U.S. Department of Homeland Security
Region VI
800 N. Loop 288
Denton, TX 76209-3698

FEMA

July 25, 2012

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, Reception Center Drill evaluated on May 24, 2012. FEMA Region VI staff evaluated the drill at the City of Stephenville Reception Center. There were no Deficiencies, one Area Requiring Corrective Action (ARCA) corrected during the exercise, and one Plan Issue identified during this exercise.

Based on the results of the drill, the planning and preparedness for the State of Texas and affected local jurisdictions provide reasonable assurance that appropriate measures can be taken to protect public health and safety in the event of a radiological release. Therefore, 44 CFR Part 350 approval of the offsite radiological emergency response plans and preparedness for the State of Texas - specific to the Comanche Peak Nuclear Power Plant will remain in effect.

Sincerely,

Lisa R. Hammond
RAC Chair

Enclosure

cc: NRC Headquarters Document Control Desk
DHS/FEMA Headquarters - Vanessa Quinn, Renae Connell
TDEM - W. Nim Kidd, CEM
TX DSHS, Radiation Control Program - Dr. David Lakey
STP Manager of Emergency Preparedness – Joseph Enoch

Comanche Peak Nuclear Power Plant

After Action Report/ Improvement Plan

Drill Date - May 24, 2012

Radiological Emergency Preparedness (REP) Program

FEMA

Published July 23, 2012

This page is intentionally blank.

Comanche Peak Nuclear Power Plant

After Action Report/Improvement Plan

Published July 23, 2012

Contents

This page is intentionally blank.

EXECUTIVE SUMMARY

On May 24, 2012, an out-of-sequence Reception Center drill was conducted for the Comanche Peak Nuclear Power Plant (CPNPP), located near Glen Rose, Texas. Personnel from the U.S. Department of Homeland Security/FEMA (DHS/FEMA) Region VI, evaluated all activities. The purpose of the drills was to assess the level of preparedness of local responders to react to a simulated radiological emergency at the CPNPP. The previous Reception Center drill conducted at this site was on September 13, 2006.

Personnel from the City of Stephenville, the State of Texas, the American Red Cross, and CPNPP participated in the drill. Evaluation Areas demonstrated included: Emergency Operations Management, Protective Action Implementation, and Support Operations/Facilities. Cooperation and teamwork of all participants was evident during the drill, and DHS/FEMA Region VI wishes to acknowledge these efforts.

This report contains the final evaluation of the out-of-sequence drill. The participants demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. One Area Requiring Corrective Action (ARCA) was identified and corrected during the drill. One Plan Issue was also identified as a result of the drill. No Deficiencies were observed.

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name
Comanche Peak Nuclear Power Plant

Type of Exercise
Drill

Exercise Date
May 24, 2012

Program
Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type
Radiological Emergency

1.2 Exercise Planning Team Leadership

Lisa Hammond
RAC Chair
FEMA Region VI
Technological Hazards Branch Chief
800 North Loop 288
Denton, Texas, 76209
940-898-5199
lisa.hammond@fema.dhs.gov

Scott Flowerday
Evaluation Team Leader
FEMA Region 6
Lead Technological Hazards Specialist
800 N. Loop 288

Denton, Texas, 76209
940-898-5370
scott.flowerday@fema.dhs.gov

Glenn Corbin
State Planning Team Lead
Texas Department of State Health Services
State Health Emergency Planner
Radiation Control Program, Environmental Monitoring
P. O. Box 149347
Austin, Texas, 78714
512-834-6770
glenn.corbin@dshs.state.tx.us

James "Jim" Ogden
Utility Exercise Planner
Comanche Peak Nuclear Power Plant
Offsite Emergency Planner
P. O. Box 1002
Glen Rose, Texas, 76042
254-897-6470
jogden2@luminant.com

1.3 Participating Organizations

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

- State Jurisdictions
  - Texas Department of State Health Services, Radiation Control Program
  - Texas Division of Emergency Management
- Support Jurisdictions
  - Stephenville Fire Department
  - Stephenville Police Department

Stephenville Parks and Recreation Department
Stephenville Public Works Department
Stephenville Animal Control Department
Stephenville Conservation Department

Private Organizations
The American Red Cross
Comanche Peak Nuclear Power Plant

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

The DHS/FEMA Region VI Office evaluated the drill on May 24, 2012 to assess the capabilities of 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 present the results and findings on the performance of the offsite response organizations during a simulated radiological emergency.

2.2 Exercise Objectives, Capabilities and Activities

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

2.3 Scenario Summary

The drill scenario was developed to evaluate the response of drill participants to an incident requiring evacuation of the public from the 10-mile Emergency Planning Zone surrounding Comanche Peak Nuclear Power Plant. The drill scenario provided for the evaluation of the City of Stephenville Reception Center's ability to conduct monitoring, decontamination and registration of evacuees. A separate walk-through of the congregate care facility was conducted to ensure that services and accommodations provided at the Conference Center were consistent with established American Red Cross guidelines.

SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Drill 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 May 24, 2012, drill 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 FEMA Radiological Emergency Preparedness (REP) Program Manual (April 2012).

3.2 Summary Results of Drill 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. Exercise criteria are listed by number and the demonstration status is 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
P - Plan Issue
N - Not Demonstrated

Table 3.1 - Summary of Drill Evaluation

DATE: 2012-05-24 SITE: Comanche Peak Nuclear Power Plant, TX M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		Stephenville RC
Emergency Operations Management		
Mobilization	1a1	
Facilities	1b1	
Direction and Control	1c1	
Communications Equipment	1d1	
Equipment and Supplies	1e1	P
Protective Action Decision Making		
EW Exp. Control Decisions	2a1	
PARs	2b1	
PADs	2b2	
PADs for Disabled/Functional Needs	2c1	
Ingestion PADs	2d1	
RRR Decisions	2e1	
Protective Action Implementation		
EW Exp. Control Implementation	3a1	M
KI Public/Institutionalized	3b1	
PAD Imp. Disabled/Functional Needs	3c1	
PAD Imp. Schools	3c2	
TACP Establishment	3d1	
Impediments to Evacuation	3d2	
Implementation of Ingestion PADs	3e1	
Ingestion Strategies and Information	3e2	
Imp. of RRR Decisions	3f1	
Field Measurement and Analysis		
RESERVED	4a1	
Field Team Management	4a2	
Field Team Operations	4a3	
Field Team Sampling	4b1	
Laboratory Operations	4c1	
Emergency Notification and Public Info		
Initial Alert & Notification	5a1	
Backup Alert & Notification	5a3	
Exception Area Alerting	5a4	
Subsequent Public Information	5b1	
Support Operations/Facilities		
Reception Center Operations	6a1	M
EW Monitoring & Decon	6b1	
Congregate Care	6c1	M
Contaminated Injured Transport & Care	6d1	

3.3 Criteria Evaluation Summaries

3.3.1 Support Jurisdictions

3.3.1.1 Stephenville Reception Center

In summary, the status of DHS/FEMA criteria for this location is as follows:

a. MET: 3.a.1, 6.a.1, 6.c.1.
b. AREAS REQUIRING CORRECTIVE ACTION: 6.a.1.

ISSUE NO.: 14-12-6a1-A-02

CRITERION: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees.

CONDITION: A bag containing an evacuee's valuables and personal items was returned to the evacuee prior to determining whether the items were free of contamination.

POSSIBLE CAUSE: Training, knowledge of plans/procedures and inconsistency in the process of securing evacuee's valuables and/or personal items during the check-in process.

REFERENCE: NUREG-0654, J.12; City of Stephenville Reception Center Operations Plan and Procedures, April 2012, SOP 8 Exposure Control, Attachment 1.

EFFECT: The evacuee could have potentially spread contamination to the staff and other evacuees.

CORRECTIVE ACTION DEMONSTRATED: Play was stopped and emergency workers (EWs) received some training on handling personal items. The EWs took the bag with the personal items and recorded the evacuee's information (simulated) and explained to her that once the items were cleared and free of contamination they would be returned. EWs were able to successfully demonstrate the handling of

previously bagged potentially contaminated valuables and personal items.

c. DEFICIENCY: None
d. PLAN ISSUES: 1.e.1.

ISSUE NO.: 14-12-1e1-P-01

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

CONDITION: The Thermo Surveyor 50 survey meters were set-up (batteries installed) and operationally checked at the Reception Center Equipment Issue Table. This set-up and operational check was performed correctly (based on training). At the initial monitoring area for the evacuees, it was noted that the written instructions provided for conducting the operational checks on the Thermo Surveyor 50 survey meters was incorrect. The information provided only for a check to verify a response to radiation and it did not require that the instrument responds within the range or readings on the sticker that was affixed to the survey meter. The trigger/action level provided on the laminated card affixed to the meter was not in agreement with the state plan (300 cpm above background). There was also no procedure available to describe the set-up, operational check, and use of the two SAIC portal monitors.

POSSIBLE CAUSE: The City of Stephenville Operations Plan and Procedure for the reception center had recently been revised (April 2012). The kit for the monitoring area contained outdated information that pre-dated this revision and it appears that this information was left out of the updated procedure.

REFERENCE: NUREG-0654/FEMA-REP-1 H.7, K.3.b and FEMA-REP-22

EFFECT: Instruments may have been used that were not measuring correctly which could result in a spread of contamination to uncontrolled areas.

RECOMMENDATION: The procedure should be revised to include step-by-step instructions for the set-up, operational check, and use of the portal monitors. Out of date instructions for the use of the hand held survey meters should be updated to

provide instructions on conducting an operational check to verify measurement within the appropriate range of readings and to provide the correct trigger/action level that is consistent with the state guidance.

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

SECTION 4: CONCLUSION

Based on the results of the drill, 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 Comanche Peak Nuclear Power Plant will remain in effect.

