



Arkansas Nuclear One

After Action Report/ Improvement Plan

Exercise Date - July 17, 2018

Radiological Emergency Preparedness (REP) Program



FEMA

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Arkansas Nuclear One

After Action Report/Improvement Plan

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EXECUTIVE SUMMARY

On July 17, 2018, a biennial Radiological Emergency Preparedness (REP) exercise was conducted in the rapid release 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 August 17, 2016. The qualifying emergency preparedness exercise was conducted on October 1, 1980. There have been twenty-four evaluated exercises, including the exercise on July 17, 2018, plus numerous drills conducted since 1980.

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 Level 1 or Level 2 Findings or Plan Issues identified, however one prior Plan Issue was resolved during the exercise.

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name

Arkansas Nuclear One

Type of Exercise Plume

Exercise Date

July 17, 2018

Program

Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type

Radiological Emergency – Rapid Release

1.2 Exercise Planning Team Leadership

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1.3 Participating Organizations

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

Risk Jurisdictions

Arkansas Department of Emergency Management
Arkansas Department of Health
Arkansas Department of Health, Emergency Communications Center
City of Russellville
Johnson County 911
Johnson County Clerk's Office
Johnson County Judge
Johnson County Office of Emergency Management
Johnson County Sheriff's Office
Logan County Emergency Medical Services
Logan County Judge
Logan County Office of Emergency Management
Logan County Sheriff's Office
Nuclear Planning & Response Program
Pope County 911
Pope County Emergency Medical Services
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 Fire Control
Yell County Office of Emergency Management
Yell County Sheriff's Office

Support Jurisdictions

Paris Police Department
Midway Rural Fire Department

Private Organizations

American Red Cross

Arkansas Nuclear One Nuclear Power Plant

Entergy Corporation Inc.

KXRJ ENS Radio Station

State Jurisdictions

Arkansas National Guard

Federal Jurisdictions

NOAA/National Weather Service - North Little Rock

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

The DHS/FEMA Region VI Office evaluated the exercise on July 17, 2018 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 Arkansas Nuclear One (ANO). The purpose of this report is to represent 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 D.

2.3 Scenario Summary

The 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, and alert and notify the public.

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) 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 REP Program Manual, dated January 2016. Detailed information on the exercise evaluation area criteria and the extent of play agreement used in this exercise are found in Appendix D of this report.

3.2 Summary Results of Exercise Evaluation

The matrix presented in Table 3.1, on the following page(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 or numbers:

M - Met (No Findings assessed and no unresolved Finding(s) from prior exercises)

1 - Level 1 Finding (formerly Deficiency) assessed

2 - Level 2 Finding assessed or previous unresolved Level 2 Finding(s)

P - Plan Issue

N - Not Demonstrated

Table 3.1 - Summary of Exercise Evaluation (Page 1 of 2)

DATE: 2018-07-17 SITE: Arkansas Nuclear One, AR M: Met, 1: Level 1 Finding, 2: Level 2 Finding, P: Plan Issue, N: Not Demonstrated			State EOC	ADH ECC	ADH/SEOFLTR	AR FRMT 1	AR FRMT 2	ADH ENC	Alt. JIC	Johnson County	Logan County	Pope County
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	M
PARs	2b1			M								
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	M
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			M								
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 (Page 2 of 2)

DATE: 2018-07-17 SITE: Arkansas Nuclear One, AR M: Met, 1: Level 1 Finding, 2: Level 2 Finding, P: Plan Issue, N: Not Demonstrated							
		Yell County	KXRJ	ENS	NOAA	NLR	
Emergency Operations Management							
Mobilization	1a1	M					
Facilities	1b1						
Direction and Control	1c1	M					
Communications Equipment	1d1	M					
Equipment and Supplies	1e1	M					
Protective Action Decision Making							
EW Exp. Control Decisions	2a1	M					
PARs	2b1						
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					
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						
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						
Support Operations/Facilities							
Reception Center Operations	6a1						
EW Monitoring & Decontamination	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, and 1.e.1.
- b. LEVEL 1 FINDING: None
- c. LEVEL 2 FINDING: 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, and 1.e.1.
- b. LEVEL 1 FINDING: None
- c. LEVEL 2 FINDING: 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 Alternate State Emergency Operations Facility in Little Rock and Emergency News Center at the Arkansas Nuclear One Ritchie 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.1, 3.a.1, 4.a.2, and 5.a.1
- b. LEVEL 1 FINDING: None
- c. LEVEL 2 FINDING: 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, and 4.a.3.
- b. LEVEL 1 FINDING: None
- c. LEVEL 2 FINDING: 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, and 4.a.3.
- b. Level 1 Finding: None
- c. Level 2 Finding: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- 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, and 5.b.1.
- b. LEVEL 1 FINDING: None
- c. LEVEL 2 FINDING: 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 and Traffic/Access Control Point

