



Quad Cities Generating Station After Action Report / Improvement Plan

Exercise Date – November 16, 2016

Radiological Emergency Preparedness (REP) Program



FEMA

Published March 31, 2017

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FEMA Region V/VII

Joint After Action Report/Improvement Plan (AAR/IP)

Published March 31, 2017

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PART I.

FEMA Region V

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FEMA Region V

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EXECUTIVE SUMMARY

On November 16, 2016, a Radiological Emergency Preparedness (REP), Partial Participation, Plume Exposure Pathway Exercise was conducted in the 10-mile Emergency Planning Zone (EPZ) around the Quad Cities Station (QCS) by the U.S. Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA), Region V. The purpose of the exercise was to assess the level of preparedness of State and local jurisdictions in responding to a radiological emergency. This exercise was held in accordance with DHS/FEMA policies and guidance concerning the exercise of State and local Radiological Emergency Response Plans (RERPs) and procedures.

The most recent exercise at this site was conducted on August 27, 2014. The qualifying emergency preparedness exercise was conducted on May 20, 1981.

The DHS/FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise. The State of Illinois, Rock Island County, and Whiteside County, local municipalities as well as various non-government entities and volunteers all contributed to the success of the exercise.

Protecting the public health and safety was the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork on the part of all participants was evident during this exercise. This after Action Report/Improvement Plan contains the evaluation of the biennial exercise and the evaluation of the following out-of-sequence activities:

- MS-1 Medical Drill – UnityPoint Health/Trinity Medical Center
- MS-1 Medical Drill – Advanced Medical Transport, UnityPoint Health/Trinity Medical Center
- Dosimetry Control Officer Briefing – Illinois State Police District 1 Headquarters
- Traffic and Access Control Post – Illinois State Police District 1 Headquarters

Sections 3 and 4 of this report provide detailed information regarding any Level 1 or Level 2 Findings, Plan Issues and Improvement Plan.

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SECTION 1: INTRODUCTION

1.1 Exercise Basis

On December 7, 1979, the President directed FEMA to assume the lead responsibility for all offsite nuclear planning and response. DHS/FEMA's activities are conducted pursuant to 44 Code of Federal Regulations (CFR) Parts 350 "Review and Approval of State and Local Radiological Emergency Plans and Preparedness," 351 "Radiological Emergency Planning and Preparedness," and 352 "Commercial Nuclear Power Plants: Emergency Preparedness Planning." These regulations are a key element in the Radiological Emergency Preparedness (REP) Program that was established following the Three Mile Island Nuclear Station accident in March 1979.

The FEMA Rule 44 CFR 350 establishes the policies and procedures for DHS/FEMA's initial and continued approval of State and local governments radiological emergency planning and preparedness for commercial nuclear power plants. This approval is contingent, in part, on State and local governments' participation in joint exercises with licensees.

DHS/FEMA's responsibilities in radiological emergency planning for fixed nuclear facilities include the following:

- Taking the lead in offsite emergency planning and in the review and evaluation of RERPs and procedures developed by State and local governments;
- Determining whether such plans and procedures can be implemented on the basis of observation and evaluation of exercises of the plans and procedures conducted by State and local governments;
- Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated October 1, 2015; and
- Coordinating the activities of Federal agencies with responsibilities in the radiological emergency planning process:
 - U.S. Department of Agriculture;
 - U.S. Department of Commerce;
 - U.S. Department of Energy;
 - U.S. Department of Health and Human Services
 - U.S. Department of the Interior;
 - U.S. Department of Transportation;
 - U.S. Environmental Protection Agency;

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- U.S. Food and Drug Administration;
 - U.S. Nuclear Regulatory Commission.

Representatives of these agencies serve on the DHS/FEMA Region V Regional Assistance Committee (RAC), which is chaired by the DHS/FEMA.

Formal submission of the RERPs for the Quad Cities Station to FEMA Region V by the State of Illinois and involved local jurisdictions occurred on March 31, 1981. Formal approval of these RERPs was granted by FEMA on June 4, 1982, under 44 CFR 350.

A REP Partial Participation Plume Exposure Pathway Exercise was conducted on November 16, 2016, and evaluated by DHS/FEMA to assess the capabilities of State and local offsite emergency preparedness organizations in implementing their RERPs and procedures to protect the public's health and safety during a radiological emergency involving the Quad Cities Station. The purpose of this exercise report is to present the exercise results and findings on the performance of the Offsite Response Organizations (OROs) during a simulated radiological emergency.

The findings presented in this report are based on the evaluations of the Federal evaluation team, with final determinations made by the DHS/FEMA Region V RAC Chair, and approved by the DHS/FEMA Headquarters.

The criteria utilized in the FEMA evaluation process are contained in:

- NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants", November 1980; and
- Program Manual, Radiological Emergency Preparedness, FEMA P-1028 / January 2016.

Section 1 of this report, entitled "Introduction," describes the exercise basis and the State of Illinois portion of the 10-mile and 50-mile Emergency Planning Zones around the Quad Cities Station.

Section 2 of this report, entitled "Exercise Overview," presents information pertaining to the team that planned and coordinated the exercise. This section also provides a listing of all participating jurisdictions and functional entities that were evaluated.

Section 3 of this report, entitled "Exercise Design Summary," contains the purpose and design of the exercise, a description of the plume pathway EPZ and presents basic information and data relevant to the exercise scenario.

Section 4 of this report, entitled "Analysis of Capabilities," presents detailed information on the demonstration of applicable exercise criteria at each jurisdiction or functional entity evaluated

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in a jurisdiction-based, issues-only format. This section also contains: (1) descriptions of all Level 1 Findings, Level 2 Findings and/or Plan Issues (if any) assessed during this exercise, recommended corrective actions, and the State and local government's Improvement Plan, if applicable, for each identified exercise issue; and (2) descriptions of unresolved Level 2 Findings assessed during previous exercises and the status of the efforts to resolve them.

Section 5 of this report, entitled "Conclusion" presents the DHS/FEMA summary of overall exercise conduct and results as evaluated against the requirements of 44 CFR 350.

1.2 Emergency Planning Zone (EPZ) Description

The Quad Cities Station is located in Rock Island County, Illinois. The Station is 20 miles northeast of the Quad Cities. It is on the eastern bank of the Mississippi River opposite the mouth of the Wapsipinicon River. The topography of the site and its immediate environs is low and relatively flat, with a mean elevation of approximately 605 feet. The ground surface drops off abruptly at the bank of the river, forming a bluff approximately 30 feet high.

The 10-mile EPZ encompasses the following jurisdictions: Rock Island County, which includes the municipalities of Cordova and Port Byron, and Whiteside County, which includes the municipality of Albany. The 2010 population of the 10-mile EPZ is 6,298 persons. The primary land use around the Quad Cities Station is agricultural, with cash grain crops of corn and soybeans. The closest major industries are located in the Cordova Industrial Park northeast of the Station.

Major transportation facilities in the Quad Cities Station 10-mile EPZ are limited to Interstate Highway 88, which passes nine and one-half miles southeast of the Station; the Illinois and Michigan Rail link and the Mississippi River.

The 10-mile EPZ also includes two Counties within the State of Iowa within the Jurisdiction of FEMA Region VII.

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SECTION 2: EXERCISE OVERVIEW

2.1 Exercise Details

Exercise Name

Quad Cities Station

Type of Exercise

Plume Exposure Pathway

Exercise Date

November 16, 2016

Program

Department of Homeland Security (DHS)/Federal Emergency Management Agency (FEMA)
Radiological Emergency Preparedness (REP) Program

Scenario Type

Radiological Emergency

2.2 Exercise Planning Team

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2.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the QCS REP, Partial-Participation Plume Exposure Pathway Exercise during the week of November 16, 2016:

Illinois State Jurisdictions

Illinois Emergency Management Agency (IEMA)
Illinois Department of Agriculture (IDOA)
Illinois Civil Service Commission (ICSC)
Illinois Department of Natural Resources (IDNR)
Illinois Office of the Governor
Illinois National Guard
Illinois Mutual Aid Box Alarm System (MABAS)
Illinois State Police
Illinois State Emergency Operations Center

Risk Jurisdictions

City of Morrison
Rock Island County Board Chairperson
Rock Island County Coroner's Office
Rock Island County Emergency Management Agency Director
Rock Island County Geographic Information System Coordinator
Rock Island County Public Health Department
Rock Island County Public Information Officer
Rock Island County Public Works
Rock Island County Regional Superintendent of Schools
Rock Island County Sheriff's Department
Village of Albany
Village of Cordova
Whiteside County Board Commissioners
Whiteside County Coroner's Office
Whiteside County Emergency Services and Disaster Agency (ESDA) Director
Whiteside County Health Department
Whiteside County Highway Department
Whiteside County Public Information Officer
Whiteside County Regional Office of Education
Whiteside County Sheriff's Department

Private Organizations

Advanced Medical Transport (AMT)
American Red Cross – Quad Cities Chapter

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Exelon Corporation
Radio Amateur Civil Emergency Service (RACES)
Sterling-Rock Falls Amateur Radio Society (ARES)
UnityPoint Health-Trinity Medical Center
KCLN/MaC Radio Station
KQCJ Radio Station

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SECTION 3: EXERCISE DESIGN SUMMARY

3.1 Exercise Purpose and Design

The purpose of this exercise is to evaluate Player actions against current emergency response plans, procedures, and performance capabilities for a National Preparedness Program related incident, and to comply with the requirements of 44 CFR 350 and the guidelines of NUREG 0654/FEMA-REP-1. Exercise Planners utilized the REP Program Manual (RPM) to develop this exercise.

The objective of the DHS/FEMA is to demonstrate reasonable assurance that the public's health and safety can be protected during a Nuclear Power Plant emergency.

3.2 Exercise Objectives, Capabilities, and Activities

Exercise objectives and identified Capabilities / REP Criteria selected to be demonstrated are discussed in Appendix E "Extent of Play."

The Exercise Planning Team (EPT) selected objectives that focused on evaluation of emergency response procedures, identifying areas for improvement, and achieving a collaborative attitude. This exercise focused on OROs effectively demonstrating the following objectives:

- Demonstration of effective Emergency Operations Management.
- Demonstration of effective Protective Action Decision Making.
- Demonstration of effective Protective Action implementation.
- Demonstration of effective Emergency Notification and Public Information.
- Demonstrate the ability of personnel to exercise proper radiological controls and issuance of dosimetry.
- Demonstrate the ability of EMS personnel to transport a contaminated injured patient.
- Demonstrate the ability of hospital personnel to treat a contaminated injured patient.
- Demonstrate proper communication between medical personnel and IEMA staff.

3.3 Scenario Summary

Appendix F “Scenario Timeline” contains a summary of the Exercise Scenario, a simulated sequence of events that was used as the basis for invoking emergency response actions by OROs during the QCS REP Partial-Participation Plume Exposure Pathway Exercise on November 16, 2016.

Results of a technical review of the scenario, submitted on September 14, 2016, indicated that the scenario was adequate to support demonstration of the DHS/FEMA requirements, as well as criteria selected by the off-site response organizations provided in the State of Illinois’ July 11, 2016, August 18, 2016, September 20, 2016, and November 14, 2016 extent-of-play submissions.

During the exercise, in addition to information and data provided through the QCS onsite scenario, controllers from the State of Illinois provided “inject messages” containing scenario events and/or relevant data to those persons or locations who would normally receive notification of such events. These inject messages were the method used for invoking additional specific response actions by OROs.

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SECTION 4: ANALYSIS OF CAPABILITIES

4.1 Exercise Evaluation and Results

This section presents the results and findings of the evaluation of all State of Illinois, Rock Island County, and Whiteside County offsite response organizations that participated in the November 16, 2016, Quad Cities Station (QCS) Radiological Emergency Preparedness (REP), Partial- Participation, Plume Exposure Pathway Exercise. The exercise was conducted jointly by FEMA Regions V and VII, the States of Illinois and Iowa, and the Risk Counties of Rock Island and Whiteside in Illinois, and Clinton and Scott in Iowa.

Each jurisdiction and functional entity was evaluated based on its demonstration of exercise criteria delineated in the FEMA P-1028 REP Program Manual, dated January 2016. Detailed information on the exercise criteria and the extent-of-play agreement used in this exercise can be found in Appendix E: Extent of Play. Presented below are definitions of the terms used in this report relative to the criteria demonstration status:

- **M – Met:** The status of a REP exercise Evaluation Area Criterion indicating that the participating ORO demonstrated all demonstration criteria for the Evaluation Area Criterion to the level required in the extent-of-play agreement with no Level 1 or 2 Findings or Plan Issues assessed in the current exercise and no unresolved prior issues.
- **L1 – Level 1 Finding:** An observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant.
- **L2 – Level 2 Finding:** An observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety. Listing of the demonstrated exercise criteria under which a Level 2 Finding was assessed during the current exercise or Level 2 Finding assessed during prior exercises remain unresolved. Included is a description of any Level 2 Findings assessed during this exercise and the recommended corrective action to be demonstrated before or during the next biennial exercise.
- **P – Plan Issue:** An observed or identified inadequacy in the ORO emergency plan or implementing procedures, rather than in the ORO demonstrated performance.
- **N – Not Demonstrated:** Exercise criteria that were not demonstrated as scheduled during this exercise and the reason(s) they were not demonstrated.
- **Prior Issues – Resolved:** Descriptions of Level 2 Findings assessed during

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previous exercises that were resolved and the corrective actions demonstrated, in this exercise.

- Prior Issues – Unresolved: Descriptions of Level 2 Findings assessed during prior exercises that were not resolved in this exercise. Included in the descriptions is the reason the Level 2 Finding remains unresolved and the recommended corrective actions to be demonstrated before or during the next exercise.

4.2 Summary Results of Exercise Evaluation

This subsection provides information on the evaluation of each participating jurisdiction and functional entity in jurisdiction-based, issues-only format.