APPENDIX A: IMPROVEMENT PLAN

Issue Number: 14-12-1e1-P-01	**Criterion: 1e1**
ISSUE: The Thermo Surveyor 50 survey meters were set-up (batteries installed) and operationally checked at the Reception Center Equipment Issue Table. This set-up and operational check was performed correctly (based on training). At the initial monitoring area for the evacuees, it was noted that the written instructions provided for conducting the operational checks on the Thermo Surveyor 50 survey meters was incorrect. The information provided only for a check to verify a response to radiation and it did not require that the instrument responds within the range or readings on the sticker that was affixed to the survey meter. The trigger/action level provided on the laminated card affixed to the meter was not in agreement with the state plan (300 cpm above background). There was also no procedure available to describe the set-up, operational check, and use of the two SAIC portal monitors.	
RECOMMENDATION: The procedure should be revised to include step-by-step instructions for the set-up, operational check, and use of the portal monitors. Out of date instructions for the use of the hand held survey meters should be updated to provide instructions on conducting an operational check to verify measurement within the appropriate range of readings and to provide the correct trigger/action level that is consistent with the state guidance.	
CORRECTIVE ACTION DESCRIPTION:	
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:
CAPABILITY ELEMENT:	START DATE:
AGENCY POC:	ESTIMATED COMPLETION DATE:

APPENDIX B: DRILL EVALUATORS AND TEAM LEADERS

DATE: 2012-05-24, SITE: Comanche Peak Nuclear Power Plant, TX

LOCATION	EVALUATOR	AGENCY
Stephenville Reception Center	Brad DeKorte *Scott Flowerday Elsa Lopez	FEMA RVI FEMA RVI FEMA RVI
* Team Leader		

APPENDIX C: EXERCISE PLAN

STEPHENVILLE RECEPTION CENTER DRILL
EXERCISE PLAN
Revision 1

1.0 Introduction

This drill will verify that the Stephenville Reception Center Personnel can effectively activate and operate the Reception Center in the event of an evacuation of the public from the 10-mile Emergency Planning Zone (EPZ) around the Comanche Peak Nuclear Power Plant (CPNPP).

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 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. a.1: The Reception Center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-0654, J.10.h.; K.5.b)

6. c.1 Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross current planning guidelines. Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities. (NUREG-0654, J.10.h., 12.)

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 evaluation criteria.

3. This is a FEMA evaluated drill. Therefore, prompting is not permitted.

4. On-the-spot corrections are allowed in accordance with Recommended Initiative 1.5-Correct Issues Immediately (March 31, 2000)

5. 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.

6. If an actual emergency occurs, the drill will be terminated.

7. All radio and telephone communications will begin and end with **THIS IS A DRILL.**

8. All signs and postings 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.)

No exceptions are requested. KI will not be issued in Stephenville per State policy guidance from 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 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.)

Exposure control at the Stephenville Reception Center will not address the issuance of Potassium Iodine (KI), as KI will not be issued to this facility due to

the distance and early evacuation of populations from the 10-mile EPZ. KI will not be stocked nor issued at the Stephenville Reception Center.

Criterion 6.a.1: The Reception Center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-0654, J.10.h.; K.5.b)

All positions at the reception center will be staffed and rosters will be available to demonstrate personnel depth for subsequent shifts.

All evacuee and vehicle decontamination measures will be simulated. A minimum of six (6) evacuees and at least two (2) vehicles will be monitored. Simulated contaminated evacuees will be processed through the decontamination shower facility. This will be accomplished by simulation with the actions to be accomplished fully discussed with evaluators.

All evacuee contamination levels will be via controller injects. Free play of these activities is not permitted.

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with current American Red Cross planning guidelines. Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities. (NUREG-0654, J.10.h., 12.)

American Red Cross personnel will demonstrate congregate care via sample shelter setup, equipment and supplies in a loaded trailer, rosters, interviews, and other resource documents. Congregate care is not the primary method used by the City of Stephenville.

5.0 Participants

This drill will require the participation of the following agencies:

City of Stephenville Emergency Management Personnel
City of Stephenville Administrative Support Staff as needed
City of Stephenville Fire Department Personnel
City of Stephenville Police Department
City of Stephenville Parks and Recreation Personnel
City of Stephenville Animal Control
North Texas Region, American Red Cross Personnel

6.0 Controller and Role Players

A minimum of five (5) controllers will be required for this drill.
A minimum of six (6) role players with automobiles will be required for this drill.

7.0 Initial Conditions

An event at the CPNPP near Glen Rose, Texas began approximately 4 hours ago. A radioactive release in a Southeasterly direction from CPNPP has prompted the evacuation of approximately 8,000 residents and visitors from the 10-mile Emergency Planning Zone (EPZ).

8.0 Narrative Summary

The Reception Center staff will be alerted to mobilize and prepare for evacuees by the Somervell County Judge (See Message 1, page 11 of this document). Set-up and activation of the Stephenville Reception Center will be completed according to the current Stephenville Reception Center Operations Plan and Procedures until the staff is ready for evacuees. Texas Department of State Health Services participants in the exercise from the Arlington office will be pre-staged in the vicinity of the City of Stephenville to allow participation in the exercise. Simulated evacuees and vehicles will be pre-staged in the vicinity of the Reception Center to allow rapid response to the facility once the facility is ready to accept evacuees.