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, and 3.d.2.
- b. LEVEL 1 FINDING: None
- c. LEVEL 2 FINDING: 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 and Traffic/Access Control Point

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, and 3.d.2.
- b. LEVEL 1 FINDING: None
- c. LEVEL 2 FINDING: 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 and Traffic/Access Control Point

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, and 3.d.2.
- b. LEVEL 1 FINDING: None
- c. LEVEL 2 FINDING: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.4 Yell County Emergency Operations Center and Traffic/Access Control Point

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, and 3.d.2.
- b. LEVEL 1 FINDING: None
- c. LEVEL 2 FINDING: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None

- f. PRIOR ISSUES - RESOLVED: PLAN ISSUE: 01-16-3a1-P-01

CONDITION: The Radiological Officer provided a radiological briefing for the Traffic/Access Control Point Officer; however, the briefing did not include instructions on how to wear dosimetry. In addition, both the Radiological Officer and TACP Officer were unsure of use and how to wear the dosimetry issued.

POSSIBLE CAUSE: Insufficient training and incomplete procedures.

REFERENCE: Yell County Radiological Response Plan Rev 5.1, NUREG-0654, K.3.a.1.

EFFECT: If emergency workers were not wearing dosimetry and were exposed to radiation they would not be able to track or report accurate readings.

RECOMMENDATION: Provide additional training and revise County Emergency Radiological Response Plans/Procedures to include information on the use and wearing of dosimetry.

- 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. LEVEL 1 FINDING: None
- c. LEVEL 2 FINDING: 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. LEVEL 1 FINDING: None
- c. LEVEL 2 FINDING: 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: EXERCISE TIMELINE

Table 1 presents the times at which key events and activities occurred during the ANO Plume Exercise held on July 17, 2018.

Table 1 - Exercise Timeline DATE: 2018-07-17, SITE:
Arkansas Nuclear One, AR

Emergency Classification Level or Event	Time Utility Declared	State EOC	ADH- ENC	ADH/SEOF LITTLE ROCK	NOAA	Alt. JIC	Johnson County EOC & T/ACP
Unusual Event	N/A						
Alert	N/A						
Site Area Emergency	0756	0806	0806	0807		0951	0806
General Emergency	0946	1004		1007		0956	0958
Simulated Rad. Release Started	0946	1004					0958
Simulated Rad. Release Ended							
Facility Declared Operational		0845		0848			0830
Declaration of State of Emergency		1034					0825
Exercise Terminated:		1252		1252		1248	1244
Early Precautionary Action Decisions:							
No Fly Zone – Pope County		0849					
Halt rail & river traffic – Pope County		1005					
Activate Reception Centers							0822
Notify/evacuate schools							0826
PAA#1: Place livestock on stored feed/water				0957	0959	1034	0954
Protective Action Decisions (PADs): PAA#2: Evacuations (Zones: G, H, K, N, O, Q, R, S and U). Shelter/Stay Indoors (Zones: I, J, L, M, P and T).				1010	1014	1034	1004
EAS Messages and Times:							
#1 Msg#: “AA-1” (Ag Advisory)			0957		1007		
#2 Msg#: “E” (Evacuation)			1011		1022		
#3 Msg#: “S” (Sheltering/Stay Indoors)			1011		1025		
Traffic Detour Advisory: Pope & Johnson Counties Traffic Detour Advisory: Logan & Yell Counties							
KI Administration Decision: PAA#3, Administer KI for EWs & Institutionalized.		1100		1037			1048