The matrix presented in Table 4.1, on the following page(s), presents the status of all exercise criteria from the FEMA P-1028 REP Program Manual, dated January 2016, which were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. The Exercise Criterion status box is blank if it was not scheduled for demonstration. The DHS/FEMA has developed a standardized system for numbering exercise issues. This system is used to achieve consistency in numbering exercise issues among DHS/FEMA Regions and site-specific exercise reports within each Region. It also is used to expedite tracking of exercise issues on a nationwide basis. The identifying number of Level 1 Findings, Level 2 Findings, and Plan Issues includes the following elements, with each element separated by a hyphen (-).

- Plant Site Identifier – A two-digit number, corresponding to the Utility Billable Plant Site Code (51 for the Quad Cities Station).
- Exercise Year – The last two digits of the year the exercise was conducted.
- Demonstration Criterion – The letters and number corresponding to the Demonstration Criterion in the six Exercise Evaluation Areas described in the FEMA P-1028 REP Program Manual, dated January 2016. Issue Classification Identifier – (L1 = Level 1 Finding, L2 = Level 2 Finding, P = Plan Issue).
- Exercise Issue Identification Number – A separate two or three-digit indexing number assigned to each issue identified in the exercise.

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Table 4.1 - Summary of Exercise Evaluation (3 pages)

DATE: 2016-11-16 SITE: Quad Cities Station, IL M: Met, L1: Level 1 Finding, L2: Level 2 Finding, P: Plan Issue, N: Not Demonstrated		IL-IWP	IL-REAC	IL-EOC-ROC	IL-EOC-ROC/SL	IL-EOC-WHI	IL-EOC-WHI-IL/SL
Emergency Operations Management							
Mobilization	1a1	M	M				
Facilities	1b1						
Direction and Control	1c1		M		M		M
Communications Equipment	1d1	M	M				
Equipment and Supplies to Support Operations	1e1		M				
Protective Action Decision Making							
EW Exposure Control Decisions	2a1			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 Exposure Control Implementation	3a1			M		M	
KI Public/Institutionalized	3b1		M				
PAD Implementation Disabled/Functional Needs	3c1						
PAD Implementation Schools	3c2						
TACP Establishment	3d1						
Impediments	3d2						
Implement Ingestion PADs	3e1						
Ingestion Pathway Decisions	3e2						
Implementation 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 Information							
Initial Alert & Notification	5a1			M	M	M	M
RESERVED	5a2						
Backup Alert & Notification	5a3						
Exception Area Alerting	5a4						
Subsequent Information & Instructions	5b1		M		M		M
Support Operations / Facilities							
Reception Center Operations	6a1						
EW Monitoring & Decontamination	6b1						
Congregate Care	6c1						
Contaminated Injured Transport & Care	6d1						

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<p>DATE: 2016-11-16 SITE: Quad Cities Station, IL</p> <p>M: Met, L1: Level 1 Finding, L2: Level 2 Finding, P: Plan Issue, N: Not Demonstrated</p>			IL-ISP D#1 HQ-DCO	IL-ISP D#1 HQ-TACP	IL-Unity-Trinity-MC	IL-Unity-Trinity-T	ROC-IWP	ROC-EOC	ROC-Sheriff-DCO
Emergency Operations Management									
Mobilization	1a1						M	M	
Facilities	1b1								
Direction and Control	1c1							M	
Communications Equipment	1d1		M	M	M	M	M	M	
Equipment and Supplies to Support Operations	1e1	M	M	M	M			M	M
Protective Action Decision Making									
EW Exposure Control Decisions	2a1								
PARs	2b1								
PADs	2b2							M	
PADs for Disabled/Functional Needs	2c1							M	
Ingestion PADs	2d1								
RRR Decisions	2e1								
Protective Action Implementation									
EW Exposure Control Implementation	3a1	M	M	M	M			M	M
KI Public/Institutionalized	3b1							M	
PAD Implementation Disabled/Functional Needs	3c1							M	
PAD Implementation Schools	3c2							M	
TACP Establishment	3d1		M					M	
Impediments	3d2							M	
Implement Ingestion PADs	3e1								
Ingestion Pathway Decisions	3e2								
Implementation 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	
RESERVED	5a2								
Backup Alert & Notification	5a3								
Exception Area Alerting	5a4								
Subsequent Information & Instructions	5b1							L1	
Support Operations/Facilities									
Reception Center Operations	6a1								
EW Monitoring & Decontamination	6b1								
Congregate Care	6c1								
Contaminated Injured Transport & Care	6d1			M	M				

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<p>DATE: 2016-11-16 SITE: Quad Cities Station, IL M: Met, L1: Level 1 Finding, L2: Level 2 Finding, P: Plan Issue, N: Not Demonstrated</p>		ROC-Sheriffs-TACP	ROC-EBS-KQCJ	WHI-IWP	WHI-EOC	WHI-Sheriffs-DCO	WHI-Sheriffs-TACP	WHI-EBS-KCLN/MaC
Emergency Operations Management								
Mobilization	1a1			M	M			
Facilities	1b1							
Direction and Control	1c1				M			
Communications Equipment	1d1	M	M	M	M		M	M
Equipment and Supplies to Support Operations	1e1	M			M	M	M	
Protective Action Decision Making								
EW Exposure Control Decisions	2a1							
PARs	2b1							
PADs	2b2				M			
PADs for Disabled/Functional Needs	2c1				M			
Ingestion PADs	2d1							
RRR Decisions	2e1							
Protective Action Implementation								
EW Exposure Control Implementation	3a1	M			M	M	M	
KI Public/Institutionalized	3b1				M			
PAD Implementation Disabled/Functional Needs	3c1				M			
PAD Implementation Schools	3c2				M			
TACP Establishment	3d1	M			M		M	
Impediments	3d2				M			
Implement Ingestion PADs	3e1							
Ingestion Pathway Decisions	3e2							
Implementation 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			M
RESERVED	5a2							
Backup Alert & Notification	5a3							
Exception Area Alerting	5a4							
Subsequent Information & Instructions	5b1				L1			
Support Operations/Facilities								
Reception Center Operations	6a1							
EW Monitoring & Decontamination	6b1							
Congregate Care	6c1							
Contaminated Injured Transport & Care	6d1							

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4.3 Criteria Evaluation Summaries

4.3.1 Risk Jurisdiction – State of Illinois

4.3.1.1 Initial Warning Point

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

- a. MET: 1.a.1, 1.d.1.
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

4.3.1.2 Radiological Emergency Assessment 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.b.1, 2.b.2, 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

4.3.1.3 State Radiological Advisor – Rock Island County

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

- a. MET: 2.a.1, 2.b.2, 2.c.1, 5.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

4.3.1.4 Illinois Emergency Management Agency Liaison – Rock Island County

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

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- a. MET: 1.c.1, 5.a.1, 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

4.3.1.5 State Radiological Advisor – Whiteside County

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

- a. MET: 2.a.1, 2.b.2, 2.c.1, 5.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

4.3.1.6 Illinois Emergency Management Agency Liaison – Whiteside County

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

- a. MET: 1.c.1, 5.a.1, 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

4.3.1.7 UnityPoint Trinity – Facility

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

4.3.1.8 UnityPoint Trinity – Transportation

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

4.3.1.9 Illinois State Police – District 1 – DCO Briefing

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

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

4.3.1.10 Illinois State Police – District 1 – TACP

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

4.3.2 Risk Jurisdictions – Rock Island County

4.3.2.1 Initial Warning Point

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

- a. MET: 1.a.1, 1.d.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None

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

4.3.2.2 Emergency Operations Center – Rock Island County

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.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1
- b. LEVEL 1 FINDINGS: 5.b.1
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: 5.b.1 unresolved from previous exercise.
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

LOCATION: Rock Island County Emergency Operations Center

ISSUE NO: 51-16-5b1-L1-1

CRITERION: 5.b.1

CONDITION: Rock Island County Officials did not provide timely and accurate information to the Public. The county did not activate the Prompt Notification System (PNS) and issue an Emergency Broadcast System (EBS) or follow-on news release regarding the decision to evacuate. During the Media Briefing, the County Public Information Officer (PIO) provided conflicting and confusing information regarding what different segments of the general population should do.

CORRECTIVE ACTION: Redemonstration was successfully conducted on December 21, 2016.

4.3.2.3 Rock Island County Sheriff – TACP

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

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4.3.2.4 Rock Island County Sheriff – DCO Briefing

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

4.3.2.5 Radio Station KQCJ

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

- a. MET: 1.d.1, 5.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

4.3.3 Risk Jurisdictions – Whiteside County

4.3.3.1 Initial Warning Point

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

- a. MET: 1.a.1, 1.d.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

4.3.3.2 Emergency Operations Center – Whiteside County

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.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1
- b. LEVEL 1 FINDINGS: 5.b.1
- c. LEVEL 2 FINDINGS: None

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- d. PLAN ISSUES: 5.b.1 unresolved from previous exercise.
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

LOCATION: Whiteside County Emergency Operations Center

ISSUE NO: 51-16-5b1-L1-2

CRITERION: 5.b.1

CONDITION: Whiteside County Officials did not provide timely and accurate information to the Public. The county did not activate the Prompt Notification System (PNS) and issue an Emergency Broadcast System (EBS) or follow-on news release regarding the decision to evacuate. During the Media Briefing, the County Public Information Officer (PIO) provided conflicting and confusing information regarding what different segments of the general population should do.

CORRECTIVE ACTION: Redemonstration was successfully conducted on December 21, 2016.

4.3.3.3 Whiteside County Sheriff – TACP

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

4.3.3.4 Whiteside County Sheriff – DCO Briefing

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

4.3.3.5 Radio Station KCLN/MaC

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

- a. MET: 1.d.1, 5.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

SECTION 5: CONCLUSION

This section summarizes the findings of the evaluation of all jurisdictions and functional entities that participated in the November 16, 2016, Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile and 50-mile EPZs surrounding the Quad Cities Station.

The exercise resulted in no Level 1 Findings for the State of Illinois. There was one Level 1 Finding for Rock Island County and one Level 1 Finding for Whiteside County.

The associated criteria were successfully redemonstrated on December 21, 2016.

There were no Level 2 Findings for the State of Illinois, Rock Island County, or Whiteside County.

There was one Plan Issue from a past exercise that was not corrected for Rock Island County.

There was one Plan Issue from a past exercise that was not corrected for Whiteside County.

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APPENDIX A: IMPROVEMENT PLAN

This section summarizes the findings of the evaluation of all jurisdictions and functional entities that participated in the November 16, 2016, Radiological Emergency Preparedness Partial- Participation Plume Exposure Pathway Exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Quad Cities Station, recommended corrective actions, and a schedule of corrective actions for the identified Primary Responsible Agency.

Finding: 51-16-5b1-L1-1

Rock Island County EOC

Criterion: 5.b.1

CONDITION: Rock Island County Officials did not provide timely and accurate information to the Public. The county did not activate the PNS and issue an EBS or follow-on news release regarding the decision to evacuate. During the Media Briefing, the County PIO provided conflicting and confusing information regarding what different segments of the general population should do.

RECOMMENDATION: Rock Island County and the State of Illinois should review their plans and procedures, provide training to responders regarding the implementation of plans and procedures, and redemonstrate Criterion 5.b.1 and associated criteria 1.c.1 and 5.a.1 within 120 days of this exercise.

CORRECTIVE ACTION DESCRIPTION: Redemonstration was successfully conducted on December 21, 2016

CAPABILITY: Emergency Public Information	PRIMARY RESPONSIBLE AGENCY: Rock
CAPABILITY ELEMENT:: EOC	START DATE: November 18, 2016
AGENCY POC: Jerry Shirk 309-799-5166 Randy Heisch, 309-799-5166	ESTIMATED COMPLETION DATE: December 21, 2016

Finding: 51-16-5b1-L1-2

Whiteside County EOC

Criterion: 5.b.1

CONDITION: Whiteside County Officials did not provide timely and accurate information to the Public. The county did not activate the PNS and issue an EBS or follow-on news release regarding the decision to evacuate. During the Media Briefing, the County PIO provided conflicting and confusing information regarding what different segments of the general population should do.

RECOMMENDATION: Whiteside County and the State of Illinois should review their plans and procedures, provide training to responders regarding the implementation of plans and procedures, and redemonstrate Criterion 5.b.1 and associated criteria 1.c.1 and 5.a.1 within 120 days of this exercise.

CORRECTIVE ACTION DESCRIPTION: Redemonstration was successfully conducted on December 21, 2016.

CAPABILITY: Emergency Public Information	PRIMARY RESPONSIBLE AGENCY:
CAPABILITY ELEMENT: EOC	START DATE: November 18, 2016
AGENCY POC: Seth Jannsen 815-772-4044	COMPLETION DATE: December 21, 2016

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APPENDIX B: EXERCISE TIMELINE

Table 1, below, presents the times at which key events and activities occurred during the QCS Radiological Emergency Preparedness, Partial - Participation, Plume Exposure Pathway Exercise conducted on November 16, 2016.

