

# After Action Report/ Improvement Plan

Exercise Date – August 16, 2017

Radiological Emergency Preparedness (REP) Program



**FEMA**

*Published: October 19, 2017*



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# After Action Report/Improvement Plan

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## EXECUTIVE SUMMARY

On August 16, 2017 a Radiological Emergency Preparedness (REP) exercise was conducted at Comanche Peak Nuclear Power Plant (CPNPP) located near Glen Rose, Texas. The previous exercise at this site was conducted on June 10, 2015. 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 16, 2017, there have been fifteen 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 and the results of a medical drill conducted on September 20, 2017. The state and local organizations except where noted in this report demonstrated knowledge of the emergency plans and procedures and properly implemented them. There was one Level Two finding that was corrected on the spot and there were no plan issues identified during this exercise.

## SECTION 1: EXERCISE OVERVIEW

### 1.1 Exercise Details

**Exercise Name**

Plume 2017-08-16

**Type of Exercise**

Plume

**Exercise Date**

August 16, 2017

**Program**

Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

**Scenario Type**

Plume

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### **1.3 Participating Organizations**

Agencies and organizations of the following jurisdictions participated in the exercise:

#### **State Jurisdictions**

- Texas Department of Public Safety
- Texas Department of State Health Services
- Texas Division of Emergency Management
- Texas Commission on Environmental Quality
- Texas Department of Agriculture
- Texas Animal Health Commission
- Texas Parks and Wildlife
- Texas Forest Service

#### **Risk Jurisdictions**

- Hood County
- Somervell County
- City of Glen Rose
- City of Granbury

#### **Support Jurisdictions**

- City of Fort Worth Fire and Emergency Management
- North Central Texas Council of Governments
- Cleburne Fire Department

#### **Private Organizations**

- American Red Cross
- Comanche Peak Nuclear Power Plant (Luminant)
- Radio Station WBAP
- Texas Health Harris Methodist Hospital Cleburne



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

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

The DHS/FEMA Region VI Office evaluated the exercise on August 16, 2017 and the medical drill on September 20, 2017 to assess the capabilities of the local emergency preparedness organizations in implementing their Radiological Emergency Response Plans and Procedures to protect the public health and safety during a radiological emergency involving Comanche Peak Nuclear Power Plant (CPNPP). The purpose of this report is to represent the results of the findings on the performance of the offsite response organizations during a simulated radiological emergency.

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

Exercise objectives and Capabilities/REP Criteria selected to be exercised are discussed in the Exercise Plan (ExPlan), Appendix D.

### **2.3 Scenario Summary**

The exercise scenario was developed to evaluate the response of the exercise participants to an incident requiring response to a simulated emergency at the Comanche Peak Nuclear Power Plant (CPNPP). The scenario provided for the evaluation of the Texas Division of Emergency Management (TDEM), Texas Department of State Health Services-Radiation Control Program (DSHS-RCP), and Hood and Somervell Counties to the emergency at Comanche Peak.

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

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

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the August 16, 2017 evaluation to test the offsite emergency response capabilities of local governments in the 10-mile Emergency Planning Zone surrounding Comanche Peak Nuclear Power Plant.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria delineated in the exercise evaluation areas as outlined in the Radiological Emergency Preparedness (REP) Program Manual, dated January 2016. Detailed information on the scenario, exercise evaluation area criteria, and the extent of play agreements used in this exercise are found in Appendix D of this report.

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

The matrix presented in Table 3.1 on the following page, presents the status of all exercise evaluation area criteria that were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities.

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Tables 3.1 - Summary of Exercise Evaluation

**Table 3.1a - Exercise Evaluation by Classification**

Date: 8/16/2017 Site: Comanche Peak Nuclear Power Plant			
Location Abbreviation	Criteria Title	Criteria	Classification
TX Health	Contaminated Injured Transport & Care	6d1	L2-Corrected*

\*L2 – Level 2 Finding

**Table 3.1b – Exercise Evaluation – Criteria Met**

Date: 8/16/2017 Site: Comanche Peak Nuclear Power Plant		
Location Abbreviation	Criteria Title	Criteria
TX Health	Contaminated Injured Transport & Care	6d1
TX Health	Equipment and Supplies	1e1
TX Health	EW Exposure Control Implementation	3a1
Som. Co. EMS	Equipment and Supplies	1e1
Som. Co. EMS	EW Exposure Control Implementation	3a1
Som. Co. EMS	Contaminated Injured Transport & Care	6d1
Som. Co. EOC	Communications Equipment	1d1
Som. Co. EOC	Equipment and Supplies	1e1
TDEM-SOC	Mobilization	1a1
TX FMT 2	Communications Equipment	1d1
DSHS-HQ	Mobilization	1a1
TX FMT 2	Equipment and Supplies	1e1
DSHS-HQ	Direction and Control	1c1
DSHS-HQ	Communications Equipment	1d1
DDC Hurst	Communications Equipment	1d1
DSHS-HQ	Equipment and Supplies	1e1
DSHS-HQ	PARs	2b1
DSHS-EOF	Communications Equipment	1d1
DSHS-EOF	EW Exposure Control Decisions	2a1
DSHS-EOF	EW Exposure Control Implementation	3a1
DSHS-EOF	Mobilization	1a1
DSHS-EOF	Direction and Control	1c1
Som. Co. EOC	EW Exposure Control Decisions	2a1
Som. Co. EOC	Mobilization	1a1
TDEM-SOC	Communications Equipment	1d1
Som. Co. EOC	EW Exposure Control Implementation	3a1