Table 1 - Exercise Timeline DATE: 2018-07-17, SITE:
Arkansas Nuclear One, AR

Emergency Classification Level or Event	Time Utility Declared	Logan County EOC & T/ACP	Pope County EOC & T/ACP	Yell County EOC & T/ACP	KXRJ ENS (SAV)	
Unusual Event	N/A					
Alert	N/A					
Site Area Emergency	0756	0806	0806	0803		
General Emergency	0946	0957	0955	0951		
Simulated Rad. Release Started	0946	0957	0955	0951		
Simulated Rad. Release Ended						
Facility Declared Operational		0816	0834	0837		
Declaration of State of Emergency		1042	0932	0941		
Exercise Terminated:		1239	1241	1239		
Early Precautionary Action Decisions:			0842			
Dam Closure – Pope County						
No fly zone – Pope County			0848			
Rail closure – Pope County			0906			
Contacted Schools – Yell County				0925		
Isolate water towers – Pope County			0939			
PAA#1: Place livestock on stored feed/water		0953	0953	0955		
Protective Action Decisions (PADs):		1007	1007	1007		
PAA#2: Evacuations (Zones: G, H, K, N, O, Q, R, S & U). Shelter/Stay Indoors (Zones: I, J, L, M, P & T)						
EBS Messages and Times:						
#1 Msg#: “AA-1” (Ag Advisory)						
#2 Msg#: “E” (Evacuation)						
#3 Msg#: “S” (Sheltering/Stay Indoors)						
Traffic Detour Advisory: Pope & Johnson Counties						
Traffic Detour Advisory: Logan & Yell Counties						
KI Administration Decision: PAA#3, Administer KI for EWs & Institutionalized.		1055	1058	1050		

APPENDIX B: EXERCISE EVALUATORS AND TEAM LEADERS

DATE: 2018-07-17, SITE: Arkansas Nuclear One, AR

LOCATION	EVALUATOR	AGENCY
Arkansas State Emergency Operations Center	*Lisa Rink Robert McWilliams-OJT	FEMA HQ FEMA HQ
Arkansas Department of Health, Little Rock Emergency Communications Center (ECC)	*Darren Bates	FEMA HQ
Arkansas Department of Health at the State Emergency Operations Facility, Little Rock, AR	*Denny Wilford Charles Blue	ICF FEMA HQ
Arkansas Field Radiological Monitoring Team One	*Scott Flowerday	FEMA R6
Arkansas Field Radiological Monitoring Team Two	George Brozowski	EPA
Arkansas Nuclear One Emergency News Center (ENC)	*Jesse King	FEMA HQ
Alternate Joint Information Center Little Rock	*Linda Gee Elena Joyner LaShawn Halsey	FEMA R6 FEMA R9 FEMA HQ
Johnson County Emergency Operations Center and Traffic/Access Control Point	*Elsa Lopez Andy Chancellor Clint Crackel Brian Ellis - OJT	FEMA R6 FEMA R7 FEMA R5 FEMA R6
Logan County Emergency Operations Center and Traffic/Access Control Point	*Brad DeKorte Sam Williams Ronnie Warren	FEMA HQ FEMA HQ FEMA R8
Pope County Emergency Operations Center and Traffic/Access Control Point	*Tim Pflieger Jimmy Wortham Gerald McLemore	FEMA R6 USDA FEMA R4
Yell County Emergency Operations Center and Traffic/Access Control Point	*Nan Williams Bill Maier Paul Anderson	FEMA R6 NRC FEMA R9
ENS Radio Station KXRJ	*Jessie King	FEMA HQ
NOAA North Little Rock	*Darren Bates	FEMA HQ
* Team Leaders		