Table 1 – Exercise Timeline Table

DATE AND SITE: November 16, 2016 – Quad Cities Station REPEX v1.1 - 2016-11-17-0628

Emergency Classification Level or Event	Time Utility Declared	IL-REAC	IL-SEOC (Not Evaluated)	Rock Island County	Whiteside County	JIC Springfield (Not Evaluated)		
Unusual Event (end of verification call for ECLs) ¹	N/A	N/A	N/A	N/A	N/A	N/A		
Alert	0809	Not Yet Operational	0824	0839	0841			
Site Area Emergency	0937	0945	0948	1006	1007			
General Emergency	1029	1039	1042	1053	1055			
Release of Radioactive Material Started ²	0937		0948	1006	1007			
Release of Radioactive Material Terminated ²	N/A		N/A	N/A	1007			
Facility Declared Operational ⁴		0851		0913	0939	0913		
Declaration of State/Local Emergency ³			1107	N/A	Not Declared			
Exercise Termination		1207	1230	1220	1249			
Early Precautionary Action Decision: ⁶ <The State issued an order to evacuate state parks and hunting areas>					N/A			
Early Precautionary Action Decision: ⁶ <The State (County) issued a Livestock Advisory: All livestock are to be sheltered and placed on stored feed and water within the 10-mile EPZ>			1018		?			
Early Precautionary Action Decision: ⁶ <The state issued Air, water and rail traffic within 5/10 miles of QCS restricted.>			1031	1034	?			
Early Precautionary Action Decision: ⁶ <Evacuate Schools and/or Special Populations>			N/A	1008	NA – No Schools in SA 2 1020 – Morrison SD. Release Students			
General Information Message: ⁷ <Public advised of incident at Quad Cities Station>				1019	1004			
Siren Activation: ⁸				1016	1010			
EAS Message: ⁹				1019	Not Performed			
Protective Action Recommendation: ¹⁰ Evacuation of Sub-Areas: 1			1052	1052	1055			
Protective Action Decision: ¹¹ 1				1039	1056			
Siren Activation: ⁸				1045	Not Performed			
EAS Message: ⁹				Did Not	Not Performed			
Protective Action Recommendation: ¹⁰ Evacuation of Sub-Areas:								
Protective Action Decision: ¹¹								
Siren Activation: ⁸								
EAS Message: ⁹								

See Page 2 for footnotes

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KI Administration Emergency Workers and Immobile Populations Decision (SEOC/REAC)/Implementation (UAC/Counties)		Did Not Exceed PAG	Did Not Exceed PAG	Did Not Exceed PAGs			
1	End of verification call is time to be recorded in table. Evaluators should note all times associated with the process, i.e. start of notification call, end of call, start of verification call, and end of verification call. Notification time for UAC is end of verification call with the state; JIC time is as communicated by the state -- see note 12.						
2	Note time notified by utility, in REAC record time as announced in REAC if release is noted as occurring prior to notification of utility.						
3	Only noted if release is terminated prior to the termination of the exercise.						
4	Time that the facility manager or designee declares the facility Operational. Evaluators should also note time facility is declared Activated. A facility is considered Activated as soon as notification of an incident is received and the Director/Commissioner/Emergency Management Representative makes the determination to activate the facility. The facility is not considered Operational until it is ready to carry out full emergency operations with key decision makers in place.						
5	Time of local declaration of emergency.						
6	Time of local decision. If the State makes the decision, time is based on state decision and county times should be when county is made aware of decision.						
7	Time that the message to be broadcast to the public is officially approved by appropriate authority						
8	Time is end of demonstration of the process that would result in siren activation (simulated unless otherwise noted in Extent-of-Play)						
9	Time that message is able to be transmitted from the radio station to the public. This time would be based on if radio station can record and broadcast at the same time, or if message needs to be completely transmitted prior to being able to broadcast to the public.						
10	Time that PAR(s) is/are approved or declared by the governing authority. If a facility is not part of the decision-making process, note the time the facility is officially notified of the PAR.						
11	Time that PAD(s) is/are approved or declared by the governing authority. If a facility is not part of the decision-making process, note the time the facility is officially notified of the PAD.						
12	Tracking of times JIC receives information from the State or the counties. The purpose is to track that information being relayed to the JIC. ECL times should be times at which the state communicates the status to the JIC and not necessarily the time the JIC is made aware of the ECL i.e. not as announced in the JIC/EOF.						

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APPENDIX C: EXERCISE EVALUATION TEAM

The following is a list of the personnel that managed the evaluation process and evaluated the Quad Cities Station Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise on November 16, 2016. The organization each of the personnel represents is indicated by the following abbreviations.

DHS/FEMA – U.S. Department of Homeland Security/Federal Emergency Management Agency

ICF – ICF International

Exercise Management

MANAGEMENT TITLE	NAME	ORGANIZATION
Regional Assistance Committee, Chair	Sean O’Leary	DHS/FEMA
Exercise Director	Stephen Tulley	DHS/FEMA
Co-Exercise Director	Edward Golinski	DHS/FEMA
Illinois Site Specialist	David Persaud	DHS/FEMA
Team Leader – State of Illinois	David Ortman	DHS/FEMA
Team Leader – Rock Island County	Edward Diaz	DHS/FEMA
Team Leader – Whiteside County	Don Daniel	DHS/FEMA
Regional Coordinator	John Wills	ICF

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Exercise Evaluators

LOCATION (Spring	EVALUATOR	AGENCY
State Initial Warning Point	Todd Lawson	DHS/FEMA
State Emergency Operations Center	David Ortman(TL) Karl Rabenhorst Todd Lawson	DHS/FEMA DHS/FEMA DHS/FEMA
Radiological Emergency Assessment Center	David Stuenkel	ICF
Joint Information Center	Kim Alahmadi	DHS/FEMA
Radiological Assessment Field Monitoring Teams Demonstration	John Wills	ICF
Unified Area Command	Todd Gemskie	DHS/FEMA
State Radiological Advisor – Rock Island County	Edward Diaz (TL)	DHS/FEMA
State Liaison– Rock Island County State Radiological Advisor – Whiteside County	Edward Diaz (TL) Don Daniel	DHS/FEMA DHS/FEMA

LOCATION	EVALUATOR	AGENCY
State Liaison– Whiteside County	Don Daniel	DHS/FEMA
UnityPoint Health/Trinity Medical Center	Todd Gemskie	DHS/FEMA
UnityPoint Health/Trinity Medical Center Transportation Provider	Marcy Campbell	ICF
Illinois State Police DCO Briefing	Janet Hlavaty-LaPosa	DHS/FEMA
Illinois State Police TACP	Gary Bolender	ICF
Rock Island County IWP	Chris Bellone	DHS/FEMA
Rock Island County EOC	Ed Diaz (TL) Henry Christiansen Jim King Marcy Campbell	DHS/FEMA ICF DHS/FEMA ICF
Rock Island County DCO Brief/TACP	Chris Bellone PJ Neid	DHS/FEMA ICF
Rock Island County EAS – 93.9 KQCI	Gary Bolender	ICF
Whiteside County IWP	Clark Duffy	ICF
Whiteside County EOC	Don Daniel(TL) Carl Bebrich Alvin Blake	DHS/FEMA DHS/FEMA DHS/FEMA
Whiteside County DCO Briefing/TACP	Carl Bebrich	DHS/FEMA
Whiteside County EAS – KCLN/MaC	Janet Hlavaty-LaPosa	DHS/FEMA

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APPENDIX D: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
AAR	After Action Report
ALS	Advanced Life Support
ARC	American Red Cross
CC	Contamination Control
CCC	Congregate Care Center
CCS	Contamination Control Supervisor
CEDE	Combined Effective Dose Equivalent
CEO	County Elected Official
CERT	Community Emergency Response Team
CIT	Critical Incident Team
CPIO	County Public Information Officer
CST	Civil Support Team
DCL	Dosimetry Control Log
DCO	Dosimetry Control Officer
DRD	Direct Reading Dosimeter
EAS	Emergency Alert System
ECL	Emergency Classification Level
ED	Emergency Department
EMA	Emergency Management Agency
EMAC	Emergency Management Agency Coordinator
EMC	Emergency Management Coordinator
EMD	Emergency Management Director
EMS	Emergency Medical Service
EMT	Emergency Medical Technician
EOC	Emergency Operation Center
EOF	Emergency Operations Facility
EPZ	Emergency Planning Zone
ERT	Emergency Response Telecommunicator
EW	Emergency Worker
FEMA	Federal Emergency Management Agency
GE	General Emergency
GIS	Geographical Information System
GM	Geiger-Mueller
HAB	Hostile Action Based

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HP	Health Physics
IAP	Incident Action Plan
IC	Incident Commander
ICP	Incident Command Post
IEMA	Illinois Emergency Management Agency
ILEAS	Illinois Law Enforcement Alarm System
IP	Improvement Plan
ISP	Illinois State Police
IWIN	Illinois Wireless Information Network
IWP	Initial Warning Point
JIC	Joint Information Center
LD	Luminescent Dosimeter
LEADS	Law Enforcement Agency Data System
LEC	Law Enforcement Center
LSC	Liquid Scintillation Counter
MRT	Medical Radiation Technician
NARS	Nuclear Accident Reporting System
NIMS	National Incident Management System
NRC	Nuclear Regulatory Commission
ORO	Offsite Response Organization
OSL	Optically Stimulated Luminescence
PAD	Protective Action Decision
PAR	Protective Action Recommendations
PDP	Personal Dosimetry Packet
PIO	Public Information Officer
PPE	Personal Protective Equipment
PRD	Permanent Record Dosimeter
PSAP	Public Safety Answering Point
QCS	Quad Cities Station
RA	Radiological Advisor
RAC	Regional Assistance Committee
RAFT	Radiological Assessment Field Team
RC	Reception Center
RCS	Reactor Coolant System
RCW	Registration Case Worker
RD	Radio Dispatch
RDO	Radiological Duty Officer
REA	Radiation Emergency Area

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REAC	Radiological Emergency Assistance Center
REP	Radiological Emergency Preparedness
RFT	Radiological Field Team
RRC	Radiological Response Chief
RSM	Registration Station Manager
RT	Radiation Technologist
RTF	Radiological Task Force
SAE	Site Area Emergency
SEOC	State Emergency Operations Center
SOP	Standard Operating Procedure
TEDE	Total Effective Dose Equivalent
UE	Unusual Event
URI	Unified RASCAL Interface

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APPENDIX E: EXTENT OF PLAY

This Appendix presents the Extent of Play Agreements and lists the exercise criteria that were scheduled for demonstration in the Quad Cities Station Radiological Emergency Preparedness Partial Participation, Plume Exposure Pathway Exercise on November 16, 2016, and the offsite extent-of-play agreements accepted by the DHS/FEMA Region V on July 11, 2016, August 18, 2016, September 20, 2016 and November 14, 2016. The exercise criteria, contained in the DHS/FEMA P-1028 REP Program Manual, dated January 2016, represent a functional translation of the planning standards and evaluation criteria of NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for the Preparation and evaluation of radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants", November 1980. Because the exercise criteria are intended for use at all nuclear power plant sites, and because of variations among offsite plans and procedures, an extent-of-play agreement is prepared by the State and accepted by the DHS/FEMA to provide evaluators with guidance on expected actual demonstration of the criteria.

The specific Radiological Emergency Preparedness criteria that were selected for demonstration during the exercise are listed in the State of Illinois, Rock Island County, and Whiteside County Extent-of-Play Agreements, which follow.

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**STATE OF ILLINOIS EXTENT OF PLAY AGREEMENT
FOR THE
QUAD CITIES STATION EXERCISE**

November 16th, 2016

Criteria that can be re-demonstrated immediately for credit, at the discretion of the evaluator, include the following: 3.a.1, 3.b.1, 3.d.1, 6.a.1, 6.b.1, 6.c.1 and 6.d.1. Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairperson of the Regional Assistance Committee, include the following: 2.a.1, 2.b.1, 2.b.2, 3.d.2, 5.a.1 and 5.b.1.

NOTE: If the exercise scenario, or related exercise play, does not prompt specific criteria-related actions, individual criteria may be addressed through a functional interview or alternative scenario-driven task demonstration. When utilized, this process will be done in a manner not to disrupt or interfere with normal exercise play.

EVALUATION AREA 1 - EMERGENCY OPERATIONS MANAGEMENT

Criterion 1.a.1: OROs use effective procedures to alert, notify and mobilize emergency personnel and activate facilities in a timely manner.

The State Emergency Operations Center (SEOC), which also houses the IEMA Communications Center (Initial Warning Point), and the Radiological Emergency Assessment Center (REAC), will be activated. The IEMA Emergency Response Telecommunicator will implement procedures for notification of IEMA staff as defined in IEMA SOPs. The SEOC will be partially activated with a number of state agencies and personnel, to the extent necessary to support exercise play and to conduct training. The SEOC will not be evaluated during this exercise. REAC will be fully activated. Rosters will be provided to demonstrate 24-hour staffing of the SEOC and REAC. The evaluator will not be allowed to remove the rosters.

The Unified Area Command (UAC) will be activated at Geneseo (746 W. Main St.); it will not be evaluated but will operate for training purposes and to the extent necessary to support state and county-level exercise play. For training purposes, the Radiological Assessment Field Team (RAFT) Command Center will be staffed at the Geneseo (746 W. Main St.), however will not be evaluated. The mobile lab will also be at Geneseo (746 W. Main St.) but only for training purposes.

IEMA personnel will be prepositioned in the local area and dispatched to the Rock Island County EOC, Whiteside County EOC, UAC, Emergency Operations Facility (EOF), Technical Support Center (TSC) and the Joint Information Center (JIC). A State JIC PIO (only) will be located at the Exelon Warrenville and a State JIC support unit will be located in the SEOC. The State JIC and related JIC support unit will not be evaluated for this exercise.

FEMA will not evaluate the TSC. A rumor control phone bank for public inquiries will not be

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operated by the State during the exercise. An actual phone call will be made to the FEMA duty officer advising them of the situation at the Quad Cities Station. Follow-up calls to FEMA will be simulated.

The prepositioned State staff will begin exercise play no earlier than the Alert.

Criterion 1.b.1: Facilities are sufficient to support the emergency response.

This criterion will not be evaluated during this exercise.

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.

The ability to direct and control emergency response activities will not be evaluated at the SEOC, UAC, JIC Support Unit or the JIC during this exercise. Coordination between the SEOC, the REAC, RAFT Command Center, the UAC, the JIC, JIC support unit, the EOF and the County EOCs will not be evaluated. REAC, however, will be evaluated for both direction and control and coordination with SEOC, UAC, RAFT Command Center, JIC, JIC support unit and EOF as required by exercise play.

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.

IEMA will use a variety of communication systems [Nuclear Accident Reporting System (NARS), telefax, and commercial telephone, and cellular phone, radio] to communicate with other organizations and locations.

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations.

The State of Illinois will demonstrate the use of equipment, maps and displays to support emergency operations. DCO logs will be available from an IEMA Radiological Advisors in the Rock Island County EOC.