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Som. Co. EOC	KI Public/Institutionalized	3b1
Som. Co. EOC	TACP Establishment	3d1
JIC	Mobilization	1a1
TX FMT 1	Communications Equipment	1d1
TX FMT 1	Equipment and Supplies	1e1
TX FMT 1	EW Exposure Control Implementation	3a1
TX FMT 1	Field Team Operations	4a3
Som. Co. EOC	Initial Alert & Notification	5a1
Som. Co. EOC	Impediments to Evacuation	3d2
Hood Co. EOC	Mobilization	1a1
Hood Co. EOC	Initial Alert & Notification	5a1
DSHS-EOF	Field Team Management	4a2
DDC Hurst	Mobilization	1a1
Hood Co. EOC	Direction and Control	1c1
TX FMT 2	EW Exposure Control Implementation	3a1
DDC Hurst	Direction and Control	1c1
TX FMT 2	Field Team Operations	4a3
JIC	Communications Equipment	1d1
DSHS-EOF	Equipment and Supplies	1e1
TDEM-SOC	Equipment and Supplies	1e1
TDEM-SOC	Direction and Control	1c1
Hood Co. EOC	PADs	2b2
Hood Co. EOC	Communications Equipment	1d1
Som. Co. EOC	Direction and Control	1c1
Hood Co. EOC	Equipment and Supplies	1e1
Hood Co. EOC	EW Exposure Control Decisions	2a1
Hood Co. EOC	EW Exposure Control Implementation	3a1
Hood Co. EOC	KI Public/Institutionalized	3b1
JIC	Equipment and Supplies	1e1
EAS-WBAP	Initial Alert & Notification	5a1
DDC Hurst	Equipment and Supplies	1e1
Som. Co. EOC	Subsequent Public Information	5b1
Hood Co. EOC	Subsequent Public Information	5b1
Som. Co. EOC	PADs	2b2
Som. Co. EOC	PADs for Disabled/Functional Needs	2c1
JIC	Subsequent Public Information	5b1
Hood Co. EOC	TACP Establishment	3d1
Hood Co. EOC	PADs for Disabled/Functional Needs	2c1

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Hood Co. EOC	Impediments to Evacuation	3d2
DSHS-EOF	PARs	2b1

### **3.3 Criteria Evaluation Summaries**

#### **3.3.1 State Jurisdictions**

**3.3.1.1 Department of Public Safety, Disaster District Hurst (Fort Worth Joint EOC)**

**3.3.1.2 Department of State Health Services - Radiation Control Program at the Emergency**

**3.3.1.3 Department of State Health Services - Radiation Control Program Field Monitoring**

**3.3.1.4 Department of State Health Services - Radiation Control Program Field Monitoring**

**3.3.1.5 Department of State Health Services, Radiation Control Program - Headquarters**

**3.3.1.6 Joint Information Center, Granbury**

**3.3.1.7 Texas Division of Emergency Management-State Operations Center**

In summary, the status of DHS/FEMA criteria for the State jurisdictions are as follows:

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

#### **3.3.2 Risk Jurisdictions**

**3.3.2.1 Hood County Emergency Operations Center**

**3.3.2.2 Somervell County Emergency Medical Service**

**3.3.2.3 Somervell County Emergency Operations Center**

In summary, the status of DHS/FEMA criteria for the Risk jurisdictions are as follows:



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

**3.3.3 Private Jurisdictions**

**3.3.3.1 EAS Radio Station WBAP**

**3.3.3.2 Texas Health Harris Methodist Hospital Cleburne**

In summary, the status of DHS/FEMA criteria for the Private jurisdictions are as follows:

- a. LEVEL 1 FINDINGS: NONE
- b. LEVEL 2 FINDINGS: NONE (6d1 corrected on the spot at Texas Health Harris Methodist Hospital Cleburne)
- c. PLAN ISSUES: NONE
- d. PRIOR ISSUES – RESOLVED: NONE
- e. PRIOR ISSUES – UNRESOLVED: NONE

## **SECTION 4: CONCLUSION**

Based on the results of the exercise, the offsite radiological emergency response plans and preparedness for the State of Texas and the affected local jurisdiction 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 Comanche Peak Nuclear Power Plant will remain in effect.

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## APPENDIX A: TIMELINE

Emergency Classification Level or Event	Time Utility Declared	TDEM/SOC	DISASTER DISTRICT	DSHS EOF	CPNPP JIC	HOOD COUNTY EOC	SOMERVELL CO. EOC	WBAP RADIO STATION
Unusual Event	0748	0826	0814	0835	N/A	0800	0801	N/A
Alert	0820	0830	0830	0835	0838	0827	0825	N/A
Site Area Emergency	0950	1007	1007	0950	0955	1002	1002	N/A
General Emergency	1026	1055	1040	1029	1029	1036	1026	N/A
Simulated Rad. Release Started	1026	1026	1040	1031	1029	1036	1026	N/A
Simulated Rad. Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		0826	0845	1022	0900	0900	0847	N/A
Declaration of State of Emergency		N/A	N/A	N/A	N/A	1029	1015	N/A
Exercise Terminated		1240	1245	1240	1241	1241	1220	N/A
Early Precautionary Action: Somervell County Evacuate 2A (SAE)		N/A	N/A	N/A	N/A	N/A	1009	1017
Early Precautionary Action: Evacuate Schools – Hood County and Somervell Counties		N/A	N/A	N/A	N/A	1046	1111	N/A
1st Protective Action Decision: Evacuate: 2A, 4A, 1A, 1B, 4B, 2B, 2D, 2E Shelter: 1C, 2G, 1D		N/A	N/A	N/A	N/A	1036	1036	N/A
1st Siren Activation		N/A	N/A	N/A	N/A	1053	1053	1053
1st EAS or EBS Message		N/A	N/A	N/A	N/A	1055	1055	1055
2nd Protective Action Decision: Evac: 2A, 4A, 1A, 1B, 4B, 2B, 2D, 2E, 1C, 2G, 1D		N/A	N/A	N/A	N/A	1105	1105	1105
2nd Siren Activation		N/A	N/A	N/A	N/A	1122	1122	1122
2 <sup>nd</sup> EAS or EBS Message		N/A	N/A	N/A	N/A	1125	1125	1125
KI Administration Decision:		N/A	N/A	1149	1152	1230	1200	N/A

