due to space restrictions. Disaster District Committee personnel not stationed at DDC 1A Garland may be pre-staged. To allow for maximum amount of play, DSHS JIC staff will pre-stage in the area. An extra dispatcher will be placed on duty at the Hood and Somervell County Sheriff's office to handle the regular workload.

ARCA: None

Sub-element 1.b – Facilities

Criterion 1.b.1: Facilities are sufficient to support the emergency response. (NUREG-0654, H.3)

Locations:

DDC 1A Garland

Extent of Play: None

ARCA: None

Sub-element 1.c - Direction and Control

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible.

(NUREG-0654, A.1.d; A 2.a., b)

Locations:

SOC

DDC 1A Garland

DSHS RCP Austin

DSHS RCP EOF

Hood County EOC T/ACP

Somervell County EOC T/ACP

Extent of Play: None

ARCA: None

Sub-element 1.d - Communications Equipment

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations. (NUREG-0654, F.1, 2)

Locations:

SOC

DDC 1A Garland

DSHS RCP Austin

DSHS RCP EOF

DSHS RCP Field Teams (FTs)

JIC

Hood County EOC T/ACP

Somervell County EOC T/ACP

Extent of Play: A controller phone cell will be established to ensure appropriate communications are accomplished and to ensure fluid exercise play.

ARCA: None

Sub-element 1.e - Equipment and Supplies to Support Operations

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654, H.7, J.10.a, b, e; J. 11; K.3.a)

Locations:

SOC

DDC 1A Garland

DSHS RCP Austin

DSHS RCP EOF

DSHS RCP FTs

DSHS Mobile Lab

JIC

Hood County EOC T/ACP

Somervell County EOC T/ACP

Extent of Play: Instrument calibration will be specific to each manufacturer's specification. Equipment not required for demonstrating exercise evaluation criterion may be left at the staging area to allow for additional space within the vehicles. The availability of silver zeolite filters will be demonstrated. However, charcoal filters are authorized in lieu of silver zeolite filters for exercise purposes. Access to Personal Protective Equipment (PPE) clothing will be demonstrated; however it will not be worn. The use of PPE will be demonstrated in accordance with applicable procedures. Field Team PPE requirements will consist of booties and gloves. *Request the option to correct issues immediately (Correction-on-the-spot).

ARCA: None

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.a – Emergency Worker Exposure Control

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to insure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654, J.10.e, f; K.4)

Locations:

DSHS RCP EOF

Hood County EOC T/ACP

Somervell County EOC T/ACP

Extent of Play: If the scenario does not warrant a discussion on either the authorization to administer KI or emergency worker (EW) exposure exceeding administrative limits, then the criterion will be accomplished through an inject at the EOF. Decision making for KI and EW exposure level above administrative limits is done at the EOF and the local EOC. According to the State policy, KI is not considered for the general public.

ARCA: None

Sub-element 2.b. - Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions. (NUREG-0654, I.8, 10; Supplement 3.)

Locations:

DSHS RCP Austin

DSHS RCP EOF

Extent of Play: DSHS RCP Headquarters is located in Austin, TX on the first floor of the Exchange Building Room N110 at 8407 Wall Street Austin TX, 78754. DSHS HQ will provide Accident Assessment while the team is in route to the incident site, and will remain in contact until they arrive. If the CPNPP EOF has been staffed by DSHS it will be the only facility evaluated for this criterion.

ARCA: None

Criterion 2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy). (NUREG-0654, J.9; J.10.f, m)

Locations:

DSHS RCP

DSHS RCP EOF

Hood County EOC T/ACP

Somervell County EOC T/ACP

Extent of Play: The protective action decisions that result from this decision-making process will not be implemented. No member of the public will be relocated.

ARCA: None

Sub-element 2.c - Protective Action Decisions Consideration for the Protection of Special Populations

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups. (NUREG-0654, J.9; J.10.d,e)

Locations:

Hood County EOC T/ACP

Somervell County EOC T/ACP

Extent of Play: Protective action decisions for special needs individuals will be considered at the County EOCs; however, actual demonstration of protective actions will not be performed. Hood and Somervell County EOC staff will demonstrate this evaluation area through discussion and showing the evaluator a roster of special needs individuals within the 10-mile emergency planning zone.