A DCO briefing/traffic and access control (TAC) interview will be conducted by Illinois State Police on November 15th at 9:30 a.m. (confirmed) at the District 1 Headquarters in Sterling. During this event, the availability of dosimetry will be demonstrated.

EVALUATION AREA 2 - PROTECTIVE ACTION DECISION MAKING

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

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limits or protective action guides.

The ability to make the decision to recommend the use of KI to emergency workers will not be demonstrated in REAC. This criterion was successfully demonstrated by the State in the last Byron exercise.

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions.

The REAC will evaluate the licensee information and complete independent dose projections based on that information and simulated field monitoring data. REAC will make an evaluation of the data and make a protective action recommendation (PAR) to the SEOC.

The coordination to determine protective action recommendations (PARs) based upon available shelters, evacuation time estimates and other relevant factors will be demonstrated between the SEOC and REAC.

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).

The coordination to determine PARs based upon available shelters, evacuation time estimates and other relevant factors may be discussed between the SEOC and REAC, but will not be evaluated. The State PAR will be transmitted to the EPZ counties via NARS.

The capability to determine which centers should be activated for monitoring, decontamination, registration reception and congregate care will be initiated at UAC, with input from the SEOC and REAC to support county- level exercise play, but will not be evaluated.

Criterion 2.c.1: Protective action decisions are made, as appropriate, for groups of people with disabilities and those with access/functional needs.

The coordination to determine PARs based upon available shelters, evacuation time estimates and other relevant factors may be discussed between the SEOC and REAC. The State PAR will be transmitted to the EPZ counties via NARS.

The ability to make the decision to recommend the use of KI to institutionalized persons will be demonstrated in REAC.

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria.

This criterion will not be demonstrated during this exercise.

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Criterion 2.e.1: Timely post-plume phase re-location, re-entry and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criterion the OROs plan and/or procedures.

This criterion will not be demonstrated during this exercise.

EVALUATION AREA 3 - PROTECTIVE ACTION IMPLEMENTATION

Criterion 3.a.1: The OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers in accordance with the plan and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. Appropriate record-keeping of the administration of KI for emergency workers is maintained.

This will be demonstrated during the DCO briefing/TAC interview on November 15th at 9:30a.m. (confirmed), at the ISP District 1 Headquarters in Sterling.

For training purposes, the Radiological Assessment Field Team (RAFT) Command Center will be staffed at the IDOT Yard near Milan (location tentative), however will not be evaluated.

Criterion 3.b.1 KI and appropriate instructions are available in case a decision to recommend use of KI is made. Appropriate record keeping of the administration of KI for institutionalized individuals is maintained.

This criterion has been successfully demonstrated within the last two years and, as such, will not be demonstrated during this exercise.

Criterion 3.c.1: Protective action decisions are implemented for people with disabilities and those with access/functional needs other than schools within areas subject to protective actions.

This criterion does not apply to the State of Illinois.

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools.

This criterion does not apply to the State of Illinois.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

This criterion has been successfully demonstrated in the last two years and will not be demonstrated during this exercise. The Illinois State Police may provide support activities at the UAC, Rock Island County EOC and Whiteside County EOC, but will not be evaluated.

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A separate out-of-sequence TAC/DCO interview will be conducted on November 15th at 9:30 a.m. (confirmed) at ISP District 1 Headquarters in Sterling.

Criterion 3.d.2: Impediments to evacuation are identified and resolved.

This criterion has been successfully demonstrated in the last two years and will not be demonstrated during this exercise, however, an impediment maybe injected or discussed for training purposes at the UAC.

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

This criterion will not be demonstrated during this exercise.

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

This criterion will not be demonstrated during this exercise.

Criterion 3.f.1: Decisions regarding controlled re-entry of emergency workers and relocation and return of the public during the post-emergency phase are coordinated with appropriate organizations and implemented.

This criterion will not be demonstrated during this exercise.

EVALUATION AREA 4 – FIELD MEASUREMENT AND ANALYSIS

Criterion 4.a.1: [RESERVED]

Criterion 4.a.2: Field teams (two or more) are managed to obtain sufficient information to help characterize the release and to control radiation exposure.

For training purposes, the Radiological Assessment Field Team (RAFT) Command Center will be staffed at Geneseo (746 W. Main St.), however will not be evaluated.

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.

For training purposes, the Radiological Assessment Field Team (RAFT) Command Center will

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be staffed at Geneseo (746 W. Main St.), however will not be evaluated.

Criterion 4.b.1: The field teams demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision-making.

This criterion will not be demonstrated during this exercise.

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions.

This criterion will not be demonstrated during this exercise.

EVALUATION AREA 5 – EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

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.

The State's role in demonstrating this criterion is limited to transmitting the State's PAR to the counties and monitoring the instructional messages provided to the public by the counties. This monitoring will be accomplished by IEMA representatives in the County EOCs.

Criterion 5.a.2: [RESERVED]

Criterion 5.a.3: Backup alert and notification of the public is completed within a reasonable time following the detection by the ORO of a failure of the primary alert and notification system.

This criterion does not apply to the State of Illinois.

Criterion 5.a.4: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation.

This criterion does not apply to the State of Illinois.

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner.

This will be demonstrated at the JIC in coordination with the SEOC, REAC, UAC and the County EOCs. IEMA personnel will be present at the JIC to coordinate with the Exelon staff. Media briefings will be conducted at the JIC. A livestock advisory will be issued to the media.

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from the JIC or the SEOC when appropriate.

A rumor control phone bank for public inquiries will not be operated by the State during the exercise.

EVALUATION AREA 6 – SUPPORT OPERATION / FACILITIES

Criterion 6.a.1: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees.

This criterion may be demonstrated by State and local officials at Rock Island High School, potentially outside the evaluated exercise week. We are currently working with school officials for non-class day availability in potentially spring of 2017.

If scheduled, the following organizations will be represented at the demonstration: local EMA, Police and Fire departments, American Red Cross and IEMA. Set up will begin at (Time TBD) with demonstration beginning approximately (Time TBD). Two portal monitors will be set up during the demonstration. Evacuee monitoring and decontamination will be demonstrated. The appropriate number of evacuees will be processed to meet 20% in 12 hours requirement.

Due to questions of legality, the impounding/confiscating of contaminated vehicles will not be demonstrated.

Criterion 6.b.1: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment including vehicles.

For training purposes, the Radiological Assessment Field Team (RAFT) Command Center will be staffed at Geneseo (746 W. Main St.); however will not be evaluated.

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with planning guidelines. Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities.

This criterion may be demonstrated by State and local officials at Rock Island High School, potentially outside the evaluated exercise week. We are currently working with school officials for non-class day availability in potentially spring of 2017.

If scheduled, set up will begin at (Time TBD), with the demonstration beginning approximately (Time TBD). Local organizations responsible for operating a reception and congregate care center will be present to demonstrate this criterion.

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Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals.

This criterion will be demonstrated during a drill at UnityPoint Trinity (formerly Trinity – West) in Rock Island on November 15th at 9 a.m. (confirmed).

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**ROCK ISLAND COUNTY EXTENT OF PLAY AGREEMENT
FOR THE
QUAD CITIES STATION EXERCISE**

November 16th, 2016

Criteria that can be re-demonstrated immediately for credit, at the discretion of the evaluator, include the following: 3.a.1, 3.b.1, 3.d.1, 6.a.1, 6.b.1, 6.c.1 and 6.d.1. Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairperson of the Regional Assistance Committee, include the following: 2.a.1, 2.b.1, 2.b.2, 3.d.2, 5.a.1 and 5.b.1.

NOTE: If the exercise scenario, or related play, does not prompt specific criteria-related actions, individual criteria may be addressed through a functional interview or alternative scenario-driven task demonstration. When utilized, this process will be done in a manner not to disrupt or interfere with normal exercise play.

EVALUATION AREA 1 – EMERGENCY OPERATIONS MANAGEMENT

Criterion 1.a.1: OROs use effective procedures to alert, notify and mobilize emergency personnel and activate facilities in a timely manner.

Rock Island County intends to fully activate the Emergency Operations Center (EOC) in Milan, Illinois. The County will implement notification procedures as defined in IPRA-Quad Cities. Representatives from IEMA, and Exelon will staff the County EOC but will not be pre-positioned in the EOC. A roster will be provided to demonstrate 24-hour staffing of the EOC. Evaluators will not be allowed to remove the roster from the EOC.

An evaluator will be positioned at the County Sheriff's Communications Center (initial warning point) at the start of the exercise. The County Sheriff's Communications Center will allow an evaluator to observe and evaluate the initial NARS message. The notification process and personnel call out will occur at the Rock Island County EOC utilizing the county Group Cast system.

Criterion 1.b.1: Facilities are sufficient to support the emergency response.

This criterion will not be evaluated during this exercise.

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.

Decision making will be demonstrated at the Rock Island County EOC. Coordination of decisions and emergency activities will be demonstrated between Rock Island County, the SIRC, the UAC, the JIC support unit at the SEOC, and between the County and municipalities within the EPZ. Coordination between Rock Island County and Whiteside County will be demonstrated.

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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.

Rock Island County will use NARS, commercial telephone, radio and telefax to communicate with departments and agencies at other locations.

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations.

Rock Island County will demonstrate the ability to support operations through the use of maps, status boards and other displays as appropriate. DCO logs will be available from the IEMA Radiological Advisor in the County EOC. The availability of dosimetry and KI will be demonstrated at the County EOC and during the traffic and access control (TAC) demonstration. The DCO briefing for the deputy demonstrating traffic and access control will be conducted at the Rock Island EOC facility during the exercise, but may be demonstrated out of the exercise scenario or timeline.

EVALUATION AREA 2 - PROTECTIVE ACTION DECISION MAKING

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.

This criterion does not apply to Rock Island County.

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions.

This criterion does not apply to Rock Island County.

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).

The State of Illinois will make protective action recommendations (PARs) to Rock Island County officials in the County EOC. The Rock Island County officials will make the final decision regarding what protective actions will be recommended to the public.

Criterion 2.c.1: Protective action decisions are made, as appropriate, for groups of people with disabilities and those with access/functional needs.

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The State of Illinois will make PARs to Rock Island County officials in the County EOC. The Rock Island County officials will make the final decision regarding protective actions for groups of people with disabilities and those with access/functional needs.

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria.

This criterion does not apply to Rock Island County.

Criterion 2.e.1: Timely post-plume phase re-location, re-entry and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the OROs plan and/or procedures.

This criterion will not be demonstrated during this exercise.

EVALUATION AREA 3 - PROTECTIVE ACTION IMPLEMENTATION

Criterion 3.a.1: The OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers in accordance with the plan and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. Appropriate record-keeping of the administration of KI for emergency workers is maintained.

Rock Island County will demonstrate this criterion through coordination with the IEMA Radiological Advisor and timely dissemination and exchange of information within the Dosimetry Control Officer network. Exercise messages will be injected which will ensure the opportunity to demonstrate this criterion in the County EOC.

The DCO briefing for the Sheriff's deputy demonstrating traffic and access control will be conducted in the county EOC during the exercise.

Criterion 3.b.1: KI and appropriate instructions are available in case a decision to recommend use of KI is made. Appropriate record keeping of the administration of KI for institutionalized individuals is maintained.

When notified by the State of Illinois to distribute and administer KI, Rock Island County officials will discuss the issuance of KI to immobile populations, as a voluntary measure, and will notify the municipalities of the State's recommendation, as appropriate.

The State of Illinois does not recommend the use of KI by the general public and, as such, that portion of the criterion will not be demonstrated.

Criterion 3.c.1: Protective action decisions are implemented for people with disabilities and those

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with access/functional needs other than schools within areas subject to protective actions.

This will be demonstrated by Rock Island County through the simulated implementation of the appropriate procedures. The appropriate officials will coordinate transportation and receiving facilities for people with disabilities and those with access/functional needs other than schools within areas subject to protective actions. One of each type of special facility will be contacted during the exercise. One of each type of transportation provider (ambulance/bus) will be contacted during the exercise. The public will not be involved in the demonstration. The Mobility Impaired List will be available for inspection in the County EOC during the exercise. The evaluator will not be allowed to remove the list from the EOC.

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools.

Rock Island County officials will demonstrate this capability through the simulated implementation of the appropriate procedures in the County EOC. The EPZ schools and transportation providers will be contacted during the exercise.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

Coordination between Rock Island County agencies designated to provide traffic and access control will be exhibited in the County EOC. For the demonstration, a post will be selected by Rock Island County or the exercise controller during the exercise based on exercise play. A deputy will not be asked to drive to the selected post location for the demonstration, but will provide adequate information to the evaluator to describe the process of staffing the selected post. The staffing of the remaining posts will be simulated.

Criterion 3.d.2: Impediments to evacuation are identified and resolved.

The Rock Island County EOC staff will demonstrate the capability to identify and take appropriate actions concerning impediments to evacuation. A message may be injected by the Controller that will drive this demonstration. County personnel will deal with the impediment by identifying the equipment needed, discussing its estimated time of arrival, etc.

Actual contacts with resource providers will be made and logged, as appropriate. The impediment information will also be coordinated into public messaging (i.e., via media briefing, notifying the JIC, etc.) to communicate alternative routes to potential evacuees.

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

This criterion does not apply to Rock Island County.

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

This criterion does not apply to Rock Island County.

Criterion 3.f.1: Decisions regarding controlled re-entry of emergency workers and relocation and return of the public during the post-emergency phase are coordinated with appropriate organizations and implemented.

This criterion will not be demonstrated during this exercise.

EVALUATION AREA 4 – FIELD MEASUREMENT AND ANALYSIS

This evaluation area does not apply to Rock Island County.

EVALUATION AREA 5 – EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

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.

Rock Island County will demonstrate the capability to provide both an alert signal and an initial instructional message to populated areas throughout their portion of the 10-mile plume pathway EPZ in a timely manner after their decision to activate the alert and notification system to implement protective action recommendations (PARs).