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## APPENDIX B: EXERCISE EVALUATORS AND TEAM LEADERS

**Team Leaders:**

LOCATION	TEAM LEADER	AGENCY
Department of Public Safety, Disaster District Hurst (Fort Worth Joint EOC)	Daniel Kanakares	FEMA Region VII
Department of State Health Services - Radiation Control Program at the Emergency	Nan Calhoun	FEMA Region VI
Department of State Health Services - Radiation Control Program Field Monitoring	Jeff Clark	FEMA Region VII
Department of State Health Services, Radiation Control Program - Headquarters	Timothy Pflieger	FEMA Region VI
EAS Radio Station WBAP	Elsa Lopez	FEMA Region VI
Hood County Emergency Operations Center	Brad DeKorte	FEMA Region VI
Joint Information Center, Granbury	Barbara Thomas	FEMA Region I
Somervell County Emergency Medical Service	Scott Flowerday	FEMA Region VI
Somervell County Emergency Operations Center	Joseph Suders	FEMA Region III
Texas Division of Emergency Management-State Operations Center	Linda Gee	FEMA Region VI
Texas Health Harris Methodist Hospital Cleburne	Timothy Pflieger	FEMA Region VI

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**Evaluators:**

LOCATION	EVALUATOR	AGENCY
Department of Public Safety, Disaster District Hurst (Fort Worth Joint EOC)	Daniel Kanakares	FEMA Region VII
Department of Public Safety, Disaster District Hurst (Fort Worth Joint EOC)	Scott Hallett	FEMA HQ
Department of State Health Services - Radiation Control Program at the Emergency	Kenneth Wierman	FEMA HQ
Department of State Health Services - Radiation Control Program at the Emergency	Nan Calhoun	FEMA Region VI
Department of State Health Services - Radiation Control Program Field Monitoring	Jeff Clark	FEMA Region VII
Department of State Health Services - Radiation Control Program Field Monitoring	George Brozowski	US EPA
Department of State Health Services, Radiation Control Program - Headquarters	Timothy Pflieger	FEMA Region VI
EAS Radio Station WBAP	Elsa Lopez	FEMA Region VI
Hood County Emergency Operations Center	Sharron McDuffie	FEMA Region VII
Hood County Emergency Operations Center	Sam Williams	FEMA Region VI
Hood County Emergency Operations Center	Brad DeKorte	FEMA Region VI
Joint Information Center, Granbury	Barbara Thomas	FEMA Region I
Joint Information Center, Granbury	Taneeka Hollins	FEMA Region I
Joint Information Center, Granbury	William Maier	U. S. NRC
Somervell County Emergency Medical Service	Scott Flowerday	FEMA Region VI
Somervell County Emergency Operations Center	Joseph Suders	FEMA Region III
Somervell County Emergency Operations Center	Dennis Branson	FEMA Region VII
Somervell County Emergency Operations Center	Lisa Rink	FEMA HQ
Texas Division of Emergency Management-State Operations Center	Linda Gee	FEMA Region VI
Texas Health Harris Methodist Hospital Cleburne	Brad DeKorte	FEMA Region VI
Texas Health Harris Methodist Hospital Cleburne	Timothy Pflieger	FEMA Region VI

## APPENDIX C: ACRONYMS AND ABBREVIATIONS

Acronym	Description
CPNPP	Comanche Peak Nuclear Power Plant
DDCC	Disaster District Committee Chairperson
EAS	Emergency Alert System
ECL	Emergency Classification Level
EMC	Emergency Management Coordinator
EMD	Emergency Management Director
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	Environmental Protection Agency
EPD	Electronic Personal Dosimeters
EPZ	Emergency Planning Zone
EW	Emergency Worker
FMTL	Field Monitoring Team Leader
GE	General Emergency
HAB	Hostile Action Based
ICP	Incident Command Post
JIC	Joint Information Center
LWP	Local Warning Point
NPP	Nuclear Power Plant
NRC	Nuclear Regulatory Commission
OSL	Optically Stimulated Luminescent
PAD	Protective Action Decision
PIO	Public Information Officers
RACES	Radio Amateur Civil Emergency Services
REP	Radiological Emergency Preparedness
RO	Radiological Officer
SAE	Site Area Emergency
TEDE	Total Effective Dose Equivalent



## APPENDIX D: EXERCISE PLAN

*As submitted by the State of Texas (on following page) the Exercise Plan consists of the Approved Exercise Extent of Play agreement, on-site objectives, the exercise narrative summary and the drill scenario and extent of play for the hospital drill. These documents are as submitted by the state (edited only for formatting).*

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## **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:**

Texas Division of Emergency Management (TDEM) State Operation Center (SOC), Disaster District 4A Hurst (Hurst DDC 4A) / Fort Worth JEOC, Department of State Health Services (DSHS) Austin Headquarters, DSHS RCP Emergency Operation Facility (EOF), Joint Information Center (JIC), Hood County Emergency Operation Center (EOC), Somervell County EOC

**Extent of Play:** DSHS personnel will pre-stage at the DSHS staging is located at Hood County Annex 1, 1410 West Pearl, Granbury TX 76048. Regardless of the scenario, no facilities/activities will relocate during this exercise. The DSHS Radiological Mobile Lab will not be evaluated during this exercise. Non-TDEM players will be pre-staged at the SOC located at 5805 North Lamar, Austin, TX 78752. DSHS will be deployed to SOC at Site Area Emergency (SAE). At SAE or General Emergency, the SOC will notify agencies that comprise the Emergency Management Council. These notifications will be logged according to procedure; however, physical notifications will be simulated. Two (2) DSHS Field Monitoring Teams (FMTs) will be deployed and evaluated by FEMA. Both DSHS FMTs will have 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 Hurst DDC 4A/ Fort Worth JEOC located at 275 West 13th Street Fort Worth TX, 76102-6333, may be pre-staged. The DSHS Austin Headquarters is located at the Exchange Building 8407 Wall Street 78754 Austin TX (512) 834-6770. To allow for maximum amount of play, DSHS JIC staff will pre-stage in the area. The JIC is located at the Granbury City Hall, 116 West Bridge Street, Granbury TX 76048. An extra dispatcher will be placed on duty at the Hood and Somervell County Sheriff's office to handle the regular workload.

