



FEMA

December 12, 2014

Mr. Marc Dapas
Regional Administrator
U.S. NRC, Region IV
1600 East Lamar Boulevard
Arlington, TX 76011-4511

Dear Mr. Dapas:

Enclosed is a copy of the radiological emergency preparedness final report for the Arkansas Nuclear One Plume Exposure Pathway Hostile Action Based exercise evaluated on September 17, 2014. FEMA Region 6 staff evaluated the Arkansas Department of Health, Pope, Yell, Logan, and Johnson Counties, National Oceanic and Atmospheric Administration Forecast Office, and KXRJ Radio Station. There were no Deficiencies, one Area Requiring Corrective Action (ARCA), which was corrected during the exercise, and one Plan Issue identified during the exercise. In addition, one previous ARCA was resolved during the exercise.

Based on the results of this exercise, the planning and preparedness for the State of Arkansas 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 emergency. Therefore, 44 CFR Part 350 approval of the offsite radiological emergency response plans and preparedness for the State of Arkansas, specific to Arkansas Nuclear One, will remain in effect.

A copy of this report was mailed to the NRC Headquarters Document Control Desk and a copy was transmitted electronically to RIV_FEMADistribution@nrc.gov as specified in the FEMA REP Program Manual dated June 2013. Should you have questions, please contact Lisa Hammond, Regional Assistance Committee Chair, at (940) 898-5199, or Elsa Lopez, Senior Site Specialist for Arkansas Nuclear One, at (940) 898-5308.

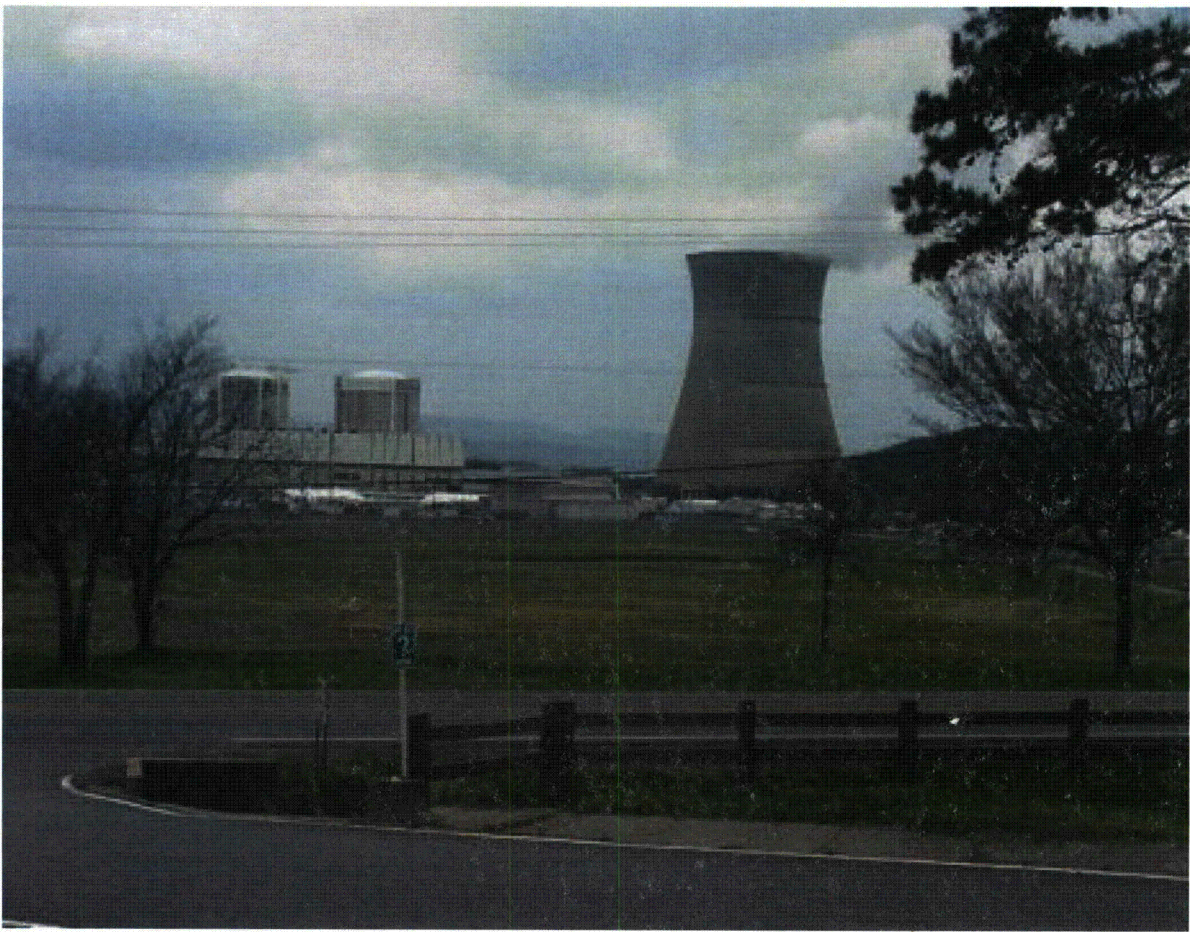
Sincerely,

George A. Robinson
Regional Administrator

Enclosure

cc: DHS/FEMA Headquarters – Vanessa Quinn, Jesse King
ADH – Bernard Bevill
ADEM – David Maxwell
ANO – Richard E. Harris

TX49



Arkansas Nuclear One

After Action Report/ Improvement Plan

Exercise Date - September 17, 2014

Radiological Emergency Preparedness (REP) Program



FEMA

Published

This page is intentionally blank.

Arkansas Nuclear One After Action Report/Improvement Plan

Contents

Executive Summary	4
Section 1: Exercise Overview	5
1.1 Exercise Details	5
1.2 Exercise Planning Team Leadership	5
1.3 Participating Organizations	6
Section 2: Exercise Design Summary	8
2.1 Exercise Purpose and Design	8
2.2 Exercise Objectives, Capabilities and Activities	8
2.3 Scenario Summary	8
Section 3: Analysis of Capabilities	9
3.1 Exercise Evaluation and Results	9
3.2 Summary Results of Exercise Evaluation	9
3.3 Criteria Evaluation Summaries	13
3.3.1 Arkansas Jurisdictions	13
3.3.1.1 Arkansas State Emergency Operations Center	13
3.3.1.2 Arkansas Department of Health, Little Rock Emergency Communications Center	13
3.3.1.3 Arkansas Department of Health at the Site Emergency Operations Facility	13
3.3.1.4 Arkansas Field Radiological Monitoring Team One	14
3.3.1.5 Arkansas Field Radiological Monitoring Team Two	14
3.3.1.6 Alternate Joint Information Center	15
3.3.1.7 Arkansas Department of Health - Freeway Medical	15
3.3.1.8 Emergency News Center NP&RP	15
3.3.2 Risk Jurisdictions	16
3.3.2.1 Johnson County Emergency Operations Center	16
3.3.2.2 Logan County Emergency Operations Center	18
3.3.2.3 Pope County Emergency Operations Center	18

3.3.2.4 Pope County Incident Command Post	19
3.3.2.5 Yell County Emergency Operations Center	20
3.3.3 Private Organizations	20
3.3.3.1 ENS Radio Station KXRJ	20
3.3.4 Federal Jurisdictions	21
3.3.4.1 NOAA North Little Rock	21
Section 4: Conclusion	22
Appendix A: Improvement Plan	23
Appendix B: Exercise Timeline	24
Appendix C: Exercise Evaluators and Team Leaders	26
Appendix D: Acronyms and Abbreviations	27
Appendix E: Exercise Plan	30

This page is intentionally blank.

EXECUTIVE SUMMARY

On September 17, 2014, a biennial Radiological Emergency Preparedness (REP) Hostile Action Based Exercise was conducted in the plume exposure pathway emergency planning zone (EPZ) around Arkansas Nuclear One (ANO) located near Russellville, Pope County, Arkansas. The U.S. Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA) Region VI evaluated the exercise. The purpose was to assess the level of preparedness of State and local responders to react to a simulated radiological emergency at ANO. This exercise was held in accordance with DHS/FEMA policies and guidance concerning the implementation of State and local radiological emergency preparedness plans and procedures.

The previous exercise at this site was a Plume Exercise conducted on April 11, 2012. The qualifying emergency preparedness exercise was conducted on October 1, 1980. There have been twenty-three evaluated exercises, including the exercise on September 17, 2014, plus several drills conducted since 1984.