Simulated evacuees begin to arrive at the Stephenville Reception Center shortly after completion of the activation.

9.0 Time Line

0930 Role Players (simulated evacuees and DSHS staff) arrive and assume positions.
1000 Drill begins. Notification to City of Stephenville received from the Somervell County EOC
1015 Evacuees begin to arrive
1130 Drill terminates
1145 Critique
1215 Activities Concluded

10.0 Facility Address

Stephenville Recreation Center
378 West Long
Stephenville, Texas 76401-4236

EVACUEE INFORMATION FOR CONTROLLERS

EVACUEE NO.	CONTAMINATION STATUS	VEHICLE STATUS
1 (Male)	**Contaminated**	**Contaminated Exterior**
2	**Clean**	**Clean**
3	**Clean**	**Clean**
4 (Female)	**Contaminated**	**Clean**
5 (Male)	**Contaminated**	**Contaminated Exterior & Interior (Driver's Seat)**
6 (Female)	**Contaminated**	**Clean**

NOTE TO CONTROLLERS IN DECONTAMINATION FACILITIES: Contaminated persons after completion of shower will be clean. The attendant will do a whole body frisk and complete all necessary documentation (survey forms) following the shower and will also frisk valuables in a bag. Once the personnel decon has been accomplished, no readings over background are necessary. The objective here is to evaluate the process not trip up the decon attendants.

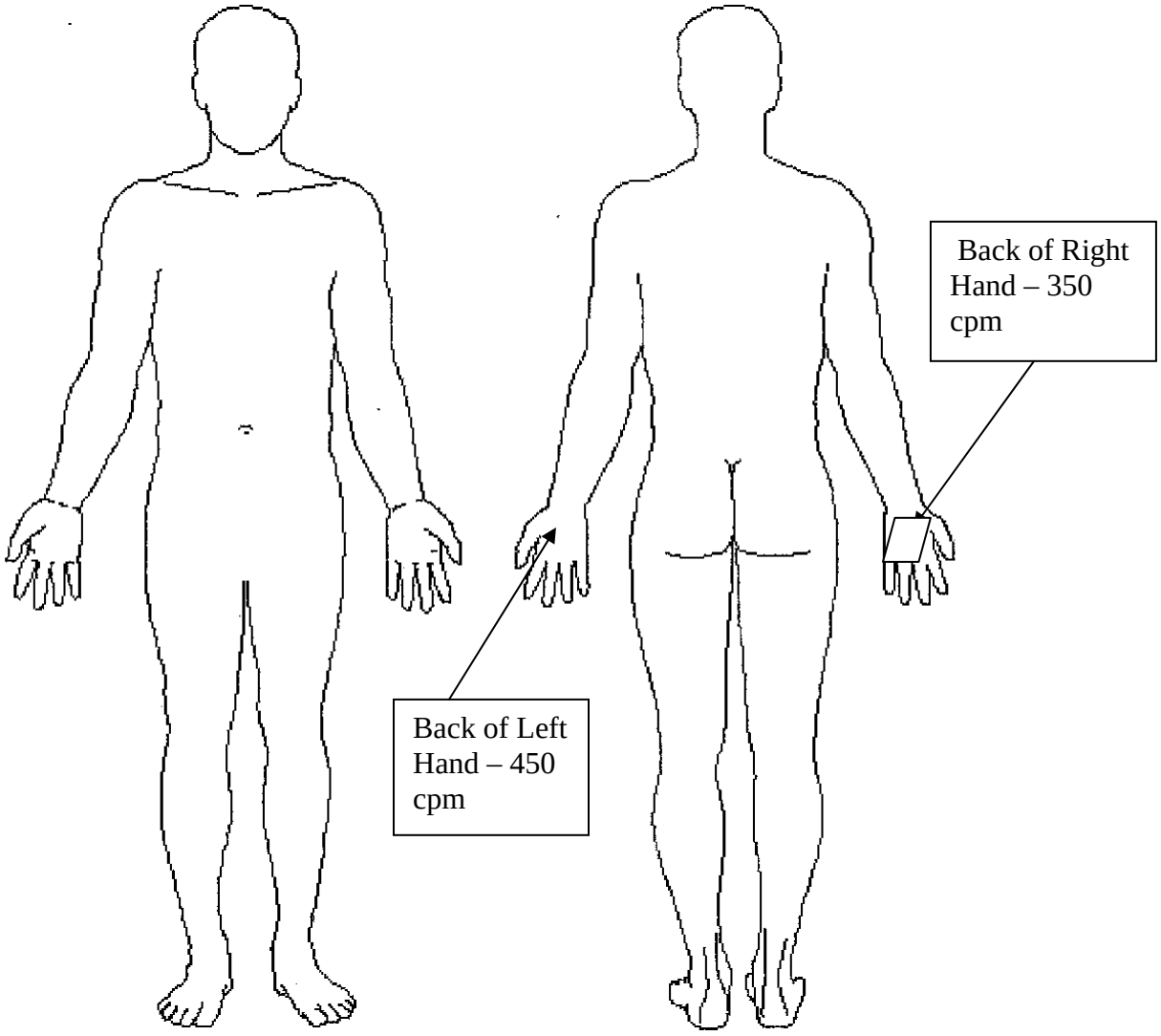
CONTAMINATION LEVELS: When a portal monitor is used to determine evacuee contamination levels the individual will be asked to step back and be re-surveyed by the portal monitor. Reception Center staff should then, at a minimum, survey hands and feet to locate/isolate contamination on the individual with a hand-held survey meter. (NOTE: The sex of the evacuee may vary due to the volunteer Role Players available on the date of the exercise)