APPENDIX C: Acronyms & Abbreviations

Acronym	Meaning
ADEM	Arkansas Department of Emergency Management
ADH	Arkansas Department of Health
AJIC	Alternate Joint Information Center
ANO	Arkansas Nuclear One
ARCC	Arkansas Response Coordination Center
AWIN	Arkansas Wireless Information Network
DCF	Dose Conversion Factor
DHS/FEMA	Department of Homeland Security/Federal Emergency Management Agency
DEF/VS	Dedicated Emergency Facsimile/Voice System
DRD	Direct Reading Dosimeter
EAL	Emergency Action Levels
EAS	Emergency Alert System
ECC	Emergency Communications Center
ECL	Emergency Classification Level
EMC	Emergency Management Coordinator
ECN	Emergency Classification Notification
EMD	Emergency Management Director
EMS	Emergency Medical Services
ENC	Emergency News Center
EOC	Emergency Operations Center
EOP	Extent of Play
EPA	Environmental Protection Agency
EPD	Electronic Personal Dosimeter
EPZ	Emergency Planning Zone
ESF	Emergency Support Function
EW	Emergency Worker
FMT	Field Monitoring Team
FTC	Field Team Control
FTL	Field Team Lead
GE	General Emergency
HP	Health Physicist
KI	Potassium Iodide
LGL	Local Government Liaison
NOAA	National Oceanic and Atmospheric Administration
NERN	Nuclear Emergency Radio Network
OEM	Office of Emergency Management
ORO	Offsite Response Organization
OSL	Optically Stimulated Luminescent
PAA	Protective Action Advisory

PAD	Protective Action Recommendation
PAG	Protective Action Guidelines
PAR	Protective Action Recommendation
PDAFN	Persons with Disabilities and Access/Functional Needs
PIO	Public Information Officer
PIT	Public Information Team
RASCAL	Radiological Assessment Systems for Consequence Analysis
REP	Radiological Emergency Preparedness
RO	Radiological Officer
RRTL	Radiological Response Team Leader
SAE	Site Area Emergency
SEOC	State Emergency Operation Center
SEOF	State Emergency Operations Facility
TACP	Traffic and Access Control Point
TCP	Traffic Control Point
TEDE	Total Effective Dose Equivalent
TLD	Thermoluminescent Dosimeter
TOCD	Technical Operations Control Director
URI	Unified RASCAL Interface
USPS	United States Postal Service
WO	Watch Officer

APPENDIX D: EXERCISE PLAN

Arkansas Nuclear One 2016 Biennial Exercise
July 17, 2018
Extent-of-Play (EOP) Agreement
Between
The Arkansas Department of Health, representing the Off-Site Response Organizations (ORO),
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 (ECC) & ADH EOC, Little Rock; ADH State Emergency Operations Facility (SEOF), Russellville; **Pope** County EOC, Russellville; Johnson County EOC, Clarksville; Logan County EOC, **Paris**; Yell County EOC, Danville. Alternate Joint Information Center (AJIC), Little Rock.

- | | |
|-----|---|
| EOP | <ol style="list-style-type: none">1. ANO will notify the ADH ECC per established procedures. The ECC will follow the instructions of the RSDO and/or the TOCD.2. Direction and Control will remain with the TOCO who will deploy to the ADH EOC. Alternate JIC Radiation Control staff will deploy to AJIC. NP&RP Russellville will report to the SEOF.3. The FRMTs will be deployed at the ANG Armory, Russellville. Two teams will go into the field. FRMTs will be directed from the ADH EOP.4. ADH, Little Rock will only be evaluated at the ECC/EOC and AJIC.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. Protocols for requesting Federal Support will be demonstrated through **Interview at** the ADH EOC.
8. The following locations will pre-stage:
 - a. Field Teams at the NP&RP Office and then to the Armory in Russellville, and the AJIC in Little Rock.

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; AOH EOC, Little Rock; Pope County EOC, Russellville; Logan County EOC, Paris; Yell County EOC, Danville; Johnson County EOC, Clarksville.

- EOP:
1. ANO will notify the ADH ECC per established procedures. The ECC will follow the instructions of the RSDO and/or the TOCO.
 2. Direction and Control will remain with the TOCO. The ADH will be evaluated at the ADH EOC.
 3. Direction & Control will remain with the TOCO located in Little Rock.

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 capab/lties are managed In support of emergency operations. (NUREG-0654/FEMA-REP-1, F.1, 2)

Locations: State EOC ADEM, Camp Robinson; ADH ECC & EOC, Little Rock; ADH SEOF, Russellville; Alternate Joint Information Center, Little Rock; Pope County EOC, Russellville; Johnson County EOC, Clarksville; Logan County EOC, Paris; Yell County EOC, Danville; State FRMT 1, Russellville; State FRMT 2, Russellville
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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; 1.7, 8, 9; J.10.a, b, e; J.11, 12; K.3.a; K.5.b)

Locations: State EOC ADEM, Camp Robinson; ADH ECC & EOC, Little Rock; Alternate Joint Information Center, Little Rock; Pope County EOC, Russellville; Johnson County EOC, Clarksville; Logan County EOC, Paris; Yell County EOC, Danville; State FRMT 1, Russellville; State FRMT 2, Russellville.