DHS/FEMA Region VI wishes to acknowledge the efforts of the many individuals in the State of Arkansas, Pope, Yell, Logan, Johnson, and Conway Counties, National Oceanic and Atmospheric Administration (NOAA) Forecast Office, KXRJ Radio Station, and surrounding jurisdictions who participated in this exercise. Protecting the public health and safety is the fulltime job of some of the exercise participants and an additional assigned responsibility for others. Still they have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork of all the participants was evident during this exercise.

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 their emergency response plans and procedures and adequately implemented them. There were no Deficiencies, one Area Requiring Corrective Action (ARCA), which was corrected during the exercise, and one Plan Issue identified during the exercise. Also, one previous ARCA was resolved during the exercise.

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name

Arkansas Nuclear One

Type of Exercise

Plume

Exercise Date

September 17, 2014

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 N. Loop 288

Denton, Texas, 76209

940-898-5199

lisa.hammond@dhs.gov

Elsa Lopez

Federal Planning Team Lead

FEMA Region VI

Technological Hazards Program Specialist

800 N. Loop 288

Denton, Texas, 76209
940-898-5308
elsa.lopez@fema.dhs.gov

Don Greene
State Planning Team Lead
Arkansas Department of Health
Health Physicist
4815 West Markham Street
Slot 30
Little Rock, Arkansas, 72205
501-661-2808
donald.greene@arkansas.gov

1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the Arkansas Nuclear One exercise:

State Jurisdictions

- Arkansas Department of Emergency Management
- Arkansas Department of Health
- Arkansas Department of Social Services
- Arkansas Game and Fish Commission
- Arkansas National Guard
- Arkansas State Police

Risk Jurisdictions

- City of Danville
- City of Danville Police Department
- City of Dardanelle Fire Department
- City of Dardanelle Police Department
- City of Russellville Mayor
- Johnson County Emergency Management
- Johnson County Sheriff's Office
- Logan County Emergency Medical Service

Logan County Health Unit - Arkansas Department of Health

Logan County Office of Emergency Management

Logan County Sheriff's Office

London Fire Department

Pope County Emergency Medical Services

Pope County Fire Coordinator

Pope County Health Department

Pope County Judge

Pope County Office of Emergency Management

Pope County Sheriff's Office

Russellville Fire Department

Russellville Police Department

Yell County Emergency Medical Services

Yell County Judge

Yell County Judge's Office

Yell County Office of Emergency Management

Yell County Sheriff's Office

Private Organizations

American Red Cross

Arkansas Nuclear One Power Plant

Arkansas Tech University

Federal Jurisdictions

Federal Bureau of Investigation

National Oceanic and Atmospheric Administration

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

The DHS/FEMA Region VI Office evaluated the first qualifying Hostile Action Based Exercise on September 17, 2014 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 hostile action and radiological emergency involving Arkansas Nuclear One (ANO). 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 E.

2.3 Scenario Summary

The no-release exercise scenario was developed to evaluate the response of exercise participants to an incident requiring evacuation of the public from the 10-mile Emergency Planning Zone surrounding Arkansas Nuclear One (ANO). The exercise scenario provided for the evaluation of the Arkansas Department of Emergency Management (ADEM), Arkansas Department of Health (ADH), Johnson, Logan, Pope, and Yell Counties, and Local Emergency Services to manage emergency operations, provide and implement protective action decisions, provide field measurement and analysis, alert and notify the public, and provide support operations and facilities.

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, which participated in the Arkansas Nuclear One (ANO) Hostile Action Based exercise to test the off-site emergency response capabilities of State and local governments in the 10-mile Emergency Planning Zone (EPZ) surrounding ANO.

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 April 25, 2002, Federal Register, Radiological Emergency Preparedness: Evaluation Methodology. Detailed information on the exercise evaluation area criteria and the extent of play agreement used in this exercise are found in Appendix E of this report.

3.2 Summary Results of Exercise Evaluation

The matrix presented in Table 3.1, on the following page(s), presents the status of all exercise evaluation area criteria from the REP Program Manual that were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise evaluation area criteria are listed by number and the demonstration status of those evaluation area criteria is indicated by the use of the following letters:

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

D - Deficiency assessed

A - ARCA(s) assessed or unresolved ARCA(s) from prior exercise(s)

P - Plan Issue

N - Not Demonstrated

Table 3.1 - Summary of Exercise Evaluation (2 pages)

DATE: 2014-09-17 SITE: Arkansas Nuclear One, AR M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		State EOC	ADH ECC	ADH/SEOF	AR FRMT 1	AR FRMT 2	Alt. JIC	Johnson County	Logan County	Pope County	Pope County ICP
Emergency Operations Management											
Mobilization	1a1	M	M				M	M	M	M	M
Facilities	1b1										
Direction and Control	1c1	M						M	M	M	M
Communications Equipment	1d1	M	M		M	M	M	M	M	M	M
Equipment and Supplies	1e1	M	M		M	M	M	M	M	M	M
Protective Action Decision Making											
EW Exp. Control Decisions	2a1							M	M	M	
PARs	2b1										
PADs	2b2							M	M	M	
PADs for Disabled/Functional Needs	2c1							M	M	M	
Ingestion PADs	2d1										
RRR Decisions	2e1										
Protective Action Implementation											
EW Exp. Control Implementation	3a1				M	M		M	M	M	P
KI Public/Institutionalized	3b1							M	M	M	
PAD Imp. Disabled/Functional Needs	3c1							M	M	M	
PAD Imp. Schools	3c2										
TACP Establishment	3d1							M	M	M	
Impediments to Evacuation	3d2							M	M	M	
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				M	M					
Field Team Sampling	4b1										
Laboratory Operations	4c1										
Emergency Notification and Public Info											
Initial Alert & Notification	5a1			M							
Backup Alert & Notification	5a3										
Exception Area Alerting	5a4										
Subsequent Public Information	5b1						M				
Support Operations/Facilities											
Reception Center Operations	6a1										
EW Monitoring & Decon	6b1										
Congregate Care	6c1										
Contaminated Injured Transport & Care	6d1										

Table 3.1 - Summary of Exercise Evaluation (Continued. page 2/2)

DATE: 2014-09-17 SITE: Arkansas Nuclear One, AR M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		Yell County	KXRJ	NOAA NLR	ADH - Freeway Medical	ENC NP&RP
Emergency Operations Management						
Mobilization	1a1	M			M	M
Facilities	1b1				M	M
Direction and Control	1c1	M			M	
Communications Equipment	1d1	M			M	M
Equipment and Supplies	1e1	M			M	M
Protective Action Decision Making						
EW Exp. Control Decisions	2a1	M			M	
PARs	2b1				M	
PADs	2b2	M				
PADs for Disabled/Functional Needs	2c1	M				
Ingestion PADs	2d1					
RRR Decisions	2e1					
Protective Action Implementation						
EW Exp. Control Implementation	3a1	M			M	
KI Public/Institutionalized	3b1	M				
PAD Imp. Disabled/Functional Needs	3c1	M				
PAD Imp. Schools	3c2					
TACP Establishment	3d1	M				
Impediments to Evacuation	3d2	M				
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				M	
Field Team Operations	4a3					
Field Team Sampling	4b1					
Laboratory Operations	4c1					
Emergency Notification and Public Info						
Initial Alert & Notification	5a1		M	M		
Backup Alert & Notification	5a3					
Exception Area Alerting	5a4					
Subsequent Public Information	5b1					M
Support Operations/Facilities						
Reception Center Operations	6a1					
EW Monitoring & Decon	6b1					
Congregate Care	6c1					
Contaminated Injured Transport & Care	6d1					

3.3 Criteria Evaluation Summaries

3.3.1 Arkansas Jurisdictions

3.3.1.1 Arkansas State Emergency Operations Center

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

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

3.3.1.2 Arkansas Department of Health, Little Rock Emergency Communications Center

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

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

3.3.1.3 Arkansas Department of Health at the Site Emergency Operations Facility

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

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

-
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.4 Arkansas Field Radiological Monitoring Team One

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

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

3.3.1.5 Arkansas Field Radiological Monitoring Team Two

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

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

ISSUE NO.: 01-12-1e1-A-01

ISSUE: The potassium iodide (KI) for use by Arkansas Department of Health Field Teams is stored in a trailer behind the Arkansas Department of Health, Nuclear Planning & Response Program office in Russellville, AR. The trailer is not climate controlled. This storage location does not meet the iOSAT manufacturer's storage instructions to store the potassium iodide at 68-77 degrees Fahrenheit.