ARCA: None

Sub-element 2.d - Radiological Assessment and Decision Making for the Ingestion Pathway

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the OROs planning criteria. (NUREG-0654, J.9, 11)

Locations:

DSHS RCP EOF

Extent of Play: Hood and Somervell County EOCs will only perform a coordination role with DSHS RCP per state policy. This will be demonstrated during the day two tabletop portion of the exercise and will consist of discussions and calculations performed by the Accident Assessment team using EPA 400 as guidance. No play will occur past the 50-mile IPZ regardless of the scenario.

ARCAs: None

Sub-element 2.e. — Radiological Assessment and Decision Making Concerning Relocation, Reentry, and Return

Criterion 2.e.1: Timely relocation, reentry, and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the ORO's plan and/or procedures. (NUREG-0654, I.10; J.9; M.1)

Locations:

Hood County EOC T/ACP

Somervell County EOC T/ACP

Extent of Play: Hood and Somervell County EOC staff will demonstrate this evaluation criterion during a tabletop exercise after the plume phase exercise. The state will assist as necessary to facilitate the tabletop and provide information necessary for the counties.

During the day 2 tabletop, the facilitator will brief the county EOCs . The participating counties will be staffed, at a minimum with the following positions: County Judge Emergency Management Coordinator, and County Sheriff. All counties will be briefed and areas of concern will be discussed. Counties will discuss relocation, re-entry, return, and resource issues as they pertain to their individual locations. No play will occur past the 50-mile IPZ regardless of the scenario.

ARCA: None

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.a - Implementation of Emergency Worker Exposure Control

Criterion 3.a.1: 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.a, 3.b)

Locations:

DSHS RCP EOF

DSHS RCP FTs

DSHS Mobile Lab

Hood County EOC T/ACP

Somervell County EOC T/ACP

Extent of Play: Personnel located at facilities outside the 10-mile EPZ and not reporting to a location within the 10-mile EPZ will not be issued dosimetry per County plans and procedures. Dosimetry for the bus driver will only be issued in the event he/she becomes an EW. EOC workers will demonstrate proper monitoring of at least one potentially contaminated EW. * Request the option to correct issues immediately (Correction-on-the-spot).

ARCA: None

Sub-element 3.c - Implementation of Protective Actions for Special Populations

Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions. (NUREG-0654, E.7., J.9., 10.c.d.e.g.)

Locations:

Hood County EOC T/ACP

Somervell County EOC T/ACP

Extent of Play:

Contact with facilities/individuals will be simulated. Protective actions for special needs individuals will be considered at the Hood and Somervell EOCs, however, actual demonstration of protective actions will not be performed. Contact with mobility impaired and transportation dependent will be simulated.

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ARCA: None

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools. (NUREG-0654, J.10.c, d, g)

Locations:

Granbury Independent School District

Extent of Play: A bus driver will travel to the school being evacuated and will discuss the travel route to the reception center and demonstrate communications. No actual transportation of student evacuees will take place and the demonstration will terminate at the school. This demonstration will be conducted out of sequence from the remainder of the exercise at the earliest available time for the bus driver after completion of his/her route. A school official will be available for interview. * Request the option to correct issues immediately (Correction-on-the-spot).

ARCA: None

Sub-element 3.d. - Implementation of Traffic and Access Control

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel. (NUREG-0654, J.10.g, j)

Locations:

Hood County EOC T/ACP

Somervell County EOC T/ACP

Extent of Play: A controller inject during the exercise will identify one (1) T/ACP location per county. The controller inject will not interfere with the T/ACP decision-making process. After the two (2) T/ACPs locations are identified they will be relocated to Squaw Creek Park. Both DSHS and the law enforcement officer will be co-located at Squaw Creek for the exercise. Both of the T/ACPs, one per county, will be evaluated. Any contacts with emergency service providers (i.e. wreckers) will be simulated but not logged. The law enforcement officer assigned to the T/ACPs will be briefed at the county EOC, and dispatched to the agreed upon location from the EOC. *Request the option to correct issues immediately (Correction-on-the-spot).