- EOP:**
1. ADH Little Rock will only be evaluated at the ECC/EOC.
 2. The quantities of Dosimetry and the quantities and expiration of KI will be confirmed by evaluators at locations identified in plans.
 3. The availability of TACP equipment will be described through interview at the Counties. TACP personnel will not go TACP locations.
 4. Exposure control and monitoring will be under the control of ANO at the SEOF. ANO will perform habitability determination using meters and area monitoring.
 5. It is Arkansas policy to issue KI only to Emergency Workers (EW) and institutionalized individuals. KI Is not issued to the general public.
 6. 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

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, Little Rock; **Pope** County EOC, Russellville; Johnson County EOC, Clarksville; Logan County EOC, Paris; Yell County EOC, Danville.

- EOP:
1. Exposure control and monitoring will be under the control of ANO at SEOF. ANO will perform habitability determination using meters and area monitoring.
 2. At the County EOCs, the RO will demonstrate the EW briefing, record keeping, and procedures for Issuing and returning dosimetry and KI.
 3. If the plume does not require a KI decision, the County EOCs can satisfy this EA by Interview.
 4. It Is Arkansas policy to issue KI only to Emergency Workers (EW) and Institutionalized individuals. EWs who decline to take KI may not be 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
 5. 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, 1.10 and Supplement 3)

Locations: ADH EOC Little Rock. EOP:

1. Dose Projections will be made per procedures using a combination of RASCAL and RDACS. RASCAL will be the primary model used to make projections **based** on "plant conditions". Once RDACS outputs are determined to adequately represent the plume, it will be used as the primary model.
2. 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.

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. The State issues Protective Action Advisories (PAAs) and ANO issues Protective Action Recommendations (PARs). A PAA and/or PAR become a PAD when all County Judges concur.

3. If the plume does not require a K1 decision, the county EOCs can satisfy this EA by Interview.

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 K1, 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 HIPAA requirements. Actions will be simulated
 2. 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.
 3. If the systems/districts are not in session, the EOCs will provide evaluators the contact information for the schools and will satisfy this criterion via interview.

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: ADHISEOF, Russellville; State Field Radiological Monitoring Teams (FRMT) 1 and (FRMT) 2, Russellville; Pope County EOC, Russellville; Johnson County EOC, Clarksville; Logan County EOC, Paris; Yell County EOC, Danville.

- EOP**
1. Exposure control and monitoring will be under the control of ANO at SEOF. Dosimetry will be available to deploying personnel when appropriate.
 2. County ROs will demonstrate the EW briefing, record keeping, and procedures for issuing and returning dosimetry and KI.
 3. It is Arkansas policy to issue KI only to Emergency Workers (EW) and institutionalized individuals. KI is not issued to the general public.
 4. If the scenario does not require a KI decision, OROs can satisfy this EA by interview.
 5. The State of Arkansas may not consider the termination of Emergency Worker exposure control to be at the end of the 11plume phase".
 6. 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.

7. 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.
8. It is Arkansas policy to issue KI only to Emergency Workers (EW) and institutionalized individuals. EWs who decline to take KI may not be 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.

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. Use of KI by EWs will be simulated.
 4. 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 accessHunctional 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 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 contacting a transportation provider is not demonstrated, a controller inject will be provided. Only one provider will be actually contacted at each EOC.

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. One County EOC will contact the SEOF with the re-routing information. The LGL will prepare a Public Notification Message and provide the re-routing information to the ENC. The LGL will not transmit the PNM but will explain the distribution. The ENC will prepare a News Release and will provide the Release to the AJIC for briefing to the media. The other Counties will simulate providing the information to the LGL.
 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.