The following levels apply to individual Role Players: (Note: All radiation levels are above background)

EVACUEE #	Location of Contamination and Level(s)	Remarks
#1	Back of Left Hand – 450 cpm, Back of Right Hand – 350 cpm,	Will be clean after use of baby wipes to decontaminate
#4	Left Hand and Forearm – 400 cpm, Head – 350 cpm over right ear	Will be clean after shower
#5	Right Hand – 650 cpm, Seat of Pants – 400, and both shoes/feet 600 cpm	Will be clean after shower
#6	Top of right shoe – 500 cpm, Back of Right Hand – 350 cpm	Will be clean after removing shoes and use of baby wipes to decontaminate Back of Right Hand

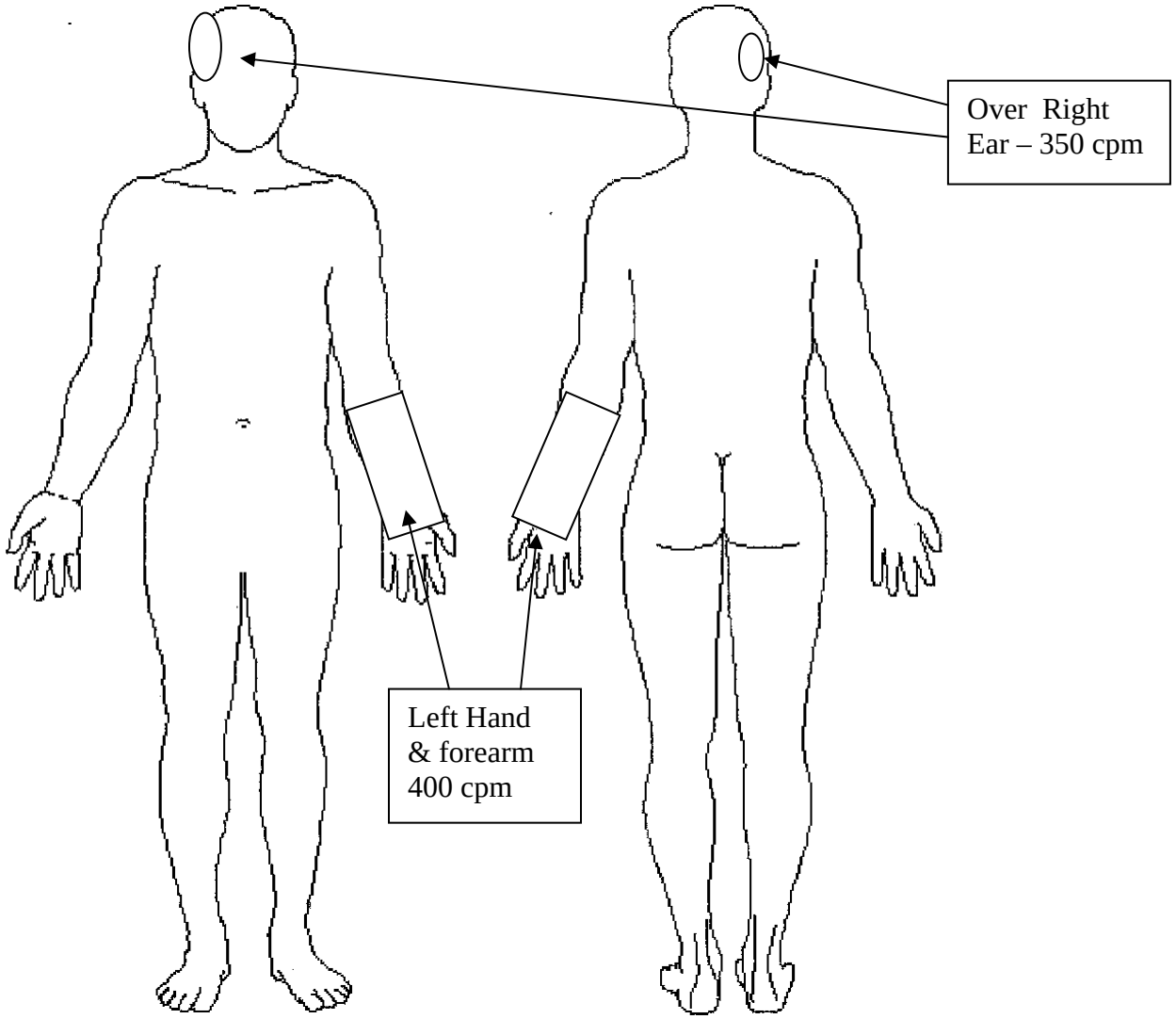
Body Chart for Recording Results of Radiation Survey