CORRECTIVE ACTION DEMONSTRATED: The Potassium Iodide is now appropriately stored within the air conditioned work area of the Nuclear Planning and Response Program Office located in Russellville. This area is climate controlled in accordance with the manufacturer's requirements.

- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.6 Alternate Joint Information Center

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

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

3.3.1.7 Arkansas Department of Health - Freeway Medical

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

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

3.3.1.8 Emergency News Center NP&RP

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

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

3.3.2 Risk Jurisdictions

3.3.2.1 Johnson County Emergency Operations Center

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

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

ISSUE NO.: 01-14-3a1-A-01

CRITERION: The OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers in accordance with the plans/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. Appropriate record-keeping of the administration of KI for emergency workers is maintained.

CONDITION: The emergency worker radiological briefing was inadequate.

POSSIBLE CAUSE: Possibly inadequate training of the County Radiological Officer and lack of procedural guidance for conducting radiological briefings

REFERENCE: NUREG-0654/FEMA REP-1:

Planning Standard J.10. The organization's plans to implement protective measures for the plume exposure pathway shall include:

- e. Provisions for the use of radioprotective drugs, particularly for emergency workers

NUREG-0654/FEMA REP-1:

Planning Standard O.5. 5. Each organization shall provide for the initial and annual retraining of personnel with emergency response responsibilities.

Johnson County Radiological Emergency Response Plan Chapter 12:

12.A.1. Responsibilities of Nuclear Planning and Response:

b. Develop and conduct training classes for all potential emergency workers. This training for emergency workers shall include, but not necessarily be limited to: radiological monitoring procedures and methods, biological effects of radiation, anti-contamination procedures, contamination "hot line" procedures and personnel and equipment decontamination.

c. Provide annual training to the County Judge, EOC staffs, and warning point staffs

EFFECT: Failure to conduct adequate radiological briefings to emergency workers, to include information on methods to minimize radiation exposure and information on the potential benefits and risks associated with radioprotective drugs, could result in increased risk to those workers due to excessive radiation dose or radioprotective drug reactions.

CORRECTIVE ACTION DEMONSTRATED: The performance deficiency was immediately corrected by radiological training provided by the Controller followed by a successful re-demonstration by the County Radiological Officer.

For long-term corrective action:

The individual(s) performing as the Johnson County Radiological Officer should be trained in the theoretical and practical aspects of radiological exposure control listed in Chapter 12 (Radiological Emergency Response Training) of the Johnson County Radiological Emergency Response Plan, to include the subject matter listed in Appendix 6 (Training Guidelines) to the Plan

The Johnson County Standard Operating Procedures should include a procedure for the County Radiological Officer with a checklist for conducting radiological briefing of emergency workers who would deploy to the emergency planning zone. The checklist should include the following points as a minimum:

- Zeroing direct-reading dosimeters,
- Checking the direct-reading dosimeters periodically during an emergency response(e.g., every 15 to 30 minutes),
- Recording the readings of the direct-reading dosimeters on exposure record(s),
- Reporting radiation exposure limits and turn-back values,

-
- Workers undertaking life-saving missions or protecting valuable property or large populations may face increased risk from radiation,
 - Proper use of permanent record dosimeters,
 - Dosing and documentation of KI ingestion,
 - Why KI is administered and any adverse effects,
 - Where to report for monitoring and decontamination, and
 - Where and to whom to return their dosimetry at the conclusion of the emergency or mission

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

3.3.2.2 Logan County Emergency Operations Center

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

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

3.3.2.3 Pope County Emergency Operations Center

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

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

-
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.4 Pope County Incident Command Post

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

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

ISSUE NO.: 01-14-3a1-P-02

CRITERION: The OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers in accordance with the plans/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. Appropriate record-keeping of the administration of KI for emergency workers is maintained.

CONDITION: Pope County Annex 1 and the provided "Dosimeter Reading" cards incorrectly state onsite emergency responder exposure limits in rem instead of Roentgen (R).

POSSIBLE CAUSE: The error may have been an oversight or the individual responsible for Pope County Annex 1 and developing the "Dosimeter Reading" cards may not have been aware of the 5x conversion factor used to convert radiation exposure to radiation dose. The offsite radiation exposure limits on the "Dosimeter Reading" card were correctly provided in terms of mR.

REFERENCE: NUREG 0654 K.3.a; Pope County Annex 1, Rev. 5.1; Arkansas Department of Health, Emergency Response Procedures, ER 2.5, Personnel Dosimetry and Exposure Guideline, Dated April 2014; Dosimeter Reading cards included in dosimetry kits.

EFFECT: Emergency workers and supervisors may be confused regarding the worker's radiation dose limit. The offsite exposure limits were provided in mR, the

onsite limits provided in R.

If the Arkansas Department of Health exposure to dose conversion factor (5x) was used for onsite dose, the emergency worker would utilize a lower radiation exposure limit than intended. Because this would result in a conservative radiation dose limit, the emergency responder may not be able to complete his/her assigned task if they believe the 2 rem limit on the "Dosimeter Reading" card is to be adjusted for dose (by using an exposure limit of 400 mR).

RECOMMENDATION: Update Annex 1 and Dosimeter Reading cards to correctly reflect the limits in terms of radiation exposure as read on the emergency worker's dosimeter and correctly stated in Arkansas Department of Health procedures.

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

3.3.2.5 Yell County Emergency Operations Center

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

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

3.3.3 Private Organizations

3.3.3.1 ENS Radio Station KXRJ

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

- a. MET: 5.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None

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

3.3.4 Federal Jurisdictions

3.3.4.1 NOAA North Little Rock

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

- a. MET: 5.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. 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 Arkansas 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 Arkansas site-specific to Arkansas Nuclear One will remain in effect.

APPENDIX A: IMPROVEMENT PLAN

Issue Number: 01-14-3a1-P-02		Criterion: 3a1	
ISSUE: Pope County Annex 1 and the provided "Dosimeter Reading" cards incorrectly state onsite emergency responder exposure limits in rem instead of Roentgen (R).			
RECOMMENDATION: Update Annex 1 and Dosimeter Reading cards to correctly reflect the limits in terms of radiation exposure as read on the emergency worker's dosimeter and correctly stated in Arkansas Department of Health procedures.			
CORRECTIVE ACTION DESCRIPTION:			
CAPABILITY:		PRIMARY RESPONSIBLE AGENCY:	
CAPABILITY ELEMENT:		START DATE:	
AGENCY POC:		ESTIMATED COMPLETION DATE:	

APPENDIX B: EXERCISE TIMELINE

Table 1 presents the times at which key events and activities occurred during the ANO Hostile Action Based Exercise held on September 17, 2014.

Table 1 - Exercise Timeline
DATE: 2014-09-17, SITE: Arkansas Nuclear One, AR

Emergency Classification Level or Event	Time Utility Declared	State EOC	ADH ECC	Alt. JIC	Johnson County	Logan County	Pope County
Unusual Event	0744	0758	0754		0812	0815	0811
Alert	0813	0832	0824	0837	0829	0830	0828
Site Area Emergency	1009	1020	1014	1012	1035	1035	1035
General Emergency							
Simulated Rad. Release Started							
Simulated Rad. Release Terminated							
Facility Declared Operational		0827		0857	0836	0830	0810
Declaration of State of Emergency					0846		0822
Exercise Terminated		1215	1236	1214	1225	1214	1225
Early Precautionary Actions:							
Protective Action Advisory							
1st Protective Action Decision							
1st Siren Activation							
1st EAS or EBS Message							
KI Administration Decision:							

Table 1 - Exercise Timeline
DATE: 2014-09-17, SITE: Arkansas Nuclear One, AR

Emergency Classification Level or Event	Time Utility Declared	Pope County ICP	Yell County	ADH - Freeway Medical	ENC NP&RP
Unusual Event	0744	0801	0810	0800	0817
Alert	0813	0831	0829	0826	0843
Site Area Emergency	1009	1017	1035	1019	1035
General Emergency					
Simulated Rad. Release Started					
Simulated Rad. Release Terminated					
Facility Declared Operational		0758	0911	0830	0820
Declaration of State of Emergency					
Exercise Terminated		1214	1214	1215	1220
Early Precautionary Actions:		0810; 0938; 0945			
Protective Action Advisory				0825	0920
1st Protective Action Decision					
1st Siren Activation					
1st EAS or EBS Message					
KI Administration Decision:					