**Findings:** NONE

### **Sub-element 1.b – Facilities**

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

#### **Locations:**

SOC

**Extent of Play:**None

**Findings:** 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, Hurst DDC 4A / Fort Worth JEOC, DSHS Austin HQ, DSHS EOF, Hood County EOC, Somervell County EOC

Extent of Play: None

Findings: 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, Hurst DDC 4A / Fort Worth JEOC, DSHS Austin HQ, DSHS EOF, DSHS Field Teams (FMTs), JIC, Hood County EOC, Somervell County EOC

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

Findings: 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, Hurst DDC 4A / Fort Worth JEOC, DSHS Austin HQ, DSHS EOF, DSHS FMTs, JIC, Hood County EOC, Somervell County EOC

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 cartridges will be demonstrated. However, charcoal filters are authorized in lieu of silver zeolite cartridges 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 out of sequence in accordance with applicable procedures, so that donning and doffing of anti-c's can be demonstrated at the

staging area in the air conditioning. Field Team PPE requirements will consist of booties and gloves. \*Request the option to correct issues immediately (Correction-on-the-spot).

Findings: 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 EOF, Hood County EOC, Somervell County EOC

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.

Findings: 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 Austin HQ, DSHS EOF

Extent of Play: DSHS RCP Headquarters is located in Austin, TX on the third floor of the Exchange Building Room N301 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 Comanche Peak (CP) EOF has been staffed by DSHS prior to declaration of a General Emergency (GE), it will be the only facility evaluated for this criterion.

Findings: 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: Hood County EOC, Somervell County EOC

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. According to the State policy, KI is not considered for the general public.

Findings: 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, Somervell County EOC

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.

Findings: 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 EOF, DSHS FMTs, Hood County EOC, Somervell County EOC

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. Exercise TLDs will be used for the exercise. Access to TLDs for real events will be demonstrated. The evaluation for these criteria will be conducted by an interview at an agreed upon time. Distribution of KI to EW will be simulated by using copies of the Patient Packet Insert to represent actual KI supplies. EW will simulate actual ingestion of KI. The use of KI by the general public is not recommended in the State of Texas. \*Request the option to correct issues immediately (Correction-on-the-spot).

Findings: None

**Sub-element 3.b - Implementation of KI Decision for Institutionalized Individuals and the General Public**

**Criterion 3.b.1: KI and appropriate instructions are available if a decision to recommend use of KI be made. Appropriate record-keeping of the administration of KI for institutionalized individuals is maintained. (NUREG-0654/FEMA-REP-1, J.10.e, f)**

Locations: Hood County EOC, Somervell County EOC

Extent of Play: If the scenario is not sufficient to drive the decision to recommend KI for EW the criteria will be demonstrated in both counties by interview and injects at the end of the exercise.\*Request the option to correct issues immediately (Correction-on-the-spot).

Findings: 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, Somervell County EOC

Extent of Play: The T/ACP decision-making process will be demonstrated in real-time sequence; however travel to the T/ACP will be simulated. The T/ACP demonstration will be simulated. A law enforcement officer representing each county and assigned to the T/ACP will discuss their knowledge of their role and responsibilities by interview with the evaluator prior to leaving the Hood and Somervell County EOCs. This interview can occur out of sequence of the exercise scenario, but during the exercise, at a time agreed upon by the Hood and Somervell controller and FEMA evaluator. \* Request the option to correct issues immediately (Correction-on-the-spot).

Findings: None

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

Locations: Hood County EOC, Somervell County EOC

Extent of Play: A controller inject will be used to initiate the demonstration for this criterion. The inject will occur during the evacuation and it will be on an evacuation route. It will trigger the re-routing of traffic and the counties will coordinate this re-routing with the JIC in order to communicate the alternate route to evacuees that are leaving the area. No impediment will actually occur, however, the situation and solution



will be discussed in the appropriate EOC. Clearing of the impediment will not occur prior to demonstration of the re-routing process that includes coordination with the JIC.

Findings: None

#### **EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS**

**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 EOF

Extent of Play: DSHS FMTs will not traverse the plume, and only Comanche Peak (CP) Field Teams will take measurements at the centerline of the plume.

Findings: 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 FMTs

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 cartridges for exercise purposes but availability of silver zeolite cartridges will be demonstrated. DSHS FMTs will not traverse the plume, and only CP Field Teams will take measurements at the centerline of the plume. . If the scenario is not sufficient to drive demonstration of the air sampling criteria an inject will be provided by the FT controller at the end of the exercise indicating that the FT is in an area that is between 2-10 mr/hr (with a difference in the Beta Gamma reading) allowing the FTs to take an air sample. In addition, the controller will inject the need for a Field Analysis for I-131 with 5,000 net cpm on the filter and 600,000 net cpm on the cartridge as the result of the measurement. \*Request the option to correct issues immediately (Correction-on-the-spot).

Findings: 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**

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**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)**

Locations: Hood County EOC, Somervell County EOC, EAS Radio Station WBAP

Extent of Play: Siren activation will be simulated. Simulation of the siren activation will be in real time sequence with the transmission of the EAS message. The sirens will be sounded at the appropriate time in the exercise in accordance with the decision and the EAS message will follow the siren sounding. Emergency Alert System (EAS) message content will be determined and communicated to the EAS stations; however broadcasts will be simulated. WBAP News/Talk 820 AM 3090 Olive Street, West Victory Plaza, Suite 400, Dallas, TX 75219, Operations Manager: Tyler Cox 214-520-4365. Route alerting will not be demonstrated.

Findings: 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, Somervell County EOC

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 Texas Division of Emergency Management (TDEM) will not make any emergency information releases.

Findings: None

**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 – will be requested for all applicable criteria.
7. No protective action decisions impacting the general public will be made beyond the 10-mile EPZ regardless of the scenario.

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### **A.1 Command and Control**

Demonstrate the ability of the emergency coordinator to provide overall direction (command and control) by initiating, coordinating and implementing timely and effective actions during the event.

### **A.2 Operational Agreements**

Demonstrate the coordination of the implementation of emergency measures and the exchange of information between the utility and federal, state and local agencies and other support organizations having an emergency response role within the emergency planning zone (EPZ).

### **A.3 Continuous Operations**

Demonstrate the capability to establish and maintain continuous (24 hour) operations for a protracted period.

### **B.1 On-Shift Response**

Demonstrate the ability of the normal staff complement to perform the functions of the on-shift ERO.

### **B.2 On-Shift Emergency Direction**

Demonstrate the emergency coordinator's ability to immediately and unilaterally initiate any emergency response action, including providing protective action recommendations to authorities responsible for implementing off-site emergency measures.