Evacuee/Emergency Worker Name: **Evacuee #1**



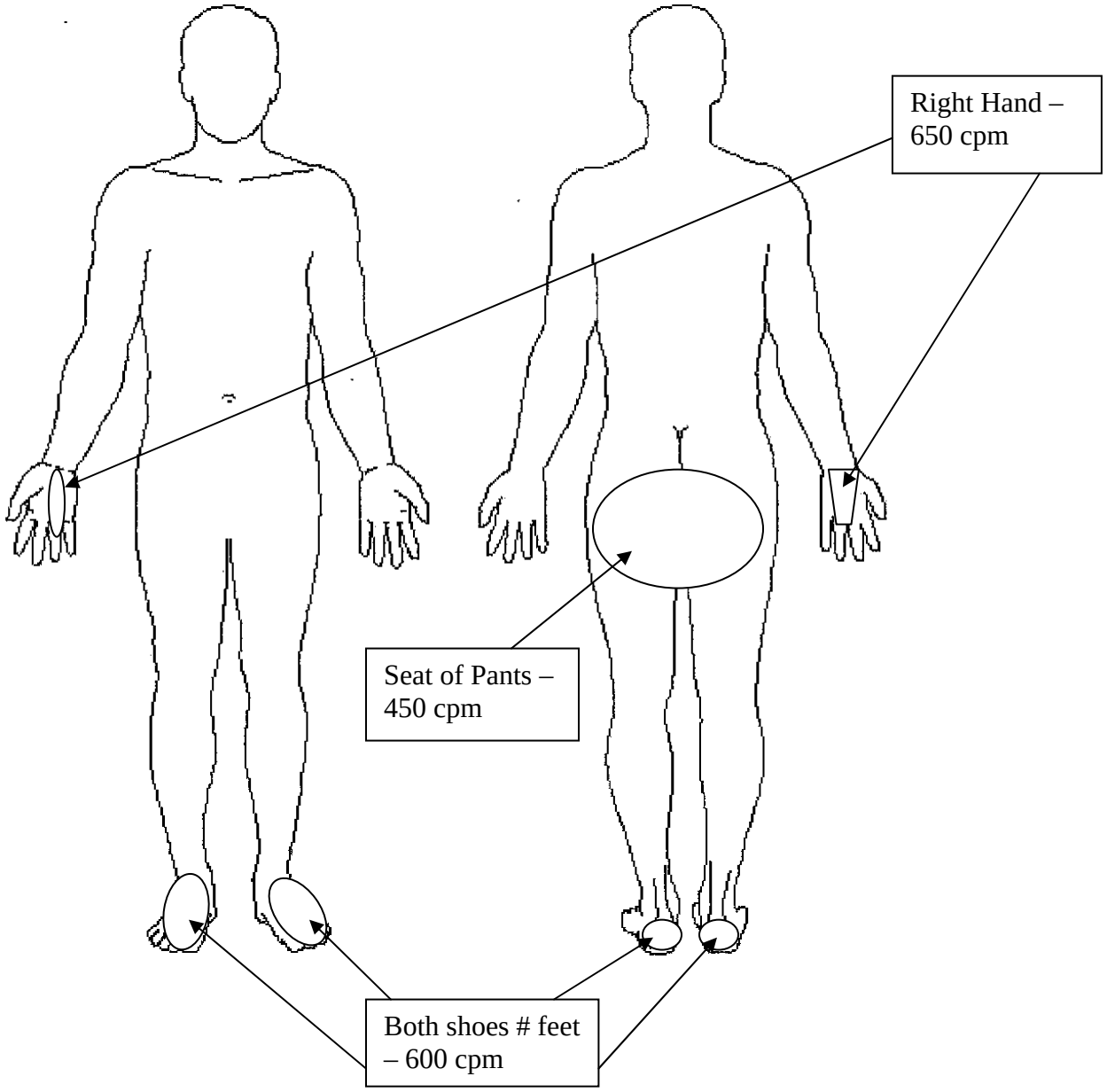
Body Chart for Recording Results of Radiation Survey