ARCA: None

Criterion 3.d.2: Impediments to evacuation are identified and resolved. (NUREG-0654, J.10. k)

Locations:

Hood County EOC T/ACP

Somervell County EOC T/ACP

Extent of Play: A controller inject will be used to initiate the demonstration for this criterion.

ARCA: None

Sub-element 3.e - Implementation of Ingestion Pathway Decisions

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk, and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions. (NUREG-0654, J.9,11)

Locations:

SOC

DSHS RCP EOF

Extent of Play: The Governor's Division of Emergency Management (GDEM) will send one or more representatives to the Somervell Exposition Center to simulate the State Operations Center for the Ingestion Pathway phase of the exercise. DSHS RCP, Hood County EOC, and Somervell County EOC will also send representatives to the Somervell Exposition Center to participate in the Ingestion Pathway phase of the exercise during the day 2 tabletop. No play will occur past the 50-mile IPZ regardless of the scenario.

ARCA: None

Criterion 3.e.2: Appropriate measures, strategies, and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk, and agricultural production. (NUREG-0654, J.9,11)

Locations:

SOC

DSHS RCP EOF

Extent of Play: The Governor's Division of Emergency Management (GDEM) will send one or more representatives to Somervell Exposition Center in Glen Rose, TX to simulate the State Operations Center for the Ingestion Pathway phase of the exercise. The DSHS RCP, and both Hood and Somervell County EOCs will also send representatives to Somervell Exposition Center to participate in the Ingestion Pathway phase of the exercise. Public Notification through the GDEM will be in the form of press releases. The DSHS will prepare press releases for selected days of the Ingestion Pathway Exercise that will include instructions to the agricultural community and the public regarding implementation of protective action decisions. The State, County, and CPNPP spokespersons will strategize messages (based on the decisions) that would be presented at the Joint Information Center. The JIC will not be activated on the day of the Ingestion Pathway Exercise; therefore, the JIC will not issue any press releases during the Ingestion Pathway Exercise. Press releases on protective action decisions and instructions to the public about relocation, reentry, and return decisions may be combined.

ARCAs: None

Sub-element 3.f - Implementation of Relocation, Reentry, and Return Decisions

Criterion 3.f.1: Decisions regarding controlled re-entry of emergency workers and relocation and return of the public are coordinated with appropriate organizations and implemented. (NUREG-0654, M.1, 3)

Locations:

SOC

Hood County EOC T/ACP

Somervell County EOC T/ACP

Extent of Play: Hood and Somervell County EOC staff will demonstrate this evaluation criterion during a tabletop exercise after the plume phase exercise. The state will assist as necessary to facilitate the day 2 tabletop, and provide information necessary for the counties. A controller inject will stimulate the decision making process for relocation, reentry, and return. No play will occur past the 50-mile IPZ regardless of the scenario.

ARCA: None

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a - Plume Phase Field Measurement and Analyses

Criterion 4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure and to sample airborne radioiodine and particulates. (NUREG-0654, H.10; I.7, 8, 9)

Locations:

DSHS RCP FTs

Extent of Play: Equipment not required for demonstrating exercise evaluation criterion may be left at the staging area to allow for additional space within the vehicle. Charcoal filters are authorized in lieu of silver zeolite filters for exercise purposes but FMTs will demonstrate silver zeolite filter availability.

ARCA: None

Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and control radiation exposure. (NUREG-0654, H.12; I.8, 11; J.10.a)

Locations:

DSHS RCP EOF

Extent of Play: DSHS FMTs will not traverse the plume, and only CPNPP Field Teams will take measurements at the centerline of the plume.

ARCA: None

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any

significant amount of radioactivity has been collected on the sample media. (NUREG-0654, I.9)

Locations:

DSHS RCP FTs

Extent of Play: *Request the option to correct issues immediately (Correction-on-the-spot).