APPENDIX C: EXERCISE EVALUATORS AND TEAM LEADERS

DATE: 2014-09-17, SITE: Arkansas Nuclear One, AR

LOCATION	EVALUATOR	AGENCY
Arkansas State Emergency Operations Center	*Joseph Suders	FEMA RIII
Arkansas Department of Health, Little Rock Emergency Communications Center	*Paul Anderson	FEMA RIX
Arkansas Department of Health at the Site Emergency Operations Facility	*Elsa Lopez	FEMA RVI
Arkansas Field Radiological Monitoring Team One	George Brozowski	EPA-R6
Arkansas Field Radiological Monitoring Team Two	*Scott Flowerday	FEMA RVI
Alternate Joint Information Center	*Cara Christianson-Riley Brenda Rembert	FEMA RVII ICFI
Arkansas Department of Health - Freeway Medical	Jesse King Robert Neff *Martin Vyenielo	FEMA REPP FEMA RIII FEMA RIII
Emergency News Center NP&RP	Robert Alvey *Meg Swearingen	DHS ICFI
Johnson County Emergency Operations Center	*Nan Calhoun LaShawn Halsey William Maier	FEMA RVI FEMA HQ NRC
Logan County Emergency Operations Center	*Chad Johnston Daniel Kanakares	FEMA RVI FEMA RVII
Pope County Emergency Operations Center	*Brad DeKorte James Greer Elsa Lopez Carolyn Sturghill	FEMA RVI ICFI FEMA RVI FEMA RV
Pope County Incident Command Post	Marcy Campbell *Timothy Pflieger	ICFI FEMA RVI
Yell County Emergency Operations Center	*Barton Freeman John Zeidler	FEMA RIII ICFI
ENS Radio Station KXRJ	*Elsa Lopez	FEMA RVI
NOAA North Little Rock	*Paul Anderson	FEMA RIX
* Team Leader		

APPENDIX D: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
ADEM	Arkansas Department of Emergency Management
ADH	Arkansas Department of Health
AJIC	Alternate Joint Information Center
ANO	Arkansas Nuclear One
ARCA	Area Requiring Corrective Action
AWIN	Arkansas Wireless Information Network
CAD	Computer Aided Dispatch
DEF/VS	Dedicated Emergency Facsimile/Voice System
DRD	Direct Reading Dosimeter
EAD	Electronic Alarming Dosimeter
EAL	Emergency Action Level
EAS	Emergency Alert System
ECC	Emergency Communications Center
ECL	Emergency Classification Level
EMC	Emergency Management Coordinator
EMS	Emergency Medical Services
ENC	Emergency News Center
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EOP	Entent of Play
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
ER	Emergency Response
ESF	Emergency Support Function
EW	Emergency Worker
EWS	Emergency Warning System
FMT	Field Monitoring Team
FMTC	Field Monitoring Team Coordinator
FRS	Family Radio Service
FTC	Field Team Controller
GIS	Geographic Information System
GPS	Global Positioning System
HAB	Hostile Action Base
HP	Health Physicist

Unclassified
Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

Arkansas Nuclear One

IC	Incident Commander
ICP	Incident Command Post
JIC	Joint Information Center
KI	Potassium Iodide
LGL	Local Government Liaison
MAC	Mutual Aid Channel
NERN	Nuclear Emergency Radio Network
NOAA	National Oceanic and Atmospheric Administration
NP&RP	Nuclear Planning and Response Program
ORO	Offsite Response Organization
OSD	Optically Stimulated Dosimeters
OSL	Optically Stimulated Luminescent
PAA	Protective Action Advisory
PAD	Protective Action Decision
PAG	Protective Action Guide
PAR	Protective Action Recommendation
PCSO	Pope County Sheriff's Office
PDF	Portable Document Format
PIO	Public Information Officer
PIT	Public Information Team
PNM	Public Notification Messages
PRD	Permanent Record Dosimeter
RACES	Radio Amateur Civil Emergency Service
REP	Radiological Emergency Preparedness
RFD	Russellville Fire Department
RO	Radiological Officer
RPD	Russellville Police Department
RRTL	Radiological Response Team Leader
RSO	Radiation Safety Officer
SAE	Site Area Emergency
SDO	Staff Duty Officer
SEOC	State Emergency Operations Center
SEOF	State Emergency Operations Facility
T/ACP	Traffic and Access Control Point
TEDE	Total Effective Dose Equivalent
TLD	Thermoluminescent Permanent Record Dosimeter
TOCD	Technical Operations Control Director
UE	Unusual Event
UPS	Uninterruptible Power Supply
VHF	Very High Frequency

Unclassified
Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

Arkansas Nuclear One

VOIP	Voice Over Internet Protocol
WO	Watch Officer

APPENDIX E: EXERCISE PLAN

**Arkansas Nuclear One 2014 Biennial Exercise
September 17, 2014
Extent-of-Play (EOP) Agreement
Between
The Arkansas Department of Health, representing the Off-Site Response Organizations,
and FEMA Region VI**

EVALUATION AREA 1

Emergency Operations Management

Sub-element 1.a – Mobilization

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to alert, notify, and mobilize emergency personnel, and activate and staff emergency facilities.

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. (NUREG-0654/ FEMA-REP-1, A.1.a, e; A.3, 4; C.1,4, 6; D.4; E.1, 2; H.3, 4)

Locations: State EOC ADEM, Camp Robinson; ADH Emergency Communications Center, Little Rock; Pope County EOC, Russellville; Johnson County EOC, Clarksville; Logan County EOC, Paris; Yell County EOC, Danville. Incident Command Post, Russellville; Emergency News Center (NP&RP), Russellville; ADH EOC at Freeway Medical, Little Rock; Alternate Joint Information Center (AJIC), Little Rock

- EOP**
1. ANO will notify the law enforcement agencies IAW ANO Security Plans and the HAB Annex to the Pope County Radiological Plan
 2. The remainder of the OROs will be notified of ECLs IAW existing plans and procedures.
 3. The ADH Radiological Response Team will report to the ADH EOC at Freeway Medical. Nuclear Planning and Response Program staff will report to their offices in Russellville.
 4. Two (2) FRMTs will pre-stage at the NP&RP office. The Armory will not be used for this exercise.
 5. No shift change will be performed. A list of second shift Key Personnel will be available for review. A shift change briefing will either be demonstrated by the OROs or the evaluator will interview the ORO to determine the content of the briefing.
 6. The 1st shift may be over staffed for training purposes. Some staff identified on the 2nd shift roster will play with the 1st team. In an actual emergency this over staffing would not be used.

7. If OROs receive information from alternate sources; the OROs will contact the licensee. The licensee will make additional notification as appropriate.
8. Resources required to respond to the event will be demonstrated. The ability to identify and request additional resources and the role of mutual aid in the response will be demonstrated through interview.
9. Protocols for requesting Federal Support will be demonstrated through interview at the ADH EOC.
10. Incident Command Post tactical operations will not be evaluated. Once coordination among the incident command, the utility, and all appropriate support agencies have been demonstrated, the evaluation of the ICP terminates. Response operations may continue, but are not subject to evaluation.
11. The following locations will pre-stage:
 - a. Incident Command Post at 7975 HWY 64 West, Russellville, AR
 - b. Field Teams
 - c. Alternate JIC
 - d. Emergency News Center/Media Briefing Location
 - e. ADH EOC at Freeway Medical
 - f. Pope County EOC

ARCA: NONE

Sub-element 1.b- Facilities

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) have facilities to support the emergency response.

Criterion 1.b.1: Facilities are sufficient to support the emergency response. (NUREG-0654/FEMA-REP-1, H.3; G.3.a; J.10.h; J.12; K.5.b)

Locations: Emergency News Center (NP&RP), Russellville; ADH EOC at Freeway Medical, Little Rock.

EOP: The above locations are new to support HAB events. They have not been evaluated previously

ARCA: None

Sub-element 1.c - Direction and Control

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) have the capability to control their overall response to an emergency.