This capability will be demonstrated through the simulated activation of the Quad Cities Station EPZ Prompt Notification System as defined in IPRA-Quad Cities. The Prompt Notification System (outdoor warning sirens) will not be activated during the exercise, but the task will be demonstrated (simulated) through an interview at the communication center during the exercise (may occur out-of-sequence to exercise play).

The ability to provide instructions to the public will be demonstrated through the simulated activation of the local radio station (KQCJ) at their facility in Kewanee (133 E. Division). The local radio station will be contacted during the first, and possibly the second, alert and notification sequence. An evaluator and a controller will be positioned at the radio station during the exercise to monitor for a message containing a PAR. If the initial message does not contain a PAR, the evaluator and controller will stay at the radio station for the second message.

Coordination between Rock Island County and Whiteside County will be demonstrated.

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Criterion 5.a.2: [RESERVED]

Criterion 5.a.3: Backup alert and notification of the public is completed within a reasonable time following the detection by the ORO of a failure of the primary alert and notification system.

This criterion does not apply to Rock Island County.

Criterion 5.a.4: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation.

This criteria does not apply to Rock Island County.

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner.

Rock Island County will demonstrate this criterion by using pre-scripted messages as indicated in IPRA-Quad Cities. Contact with the radio station will be simulated for each alert and notification sequence following the sequence issuing the initial PAR.

The ability to provide information to the media will be demonstrated by Rock Island County through a briefing held at the Rock Island County media briefing location. If real media are not present for the briefing, the controller and observers will serve as mock media. Evaluators will not serve as mock media.

The ability to deal with rumors will be demonstrated by Rock Island County through coordination between the County EOC and the JIC support unit at the SEOC. The Rock Island County EOC controller will inject exercise messages which will ensure the opportunity to demonstrate this criterion. County officials will investigate and address "rumors." If appropriate, the "rumors" will be coordinated between State and County officials in the County EOC and the JIC support unit at the SEOC.

County emergency broadcast messages and news releases, if issued, will be communicated to the JIC support unit at the SEOC.

EVALUATION AREA 6 – SUPPORT OPERATION / FACILITIES

This evaluation area does not apply to Rock Island County.

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**WHITESIDE COUNTY EXTENT OF PLAY AGREEMENT
FOR THE
QUAD CITIES STATION EXERCISE**

November 16th 2016

Criteria that can be re-demonstrated immediately for credit, at the discretion of the evaluator, include the following: 3.a.1, 3.b.1, 3.d.1, 6.a.1, 6.b.1, 6.c.1 and 6.d.1. Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairperson of the Regional Assistance Committee, include the following: 2.a.1, 2.b.1, 2.b.2, 3.d.2, 5.a.1 and 5.b.1.

NOTE: If the exercise scenario, or related exercise play, does not prompt specific criteria-related actions, individual criteria may be addressed through a functional interview or alternative scenario-driven task demonstration. When utilized, this process will be done in a manner not to disrupt or interfere with normal exercise play.

EVALUATION AREA 1 - EMERGENCY OPERATIONS MANAGEMENT

Criterion 1.a.1: Offsite Response Organizations (OROs) use effective procedures to alert, notify and mobilize emergency personnel and activate facilities in a timely manner.

Whiteside County intends to fully activate the Emergency Operations Center (EOC) in Morrison, Illinois. The County will implement notification procedures as defined in IPRA-Quad Cities. Representatives from IEMA, and Exelon will staff the County EOC but will not be pre-positioned in the EOC. A roster will be provided to demonstrate 24-hour staffing of the EOC. Evaluators will not be allowed to remove the roster from the EOC.

An evaluator will be positioned at the County Sheriff's Communications Center (initial warning point) at the start of the exercise.

Criterion 1.b.1: Facilities are sufficient to support the emergency response.

This criterion will not be evaluated during this exercise.

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.

Decision making will be demonstrated at the Whiteside County EOC. Coordination of decisions and emergency activities will be demonstrated between Whiteside County, the SIRC, the UAC, the JIC support unit at the SEOC, and between the County and Albany. Coordination between Whiteside County and Rock Island County will be demonstrated.

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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.

Whiteside County will use NARS, commercial telephone, radio, and telefax to communicate with departments and agencies at other locations.

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations.

Whiteside County will demonstrate the ability to support operations through the use of maps, status boards and other displays as appropriate. DCO logs will be available from the IEMA Radiological Advisor in the County EOC. The availability of dosimetry and KI will be demonstrated at the County EOC and during the traffic and access control (TAC) demonstration. The DCO briefing for the deputy demonstrating traffic and access control will be conducted at the Whiteside County EOC during the exercise.

EVALUATION AREA 2 – PROTECTIVE ACTION DECISION MAKING

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.

This criterion does not apply to Whiteside County.

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions.

This criterion does not apply to Whiteside County.

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).

The State of Illinois will make protective action recommendations (PARs) to Whiteside County officials in the County EOC. The Whiteside County officials will make the final decision regarding what protective actions will be recommended to the public.

Criterion 2.c.1: Protective action decisions are made, as appropriate, for groups of people with disabilities and those with access/functional needs.

The State of Illinois will make PARs to Whiteside County officials in the County EOC. The

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Whiteside County officials will make the final decision regarding protective actions recommended for groups of people with disabilities and those with access/functional needs.

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria.

This criterion does not apply to Whiteside County.

Criterion 2.e.1: Timely post-plume phase re-location, re-entry and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criterion the ORO's plan and/or procedures.

This criterion will not be demonstrated during this exercise.

EVALUATION AREA 3 - PROTECTIVE ACTION IMPLEMENTATION

Criterion 3.a.1: The OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers in accordance with the plan and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. Appropriate record-keeping of the administration of KI for emergency workers is maintained.

Whiteside County will demonstrate this criterion through coordination with the IEMA Radiological Advisor and timely dissemination and exchange of information within the Dosimetry Control Officer network. Exercise messages may be injected which will ensure the opportunity to demonstrate this criterion in the County EOC.

This criterion will also be demonstrated during the (TAC) demonstration. The DCO briefing for the Sheriff's deputy demonstrating traffic and access control will be conducted at the Whiteside County EOC during the exercise but may be demonstrated out-of-sequence to exercise play.

Criterion 3.b.1: KI and appropriate instructions are available in case a decision to recommend use of KI is made. Appropriate record keeping of the administration of KI for institutionalized individuals is maintained.

When notified by the State of Illinois to distribute and administer KI, Whiteside County officials will discuss the issuance of KI and immobile populations, as a voluntary measure, and will notify Albany officials of the State's recommendation, as appropriate.

The State of Illinois does not recommend the use of KI by the general public and, as such, that portion of the criterion will not be demonstrated.

Criterion 3.c.1: Protective action decisions are implemented for people with disabilities and those with access/functional needs other than schools within areas subject to protective actions.

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This will be demonstrated by Whiteside County through the simulated implementation of the appropriate procedures. The appropriate officials will coordinate transportation and receiving facilities for people with disabilities and those with access/functional needs other than schools within areas subject to protective actions. One of each type of special facility will be contacted during the exercise. One of each type of transportation provider (ambulance/bus) will be contacted during the exercise. The public will not be involved in the demonstration.

The Mobility Impaired List will be available for inspection in the County EOC during the exercise. The evaluator will not be allowed to remove the list from the EOC.

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools.

This criterion will be demonstrated in the Whiteside County EOC.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

Coordination between Whiteside County agencies designated to provide traffic and access control will be exhibited in the County EOC. For the demonstration, a post will be selected by Whiteside County or the exercise controller during the exercise based on exercise play. A deputy will not be asked to drive to the selected post location for the demonstration, but will provide adequate information to the evaluator to describe the process of staffing the selected post. The staffing of the remaining posts will be simulated.

Criterion 3.d.2: Impediments to evacuation are identified and resolved.

The Whiteside County EOC staff will demonstrate the capability to identify and take appropriate actions concerning impediments to evacuation. A message may be injected by the Controller that will drive this demonstration. County personnel will deal with the impediment by identifying the equipment needed, discussing its estimated time of arrival, etc. Actual contacts with resource providers will be made and logged, as appropriate. The impediment information will also be coordinated into public messaging (i.e., via media briefing, notifying the JIC, etc.) to communicate alternative routes to potential evacuees.

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

This criterion does not apply to Whiteside County.

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

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This criterion does not apply to Whiteside County.

Criterion 3.f.1: Decisions regarding controlled re-entry of emergency workers and relocation and return of the public during the post-emergency phase are coordinated with appropriate organizations and implemented.

This criterion will not be demonstrated during this exercise.

EVALUATION AREA 4 – FIELD MEASUREMENT AND ANALYSIS

This evaluation area does not apply to Whiteside County.

EVALUATION AREA 5 - EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

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.

Whiteside County will demonstrate the capability to provide both an alert signal and an initial instructional message to populated areas throughout their portion of the 10-mile plume pathway EPZ in a timely manner after their decision to activate the alert and notification system to implement PARs.

This capability will be demonstrated through the simulated activation of the Quad Cities Station EPZ Prompt Notification System as defined in IPRA-Quad Cities. The Prompt Notification System (outdoor warning sirens) will not be activated during the exercise, but the task will be demonstrated (simulated) through an interview at the communication center during the exercise (may occur out-of-sequence to exercise play).

The ability to provide instructions to the public will be demonstrated through the simulated activation of the local radio station (KCLN/MaC) in Clinton, Iowa. The local radio station will be contacted during the first, and possibly the second, alert and notification sequence. An evaluator and controller will be positioned at the radio station during the exercise to monitor the messages. If the initial message does not contain a protective action recommendation, the evaluator and controller will stay at the radio station for the second message.

Coordination between Whiteside County and Rock Island County will be demonstrated.

Criterion 5.a.2: [RESERVED]

Criterion 5.a.3: Backup alert and notification of the public is completed within a reasonable time

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following the detection by the ORO of a failure of the primary alert and notification system.

Criterion 5.a.4: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation.

This criterion does not apply to Whiteside County.

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner.

Whiteside County will demonstrate this criterion by using pre-scripted messages as indicated in IPRA-Quad Cities. Contact with the radio station will be simulated for each alert and notification sequence following the sequence issuing the initial PAR.

The ability to provide information to the media will be demonstrated by Whiteside County through a briefing held at the Whiteside County media briefing location. If real media are not present for the briefing, the controller and observers will serve as mock media. Evaluators will not serve as mock media.

The ability to deal with rumors will be demonstrated by Whiteside County through coordination between the County EOC and the JIC support unit at the SEOC. The Whiteside County EOC controller will inject exercise messages which will ensure the opportunity to demonstrate this criterion. County officials will investigate and address "rumors." If appropriate, the "rumors" will be coordinated between State and County officials in the County EOC and the JIC support unit at the SEOC.

County emergency broadcast messages and news releases, if issued, will be communicated to the JIC support unit at the SEOC.

EVALUATION AREA 6 – SUPPORT OPERATION/FACILITIES

This evaluation area does not apply to Whiteside County.

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APPENDIX F: SCENARIO TIMELINE

This Appendix presents the Off-Site Scenario Timeline for the State of Illinois, Rock Island County, and Whiteside County that drove the Quad Cities Station Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on November 16, 2016. The timeline includes both On-Site events and comments and expected Off-Site response actions.

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SCENARIO TIMELINE
November 16, 2016
SECTION 1

<u>Approximate Time</u>	<u>Event/Anticipated Response</u>
0755	An Alert is declared at Quad Cities Station (QCS).
0835	Exelon notifies the Illinois Emergency Management Agency (IEMA) telecommunicator of the Alert via the Nuclear Accident Reporting System (NARS). IEMA telecommunicator verifies the NARS message. An IEMA Duty Officer contacts the QCS Shift Engineer. IEMA telecommunicator notifies IEMA personnel of the Alert. IEMA may activate the State Emergency Operations Center (SEOC) And Radiological Emergency Assessment Center (REAC). IEMA may dispatch liaisons to the County EOCs, Unified Area Command (UAC), Radiological Assessment Field Team (RAFT) Staging Area, Joint Information Center (JIC), Technical Support Center (TSC), and Emergency Operations Facility (EOF). IEMA notifies the Illinois Governor's Office (IGO) of the Alert. IEMA telecommunicator notifies appropriate State agencies of the Alert. IEMA notifies the Federal Emergency Management Agency (FEMA).
0850	IEMA telecommunicator notifies Emergency Planning Zone (EPZ) counties of the Alert via NARS. County telecommunicators complete and verify the NARS message. County telecommunicators notify county officials and municipalities. Municipal telecommunicators complete and verify the NARS message. Municipal telecommunicators notify officials of the Alert. The counties and municipalities may activate EOCs if appropriate.

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SCENARIO TIMELINE
November 16, 2016
SECTION 2

<u>Approximate Time</u>	<u>Event/Anticipated Response</u>
0940	A Site Area Emergency (SAE) is Declared at QCS.
0955	Exelon notifies the IEMA telecommunicators of the SAE via NARS. IEMA telecommunicator verifies the NARS message. REAC contacts the QCS Shift Engineer. SEOC is activated if not previously activated. SEOC notifies the IGO and requests that a representative report to the SEOC (simulated). IEMA notifies State agencies. REAC contacts Federal agencies (simulated). REAC provides an update to the SEOC and County Liaisons. REAC provides an update to the JIC.
1010	IEMA notifies EPZ counties of the SAE via NARS. County telecommunicators complete and verify the NARS message. County telecommunicators notify County officials and municipalities of the SAE. Counties implement public notification procedures if appropriate (simulated). Municipal telecommunicators notify officials. County and municipal EOCs are activated if not previously activated. Dosimetry is issued to emergency personnel, EOC staff, and exposure Records are completed.
1045	A General Emergency (GE) is declared at QCS.

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SCENARIO TIMELINE
November 16, 2016
SECTION 3

1100 Exelon notifies the IEMA telecommunicators of the GE via NARS.
 Protective Action Recommendations are issued.

 IEMA telecommunicators verifies the NARS message.

 The SEOC and REAC evaluate the PAR.

 A recommendation is made to the Governor. The Governor recommends
 that protective actions be implemented.