ARCA: None

Sub-element 4.b – Post Plume Phase Field Measurements and Sampling

Criterion 4.b.1: The field teams demonstrate the capability to make appropriate measurements and to collect appropriate samples (for example, food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision-making. (NUREG-0654, I.8; J.11)

Locations:

DSHS RCP FTs

Extent of Play: This criterion may be demonstrated out of sequence at the termination of the day 1 plume phase exercise at an agreed upon time. *Request the option to correct issues immediately (Correction-on-the-spot).

ARCAs: None

Sub-element 4.c – Laboratory Operations

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions. (NUREG-0654, C.3; J.11)

Locations:

DSHS Mobile Lab

Extent of Play: *Request the option to correct issues immediately (Correction-on-the-spot).

ARCAs: None

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.a - Activation of the Prompt Alert and Notification System

Criterion 5.a.1: Activities associated with primary alerting and notifications of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP guidance. (10 CFR Part 50, Appendix E.IV.D; NUREG-0654, E.5, 6, 7)

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Locations:

Hood County EOC T/ACP
Somervell County EOC T/ACP
EAS Radio Station WBAP

Extent of Play: Emergency Alert System (EAS) messages will be sent to the EAS radio stations; however broadcasts will be simulated. Siren activation will be simulated and discussed.

ARCA: None

Sub-element 5.b - Emergency Information and Instructions for the Public and the Media
Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner. (NUREG-0654, E. 5,7; G.3.a; G.4.c)

Locations:

JIC
Hood County EOC T/ACP
Somervell County EOC T/ACP

Extent of Play: Messages will not be broadcast over commercial radio or television. Four (4) telephones will be staffed at the JIC for the public inquiry demonstration. A phone cell and mock media will inject rumors. The Governor's Division of Emergency Management (GDEM) will not make any emergency information releases.

ARCA: Hood County EOC T/ACP #14-07-5b1-A-01, Somervell County EOC T/ACP #14-07-5b1-A-03

GENERAL EXTENT-OF-PLAY (EOP):

1. With regard to last minute additions or changes to any previously approved Extent-of-Play, all suggested changes must be forwarded to the RAC Chair for approval.
2. The goal of all offsite response organizations (ORO) is to protect the health and safety of the public. This goal is achieved through the execution of appropriate plans and procedures. It is recognized that situations may arise that could limit the organizations in the exact execution of these plans and procedures.
3. As a statement of fact, no ORO will deliberately deviate from its plans and procedures with the intent of avoiding responsibility.
4. Federal involvement will not be evaluated.
5. The exercise may be suspended or terminated due to a real emergency situation.
6. * Correction-on-the-spot is defined in FEMA Policy Paper, Strategic Review Steering Committee, Initiative 1.5, Correct Issues immediately, effective March 31, 2000, signed by Kay C. Goss, CEM, Associate Director for Preparedness, Training, and Exercises.
7. No play will occur past the 50-mile IPZ regardless of the scenario.

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Appendix 4

CPNPP Graded Exercise Narrative Summary

This scenario is for Comanche Peak Nuclear Power Plant Unit 1 & 2. The event will begin with a loss of 1E electrical power. Then there will be a fire in the Service Water Structure affecting a Service Water pump. A small but significant steam release will occur from a Steam Generator Safety Valve. A Reactor Coolant Pump will trip causing a reactor trip. At this point there will also be indications of failed fuel, loose parts in a Steam Generator, and two stuck control rods. A tube leak will occur on the affected Steam Generator. The main event is a tube rupture in a Steam Generator with the Safety Valve sticking partially open resulting in a release of radioactive material to the environment.

The exercise is scheduled to begin at 7:30 a.m., Tuesday April 7, 2009.

METEOROLOGICAL CONDITIONS

Temperature is 65 degrees with wind out of the westsouthwest at 4 mph. Temperature will increase to about 75 degrees by the end of the exercise. Wind speed will be light to moderate throughout the day. Stability Class is 'B'. Wind is from 230*.