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/FEMA-REP-1, A.1.d; A.2.a, b; A.3; C.4, 6)

Locations: State EOC ADEM, Camp Robinson; ADH EOC at Freeway Medical, Little Rock; Pope County EOC, Russellville; Logan County EOC, Paris; Yell County EOC, Danville; Johnson County EOC, Clarksville; Incident Command Post, Russellville

- EOP:**
1. Incident Command will be established at the ICP IAW existing plans and procedures. The incident commander will direct and control ORO response at the event location.
 2. The TOCD will direct and control the ADH Radiological Response Team (RRT).
 3. The RRT will provide recommendations related to the radiation aspect of the response and will assess the radiation environment as required.
 4. The TOCD/RRT will be located at the ADH EOC in Freeway Medical.
 5. ANO will notify the ADH ECC per established procedures. The ECC will follow the instructions of the RSDO and/or the TOCD

ARCA: None

Sub-element 1.d – Communications Equipment

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs establish and operate reliable primary and backup communication systems to ensure communications with key emergency personnel at locations such as contiguous governments within the EPZ, Federal emergency response organizations, the licensee and its facilities, EOCs, Incident Command Posts, and FMTs.

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/FEMA-REP-1, F.1, 2)

Locations: State EOC ADEM, Camp Robinson; ADH ECC, Little Rock; ADH EOC at Freeway Medical, Little Rock; Emergency News Center (NP&RP), Russellville; Alternate Joint Information Center, Little Rock; Pope County EOC, Russellville; Johnson County EOC, Clarksville; Logan County EOC, Paris; Yell County EOC, Danville; Incident Command Post, Russellville; State FRMT 1, Russellville; State FRMT 2, Russellville

EOP: Each location will demonstrate the use of one primary and one backup communications system and be prepared to discuss backup alternate communication systems. Each location will identify a communications system that is independent of the commercial telephone system.

ARCA: None

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

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) have emergency equipment and supplies adequate to support the emergency response.

Criterion 1.e.1: Equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations (NUREG-0654/FEMA-REP-1, H.7, 10; I.7, 8, 9; J.10.a, b, e; J.11, 12; K.3.a; K.5.b)

Locations: State EOC ADEM, Camp Robinson; ADH ECC, Little Rock; ADH EOC at Freeway Medical, Little Rock; Emergency News Center (NP&RP), Russellville; Alternate Joint Information Center, Little Rock; Pope County EOC, Russellville; Johnson County EOC, Clarksville; Logan County EOC, Paris; Yell County EOC, Danville; Incident Command Post, Russellville; State FRMT 1, Russellville; State FRMT 2, Russellville.

- EOP:**
1. The staging area will not be activated. Through interview the NP&RP manager will demonstrate the procedures, when required, for providing dosimetry, KI and just in time training to specialized responding resources.
 2. Meters or DRDs that have "bar code" labels can have their calibration and quarterly operational check dates verified with the master database maintained by the NP&RP HP. Operational checks of meters will be performed before use, using range of readings stickers on the meters.
 3. The quantities of Dosimetry and the quantities and expiration of KI will be confirmed by evaluators at locations identified in plans.
 4. The availability of TACP equipment will be described through interview at the Counties. TACP personnel will not go TACP locations.
 5. Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to ensure that exercise play is not interrupted.

ARCA: 01-12-1e1-A-01

EVALUATION AREA 2

Protective Action Decision-Making

Sub-element 2.a - Emergency Worker Exposure Control

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to assess and control the radiation exposure received by emergency workers and have a decision chain in place, as specified in the ORO's plans/procedures, to authorize emergency worker exposure limits to be exceeded for specific missions.

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure 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/FEMA-REP-1, C.6; J.10. e, f; K.4)

Locations: ADH EOC at Freeway Medical, Little Rock; Pope County EOC, Russellville; Logan County EOC, Paris; Yell County EOC, Danville; Johnson County EOC, Clarksville.

- EOP:**
- 1. Exposure control is IAW existing plans and procedures. The ADH EOC at Freeway Medical will advise the Incident Commander and EOCs of any change in Dose Projection**
 - 2. It is Arkansas policy to issue KI only to Emergency Workers (EW) and institutionalized individuals. County EWs who decline to take KI are not identified in advance. If they decline to take KI at their duty stations, they will not be placed in positions that would expose them to radiation. KI is not issued to the general public**
 - 3. If the scenario does not require a KI decision, OROs can satisfy this EA by interview.**
 - 4. The State of Arkansas may not consider the termination of Emergency Worker exposure control to be at the end of the "plume phase".**

ARCA: None

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to independently project integrated dose from projected or actual dose rates and compare these estimates to the PAGs. OROs must have the capability to choose, among a range of protective actions, those most appropriate in a given emergency. OROs base these choices on PAGs from their plans/procedures or EPA's *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents* and other criteria, such as plant conditions, licensee PARs, coordination of PADs with other political jurisdictions (e.g., other affected OROs and incident command), availability of in-place shelter, weather conditions, and situations, to include HAB incidents, the threat posed by the specific hostile action, the affiliated response, and the effect of an evacuation on the threat response effort, that create higher than normal risk from general population evacuation.

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

Locations: ADH EOC at Freeway Medical.

EOP:

1. Protective actions related to radiation events will be made IAW existing plans and procedures. If the scenario does not result in a GE declaration and the requirement for a protective action, the TOCD will demonstrate the process for making a decision not to make a PAA. This decision will be communicated to the County EOCs. The EOCs will demonstrate the process for agreeing with this decision. The decision not to make any protective action meets the requirement of this criterion.
2. The State's Dose Assessment Team will make projections based on plant conditions and/or source terms, when available. The Team will be operational at the ADH EOC at Freeway Medical. If the scenario does not result in a release, a controller inject with a source term and a RDACS projection will be given to the Dose Assessment Team. They will calculate a dose projection and compare results.
3. Protective Action Advisories issued by the State may differ from the ANO Protective Action Recommendations and may not reflect the logic identified in NUREG-0654/FEMA-REP-1, Revision 1, Supplement 3, *Guidance for Protective Action Strategies (October 2011)*

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/FEMA-REP-1,A.3; C.4, 6; D.4; J.9; J.10.f, m)

Locations: Pope County EOC, Russellville; Johnson County EOC, Clarksville; Logan County EOC, Paris; Yell County, EOC, Danville; Incident Command Post, Russellville.

EOP:

1. It is Arkansas policy to issue KI only to Emergency Workers (EW) and institutionalized individuals. KI is not issued to the general public.
2. Protective actions related to radiation events will be made IAW existing plans and procedures. If the scenario does not result in a GE declaration and the requirement for a protective action, the TOCD will demonstrate the process for making a decision not to make a PAA. This decision will be communicated to the County EOCs. The EOCs will demonstrate the process for agreeing with this decision. The decision not to make any protective action meets the requirement of this criterion.

3. **The State issues Protective Action Advisories (PAAs) and ANO issues Protective Action Recommendations (PARs). A PAA and/or PAR becomes a PAD when all County Judges concur.**
4. **Protective actions related to tactical operations, non radiation, will be made by the Incident Commander IAW existing plans and procedures and law enforcement protocols.**
5. **The Incident Commander will advise EOCs of the magnitude of the threat, the response, and/or site conditions that would require changing Protective Action Decisions.**

ARCA: None

Sub-element 2.c - PAD Consideration for the Protection of Persons with Disabilities and Access/Functional Needs

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to determine PADs, including evacuation, sheltering, and use of KI, if applicable, for groups of persons with disabilities and access/functional needs (e.g., hospitals, nursing homes, correctional facilities, schools, licensed daycare centers, mobility-impaired individuals, and transportation-dependent individuals). The focus is on those groups of persons with disabilities and access/functional needs that are, or potentially will be, affected by a radiological release from an NPP.

Criterion 2.c.1: Protective action decisions are made, as appropriate, for groups of persons with disabilities and access/functional needs. (NUREG-0654/FEMA-REP-1,D.4; J.9; J.10.d, e)

Locations: Pope County EOC, Russellville; Johnson County EOC, Clarksville; Logan County EOC, Paris; Yell County EOC, Danville.