Evacuee/Emergency Worker Name: **Evacuee #4**



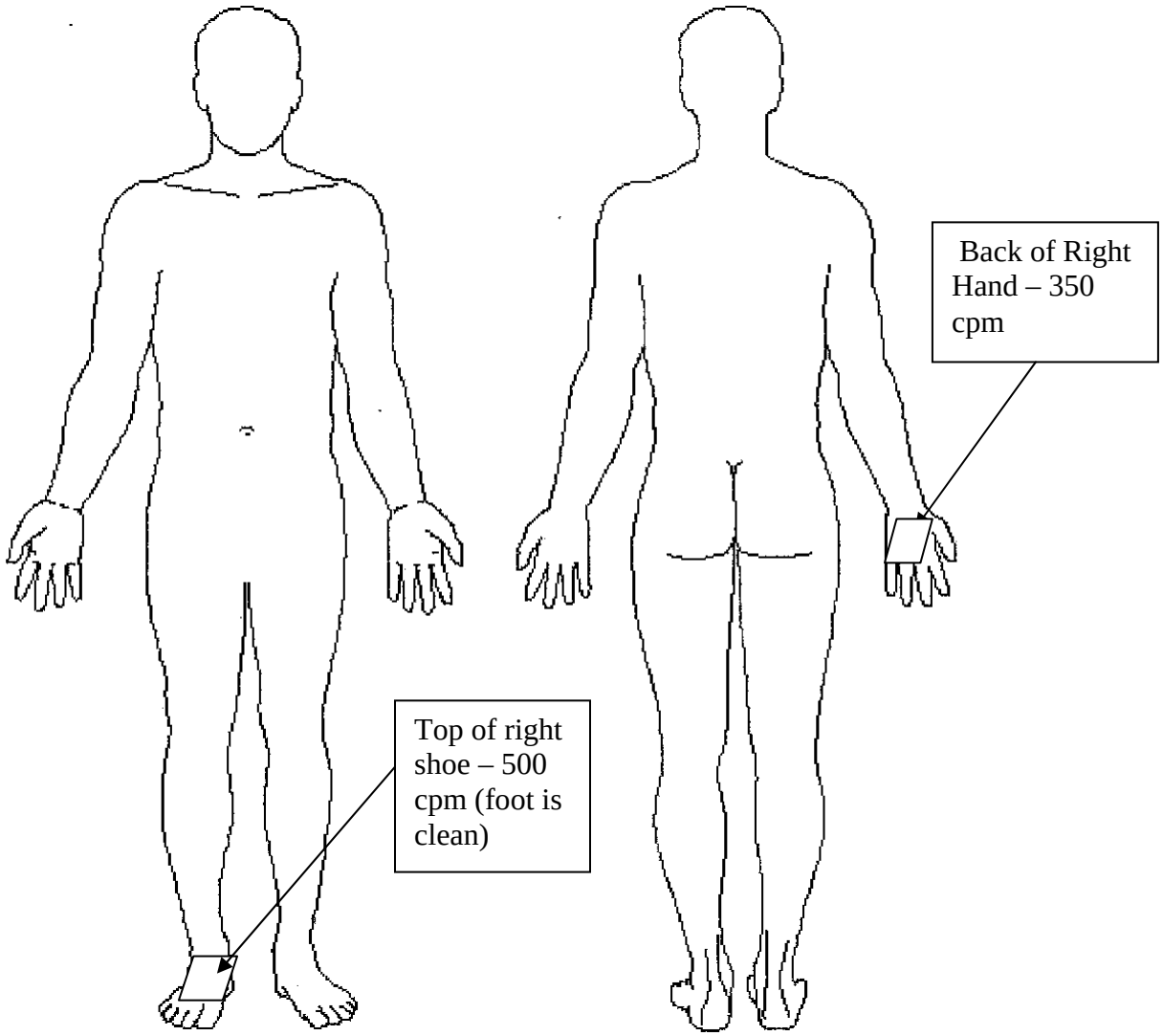
Body Chart for Recording Results of Radiation Survey