EVENT SUMMARY

- XST1 (XST2 is out of service, Active LOCAR) will lose power, causing the 1E busses to switch over to the Diesel Generators. After 15 minutes, this warrants the declaration of a NOTIFICATION OF UNUSUAL EVENT (EPP-201, Chart 5).
- A fire occurs in the Service Water Intake Structure causing one of the Service Water Pumps to trip. The fire lasts greater than 15 minutes. This warrants the declaration of an ALERT (EPP-201, Chart 9).
- A Reactor Coolant Pump trip. This causes a reactor trip. During the trip two control rods become stuck, there is an indication of loose parts in a Steam Generator, and there is an indication of failed fuel. A tube leak occurs on the Steam Generator. A SITE AREA EMERGENCY is warranted due to the sustained steam leak from the Steam Generator Safety Valve and indications of failed fuel (EPP-201, Chart 3). Expect the ERO to take actions warranted by procedure for a SITE AREA EMERGENCY. **Site evacuation will not be demonstrated.**
- The Steam Generator tube leak escalates to a tube rupture and a Safety Valve sticks partially open. This warrants the declaration of a GENERAL EMERGENCY (EPP-201, Chart 3). Expect the ERO to take actions warranted by procedure for a GE and to make the initial protective action recommendation based on plant conditions to be 'Evacuate zone 2A and affected sectors down wind to 5 miles and Shelter affected downwind sectors between 5 and 10 miles.'
- Terminate the exercise around 1430.

Appendix 4
Timeline

7.0 Onsite Exercise Guide

TIME	MESSAGE NUMBER	FROM	TO	LOCATION	SUMMARY	RESPONSE	NOTES
0700	PRE-EX	Exercise Lead Controller	"all" facilities		Send pre-exercise message to list 1 and list 3	None	
0700	1	CR Lead Controller	Shift Manager	LORT Classroom	Brief the crew		All events refer to Unit 1.
0730				Simulator	Initial conditions established for the operating crew.		Ensure crew has had a chance to review the control boards.
0735 35				Simulator	Loss of XST1 (XST2 is out of service, Active LOCAR)		Ref EPP-201, Chart 5, Block 5.A-t, 5.Bf= NOUE
0750	2	Simulator Lead Controller	Shift Manager	Simulator	CONTINGENCY MESSAGE: Conditions warrant declaration of a NOUE		Inform the Exercise Lead Controller if this message is passed.
0815				Simulator	Alarm indicating a fire in the SWIS	Fire Brigade Respond	SSWP 2-01 trips 15 minutes after fire alarm
0830				Simulator	Fire has lasted >15 minutes affecting safety system operability	This warrants declaration on as ALERT	Ref EPP-201, Chart 9, block 9.H - t, 9.E-t = ALERT
0835		Fire Brigade	Simulator		Fire is out		

**Appendix 4
Timeline**

7.0 Onsite Exercise Guide

TIME	MESSAGE NUMBER	FROM	TO	LOCATION	SUMMARY	RESPONSE	NOTES
0845	3	Simulator Lead Controller	Shift Manager / Emergency Coordinator	Simulator	<u>CONTINGENCY MESSAGE:</u> Plant Conditions warrant declaration of an ALERT.		Inform the Exercise Lead Controller if this message is passed.
0915	4	Simulator Lead Controller	TSC Manager	Simulator	<u>CONTINGENCY MESSAGE:</u> The TSC Manager should relocate to the TSC.	Action intended to keep the scenario on the timeline.	Ensure TSC is staffed and ready to activate.
0950	5			Simulator	1-02 RCP 1 trip, Rx Trip, Loose Part Monitor Alarm #2 S/G, 2 Stuck rods, indications of failed fuel	Chemistry report of rad level increase on recirc line	Coupling Bolts Sheared
0950				Simulator	20 gpm tube leak on #2 S/G	This warrants declaration of a SAE	Ref'EPP-201, Chart 3, Block 3.A-t, 3.B-f, 3.F-t, 3.G-t, 3.H-t = SAE
1005	6	Facility Lead Controller	Emergency Coordinator	TSC or EOF	<u>CONTINGENCY MESSAGE:</u> Plant Conditions warrant declaration of a Site Area Emergency.	Implement the Emergency Plan commensurate with a Site Area Emergency. Evacuation should NOT be performed. Control Room / TSC personnel to sound alarm and read message 6.	Inform the Exercise Lead Controller if this message is passed. Pass site evacuation message after the TSC/EOF Manager has prepared one from the Manager PAD.