- EOP:**
1. **Lists and procedures will be demonstrated for supporting “groups of persons with disabilities and access/functional needs”. These lists will be reviewed by evaluators but will not be given to evaluators because of HIPPA requirements. Actions will be simulated**
 2. **If the scenario does not result in a GE requiring a PAD, a controller inject will be inserted to all the EOCs to demonstrate this criterion through interview.**
 3. **County EOCs will actually notify all public school systems/districts one time during the drill IAW with their procedures, if the systems/districts are in session.**

ARCA: None

EVALUATION AREA 3

Protective Action Implementation

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to provide for the following: distribution, use, collection, and processing of direct-reading dosimetry and permanent record dosimetry; reading of direct-reading dosimetry by emergency workers at appropriate frequencies; maintaining a radiation dose record for each emergency worker; establishing a decision chain or authorization procedure for emergency workers to incur radiation exposures in excess of the PAGs, and the capability to provide KI for emergency workers, always applying the —as low as is reasonably achievable principle as appropriate.

Criterion 3.a.1: The OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers in accordance with the plans/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. OROs maintain appropriate record-keeping of the administration of KI to emergency workers. (NUREG-0654/FEMA-REP-1, J.10.e; K.3.a, b; K.4)

Locations: ADH EOC at Freeway Medical, Little Rock; Pope County EOC, Russellville; Logan County EOC, Paris; Yell County EOC, Danville; Johnson County EOC, Clarksville; Incident Command Post, Russellville; State FRMT 1, Russellville; State FRMT 2, Russellville.

- EOP:**
- 1. Exposure control is IAW existing plans and procedures. The ADH EOC at Freeway Medical will advise the Incident Commander and EOCs of any change in Dose Projection**
 - 2. County ROs will demonstrate the EW briefing, record keeping, and procedures for issuing and returning dosimetry and KI.**
 - 4. It is Arkansas policy to issue KI only to Emergency Workers (EW) and institutionalized individuals. KI is not issued to the general public.**
 - 5. If the scenario does not require a KI decision, OROs can satisfy this EA by interview.**
 - 6. The State of Arkansas may not consider the termination of Emergency Worker exposure control to be at the end of the “plume phase”.**
 - 7. The listing of EWs who have ingested KI would be developed after the exposure forms are turned in. Because of the length of this exercise, this requirement will not be demonstrated. Each EW who simulates taking KI will have a form documenting when it was taken. These forms would be the basis for developing this list. Forms will be available for evaluator review.**
 - 8. Responding resources that do not have proper dosimetry or KI will be issued dosimetry or KI at the ICP. Just in time training will be provided as required.**

9. **The staging area will not be activated. Through interview the NP&RP manager will demonstrate the procedures, when required, for providing dosimetry, KI and just in time training to specialized responding resources**
10. **Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to ensure that exercise play is not interrupted.**

ARCA: None

Sub-element 3.b – Implementation of KI Decision for Institutional individuals and the General Public

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to provide KI for institutionalized individuals, and, if in the plans/procedures, to the general public for whom immediate evacuation may not be feasible, very difficult, or significantly delayed. While it is necessary for OROs to have the capability to provide KI to institutionalized individuals, providing KI to the general public is an ORO option and must be reflected as such in ORO plans/procedures. Provisions must include the availability of adequate quantities, storage, and means of distributing KI.

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

Locations: Pope County EOC, Russellville; Logan County EOC, Paris; Yell County EOC, Danville; Johnson County EOC, Clarksville.

- EOP:**
1. **It is Arkansas policy to issue KI only to Emergency Workers (EW) and institutionalized individuals. KI is not issued to the general public.**
 2. **If the scenario does not require a KI decision, the County EOCs can satisfy this EA by interview.**
 3. **Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to ensure that exercise play is not interrupted.**

ARCA: None

Sub-element 3.c – Implementation of Protective Actions for Persons with Disabilities and Access/Functional Needs.

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement PADs, including evacuation and/or sheltering, for all persons with disabilities and access/functional needs. The focus is on those persons with disabilities and access/functional needs that are (or potentially will be) affected by a radiological release from an NPP

Criterion 3.c.1: Protective action decisions are implemented for persons with disabilities and access/functional needs other than schools within areas subject to protective actions. (NUREG-0654/FEMA-REP-1, J.10.c, d, e, g)

Locations: Pope County EOC, Russellville; Johnson County EOC, Clarksville; Logan County EOC, Paris; Yell County EOC, Danville.

- EOP:**
1. Lists and procedures will be demonstrated for supporting “groups of persons with disabilities and access/functional needs”, if required by the scenario. Actions will be simulated.
 2. If the scenario does not result in a GE requiring a PAD, a controller inject will be inserted to all the EOCs to demonstrate this criterion through interview.
 3. If contacting a transportation provider is not demonstrated, a controller inject will be provided. Only one provider will be actually contacted at each EOC.

ARCA: None

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement protective action plans/procedures, including relocation and restriction of access to evacuated/sheltered areas. This Sub-element focuses on selecting, establishing, and staffing of traffic and access control points, and removal of impediments to the flow of evacuation traffic.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel. (NUREG-0654/FEMA-REP-1, A.3; C.1,4; J.10.g, j)

Locations: Pope County EOC, Russellville; Logan County EOC, Paris; Yell County EOC, Danville; Johnson County EOC, Clarksville.

- EOP:**
1. The RO will issue Dosimetry, KI and brief the Deputy assigned to the T/ACP as appropriate. The Deputy will not drive to the location. The Deputy will talk through the T/ACP, monitoring, and EW exposure control procedures.
 2. If the scenario does not result in a GE declaration requiring a PAD; a controller inject will be inserted to demonstrate this criterion.
 3. Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to ensure that exercise play is not interrupted.

ARCA: None

Criterion 3.d.2: Impediments to evacuation are identified and resolved. (NUREG-0654/FEMA-REP-1, J.10.k)

Locations: Pope County EOC, Russellville; Logan County EOC, Paris; Yell County EOC, Danville; Johnson County EOC, Clarksville.

- EOP:**
1. The EOC representative will talk through the procedures that demonstrate the capability to identify and take appropriate actions concerning impediments to evacuation.
 2. An inject will be inserted after the evacuation has started. The inject will require the re-routing of traffic.
 3. If a GE has not been declared and evacuations have not been ordered, this inject will be inserted out of sequence.
 4. All EOCs will discuss how this road closing information and re-routing information will get to the public. Providing this information to the AJIC will be simulated.
 5. Actual dispatch of resources will not take place.

ARCA: None

EVALUATION AREA 4

Field Measurement and Analysis

Sub-element 4.a – Plume Phase Field Measurements and Analyses

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to deploy FMTs with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. In addition, NUREG-0654/FEMA-REP-1 indicates that OROs must have the capability to use FMTs within the plume exposure pathway EPZ to detect airborne radioiodine in the presence of noble gases and radioactive particulate material in the airborne plume. In an incident at an NPP, the possible release of radioactive material may pose a risk to the nearby population and environment. Although incident assessment methods are available to project the extent and magnitude of a release, these methods are subject to large uncertainties. During an incident, it is important to collect field radiological data to help characterize any radiological release. Adequate equipment and procedures are essential to such field measurement efforts.

4.a.2: Field teams (2 or more) are managed to obtain sufficient information to help characterize the release and to control radiation exposure. (NUREG-0654/FEMA-REP-1, C.1; H.12; I.7, 8, 11; J.10.a)

Locations: ADH EOC, Little Rock at Freeway Medical

- EOP:**
1. State FRMTs will follow the ALARA Policy of the Arkansas Department of Health. Teams will not routinely traverse a plume. State Teams will define the edge of the plume. Air samples will be taken in areas reading near 20 mR/hr or as directed.

2. Air samples will not be transported.
3. Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to ensure that exercise play is not interrupted.
4. Coordination concerning transfer of sample, including chain of custody form, to a laboratory will be discussed. It is not the intent of the State of Arkansas to deliver air samples to the lab within four (4) hours.
5. If the scenario does not result in a release, a controller inject will be inserted with radiological data. FRMT members will demonstrate taking radiation readings and air samples. Results will be communicated to field team control IAW procedures.

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 (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. (NUREG-0654/FEMA-REP-1, C.1; H.12: I.8, 9; J.10.a)

Locations: State FRMT 1, Russellville; State FRMT 2, Russellville

- EOP:
1. State FRMTs will follow the ALARA Policy of the Arkansas Department of Health. Teams will not routinely traverse a plume. State Teams will define the edge of the plume. Air samples will be taken in areas reading near 20 mR/hr or as directed.
 2. Air samples will not be transported.
 3. Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to ensure that exercise play is not interrupted.
 4. Coordination concerning transfer of sample, including chain of custody form, to a laboratory will be discussed. It is not the intent of the State of Arkansas to deliver air samples to the lab within four (4) hours.
 5. If the scenario does not result in a release, a controller inject will be inserted with radiological data. FRMT members will demonstrate taking radiation readings and air samples. Results will be communicated to field team control IAW procedures.
 6. Air samplers will not be purged.
 7. FRMTs may be asked to describe all procedures not demonstrated.