### **B.3 Line of Succession**

Demonstrate the ability to transfer overall command and control of the emergency response.

Note: An Alert or higher classification level must be declared.

### **B.4 Non-Delegable Responsibilities**

Demonstrate the performance of authority of the non-delegable responsibilities.

### **B.5 Minimum ERO Staffing Requirements**

Demonstrate the ability to augment the on-shift response capabilities within a short period.

### **B.6 Full ERO Staff Augmentation**

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Demonstrate the ability of management, administrative and technical support personnel to augment the plant staff in the areas of logistics support, technical support, government interface, and public information.

**B.7 ERO Support Organizations**

Demonstrate the ability of management, administrative and technical support personnel to augment the plant staff in the areas of logistics support, technical support, government interface, and public information.

**B.8 Emergency Services Support Organizations**

Demonstrate the ability to use on-site first aid / fire brigade personnel and to coordinate with required off-site emergency services (police, fire, ambulance, medical, hospital).

**B.10 24-hour per day emergency response capabilities**

Demonstrate planning for 24-hour per day emergency response capabilities.

**C.1 Federal Support**

Demonstrate the ability to effectively integrate assistance resources from federal agencies to augment the plant's emergency response capabilities.

**C.2 Community Representatives**

Demonstrate the ability to provide a liaison at each participating off-site governmental emergency operations center (EOC).

**D.1 Classification**

Demonstrate the ability to recognize the initiating conditions for the EALs and to properly classify emergencies.

**E.1 Off-site Notification**

Demonstrate the ability to notify the off-site response organizations (ORO) consistent with the classification scheme including the verification of messages in a timely manner.

**E.2: ERO Notification**

Demonstrate the ability to alert, notify and mobilize ERO personnel.

**E.3 Initial Notification Message Content**

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Demonstrate the ability to provide the required content for the initial notification messages accurately within the required timeframes.

**E.4 Follow-up Information Message Content**

Demonstrate the ability to provide the required content for the follow-up information messages timely and accurately.

**F.1 State Communications Systems**

Demonstrate the ability to operate the communications systems used by the ERO to provide information to the state(s).

**F.2 Federal Communications Systems**

Demonstrate the ability to operate the communications systems used by the ERO to provide information to federal agency(s).

**F.3 Emergency Response Data System (ERDS)**

Demonstrate the ability to activate ERDS as soon as possible but no later than one hour after declaration of an emergency of an Alert or higher emergency classification.

**F.4 Utility Communications Systems**

Demonstrate the ability to operate the communications systems used by the ERO to exchange information with other utility facility(s).

**F.6 Medical Support Communications**

Demonstrate the ability to perform communications with both fixed and mobile medical support unit.

**G.1 JIC Support of Emergency Operations**

Demonstrate the adequacy of the joint information center (JIC) to support emergency response activities.

**G.2 Media Briefings**

Demonstrate the ability of the corporate spokespersons to brief the media in a clear, accurate and timely manner.

**G.3 Exchange of Public Information**

Demonstrate timely exchange of public information among designated agency spokespersons.

#### **G.4 Rumor Control**

Demonstrate the ability to establish and operate rumor control in a coordinated fashion.

#### **G.5 Release of Information**

Demonstrate the ability to develop and release information to the media/public for a declared emergency.

#### **H.1 TSC Support of Emergency Operations**

Demonstrate the adequacy of the TSC to support emergency response activities.

#### **H.2 EOF Support of Emergency Operations**

Demonstrate the adequacy of the EOF to support emergency response activities.

#### **H.3 OSC Support of Emergency Operations**

Demonstrate the adequacy of the OSC to support emergency response activities.

#### **H.4 Timely Facility Activation**

Demonstrate the ability to activate the emergency response facility in a timely manner.

#### **H.7 ERF Display Capabilities**

Demonstrate the capability for obtaining and displaying plant data and radiological information for each reactor at the station and each station supported by the facility.

#### **H.10 Control Room direction and control**

Demonstrate effective direction and control for on-site resources to support assessment and mitigation of the event.

#### **H.11 TSC Direction and Control**

Demonstrate effective direction and control for facility resources to support assessment and mitigation of the event.

#### **H.12 EOF Direction and Control**

Demonstrate effective direction and control for facility resources to support facility priorities.



## **H.17 Meteorological Data**

Demonstrate the ability to obtain current and forecasted meteorological information from primary as well as backup and alternate sources.

### **I.1 Accident Recognition and Assessment**

Demonstrate the ability to provide initial values and continuing assessment throughout the course of an accident as well as the parameter values that correspond to the initiating conditions for EALs and PARs.

### **I.2 Core Damage Assessment**

Demonstrate the ability to determine the extent of core failure based on station-specific assessment strategies and sampling.

### **I.3 Release and Dose Assessment**

Demonstrate the capability to determine the magnitude of radioactive releases or perform dose assessments based on plant parameters, effluent monitors, field data and meteorological conditions.

### **I.5 Health Physics – in plant monitoring**

Demonstrate response and analysis of simulated elevated airborne and liquid samples and direct radiation measurements in the environment.

### **I.6 Health Physics – environmental release monitoring**

Demonstrate response and analysis of simulated elevated airborne and liquid samples and direct radiation measurements in the environment.

### **I.7 FMT Support of Emergency Operations**

Demonstrate the adequacy of the FMTs to support emergency response activities.

### **I.8 Plume Phase Monitoring**

Demonstrate the ability to monitor radiological releases to the environment in the field.

### **I.9 Environmental Phase Monitoring**

Demonstrate the ability to monitor post-plume environmental conditions in the field.

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**J.1 Warning On-site Personnel**

Demonstrate the means to alert individuals at the site and persons who may be in the public access areas within the owner-controlled area.

**J.3 Site Evacuee Monitoring**

Demonstrate the capability for radiological monitoring and decontamination of personnel evacuated from the protected area.

**J.7 Protective Action Recommendations**

Demonstrate the ability to recommend protective actions to appropriate off-site authorities.

**K.4 Area Contamination Controls**

Demonstrate contamination control practices.