Evacuee/Emergency Worker Name: **Evacuee #5**

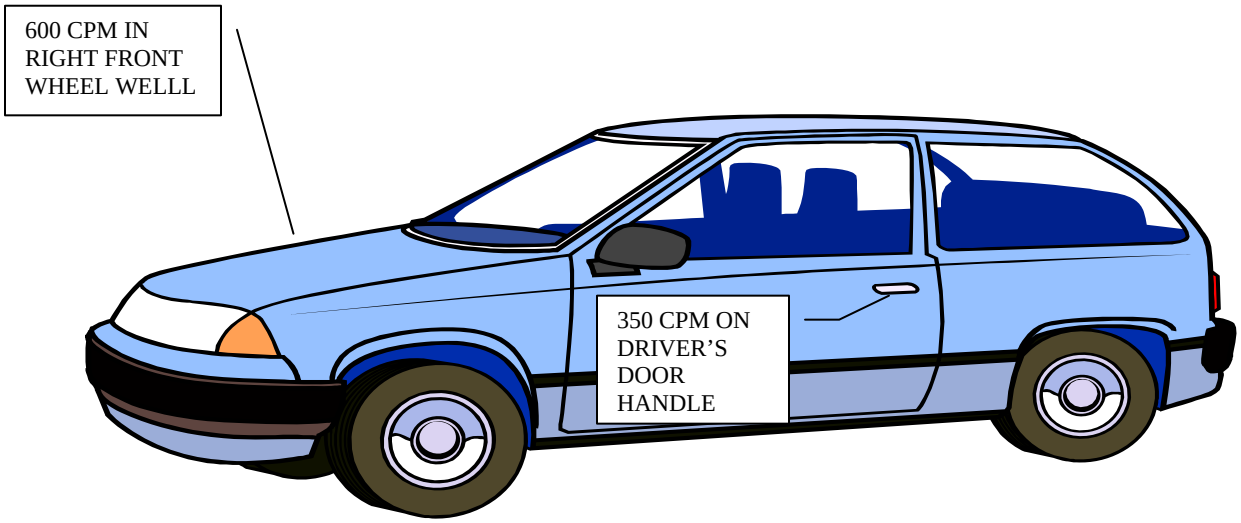


Body Chart for Recording Results of Radiation Survey

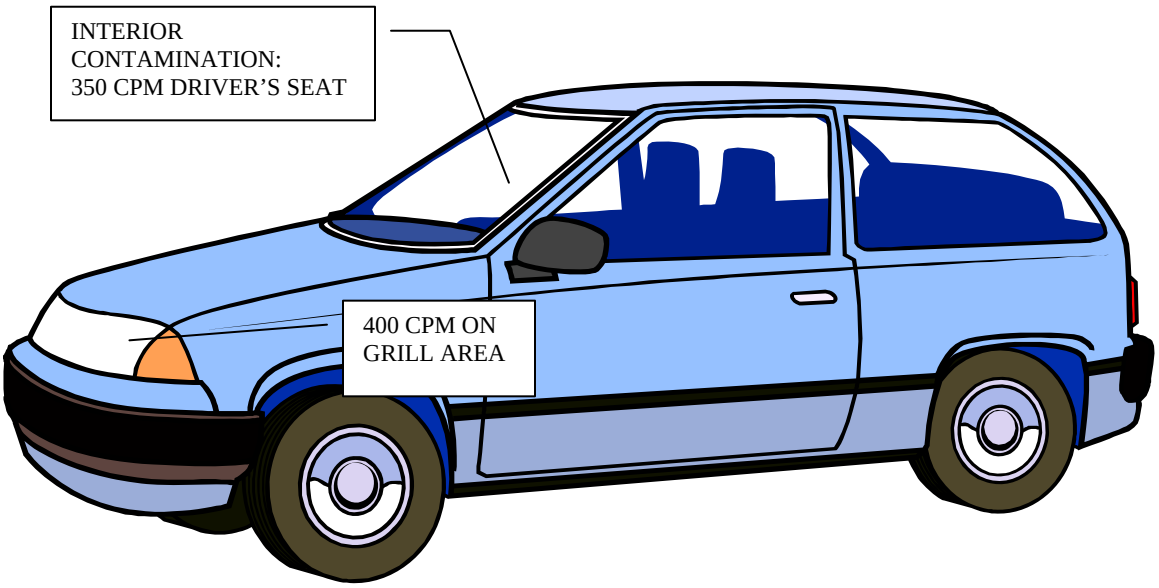
Evacuee/Emergency Worker Name: **Evacuee #6**



VEHICLE CONTAMINATION DETAILS FOR CONTROLLERS



CONTAMINATION INFORMATION FOR VEHICLE #1



CONTAMINATION INFORMATION FOR VEHICLE #5

NOTE: Vehicles depicted may differ from actual vehicles driven during this event.

Stephenville Reception Center Drill May 24, 2012

MESSAGE 1

TIME: 1000

FROM: Somervell County Judge

TO: City Administrator's Office 254/918-1225 (Office)/254/965-0400 (Cell) **[Mark Kaiser]** or City Secretary **[Cindy Stafford]** 254-918-1212 (Office) or 254/592-6630 (Cell)

TEXT:

THIS IS A DRILL!

THIS IS THE SOMERVELL COUNTY JUDGE AT THE SOMERVELL COUNTY EOC. AN EVACUATION OF THE SOUTHEASTERN AREA OF SOMERVELL COUNTY HAS BEEN RECOMMENDED DUE TO A RELEASE OF RADIOLOGICAL MATERIAL AT THE COMANCHE PEAK NUCLEAR POWER PLANT. WE REQUEST THAT THE STEPHENVILLE RECEPTION CENTER BE ACTIVATED FOR THE RECEIPT OF EVACUEES.

WE ANTICIPATE THAT APPROXIMATELY 8,000 PERSONS ARE AFFECTED BY THIS EVACUATION.

THE EVACUATION INFORMATION HAS JUST BEEN BROADCASTED TO THE PUBLIC OVER THE EAS STATION. WE ANTICIPATE THAT THE FIRST EVACUEES WILL BE ARRIVING IN CLEBURNE WITHIN AN HOUR.

MY CALL BACK NUMBER IS 682-936-9100.

PLEASE GIVE ME YOUR NAME FOR THE LOG.

THANK YOU.

THIS IS A DRILL.

This page is intentionally blank.