8. **Charcoal canisters will be used instead of Silver Zeolite. Silver Zeolite canisters will be available for evaluator review.**
9. **Sealed kits do not have to be inventoried. However, FRMTs can inventory them if they want.**
10. **Two teams will be deployed to the field**
11. **State FRMTs will use gloves as necessary. Access to "anti-C's" will be demonstrated; however, they will not be worn. After the termination of the exercise FRMT members will be prepared to demonstrate the donning and removal of "anti-C's" at the NP&RP office. A hot line will not be established and monitoring of team member will not be demonstrated. Respiratory protection will NOT be used.**

ARCA: None

EVALUATION AREA 5

Emergency Notification and Public Information

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to provide prompt instructions to the public within the plume exposure pathway EPZ. Specific provisions addressed in this Sub-element are derived from the *Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants*, FEMA-REP-10 (November 1985).

Criterion 5.a.1: Activities associated with primary alerting and notification 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 REP guidance. (NUREG-0654/FEMA-REP-1, E.5, 6, 7)

Locations: NP&RP, Russellville: NOAA. North Little Rock; Station KXRJ, Russellville.

EOP:

1. **The EAS is not used for ANO alert and notification. The alerting is accomplished by the activation of the siren system and the tone on the NOAA radio. The notification will be demonstrated by the simulated broadcast of the message on NOAA radio and simulated, remote takeover of KXRJ's transmitter and the re-broadcast of the NOAA message.**
2. **No sirens will sound and local radio messages and National Oceanic and Atmospheric Administration (NOAA) messages will NOT BE BROADCAST. The siren activation will be simulated. However, the procedures should be demonstrated up to the point of actual activation. In Arkansas the County**

Judge is the decision maker for protective actions. The TOCD only recommends actions. Since the State does the "alert and notification", the State must wait until the final Judge makes a decision to agree with the recommendation before the "alert and notification" begins.

3. **Local radio message simulation will be demonstrated at radio station KXRJ in Russellville. A site visit will be made to check equipment. The remote takeover of the KXRJ will be simulated at either the NP&RP office or the communications trailer.**
4. **NOAA message simulation will be demonstrated at the National Weather Service Forecast Office, North Little Rock. Any real emergency will take precedence. Procedures to broadcast the message will be fully demonstrated as they would in an actual emergency up to the point of transmission. Broadcast of the message(s) or test messages is not required.**
5. **Route Alerting is not a Primary ANS method. It will not be demonstrated.**
6. **The demonstration of the ANS activation will be after the drill terminates.**

ARCA: None

Sub-element 5.b – Emergency Information and Instructions for the Public and the Media

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to disseminate appropriate emergency information and instructions, including any recommended protective actions, to the public. In addition, NUREG-0654/FEMA-REP-1 requires OROs to ensure that the capability exists for providing information to the media. This includes the availability of a physical location for use by the media during an emergency. NUREG-0654/FEMA-REP-1 also provides that a system must be available for dealing with rumors. This system will hereafter be known as the —public inquiry hotline.||

Criterion 5.b.1: OROs provide accurate subsequent emergency information and instructions to the public and the news media in a timely manner. (NUREG-0654/FEMA-REP-1, E.5, 7; G.3.a, G.4.a, c)

Locations: Emergency News Center (NP&RP), Russellville; Alternate Joint Information Center, Little Rock.

EOP:

1. **Media kits will be provided by Entergy at the AJIC.**
2. **Rumor Control activity is staffed by ANO employees IAW Entergy plans and procedures.**
3. **The JIC and Rumor Control will be in Little Rock. They will pre-stage!**
4. **County representation at the JIC will be through the ENC Liaison position. County personnel will not be at the JIC.**

5. **If the primary JIC and Rumor Control is not available at the training center because of the hostile action, the following Joint Information System will be established:**
 - a. **State Emergency News Center will be established at the NP&RP offices.**
 - b. **The Alternate JIC will be established at the Entergy building in Little Rock.**
 - c. **The media briefing Location will be established at the Hughes Center in Russellville.**
6. **The Incident Commander or his representative will approve all news releases related to the security incident. News releases related to the radiation event will be approved IAW plans and procedures.**
7. **State News Release will be written at the ENC.**
8. **Media briefings will be presented at the Media Briefing Location in the Hughes Center. This location is an extension of the ENC.**

ARCA: None

SCENARIO NARRATIVE SUMMARY

**September 17, 2014
Hostile Action Based Exercise**

Initial Conditions

Exercise will be conducted in real time. Exercise will commence at 0730 hours on Wednesday, September 17, 2014, a normal working day.

Unit 1

The Unit 1 Simulator will not participate in the Exercise. There will be no communications with the Simulator crew other than the Unit 1 Shift Manager.

- Unit 1 is operating at 100% power and has been operating at this power level for 360 days. There are no Technical Specification Limiting Conditions.
- Unit 1 has no apparent problems.
- A Unit 1 Shift Manager and Control Room Communicator will be available to support Unit 2.

Unit 2

Initial plant conditions on Unit 2 are as follows:

- Unit 2 is operating at 100% power and has been operating at this power level for 47 days.
- Unit 2 Reactor Coolant Pump, 2P-32B has a failed lower seal stage.
- Unit 2 'A' Main Feedwater Control system (FWCS) Master controller will not transfer to manual on the Hand Indicating Controller. The 'A' FWCS Master controller is in Soft panel mode.

The following facilities will participate in this Exercise: Unit 2 Simulator, EOF, Alternate TSC, Alternate OSC, Alternate JIC and ICP. The Incident Command Post (ICP) and Alternate JIC will be pre-staged.

A Unit 1 Shift Manager and a Unit 1 Control Room Communicator will participate in this Exercise to support the Unit 2 Operations crew. The Unit 1 Shift Manager has responsibility for their own unit if an abnormal condition exists on that unit.

The Unit 1 Simulator will not participate in this Exercise and no actions will be taken by Unit 1 personnel during the Exercise. If any Unit 1 actions need to be taken during the Exercise, they will be simulated and documented in the scenario.

The Unit 1 and Unit 2 actual controls rooms will not be participating in this Exercise except to sound the plant evacuation alarm if necessary.

September 17, 2014
Full Scale ERO Drill

NARRATIVE SUMMARY

The exercise will begin when the crew accepts responsibility for Unit 2 at approximately **0730** hours on September 17, 2014.

Airliner leaves Atlanta

At **0720 hours**, Delta Airline Flight DL 1272 (Boeing 737) departed from the Hartsfield-Jackson Atlanta International Airport heading for the Kansas City International Airport carrying 211 passengers. The airliner has not been on the planned flight path since takeoff. The captain was contacted by air traffic control at 0725 hours where the captain stated that there is trouble with one of the engines. Traffic Control directed the captain to change course to the Memphis International Airport. Memphis International Airport has been notified to prepare for an emergency landing.

Crew Assumes Watch

At **~0730 hours**, both Unit 1 and Unit 2 reactor power will be 100%. The operations crew will have received turnover briefing and have walked down panels. Shift Manager should take the watch.

Credible Airliner Threat (NUE Criteria Met)

At **0735 hours**, the NRC will call the Unit 2 Control Room and inform the Shift Manager that a credible airliner threat to ANO exists. The NRC will request that an open (continuous) line of communications be maintained. (1203.048 Section 2, Step 3)

The current airliner position is approximately 60 minutes (450 miles) from the site. Since the 0725 hour communication, authorities have not been able to contact the airliner. The airliner has not changed course, has not reduced speed, or lowered altitude as directed, in order to land at Memphis International Airport. Current course takes the airliner near Arkansas Nuclear One.

EAL Criteria Met

IC HU1 - Confirmed SECURITY CONDITION or threat which indicates a potential degradation in the level of safety of the plant.