**Appendix 4
Timeline**

7.0 Onsite Exercise Guide

TIME	MESSAGE NUMBER	FROM	TO	LOCATION	SUMMARY	RESPONSE	NOTES
1045				Simulator	Tube Rupture > capacity of CCP's following the SI, #2 S/G Safety Valve Fails Open	This warrants declaration of a GE	Ref EPP-201, chart 3; 3.A-t, 3.B-t, 3.C-t, 3.D-t = GENERAL EMERGENCY Initial Protective action recommendation should be 'evacuate 2 mile radius (2A) and downwind to 5 miles (2B, 1A, 2D, 2E, 4A, 1B). Shelter from 5 to 10 miles downwind (1C, 2G, 2F)'
37							
1100	7	Facility Lead Controller	TSC Manager	TSC	<u>CONTINGENCY MESSAGE:</u> The conditions warrant declaration of a GENERAL EMERGENCY.	Implement the Emergency Plan commensurate with a GENERAL EMERGENCY.	Inform the Exercise Lead Controller if this message is passed.
1430	8	Exercise Lead Controller	All	All	The exercise is terminated at the direction of the lead controller.	All personnel should secure exercise activities and prepare for facility de-briefs.	Pass only with permission of the exercise lead controller. All onsite & offsite objectives have been evaluated.

APPENDIX 5

PLANNING ISSUES

1. Governor's Division of Emergency Management-State Operations Center

ISSUE NO.: 14-09-1d1-P-01

CONDITION: Texas Department of State Health Services (DSHS) Headquarters did not receive the fax notification from Comanche Peak Nuclear Power Plant. In addition, no follow-up phone calls were made to DSHS to confirm that notification was received. Because the team was pre-staged they were able to contact players in other locations to determine the status of the simulated emergency. In a real event, it is unclear as to how long the emergency would have gone on before DSHS received notification.

POSSIBLE CAUSE: The Governor's Division of Emergency Management did not contact DSHS (for Notification of Unusual Event and Alert) to confirm that DSHS had received the notification.

REFERENCE: NUREG-0654 F.1, 2;
Interim REP Program Manual Criterion 1.d.1

EFFECT: Without a way to confirm that all offsite recipients received the notification, DSHS could have been delayed in making important Protective Action Recommendations (PARs) that would protect the safety of the public.

RECOMMENDATION: Update the Nuclear Power SOP to require that a confirmation call be made by the Governor's Division of Emergency Management to the Department of State Health Services for each Emergency Classification Level (ECL) notification. Currently, procedures state that (for Unusual Event and Alert) notification will be made by Division of Emergency Management as instructed by the State Coordinator or ASC/OP (see page C-4-A-2). The procedure should require a notification call to DSHS for each ECL notification received rather than leave it pending instruction.

2. Hood County Emergency Operations Center and Traffic/Access Control Point

ISSUE NO.: 14-09-3a1-P-03

CONDITION: There is no existing form in the current Radiological Officer Standard Operating Procedures for the emergency worker (EW) on which to record the dosimeter readings. The EW was not issued a form to formally record the exposure levels while out in the field. During the Radiological Officer Briefing, EWs were instructed to read and record their dosimeters every 30 minutes.

POSSIBLE CAUSE: There is no formal EW Exposure Form available for use for EWs to record the dosimeter readings.

REFERENCE: NUREG-0654 Planning Standard K.3.a and b;
Interim REP Program Manual Criterion 3.a.1

EFFECT: Records are not maintained in order to provide a official record of possible exposures.