 SEOC staff is briefed.

 SEOC briefs UAC, the County EOC liaisons, and JIC staff.

 SEOC notifies FEMA of conditions (simulated).

 REAC provides an update to the SEOC and County EOC liaisons.

 REAC provides an update to the JIC.

1115 SEOC notifies EPZ counties of the GE and the PARs via NARS.

 County telecommunicators complete and verify the NARS message.

 County telecommunicators notify county officials and municipalities.

 Counties implement public notification and traffic and access control
 as applicable.

 Municipal telecommunicators complete and verify the NARS message.

 Municipal telecommunicators notify staff.

1200 Terminate exercise play.

APPENDIX G: ENHANCEMENT OPPORTUNITIES

The Radiological Emergency Preparedness (REP), Partial Participation, Plume Exposure Pathway Exercise conducted November 16, 2016, in the 10-mile Emergency Planning Zone (EPZ) around the Quad Cities Station (QCS) included a pioneering effort to increase collaboration between FEMA Regions, participating States, and Offsite Responder Organizations (OROs). A steering committee led all activities towards this purpose, which they collectively referred to as the Exercise Enhancement Initiative (EEI).

The EEI was a collaborative departure from the traditional FEMA-only evaluation of REP exercises and placed a greater emphasis on the OROs to self-identify, document and openly critique their own performance; as well as provide FEMA opportunities to shed light on the all hazards, whole government concepts that the REP program provides.

The following section details the Enhancement Opportunities identified in this process as it was implemented by the Illinois Emergency Management Agency.

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ORO Enhancement Number: IL-16-QUAD-1a1-01		Criterion: 1.a.1 Location: Rock Island County EOC / UAC
Enhancement Opportunity: Phone number to Unified Area Command (UAC) was not working properly (Exercise Issue).		
Planned Enhancement Action: Review phone numbers with IEMA Bureau of Operations prior to each exercise regarding the UAC.		
Primary Responsible Agency: Illinois Emergency Management Agency		
Enhancement Mechanism: Operational Process Modification	Start Date: 1/31/2017	
Agency POC: William Conway, 217-785-9986	Estimated Completion Date: Ongoing	

ORO Enhancement Number: IL-16-QUAD-1d1-01		Criterion: 1.d.1 Location: Rock Island County EOC
Enhancement Opportunity: Rock Island County Dispatch Center needs the Yak program for informational purposes		
Planned Enhancement Action: Explore possibilities for including a computer for the Sheriff's dispatch center to use the Yak program		
Primary Responsible Agency: Rock Island County EMA/Sheriff's dispatch center		
Enhancement Mechanism: Equipment Purchase	Start Date: 1/31/2017	
Agency POC: Randy Heisch, 309-799-5166	Estimated Completion Date: TBD – FY2019	

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ORO Enhancement Number: IL-16-QUAD-2c1-01		Criterion: 2.c.1 Location: Rock Island County EOC
Enhancement Opportunity: Add procedures for conferring with EOC Director to determine what action schools should take in Riverdale.		
Planned Enhancement Action: Review the Regional Office of Education's (ROE) checklist for possible enhancement. Enhanced REP related ROE training will be incorporated in IEMA's trainings.		
Primary Responsible Agency: Rock Island County EMA and ROE/Illinois Emergency Management Agency		
Enhancement Mechanism: Potential Procedure Revision/Training	Start Date: 1/31/2017	
Agency POC: Randy Heisch, 309-799-5166 William Conway, 217-785-9986	Estimated Completion Date: 5/1/2017	

ORO Enhancement Number: IL-16-QUAD-2c1-02		Criterion: 2.c.1 Location: Rock Island County EOC
Enhancement Opportunity: Further explanation or communicating the expectation/recommendation for the school district when site area emergency is declared.		
Planned Enhancement Action: Review the Regional Office of Education's (ROE) checklist for possible enhancement. Enhanced REP related ROE training will be incorporated in IEMA's trainings.		
Primary Responsible Agency: Rock Island County EMA and ROE/Illinois Emergency Management Agency		
Enhancement Mechanism: Potential Procedure Revision/Training	Start Date: 1/31/2017	
Agency POC: Randy Heisch, 309-799-5166 William Conway, 217-785-9986	Estimated Completion Date: 5/1/2017	

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ORO Enhancement Number: IL-16-QUAD-5b1-01		Criterion: 5.b.1 Location: Rock Island County EOC
Enhancement Opportunity: Reduce confusion and enhance communication in preparing emergency messages.		
Planned Enhancement Action: Review and update PIO checklist, as needed. Enhanced REP related PIO training will be developed for all REP Counties.		
Primary Responsible Agency: Rock Island County EMA and PIO/Illinois Emergency Management Agency		
Enhancement Mechanism: Potential Procedure Revision/Training	Start Date: 1/31/2017	
Agency POC: Randy Heisch, 309-799-5166 William Conway, 217-785-9986	Estimated Completion Date: 5/1/2017	

ORO Enhancement Number: IL-16-QUAD-5b1-02		Criterion: 5.b.1 Location: Rock Island County EOC	
Enhancement Opportunity: Need to clarify intent and difference between stay-in-place message vs. shelter-in-place message.			
Planned Enhancement Action: Renaming and rewriting the “stay-in-place” message or removing it from the plan			
Primary Responsible Agency: Illinois Emergency Management Agency (in conjunction with all Illinois REP Counties)			
Enhancement Mechanism: Plan Revision		Start Date: 1/31/2017	
Agency POC: William Conway, 217-785-9986		Estimated Completion Date: 5/1/2017	

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ORO Enhancement Number: IL-16-QUAD-1a1-02		Criterion: 1.a.1 Location: Whiteside County EOC
Enhancement Opportunity: Delay in notification from the state/Exelon.		
Planned Enhancement Action: Illinois Emergency Management Agency and Exelon plan to implement a concurrent NARS notification process in the summer of 2017.		
Primary Responsible Agency: Illinois Emergency Management Agency		
Enhancement Mechanism: Operational Process Modification	Start Date: 1/31/2017	
Agency POC: William Conway, 217-785-9986	Estimated Completion Date: 9/1/2017	

ORO Enhancement Number: IL-16-QUAD-1a1-03		Criterion: 1.a.1 Location: Whiteside County EOC/Springfield JIC
Enhancement Opportunity: Phone number for the Joint Information Center (JIC) was incorrect. (Exercise issue)		
Planned Enhancement Action: Review and confirm phone numbers prior to each exercise regarding the JIC.		
Primary Responsible Agency: Illinois Emergency Management Agency		
Enhancement Mechanism: Operational Process Modification	Start Date: 1/31/2017	
Agency POC: William Conway, 217-785-9986	Estimated Completion Date: Ongoing	

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ORO Enhancement Number: IL-16-QUAD-1c1-01		Criterion: 1.c.1 Location: Whiteside County EOC
Enhancement Opportunity: Need to discuss topics with County Public Information Officer (PIO) before a media briefing.		
Planned Enhancement Action: Review and revise PIO checklist to ensure a coordinated discussion with the proper EOC members prior to a media briefing. Enhanced REP related PIO training will be developed for all REP Counties.		
Primary Responsible Agency: Whiteside County EMA and PIO/Illinois Emergency Management Agency		
Enhancement Mechanism: Procedure Revision	Start Date: 1/31/2017	
Agency POC: Seth Janssen, 815-772-5209 William Conway, 217-785-9986	Estimated Completion Date: 5/1/2017	

ORO Enhancement Number: IL-16-QUAD-1e1-01		Criterion: 1.e.1 Location: Whiteside County EOC
Enhancement Opportunity: Move 2-2 location (on traffic and access control map) east to Archer Intersection.		
Planned Enhancement Action: Revise the Illinois Plan for Radiological Accidents (IPRA) map as indicated.		
Primary Responsible Agency: Illinois Emergency Management Agency		
Enhancement Mechanism: Plan Revision	Start Date: 1/31/2017	
Agency POC: William Conway, 217-785-9986	Estimated Completion Date: 7/31/2017	

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ORO Enhancement Number: IL-16-QUAD-1a1-04		Criterion: 1.a.1 Location: Radiological Emergency Assessment Center (REAC)
Enhancement Opportunity: Process used to activate county liaisons.		
Planned Enhancement Action: Evaluate current procedures.		
Primary Responsible Agency: Illinois Emergency Management Agency		
Enhancement Mechanism: Potential Procedure Revision	Start Date: 1/31/2017	
Agency POC: Ken Evans, 217-785-9912	Estimated Completion Date: 7/31/2017	

ORO Enhancement Number: IL-16-QUAD-1c1-02		Criterion: 1.c.1 Location: Radiological Emergency Assessment Center (REAC)
Enhancement Opportunity: Several items for performance improvement were noted in REAC.		
Planned Enhancement Action: Distribute bulletin to all REAC staff with applicable lessons learned.		
Primary Responsible Agency: Illinois Emergency Management Agency		
Enhancement Mechanism: Notice to Staff	Start Date: 1/31/2017	
Agency POC: Ken Evans, 217-785-9912	Estimated Completion Date: 2/28/2017	

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ORO Enhancement Number: IL-16-QUAD-2b1-01		Criterion: 2.b.1 Location: Radiological Emergency Assessment Center (REAC)
Enhancement Opportunity: Process used to confirm county recommendations & communication on opening reception centers.		
Planned Enhancement Action: Add to appropriate checklist.		
Primary Responsible Agency: Illinois Emergency Management Agency		
Enhancement Mechanism: Procedure Revision	Start Date: 1/31/2017	
Agency POC: Ken Evans, 217-785-9912	Estimated Completion Date: 7/1/2017	

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PART II.

FEMA Region VII

After Action Report/Improvement Plan (AAR/IP)

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Quad Cities Generating Station

FEMA Region VII

After Action Report / Improvement Plan (AAR/IP)

Published March 31, 2017

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EXECUTIVE SUMMARY

On November 16, 2016, the Department of Homeland Security (DHS)/Federal Emergency Management Agency (FEMA) Region VII conducted a biennial Partial Plume (PPX) exercise including a Relocation, Reentry and Return (RRR) scenario as part of the overall exercise for the Quad Cities Generating Station (QCGS).

The 2016 QCGS exercise was conducted jointly between FEMA Region VII and FEMA Region V as part of the Enhanced Exercise Initiative (EEI). See Part 3 for more details on the EEI.

In addition to the November 16, 2016 exercise, an Out-Of-Sequence Medical Services drill (MS-1) was conducted on October 12, 2016 at the Genesis Medical Center in Davenport, IA, and a facility review was conducted on November 17, 2016 at the Gooselake Reception Center. The purpose of both the exercise and associated drills was to assess the level of State and local preparedness in responding to a radiological emergency. The exercise and drills were held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans and procedures.

The previous biennial Quad Cities Station exercise was conducted on August 27, 2014. The qualifying emergency preparedness exercise was conducted on March 26, 1986.

FEMA wishes to acknowledge the efforts of all who participated in and supported the exercise and drills. Along with the State of Iowa, Scott County and Clinton County participated along with the various State and local organizations. The staff of Exelon Generation should also be commended for their work on the training, scenario development and exercise preparation.

Protecting the public health and safety is the full-time job of some exercise participants and an additionally assigned responsibility for others. Numerous individuals have willingly sought this responsibility by volunteering to provide vital emergency services to their community. The cooperation and teamwork of all the participants were evident during this exercise. Thanks to all who participated in this community service.

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Cooperation and teamwork of all the participants were evident during this exercise. The State of Iowa and local organizations demonstrated knowledge of their emergency response plans and procedures and adequately implemented them.

This report contains the evaluation of the biennial full-scale exercise.

- No Level 1 issues were identified.
- Two “jointly identified” issues were found.
- Two plan issues were identified, one in each county.
- There were no previous issues for this exercise.

The State and local organizations demonstrated knowledge of their emergency response plans and procedures and adequately implemented them.

The final Protective Action Decision (PAD) during the emergency plume phase was the simulated evacuation of portions of Scott and Clinton counties in Iowa. This final PAD was to evacuate portions of both Clinton and Scott Counties in Iowa.

In Clinton County, sub-area 1 (approximately 2 mile radius from the plant), and sub-area 5 were evacuated.

In Scott County, sub-area 2 (approximately 2 mile radius from the plant) was evacuated. Approximately 4,728 Iowa residents and transients were affected by this evacuation decision.