Plant Evacuation

At **~0740 hours**, the Unit 2 Shift Manager will evacuate the protected area due to the airliner threat (1203.048 Section 2, Step 3.A.). Site personnel will evacuate to the Emergency Operations Facility (EOF) or the Generation Support Building. **(Only drill participants will evacuate)**

NUE Declared

Approximately **0740 hours**, the Unit 2 Shift Manager should declare a **Notification of Unusual Event (NUE)** based on the following condition:

IC HU1, "Confirmed SECURITY CONDITION or threat which indicates a potential degradation in the level of safety of the plant"

EAL 3 - A validated notification from NRC providing information of an aircraft threat

The Shift Manager will notify the NRC and Offsite Response Organization in accordance with Procedure 1203.048, Security Events. The Emergency Response Organization (ERO) will be notified via pager in accordance with Procedure 1203.048, Security Events.

State and local authorities should be notified of the NUE declaration and that there are no protective actions recommended for the general public.

Security should contact Pope County 911 office to inform them of the credible threat.

ICP Staffing

Approximately **0800 hours**, Local Law Enforcement may begin to staff the Incident Command Post (ICP) due to the credible airliner threat.

Airliner Crash

At **0802 hours**, the NRC informs the Unit 2 Control Room that the airliner has crashed approximately 250 miles east of the site.

Hostages Taken at GSB (Alert Criteria Met)

At **0805 hours**, a Security Officer in the Generation Support Building (GSB) on a personal cell phone will contact CAS/SAS and inform them that personnel in the GSB have been taken hostage. At least 2 armed individuals, dressed in military-type uniforms have taken over the GSB. Adversaries have forced all personnel to move to the cafeteria area and lie down. At least 2 individuals have been shot; but it appears they are still alive. Security Officer will report he believes that the adversaries were talking with additional conspirators at a different location. Adversaries will confiscate all cell phones and not allow any outside communication by hostages. Security should contact the Shift Manager.

EAL Criteria Met

IC HA1 - HOSTILE ACTION within the OWNER CONTROLLED AREA or airborne attack threat.

Incident Command Post Established

At approximately **0815 hours**, Pope County Sheriff's Office personnel should be responding to the site and begin establishing an Incident Command Post (ICP). Security should be communicating with the responding officers.

ALERT Declared

By **0820 hours**, the Shift Manager / Emergency Director should declare an **ALERT** emergency class based upon the following EAL:

IC - HA1 - HOSTILE ACTION within the OWNER CONTROLLED AREA or airborne attack threat.

EAL 1 - A HOSTILE ACTION is occurring or has occurred within the OWNER CONTROLLED AREA as reported by ANO Security Shift Supervision.

The Shift Manager will use Procedure 1203.048, Security Event, to notify members of the Emergency Response Organization (ERO) and initiate offsite notifications for the ALERT. State and local authorities will be notified of the Alert and that there are no protective actions recommended for members of the general public.

Facilities Staffed

By **0835 hours**, the EOF, Alternate TSC, and Alternate OSC may be staffed. ED&C may be transferred by this time, depending on the security situation.

SOCA Alarm

At **0835 hours**, Security will receive a SOCA alarm on the switchyard fence.

Loss of Offsite Power (NUE Criteria Met)

At **0840 hours**, two adversaries have made their way into the switchyard. An explosive charge [Improvised Explosive Device (IED)] is set off at the Phase B auto transformer.

The 500kV ring bus trips and locks out on imbalanced phases. Both units will trip.

The auto-transformer oil ignites and a large, smoky fire ensues.

After the Unit 1 reactor trip, the Unit 1 Emergency Diesel Generator, K-4B, will auto-start and energize Bus A-4 without incident.

After the Unit 2 reactor trip, the Unit 2 Emergency Diesel Generator, 2K-4B will auto-start, but will not load onto bus 2A-4 due to a malfunction of EDG output breaker 2A-408.

At **0843 hours** a second explosive device (IED) detonates on the Start-Up #2 (SU2) voltage regulator which supplies power to SU2. The 161kV ring bus trips and locks out. The station is now without any offsite power.

The Unit 1 Emergency Diesel Generator, K-4A, will auto start and energize Bus A-3 without incident.

The Unit 2 Emergency Diesel Generator, 2K-4A will auto-start and energize Bus 2A-3 without incident.

EAL Criteria Met (Plant should already be in an Alert due to Security Event)

IC SU1 - Loss of all offsite AC power to Vital 4.16 KV busses \geq 15 minutes

Adversary Neutralized

At **0848 hours**, one of the adversaries in the switchyard will be neutralized at the 161 kV ring bus (after the explosive charge has been set off).

Unit 2 Emergency Diesel Generator, 2K-4A Trips (Alert Criteria Met)

At **0918 hours**, the Unit 2 Emergency Diesel Generator, 2K-4A will trip due to low lube oil pressure. Strainer gasket has failed, allowing a loss of lube oil pressure.

EAL Criteria Met (Plant should already be in an Alert due to Security Event)

IC SA1 - AC power capability to Vital 4.16 KV busses reduced to a single power source \geq 15 minutes such that any additional single power source failure would result in station blackout. (AAC is the single source).

Alternate AC Generator Low Pressure Alarm

Approximately 5 minutes after starting the Alternate AC Generator, (**~0921 hours**), the Alternate AC Generator Low Starting Air Pressure alarm is received. If starting air pressure drops too low the fuel racks will close, stopping the diesel generator. This malfunction is to ensure urgency on repairs to DG #1 and DG#2.

Unidentified Individual In PA

By this time all plant personnel should have been evacuated from the protected area except for operations and security personnel.

At **0950 hours**, SOCA Monitoring Center (SMC) sees an individual, acting suspicious; enter the train bay from behind the Unit 2 main transformer yard, carrying a backpack.

Gun Fire in Turbine Building (SAE criteria met)

At **1015 hours**, a security officer is dispatched to ascertain the identity of the individual. When the Security Officer orders the individual to "HALT", he is fired upon. The security officer returns fire, killing the individual. When the flap of the backpack is lifted, it is discovered that a third IED is contained within.

EAL Criteria Met

IC HS1 – Hostile Action within the Protected Area

EAL 1 – A Hostile Action is occurring or has occurred within the Protected Area as reported by ANO Security Shift Supervision

Site Area Emergency Declared

At approximately **1015 hours**, the Emergency Director should declare a **SAE** emergency class based upon the following IC:

IC HS1 – Hostile Action within the Protected Area

EAL 1 – A Hostile Action is occurring or has occurred within the Protected Area as reported by ANO Security Shift Supervision

The Shift Manager or Emergency Director, whoever has ED&C, will enter Procedure 1203.048, Security Event, to notify members of the Emergency Response Organization (ERO) and initiate offsite notifications for the SITE AREA EMERGENCY. State and local authorities will be notified of the Site Area Emergency and that there are no protective actions recommended for the members of the general public.

GSB Adversaries Captured

By approximately **1030 hours**, GSB and Switchyard Adversaries should be captured in accordance with the plan developed by the ICP.

FBI assumes responsibility for bomb

At ~1030 the FBI will assume responsibility for the unexploded IED and disposition of the remains of the hostiles/adversaries. The ICP should develop a plan to address the IED.

The FBI should notify the ICP of restrictions related to post-attack environment and coordination of on-site activities.

Post Attack Environment

At approximately **1040 hours**, the ICP should have knowledge that all known adversaries have been neutralized or captured, the ICP should prepare to deal with the plant fire (switchyard) and medical conditions (GSB).

FBI should begin preparations to make the site a crime scene

Fire Support Dispatched to Site

Approximately **1115 hours**, the London Fire Department, with support from other supporting fire departments, will be dispatched on-site to address the auto-transformer fire. The extent of play for this activity will consist of developing plans, simulating issuance of appropriate dosimetry and radiological equipment, and briefing teams. Once complete, the remainder of the fire support will be simulated.

Medical Support Dispatched to Site

Approximately **1115 hours**, Pope County Emergency Medical Services will be dispatched to the site and GSB to address the injured. The extent of play for this activity will consist of developing plans, simulating issuance of appropriate dosimetry and radiological equipment, and briefing teams. Once complete, the remainder of the EMS support will be simulated.

OSC Team Dispatched

Approximately **1115 hours**, once the site is in the post attack environment, or if teams are escorted by Local Law Enforcement personnel, the OSC will dispatch Repair and Corrective Action Teams to repair plant equipment.

Drill Terminated

At **~1230 hours**, once electrical power is restored to Unit 2, the Lead Drill Controller will terminate the drill.

This page is intentionally blank.