RECOMMENDATION: Create and provide a form for the EWs to record individual dosimetry readings. Another possible option is for the Sheriff's Dispatch Center to obtain and record the EWs dosimetry readings via radio.

3. Hood County Emergency Operations Center and Traffic/Access Control Point

ISSUE NO.: 14-09-3f1-P-04

CONDITION: The Manual of Emergency Procedures for Incidents Involving Comanche Peak Nuclear Power Plant (CPNPP) dated January, 2009 for Somervell and Hood Counties do not contain implementing procedures for relocation, re-entry, and return of the population following an evacuation as a result of a radiological release from a nuclear power plant.

POSSIBLE CAUSE: Implementing procedures are not included in the Manual of Emergency Procedures for Incidents Involving CPNPP dated January, 2009.

REFERENCE: NUREG-0654 M.1,3;

Interim REP Program Manual Criterion 3.f.1

EFFECT: Emergency workers were unable to effectively perform their responsibilities for this element.

RECOMMENDATION: Update the Manual of Emergency Procedures for Incidents Involving The Comanche Peak Nuclear Power Plant dated January, 2009 to include the appropriate procedures for criterion 3.f.1 as required by NUREG-0654/FEMA-REP-1.

4. Somervell County Emergency Operations Center and Traffic/Access Control Point

ISSUE NO.: 14-09-3a1-P-07

CONDITION: There is no existing form in the current Radiological Officer Standard Operating Procedures for the Emergency Worker (EW) on which to record the dosimeter readings. The EW was not issued a form to formally record the exposure levels while out in the field. During the Radiological Officer Briefing, EWs were instructed to read and record their dosimeters every 30 minutes.

POSSIBLE CAUSE: There is no formal Emergency Worker Exposure Form available for use for Emergency Workers to record the dosimeter readings.

REFERENCE: NUREG-0654 K.3.a and b;
Interim REP Program Manual Criterion 3.a.1

EFFECT: Records would not be maintained in order to provide a official record of possible exposures.

RECOMMENDATION: Develop and provide a form for emergency workers to record individual dosimetry readings.

5. Somervell County Emergency Operations Center and Traffic/Access Control Point

ISSUE NO.: 14-09-3b1-P-08

CONDITION: The Radiological Officer issued potassium iodide (KI) to an Emergency Worker but did not document that the recipient received KI in accordance with the Manual of Emergency Procedures for Incidents Involving Comanche Peak Nuclear Power Plant, Attachment B (January 2009).

POSSIBLE CAUSE: There is no formal log for recording that an Emergency Worker was issued Potassium Iodide (KI).

REFERENCE: NUREG-0654, E.7., J.10.e.f.;
Interim REP Program Manual Criterion 3b1

EFFECT: The Radiological Officer would not be able to identify who received potassium iodide (KI) and who has not during an actual event that required response by numerous emergency workers.

RECOMMENDATION: Add a column on the Dosimetry Issue Log that will allow the Radiological Officer to formally record who receives potassium iodide (KI). This could be a check box just to indicate if KI was issued with dosimetry.

6. Somervell County Emergency Operations Center and Traffic/Access Control Point

ISSUE NO.: 14-09-3f1-P-09

CONDITION: The Manual of Emergency Procedures for Incidents Involving The Comanche Peak Nuclear Power Plant dated January, 2009 for Somervell and Hood Counties does not contain implementing procedures for Relocation, Reentry, and Return of the population following an evacuation as a result of a radiological release from a nuclear power plant.

POSSIBLE CAUSE: Implementing procedures are not included in The Manual of Emergency Procedures for Incidents Involving The Comanche Peak Nuclear Power Plant dated January, 2009.

REFERENCE: NUREG-0654, M.1,3;
Interim REP Program Manual Criterion 3.f.1

EFFECT: Emergency workers were unable to effectively perform their responsibilities for this element.

RECOMMENDATION: Update the Manual of Emergency Procedures for Incidents Involving The Comanche Peak Nuclear Power Plant dated January, 2009 to include the appropriate procedures for criterion 3.f.1 as required by NUREG-0654/FEMA-REP-1.