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ACRONYMS & ABBREVIATIONS

Acronym	Meaning
ANS	Alert & Notification System
CAD	Computer Aided Design
CFR	Code of Federal Regulations
CI	Continuous Improvement
CST	Central Standard Time
DCO	Dosimetry Control Officer
DHS	Department of Homeland Security
DPS	Department of Public Safety
DOT	Department of Transportation
DRD	Direct Reading Dosimeter
EAL	Emergency Action Level
EAS	Emergency Alert System
ECL	Emergency Classification Levels
EEI	Enhanced Exercise Initiative
EMC	Emergency Management Coordinator
EMA	Emergency Management Agency
EMD	Emergency Management Director
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ESF	Emergency Support Function
EPZ	Emergency Planning Zone
EW	Emergency Workers
FCP	Forward Command Post
FEMA	Federal Emergency Management Agency
GE	General Emergency
GIS	Geographic Information System
HSEMD	Iowa Homeland Security & Emergency Management
IDPH	Iowa Department of Public Health
ISD	Independent School District
ISP	Iowa State Patrol
JIC	Joint Information Center
KI	Potassium Iodide

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MACH	Mobile Architecture for Communications Handling
NARS	Nuclear Accident Reporting System
NOUE	Notification of Unusual Event
NRC	Nuclear Regulatory Commission
ORO	Off-Site Response Organization
PAD	Protective Action Decision
PAR	Protective Action Recommendation
PPX	Partial Plume Exercise
PIO	Public Information Officer
PPE	Personal Protective Equipment
RPM	REPP Program Manual
RRR	Relocation, Reentry & Return
SAE	Site Area Emergency
SNB	Special News Broadcast
QCGS	Quad Cities Generating Station
SEOC	State Emergency Operations Center
RACES	Radio Amateur Civil Emergency Service
TACP	Traffic & Access Control Point

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SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name

Quad Cities Generating Station (QCGS)

Type of Exercise

Partial Plume (PPX) / Relocation, Re-entry and Return (RRR)

Exercise Date

November 16, 2016

Program

Department of Homeland Security/FEMA Radiological Emergency Preparedness

Scenario Type

Radiological Emergency

1.2 Exercise Planning Team Leadership

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1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the 2016 QCGS exercise:

State Jurisdictions:

Iowa Department of Aging
Iowa Department of Agriculture and Land Stewardship
Iowa Department of Corrections
Iowa Department of Human Services
Iowa Department of Homeland Security and Emergency Management
Iowa Department of Inspections and Appeals
Iowa Department of Natural Resources
Iowa Department of Public Health
Iowa Department of Transportation
Iowa National Guard
Iowa State Patrol
Iowa State University - Environmental Health and Safety
Iowa State University - Extension Service
Iowa Utilities Board
University of Iowa - State Hygienic Lab

Risk Jurisdictions:

City of Clinton Mayor
City of Camanche Mayor
Clinton County Area Education Agency
Clinton County Board of Supervisors
Clinton County Department of Human Services
Clinton County Emergency Management Agency
Clinton County Engineer
Clinton County Health Department
Clinton County Public Information Officer
Clinton County Sheriff's Office
Scott Emergency Communications Center
Scott County Emergency Management Agency
Scott County Facility and Support Services
Scott County GIS Office
Scott County Health Department
Scott County Sheriff's Office
Scott County Secondary Roads

Support Jurisdictions:

American Red Cross
Radio Amateur Civil Emergency Service (RACES)

Private Organizations:

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Federal Jurisdictions

Federal Emergency Management Agency (FEMA) Region VII
Nuclear Regulatory Commission
National Weather Service

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

Quad Cities Generating Station's (QCGS) Emergency Plan describes the capability to respond effectively to a radiological emergency at the site, and provides a detailed description of interaction with Federal, State, and local government agencies as well as private organizations. The Emergency Plan provides for continuous emergency preparedness including the conduct of an annual exercise and preparatory drills.

The purpose of the November 16, 2016, exercise was to activate and evaluate portions of the Iowa State Emergency Plan, the Scott and Clinton County emergency plans, and associated implementing procedures, in accordance with 44 CFR 350. Furthermore, these exercises and drills tested the QCGS emergency response community's ability to assess and respond to emergency conditions and coordinate efforts with other agencies for protection of the health and safety of the public. The conduct and evaluation of this exercise provided additional training for emergency response organization personnel and a means to further enhance QCGS's emergency response capability.

The scenario was designed to provide the basis for a simulated radiological accident initiated by a Radiological Plume event at QCGS through which the capabilities and effectiveness of the emergency response plans can be evaluated. The scenario was used by the exercise controllers and evaluators as the control mechanism for the conduct of the exercise.

QCGS Emergency Planning personnel developed the scenario; it was reviewed by ICF, a FEMA contractor, prior to the final review and approval by FEMA Region VII. The scenario, as driven by the QCGS Control Room Simulator and injects, depicted a simulated sequence of events of events which resulted in escalating conditions of sufficient magnitude to warrant mobilization of State and local agencies to respond to the simulated emergency. Whenever practical, the exercise incorporated provisions for "free play" on the part of the participants.

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2.2 Exercise Objectives, Capabilities and Activities

Quad Cities Generating Station (QCGS) exercises and drills are conducted to test and provide the opportunity to evaluate emergency plans, associated implementing procedures, facilities, and equipment. This exercise tested the QCGS offsite response organizations' ability to assess and respond to emergency conditions as well as coordinate efforts with other agencies for protection of the health and safety of the public.

The QCGS Emergency Preparedness Exercise & Drill Program objectives are based on the Federal requirements delineated in 44 CFR 350, as well as on the priorities and procedures detailed in the emergency preparedness plans for the State of Iowa as well as Scott and Clinton Counties. Additional guidance provided in NUREG-0654, NUREG-0696, and NUREG-0737, was used in developing these objectives.

The overall objective of the exercise was to evaluate the integrated capability of a major portion of the basic elements existing within the onsite emergency plans and emergency response organizations. The exercise tested the implementation of the plans and procedures of participating agencies, along with the capability of these agencies to conduct operations in accordance with these plans. This objective is further defined by the criteria evaluated for each participating location.

The exercise included partial participation by the State of Iowa and full participation by Scott and Clinton Counties, as well as other associated offsite response organizations.

A summary of the specific criteria evaluated for each of the participating organizations is listed in Table 3.1.

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2.3 Scenario Summary

The following is the scenario summary provided by Quad Cities Generating Station Emergency Preparedness personnel and approved by Department of Homeland Security/FEMA for use during the exercise:

EXERCISE TIME LINE (November 16, 2016)

Unit 1 Initial Conditions		Unit 2 Initial Conditions	
<ol style="list-style-type: none"> Unit 1 at 985 MWe. 571 days online – Online Risk GREEN Equipment OOS – 1B CRD Pump OOS Protected Pathway – 1A CRD Pump, 1A/B FPC Train, 1A/B RBCCW Major evolutions – Flex Generator Test 		<ol style="list-style-type: none"> Unit 2 is at 980 MWe 210 days online – Online Risk GREEN Equipment OOS – 2A RHRSW Pump, 2A Travelling Screen Protected Pathway – 2A/B FPC Train, 2A/B RBCCW, 2B RHRSW Pump Major evolutions scheduled – <ol style="list-style-type: none"> 2A Travelling Screen Quarterly Inspection Trash Rake Maintenance 	
T=0	0755	Start Scenario Wind direction – from 221 degrees, 7 mph, Stability Class D	
T+10	0805	<p>ALERT, MA3 – Automatic or manual trip fails to shut down the reactor, and subsequent manual actions taken at the reactor control consoles are not successful in shutting down the reactor</p> <ol style="list-style-type: none"> (0805) 2 Level Transmitter on 2201-5 Rack experience a fault results in a Group 1 isolation causing MSIVs to shut <ul style="list-style-type: none"> Scram signal results in ATWS with power stabilizing at ~15% (T=0 for ALERT) U1 Turbine trip signals OCB 6-7 and 7-8 to open <ul style="list-style-type: none"> OCB 6-7 fails to open so Local Breaker Backup causes OCB 4-6 to open losing offsite line L0401 SBLC is actuated Scram Discharge Volume does not drain efficiently causing the Ops Crew to drive rods individually (QCOP 0300-28) B SBT starts Pressure spike from the scram and turbine trip coupled with ATWS condition causes a small fuel defect to develop causing Drywell radiation to begin rising (0810) Small steam leak develops in the Drywell from the A Recirc Loop SM should declare ALERT (MA3) due to ATWS with Reactor Power > 5% and actions from reactor control console are unsuccessful at shutting down the reactor ERO activated, OSC/TSC/EOF should be staffed within 60 minutes Command and Control transfer occurs 	

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T+40	0835 - 0845	Equipment Malfunctions <ul style="list-style-type: none"> ▪ (0835) Reactor Water Level transmitter, LT-73B, fails downscale causing Wide Range Fuel Zone indication to be lost ▪ (0845) 1A CRD Pump trip
T+90	0925	SITE AREA EMERGENCY, FS1 – Loss or Potential Loss of ANY two barriers <ul style="list-style-type: none"> ▪ Leak develops on the HPCI steam line in the HPCI Room <ul style="list-style-type: none"> ○ Hi Temperature and Hi Radiation Alarms come in for the HPCI Room (T=0 for SITE AREA EMERGENCY) ○ Isolation signal (or manual attempts) fails to isolate the leak <ul style="list-style-type: none"> ▪ 1-2301-4, HPCI Inboard Steam Isolation valve is stuck open ▪ 1-2301-5, HPCI Outboard Steam Isolation valve is bound open ▪ TSC should declare SITE AREA EMERGENCY (FS1) due to Loss of Reactor Coolant System (RC.4.1) and Loss of Containment (CT.6.3) ▪ Assembly and Accountability should be performed ▪ DW Radiation continues to rise from damaged fuel earlier in the scenario ▪ Rad levels in HPCI Room exceed max safe values
T+95	0930	Radioactive Release in Progress <ul style="list-style-type: none"> ▪ The steam leaking in the HPCI Room is drawn through the SBT system and out the Chimney causing the Effluent monitor to rise <ul style="list-style-type: none"> ○ URI Path F - <RCS><Rx Bldg><SBT><Chimney><Env> ○ Peak Release – 3.0E+06 uCi/s @ 1100
T+155	1030	GENERAL EMERGENCY, FG1 – Loss of any 2 barriers AND Loss or Potential Loss of third barrier <ul style="list-style-type: none"> ▪ Drywell Radiation exceeds 665 R/hr and peaks at 745 R/hr (T=0 for GENERAL EMERGENCY) ▪ TSC should declare GENERAL EMERGENCY (FG1) due to Loss of RCS and Containment and Loss of Fuel Clad (FC.5) <ul style="list-style-type: none"> ○ PARs – Evacuate Sub Areas IL-1,2, IA-1,2,5
	>1100	Damage Mitigation <ul style="list-style-type: none"> ▪ 1-2301-5, HPCI Outboard Steam Isolation valve is able to be moved after the valve motor binding is released locally at the MOV
T=215	1200	Exercise Termination

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SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Exercise Evaluation and Results

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the November 16, 2016, exercise; as well as the out-of-sequence drill held on October 12, 2016 and facility review held on November 16, 2017.

The exercise/drill tested the offsite emergency response capabilities of the state and local governments in the 10-mile plume and 50-mile ingestion pathway emergency planning zones surrounding the Quad Cities Generating Station.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of the criteria delineated in FEMA's Radiological Emergency Preparedness Program Manual, dated January 2016.

All noted inadequacies in plans, procedures, and exercise performance identified by FEMA as well as OROs were reviewed by FEMA Region V, FEMA Region VII, the State of Iowa and the State of Illinois during the Joint Adjudication Meeting on November 30, 2016.

3.2 Summary Results of Exercise Evaluation

The matrix presented in Table 3.1 presents the status of all exercise criteria, which were scheduled for demonstration during this exercise, at all participating jurisdictions and functional entities. Exercise criteria are listed by number and the demonstration status of those criteria is indicated by the use of the following letters:

1. **M – Met**
An observed action, behavior, procedure, and/or practice that met the exercise criteria.
2. **L1 – Level 1 Finding**
An observed or identified inadequacy of organizational performance in an exercise that could cause a determination that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a Nuclear Power Plant (NPP).

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3. L2 – Level 2 Finding

An observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety.

4. P – Plan Issue

An observed or identified inadequacy in the offsite response organizations' (ORO's) emergency plan/implementing procedures, rather than that of the ORO's performance.

5. J – Jointly Identified Issue

An issue that was identified by both the FEMA evaluation team as well as the ORO and are therefore considered an enhancement opportunity and a successful outcome of the exercise.

6. N - Not Demonstrated

While FEMA evaluated ORO performance against the minimum requirements of the demonstration criteria, participants and ORO special observers were empowered through the EEI to critique ORO demonstration above and beyond the minimum requirements of the program.

These ORO identified items are identified as "opportunities for enhancement" and considered a successful outcome of the exercise. All ORO opportunities for enhancement are outlined in the narratives below.

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3.2 Summary of Exercise Evaluation Table

DATE: 2016-11-16 SITE: Quad Cities Generating Station (Iowa) <i>M: Met, 1: Level 1, 2: Level 2, P: Plan Issue, J: Jointly Identified</i>		Iowa State EOC	IA Dose Assess.	Clinton County EOC	Scott County EOC		Genesis Medical	Medic EMS (MS-1)	Gooselake Reception
Emergency Operations Management									
Mobilization	1a1	M	M	M	M				
Facilities	1b1								M
Direction & Control	1c1	M		M	M				
Communications Equipment	1d1	M	M	M	M				
Equipment and Supplies	1e1	M	M	M	M		M	M	
Protective Action Decision Making									
EW Exp. Control Decisions	2a1		M	M	M				
PARs	2b1		M						
PADs	2b2	M	M	M	M				
PADs for Disabled/Functional Needs	2c1			P	P				
Ingestion PADs	2d1								
RRR Decisions	2e1								
Protective Action Implementation									
EW Exp. Control Implementation	3a1			M	M		M	M	
KI Public/Institutionalized	3b1			M	M				
PAD Imp. Disabled/Functional Needs	3c1								
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			J	M				
Field Measurement and Analysis (Not applicable to this exercise)									
Emergency Notification and Public Info									
Initial Alert & Notification	5a1			M	M				
RESERVED	5a2								
Backup Alert & Notification	5a3								
Exception Area Alerting	5a4								
Subsequent Public Information	5b1	M		M	M				
Support Operations/Facilities									
Reception Center Operations	6a1								
EW Monitoring & Decon	6b1								
Congregate Care	6c1								
Contaminated Injured Transport & Care	6d1						M	M	

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3.3 Criteria Evaluation Summaries

3.3.1 Iowa Jurisdictions

3.3.1.1 Iowa State Emergency Operations Center (SEOC)

The Iowa State Emergency Operations Center (SEOC), located at 6100 NW 78th Avenue Johnston, IA had fifteen State agencies participate in the November 16, 2016 exercise.

Mobilization of the SEOC went smoothly, with all responding agencies being notified in a timely manner. Use of the automated call-out system (Alert Iowa) ensured all responding agencies were notified via multiple methods (Phone Call, SMS, email, etc.) and close monitoring of the message status for each recipient enabled follow-up as needed with individual agencies and also validated contact information for mobilization rosters.

Coordination among state agencies was smooth and seamless. Each agency representative's roles and responsibilities were clearly defined and were familiar. The SEOC briefings were conducted regularly and provided valuable information to the state agencies to ensure appropriate actions were taken. Any questions or issues needing clarification were quickly addressed, including errors or issues with the State's crisis information management system, WebEOC. Excellent use of checklists was observed by the SEOC leadership and other agency representatives to ensure all necessary actions are completed.