**K.5 Habitability Controls**

Demonstrate the capability to minimize EROS internal contamination through ERF habitability controls and controlling the intake of drinking water and food supplies.

**L.2 First Aid**

Demonstrate the ability to provide first aid treatment on site.

**N.1 Exercise and Drills**

Demonstrate the ability to conduct drills and exercises which evaluate key skills, overall emergency response capabilities, and formal critiques identifying weaknesses or deficiencies requiring action.

**N.2 Plans, Procedures, Facilities and Equipment**

Personnel, plans, procedures, facilities and equipment are tested and maintained ready to respond to emergencies, from minor events to severe accidents.

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Narrative Summary:

This exercise is for Comanche Peak Nuclear Power Plant (CPNPP), Unit 1 and Unit 2. The crew receives the watch with Unit 1 at 100% power, Xe Equilibrium, MOL. Unit 2 is at 100% power, EOL. RHR PMP 1-02 is Out of Service for breaker maintenance. GEM postings per STI-600 have been placed on RHR PMP 1-01.

The exercise is scheduled to begin on Wednesday, August 16, 2017 at 0730 hours.

METEOROLOGICAL CONDITIONS

Temperature is 86 deg F and with a forecast high of 105 deg F. Wind speed is 15 mph from direction 220 degrees. Stability class is E. Drought conditions are in effect, with no measurable precipitation in the previous 15 days. A slight cold front is forecast for later in the day.

EVENT SUMMARY

- A 40-gpm reactor coolant system (RCS) leak occurs inside U1 Containment for greater than 15 minutes (**UNUSUAL EVENT, SU5.1**)
- A Large Break Loss of Coolant Accident (LBLOCA) occurs (**ALERT, FA1.1**).
- After transfer to Cold Leg Recirculation, the Train A Containment Sump becomes clogged affecting TRAIN A RHR/CT.
- The Containment High Range radiation monitors (CTE-116/CTW-117) rise to greater than 85 R/hr (value established sufficient to drive later required PARs) (**SITE AREA EMERGENCY, FS1.1**).
- A Security officer near the south island observes steam coming from the area of the U1 Emergency Escape Hatch. This will be the beginning of a release from U1 Containment to the environment (**GENERAL EMERGENCY, FG1.1**).

Protective Action Recommendation (PAR):

EVAC: 2A, 4A, 1A, 1B, 4B, 2B, 2D, 2E

SHELTER: 1C, 2G, 1D

SECTORS: BCD

- The leak rate out of Containment worsens noticeably. This results in an expansion of the evacuation zone beyond 5 miles:

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Subsequent PAR:

EVAC: 2A, 4A, 1A, 1B, 4B, 2B, 2D, 2E, 1C, 2G, 1D,

SHELTER: N/A

SECTORS: BCD

On-Call Event (at the discretion of the Lead Controller): To  
slow the recovery of the RHR PMP 1-02, one of the electricians working on freeing the stuck  
RHR pump breaker from its cubicle will be injured when his hand is pinched between the  
breaker and the cubicle wall resulting in a laceration and possible broken bones.

- Exercise is terminated after successful completion and notification of the second PAR  
and at the discretion of the Lead Controller.

**TEXAS HEALTH HARRIS METHODIST HOSPITAL – CLEBURNE MS-1  
HOSPITAL  
September 20, 2017**

**1.0 Introduction**

This drill will verify that the Texas Health Harris Methodist Hospital Cleburne Radiological Emergency Area (REA) and personnel assigned to care for contaminated injured patients can meet FEMA MS-1 drill requirements. The drill will also verify that the Somervell County EMS Ambulance personnel can interface with the MS-1 hospital.

**2.0 FEMA Evaluation Criteria**

- 1.e.1: 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.)
- 3.a.1: The offsite response organizations (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.)
- 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG-0654, F.2, H.10., K.5.a.b., L.1., 4.)

**3.0 Guidelines**

The following guidelines have been developed to instruct drill participants of the extent of play required to fulfill the drill evaluation criteria.

- 1. Drill lead controller is responsible for conducting the drill per the drill package.
- 2. Controllers will be assigned as needed to ensure the completion of drill objectives.
- 3. This is a FEMA evaluated drill. Therefore, prompting/coaching is not permitted.
- 4. On-the-spot corrections are allowed in accordance with the REP Program Manual.

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4. The controllers should allow free-play. However, free-play will be stopped under the following conditions:
  - a. if the action taken would prevent a drill evaluation criterion from being met or is outside the scope of the drill.
  - b. if the actions are judged to be unsafe or leading to violations of the law.
  - c. if the actions would degrade systems or equipment, or degrade response to a real emergency.
5. If an actual emergency occurs, the drill will be terminated.
6. All radio and telephone communications will begin and end with **THIS IS A DRILL**.
7. All signs and postings at the hospital should be marked either **FOR TRAINING USE ONLY** or **DRILL IN PROGRESS**.

#### 4.0 Extent of Play

These guidelines define the extent of play required to meet an objective and identify planned simulations.

**Criterion 1.e.1:** 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.)

EMS personnel will demonstrate the KI portion of this evaluation criterion by interview (i.e. storage, use, precautions). KI **will not** be carried on the ambulance and **is not required** at the hospital. The KI for ambulances is stored at the Hood and Somervell County EOCs and would be distributed at that point in the event of the recommendation to do so by the Texas Department of State Health Services (DSHS).

**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 (approximately every 30 minutes) 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.)

No exceptions are requested.

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**Criterion 6.d.1:** The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG-0654, F.2, H.10., K.5.a.b., L.1., 4.)

The Somervell County EMS ambulance with driver and EMT or paramedic and the "contaminated" patient will pre-stage at the Cleburne Reception Center.

All decontamination will be demonstrated to the extent necessary to satisfy evaluator concerns. All medical procedures will be simulated except for decontamination of wounds and or abrasions. The Controller will use the decontamination chart and written guidance to guide the decontamination processes.

All injury and contamination levels will be via controller verbal inject from the "Injury Map for Medical Controllers" (Attachment 4a – Anatomical Charts). **Free play of this activity is not permitted.**

5.0 Participants

This drill will require the participation of the following agencies:

Texas Health Cleburne Emergency Room Staff and;  
Support Staff as needed  
Somervell County EMS Ambulance Personnel  
Texas Department of State Health Services – Radiation Control Program (DSHS-RCP), Medical Facility Liaison

6.0 Controller and Role Players

A minimum of four (4) controllers will be required for this drill.