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; 1.7, 8, 11; J.10.a)

Locations: SEOF, 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. The team member will discuss the process for transferring samples.
 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 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: 1.8, 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. The team member will discuss the process for transferring samples
 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. Air samplers will not be purged.
 5. FRMTs may be asked to describe all procedures not demonstrated.
 6. Charcoal canisters will be used instead of Silver Zeolite. Silver Zeolite canisters will be available for evaluator review.
 7. Sealed kits do not have to be inventoried. However, FRMTs can inventory them if they want.
 8. Two teams will be deployed to the field.
 9. 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". 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 S.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: SEOF & ENC, 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.
 - a. If the Local Government Liaison (LGL) position Is staffed at the SEOF when the first PAD is issued requiring activation of the **ANS**:
 - 1) The activation of the siren system will be demonstrated at the SEOF.
 - 2) Emergency **Messages** will be completed by the LGL and provided to NOAA for broadcast.
 - b. If the LGL position is staffed at the NP&RP offices when the first PAD is Issued requiring activation of the **ANS**:
 - 1) The activation of the siren system will be demonstrated at the NP&RP offices.
 - 2) Emergency **Messages** will be completed by the LGL and provided to NOAA for broadcast

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 TOCO 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 SEOF.
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.**

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, 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 AJIC and Rumor Control will be in Little Rock.
 4. County representation at the AJIC will be through the PIT Liaison position. County personnel will not be at the AJIC.
 5. State News Release will be written at the ENC.

ARCA: None

EMERGENCY PREPAREDNESS EXERCISE

JULY 17, 2018

DETAILED SCENARIO

DETAILED DESCRIPTION OF EVENTS

This section contains a chronological listing of major scenario events and anticipated responses that are expected to occur during the exercise and is intended for the effective placement of controllers, evaluators, and observers. The anticipated responses listed in this section do not necessarily include all of the acceptable actions by players and should not be used as a basis for performance evaluations. Evaluation of player decisions should be based on appropriate implementation of the ANO Emergency Plan and procedures.

Initial Conditions

- **Unit 1 Simulator**
 - 100% power at beginning of core life.
 - #1 Emergency Diesel Generator is out of service for oil replacement.
- **Unit 2 Simulator (Shift Manager & Shift Crew)**
 - Unit 2 is at 100% power and is at the end of core life.

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Initial Conditions

The plant has been operating at 100% for the past 80 days and is at beginning of core life.

#1 EDG is out of service for oil replacement.

Scenario Event Sequence

07:30 Scenario begins

07:37 Loss of offsite power with a trip of #2 EOG before loading.

Control Room declares an SAE (**5 S1**) within 15 minutes (07:52)

07:38 Control Room dispatches AO to attempt to restore non-running EOG using K01 ACA and OP-1104.036 EOG Operation.

07:40 Unit 2 reports that AAC Diesel will not start from the control room and an operator has been dispatched to start the diesel locally.

07:55 WCO reports to the control room that CV-1221 and CV-1274 are closed manually.

07:58 Control Room will contact Dispatcher to take emergency actions to restore power, including system load shed if necessary.

At some point the control room may consider declaring an Extended Loss of AC power which would put them in FDS-001. **This is not the intent of the scenario.**

08:05 Control Room dispatches WCO to take manual control of P-7A per OP-1106.006 Exhibit C.

08:10 Unit 2 reports that AAC Diesel is running and ready to load.

08:20 Dispatch an operator with a radio to place ATM Dump CNTRL valves on hand jack and fully open. OP-1203.002, Exhibit A.

08:30 E-29A Letdown Cooler leak (30 gpm) with a failure of the inlet valve CV-1213 to close. Also the ICW isolation valve CV-2215 will fail to close.

08:40 RCS leak begins and builds in over 10 minutes to a value of 150-200 gpm.

08:50 The WCO reports to the control room that the running Makeup Pump, P-36A or C, has a significant oil leak that he cannot fix.

09:00 Failed fuel begins

09:25 P-4A or C Service Water Pump Motor Winding Temperatures begin to rise requiring the motor to be secured or the breaker will eventually trip on a delayed overcurrent trip.

09:45 Break occurs at P-62 on ICW drain line upstream of the isolation valve (CNB4).

12:00 Breaker B-6191 replaced and CV-2215 closed which will allow the ERO to begin downgrading the GE.