One (1) role player victim will be required for this drill

7.0 Initial Conditions

Comanche Peak has experienced a Steam Generator Tube Failure, in conjunction with Failed Fuel and a stuck open Safety Valve. A radiological release is in progress and evacuation out to ten miles, downwind have been recommended. Potassium Iodide (KI) for Emergency Workers has been authorized by the Somervell and Hood County Judges at the recommendation of the Texas Department of State Health Services.

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## 8.0 Narrative Summary

A Johnson County resident (Hank) was helping his mother evacuate from her house in Somervell County located in the downwind direction near Comanche Peak. Hank spent significant time outside helping load his mother's belongings and animals (2 outside dogs, three cats, one potbelly pig, a miniature Hereford, and a goat). His evacuation route to the Cleburne Reception Center took him eastbound on Hwy 67 towards Cleburne. Upon entering Cleburne, Hank was involved in a hit-and-run collision at the intersection of West Henderson St. and Nolan River Rd. Somervell County EMS responded to 911 call for Cleburne EMS. *Note: Due to the overwhelmed Cleburne Fire Department, EMS mutual aid was requested from Somervell County EMS, which was staged at the Cleburne Reception Center at the onset of the Comanche Peak emergency.*

Upon arrival on-scene, the Somervell County EMS discovered Hank was injured with multiple lacerations and abrasions, but responsive. Paramedics were able to ascertain Hank's point of origin and destination before removing him from the vehicle. They determined Hank was possibly radiological contaminated due to his origin and triaged him as such before transport to the hospital.

## 9.0 Time Line

0930 Drill begins [Message Number 1].

0940 Patient data is transmitted to Texas Health Cleburne from the Ambulance en-route [Message Number 2].

1000 Ambulance arrives at Texas Health Cleburne.

1100 Drill terminates

1115 Critique

1145 Activities Concluded

## 10.0 Facility Addresses/Locations:

Cleburne Reception Center  
1212 Glenwood Dr.  
Cleburne, TX 76033

Texas Health Harris Methodist Hospital Cleburne  
201 Walls Dr.  
Cleburne, TX 76033



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**MEDICAL INFORMATION FOR CONTROLLERS**

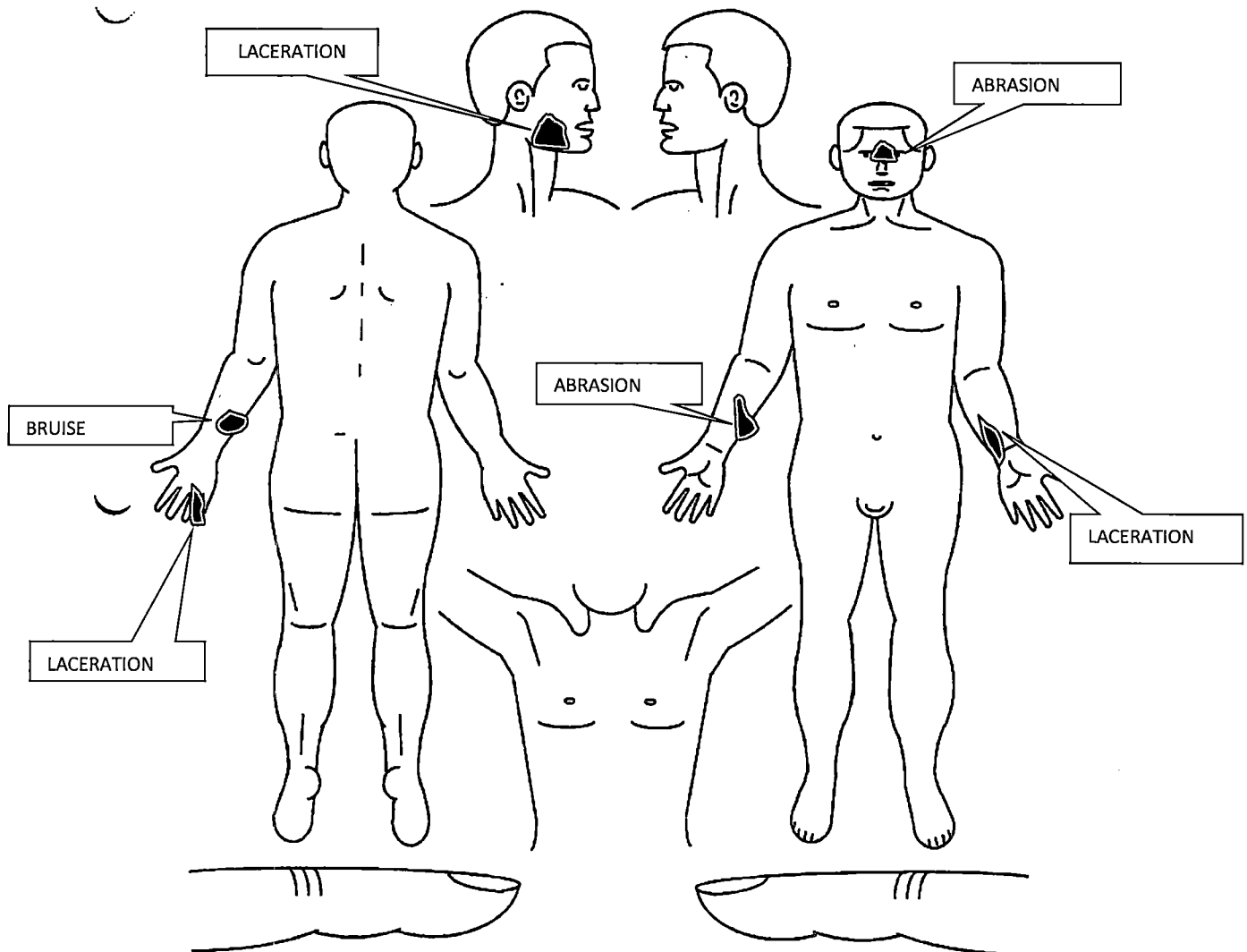
	<b>INITIAL</b>	<b>ENROUTE</b>	<b>HOSPITAL</b>
<b>Blood Pressure</b>	<b>90/40</b>	<b>110/70</b>	<b>120/84</b>
<b>Respiration</b>	<b>10rpm</b>	<b>16</b>	<b>16</b>
<b>Pulse</b>	<b>120</b>	<b>110</b>	<b>100</b>
<b>Breathing</b>	<b>Normal</b>	<b>Normal</b>	<b>Normal</b>
<b>Skin Condition</b>	<b>Pale, cool, moist</b>	<b>Pale, cool, dry</b>	<b>Dry, warm</b>
<b>Blood Glucose Level</b>	<b>110</b>	<b>110</b>	<b>110</b>
<b>Consciousness</b>	<b>Disoriented, but responsive</b>	<b>Disoriented/confused</b>	<b>Oriented and responsive</b>
<b>Pupils</b>	<b>Equal, reactive</b>	<b>Equal, reactive</b>	<b>Equal, reactive</b>
<b>Significant injury</b>	<b>Laceration on left forearm; Laceration on right cheek; Laceration on left hand.</b>		

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**ATTACHMENT 4a - ANATOMICAL CHART**

PATIENT'S NAME: \_\_\_\_\_ SURVEY DATE/TIME: \_\_\_\_\_

Directions: Record indicated levels of contamination in counts per minute (CPM) on the patient map.



TYPE OF INSTRUMENT USED: \_\_\_\_\_  
(MODEL AND NUMBER)

DISTANCE SKIN TO PROBE: \_\_\_\_\_ INCHES

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**ATTACHMENT 4a - ANATOMICAL CHART**

PATIENT'S NAME: \_\_\_\_\_

SURVEY DATE/TIME: \_\_\_\_\_

Directions: Record indicated levels of contamination in counts per minute (CPM) on the patient map.

The anatomical chart includes three views of a human figure: back, side, and front. Contamination measurement points are indicated by callouts with counts and labels:

- A:** 1500 COUNTS (Back of head)
- B:** 1000 COUNTS (Back of foot)
- C:** 750 COUNTS (Right hand)
- D:** 500 COUNTS on three spots across clothing where seatbelt was, if still (Chest area)
- E:** 1200 COUNTS on both knees of clothing, if still clothed. (Knees)

TYPE OF INSTRUMENT USED: \_\_\_\_\_ (MODEL AND NUMBER)

DISTANCE SKIN TO PROBE: \_\_\_\_\_ INCHES

Revision 06/07/2000

**CONTAMINATION MAP ADDITIONAL INFORMATION FOR  
RADIOLOGICAL CONTROLLER  
(Page Two – MS-1 Drill)**

**INSTRUCTIONS FOR PROVIDING DECONTAMINATION LEVELS  
(Letters below correspond to Anatomical Chart on preceding page)**

- . Allow the decontamination on the right check laceration to be completed as follows:
  - 1. After the first attempt, 600 cpm remain
  - 2. After the second attempt, the reading should be 30 cpm.
- A. Allow the decontamination of the top of left hand laceration to be completed as follows:
  - 1. After the first attempt, 500 cpm remain
  - 2. After the second attempt, the reading should be 35 cpm.
- B. Allow the decontamination of the left forearm laceration to be completed as follows:
  - 1. After the first attempt, 380 cpm remain
  - 2. After the second attempt, 250 cpm remain
  - 3. **If they try a third attempt, 240 cpm remain. Note: They should recognize this reading is considered clean at this point.**
- C. If patient still has on blue scrub shirt, then controller should give readings (in accordance with chart) on chest of clothing where seatbelt would have been. ER Staff should remove scrub shirt and no contamination will be detected under the shirt. **If blue scrub shirt has already been removed, then no readings are given by controller in chest area.**
- E. If patient still has on blue scrub pants, then controller should give readings (in accordance with chart) on both knees. ER Staff should remove scrub pants and no contamination will be detected under pants. **If blue scrub pants have already been removed, then no readings are given by controller on the knees.**

Unclassified  
Radiological Emergency Preparedness Program (REP)  
After Action Report/Improvement Plan

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**MS-1 Hospital Drill**

**MESSAGE 1**

**TIME:** 0930

**FROM:** Medic 1

**TO:** Texas Health Cleburne ER (phone # TBD)

**TEXT:**

**THIS IS A DRILL!**

A CONTAMINATED INJURED PATIENT IS BEING TRANSPORTED TO YOUR FACILITY BY SOMERVELL COUNTY EMS AMBULANCE.

THE PATIENT IS ASSUMED TO BE RADIOLOGICALLY CONTAMINATED. PLEASE ACTIVATE YOUR RADIATION EMERGENCY AREA FOR RECEIPT OF THE PATIENT.

MY CALL BACK NUMBER IS \_\_979-324-3984\_\_\_\_\_.

THE AMBULANCE WILL CONTACT YOUR FACILITY WHEN EN-ROUTE. PLEASE GIVE ME YOUR NAME FOR THE LOG.

THANK YOU.

**THIS IS A DRILL.**

Unclassified  
Radiological Emergency Preparedness Program (REP)  
After Action Report/Improvement Plan

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**MS-1 Hospital Drill  
September 20, 2017**

**MESSAGE 2**

**TIME:** 0940

**FROM:** Medic 1

**TO:** Texas Health Cleburne ER (Phone TBD)

**TEXT:**

**THIS IS A DRILL!**

THIS IS SOMERVELL COUNTY EMS EN-ROUTE TO YOUR FACILITY WITH A MALE PATIENT APPROXIMATELY 30 YEARS OF AGE WHO WAS INVOLVED IN A TRAFFIC ACCIDENT, WHILE EVACUATING FROM SOMERVELL COUNTY.

PATIENT VITAL SIGNS ARE AS FOLLOWS:

<b>Vital Sign</b>	<b>ENROUTE DATA</b>
Blood Pressure	90/40
Respiration	10
Pulse	120
Consciousness	Disoriented, but responsive

OUR ETA IS 20 MINUTES.

**THIS IS A DRILL!**