Excellent use of multiple communication systems was demonstrated by participants at the SEOC. Two systems of note that were particularly effective include the Administrative Hotline and the Decision-Makers Hotline. The Administrative Hotline is a standing conference line lead by the SEOC and monitored by representatives from both impacted counties, the Forward Command Post, the Joint Information Center, the Exelon Emergency Operations Facility, State Public Affairs staff, the SEOC Executive Decision Makers. This system allows for rapid and coordinated dissemination of information to all affected parties and to ensure any issues or questions are addressed in a timely manner. The Decision-Makers Hotline is used by Exelon to consult directly with executive decision makers in both Iowa and Illinois on any matters relating to plant status and protective action recommendations. Use of these systems, combined with statewide use of WebEOC provides great situational awareness and common operating picture throughout the incident.

The SEOC was very well equipped with analog and technological support equipment and supplies. Maps and site specific displays were easily accessible and of professional quality.

The SEOC Executive Decision-Makers determined the appropriate Protective Action Recommendations (PARs) based on the exercise scenario data/conditions provided by the utility. With input and consultation with other state agency officials, PARs were concurred upon, coordinated, and effectively communicated to the appropriate County OROs.

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Great collaboration occurred between appropriate state agencies and with the Forward Command Post (FCP) and county EOCs regarding needed traffic control support and requirements. Effective collaboration and coordination to control any potentially impacted air, water, or rail infrastructure/operations were demonstrated.

State EOC personnel demonstrated the ability to plan and equip for supporting or conducting impediment removal operations. Staff communicated regularly with field assets to determine evacuation route status and personnel also held discussions with the public affairs staff on traffic status and operations.

The Public Information Officers (PIOs) kept aware of the events that were occurring and tracked down the relevant information they needed to get out to the public. There was very good coordination among all State agencies.

The SEOC Public Information staff performed a vital component of exercise play and there was good communication between the Utility JIC Manager, the SEOC Public Information staff, and Scott and Clinton Counties. The staff was synchronized and functioned well as a team. They were in constant communication with each other, to ensure that required information was passed along in a timely manner to make reports successful. The Lead PIO coordinated the production of news releases and communications with the JIC effectively and quickly.

The Internal Communications/VIP Coordinator monitored and participated on the Administrative "Hotline" keeping everyone well informed of the current status and potential discrepancies. The Public Inquiry staff members answered calls professionally and compassionately; provided the information known at the time; and identified a trend concerning the financial and economic impact of the incident, from the calls received.

All eight (8) criteria at this location were adequately demonstrated in accordance with the plans, procedures, and extent of play agreement. 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.b.2, 3.d.1, 3.d.2, 5.b.1.
- b. LEVEL ONE: None
- c. LEVEL TWO: None
- d. PLAN ISSUES: None
- e. JOINTLY IDENTIFIED ISSUES: None
- f. NOT DEMONSTRATED: None
- g. PRIOR ISSUES - RESOLVED: None
- h. PRIOR ISSUES - UNRESOLVED: None
- i. ORO-IDENTIFIED OPPORTUNITIES FOR ENHANCEMENT: 1.c.1, 1.e.1, 2.b.2, 3.d.1, 5.b.1

ORO-Identified Enhancement Number: IA-16-QUAD-1c1-01

Briefings to the SEOC did not always include all recommended components of

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information as outlined in the Chief of Operations Checklist. In some cases, the state agency participants were not immediately notified of an escalation in Emergency Action Level (EAL).

ORO-Identified Enhancement Number: IA-16-QUAD-1c1-02

A situation report was never issued by the SEOC for this event. Although a rough draft was compiled by State EOC staff, it was never finalized or issued at the conclusion of exercise play.

ORO-Identified Enhancement Number: IA-16-QUAD-1c1-03

The Iowa Department of Transportation (IDOT) checklist at the SEOC needs to be better coordinated with the IDOT checklist used at the Forward Command Post.

ORO-Identified Enhancement Number: IA-16-QUAD-1c1-04

Although significant actions taken by state agency partners are communicated during the regular SEOC briefings, these actions are generally not documented anywhere else for review to ensure all appropriate actions are taken and followed up on accordingly. All SEOC positions should be encouraged to document all actions taken in a position log for review as needed.

ORO-Identified Enhancement Number: IA-16-QUAD-1e1-01

A set of EAL Boards would be beneficial in the SEOC Executive Office.

ORO-Identified Enhancement Number: IA-16-QUAD-2b2-01

Adoption of a formal communications protocol in the SEOC and especially the executive decision room is recommended. Adopting a three-way communications formality when critical information/orders is/are being communicated, limiting or actually eliminating sidebar conversations that are not relative to the emergency or drill/exercise scenario should be encouraged, and participants should be more attentive to incoming data/information by pausing conversations and other telephone calls when critical information (Higher Priority) is incoming or outgoing.

ORO-Identified Enhancement Number: IA-16-QUAD-3d1-01

Further discussion and coordination needs to occur to ensure restrictions on rail, river, and air traffic can be implemented in a prompt and coordinated manner. These discussions need to include coordination with the State of Illinois to identify the primary responsible party for restrictions that affect both states. Due to the heavy simulation of activities during an exercise as they relate to transportation restrictions, existing procedures should be validated with the responsible federal partners to ensure there are no faulty assumptions in place and that they are effective. Finally, better information needs to be communicated to the counties on the status of these restrictions to ensure duplicative actions are not being taken by the counties.

ORO-Identified Enhancement Number: IA-16-QUAD-3d1-02

Additional markers or indicators within MACH for the location of active access control

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points would be beneficial for situational awareness.

ORO-Identified Enhancement Number: IA-16-QUAD-5b1-01

Implementation of a new procedure was demonstrated during this exercise where the SEOC issues press releases on behalf of the counties with instructions to the public on protective actions. While the messages were issued in a timely manner without undue delay, they were not issued as quickly as expected. A review of the new process is needed to improve the timeliness of message issuance and to shorten the gap between the issuance of the EAS message and the issuance of the subsequent press release by the state.

ORO-Identified Enhancement Number: IA-16-QUAD-5b1-02

In addition to the issuance of follow-up emergency messages containing protective actions for the public, the State has also agreed to assist the counties in distributing other county press releases during an incident to ensure the widest distribution of the information possible. Greater guidance is needed for the State public affairs staff on when, how, and where to post these county press releases.

3.3.1.2 Iowa Dose Assessment

The Iowa Dose Assessment function was conducted by the Iowa Department of Public Health (IDPH) and occurred at the SEOC.

Notification and mobilization of the Iowa Department of Public Health (IDPH) staff worked well and was timely. The IDPH communicator procedures and call list for notification of internal staff, state, and federal partners was validated and proven to be more effective than past mobilization procedures. The Iowa Department of Public Health was able to obtain additional valuable information from the Quad Cities Generating Station (QCGS) early in the event during mobilization which allowed for greater situational awareness.

IDPH performed accurate dose projections, validation of the assessments using independent analysis and field team results, and protective action recommendations including evacuations, factoring in differing results and additional evacuation recommendations from the licensee. There was outstanding coordination and communication between the IDPH and the utility technical liaison which was able to provide quick and accurate information about plant conditions. Additionally, there was good communication between IDPH, the utility, and Illinois Emergency Management Agency (IEMA) when comparing dose projections and excellent use of new technologies by utilizing "RadResponder" for field team data. Continuous improvements were demonstrated by the use of a new IDPH call-down list and employing additional staff which improved efficiency.

Finally, good communications of PARs with counties was demonstrated. The scenario never resulted in PAG's exceeded, so the default "D" PAR from the plant was a conservative recommendation. IDPH conveyed this information effectively to Clinton and Scott counties allowing Clinton County to recognize that the City of Clinton did not need to be included in evacuation recommendation.

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All six (6) criteria for this function were adequately demonstrated in accordance with the plans, procedures, and extent of play agreement. 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, 2.a.1, 2.b.1, 2.b.2
- b. LEVEL ONE: None
- c. LEVEL TWO: None
- d. PLAN ISSUES: None
- e. JOINTLY IDENTIFIED ISSUES: None
- f. NOT DEMONSTRATED: None
- g. PRIOR ISSUES - RESOLVED: None
- h. PRIOR ISSUES - UNRESOLVED: None
- i. ORO-IDENTIFIED OPPORTUNITIES FOR ENHANCEMENT: 1.e.1, 2.b.1

ORO-Identified Enhancement Number: IA-16-QUAD-1e1-02

RadResponder was used by both Iowa and Illinois during this exercise. Procedures need to be coordinated with Illinois to ensure Iowa is allowed access and granted the proper permissions to the RadResponder event created by Illinois. Recent enhancements to RadResponder also need to be reviewed and incorporated into existing procedures.

ORO-Identified Enhancement Number: IA-16-QUAD-2b1-01

IDPH staff have a good understanding of the basics of dose assessment with RASCAL and URI RASCAL, but more training to understand URI RASCAL for QCGS would be beneficial for dose assessment staff to increase knowledge of other options and techniques available in the software. Staff would benefit from instruction/awareness of systems knowledge specific to the QCGS, i.e. correlation of plant release points to system data points, etc.

3.3.2 Risk Jurisdictions

3.3.2.1 Clinton County Emergency Operations Center

The Clinton County Emergency Operations Center (EOC) is located in the Clinton County Courthouse at 612 North 2nd Street in Clinton, IA. Representatives from ten agencies participated in the EOC during the exercise.

Clinton County Communications Center dispatcher referred to and followed written procedures when taking initial notification from QCGS. The Clinton County EOC demonstrated good use of Alert Iowa for mobilization of EOC personnel. Both the communications center and EOC staff know their roles and implement the notification process efficiently.

The Clinton County EOC demonstrated good direction, control, and coordination throughout the entire exercise. Key decisions were made only after seeking out information from all the participants at the local and State level that may have knowledge of and/or be affected by the decision. The EOC Manager conducted regular EOC briefings and all EOC groups demonstrated good leadership and coordination skills. Overall, key leaders demonstrated excellent command and control and forward thinking of potential issues or policy questions that would need to be addressed. The Clinton County EOC participants worked very well together and demonstrated good leadership skills and knowledge of their roles and responsibilities to protect the health and safety of their citizens in the event of an incident at the Quad Cities Generating Station.

Multiple communications systems were available and operable during the exercise. Although a minor issue arose regarding the use of the Administrative Hotline with a headset early in the event, the EOC staff quickly adjusted and addressed the issue with no impact to operations. Ensuring a dedicated staff member is available to monitor WebEOC and to enter pertinent information on behalf of all EOC responders worked very well.

Very good discussion and coordination occurred within the Clinton County EOC about initial utility PARs and the potential PADs effects. At the General Emergency (GE) escalation, good pre-planning was observed by the EOC Manager, Policy and Operations Groups to consider possible evacuation further than the initial utility recommendation. This discussion generated questions for the State EOC about the State's PAR that were promptly answered. Clinton County EOC staff clearly demonstrated the ability to consider other factors and make decisions based on the information provided.

The EOC Manager coordinated directly with the Logistics group to keep them informed of the situation. Logistics demonstrated good coordination with the schools and performed the required calls. They also had their list of functional needs persons by sub-area and coordinated transportation resources.

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The Clinton County Sheriff and Clinton County Engineer conducted an outstanding review of resource identification and availability to support traffic and access control operations. Clear decisions were made on which jurisdiction would assume access control responsibilities for specific locations and then continued follow-up by the Sheriff occurred with each jurisdiction to ensure adequate 24 hour coverage. The Sheriff also simulated contact with the Iowa Department of Natural Resources (DNR) for current census count at area parks for situational awareness.

Thorough discussion and coordination between law enforcement and the City of Camanche elected officials ensured traffic impediments were handled effectively and efficiently. The Clinton County Public Information Officer (PIO) quickly came to the table and inquired if any reroute of traffic should be advertised through public information. Law Enforcement and decision makers determined it was not appropriate as the reroute was not easily described, only affected a small population, and would become self-evident by motorists.

Excellent coordination was observed with Scott County on knowledge of utility notification and siren sounding times in conjunction with the initial message. This was accomplished in a timely fashion at both the Site Area Emergency and General Emergency escalations. An excellent peer review process between the EOC Manager and the PIO group to approve special information messages was demonstrated. PIO's drafted their messages in a timely manner, received approval of the messages, and uploaded them to the State EOC very quickly. The lead PIO in Clinton County showed excellent leadership in identifying issues early and resolving them rapidly.

Thirteen (13) of fourteen (14) total criteria were adequately demonstrated in accordance with plans, procedures, and the extent of play agreement. 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, 3.a.1, 3.b.1, 3.d.1, 3.d.2, 5.a.1, 5.b.1.
- b. LEVEL ONE: None
- c. LEVEL TWO: None
- d. PLAN ISSUES: 2.c.1.

CRITERION NO: 51-17-2c1-P-01

CONDITION: During the November 16, 2016 REPP Plume exercise, the Clinton County Emergency Management Agency (EMA) made the decision to implement the early dismissal option for Clinton County schools at approximately 1006 Central Standard Time (CST). At 1039 CST, the situation at QCGS escalated to a General Emergency (GE) Emergency Classification Level (ECL). At 1115, the State of Iowa made a Special News Broadcast Message (SNB) to evacuate Subareas #1 and 5, including the city of Camanche, Iowa. In close coordination with Scott County and State of Iowa representatives, the Clinton County EMA decided to proceed with the early dismissal of the Clinton County schools to be effective at 1200 CST. This was a deliberate decision to not revise/add to the evacuation message regarding the early dismissal of students.

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Iowa provided information to FEMA, following exercise demonstration, stating they felt the decision to implement the early dismissal option was the right decision path for this scenario. It is FEMA's position that this decision was not supported by current plans/procedures in that they do not contain sufficient information for the early dismissal option to be implemented completely. The aforementioned plans/procedures need to clarify specifically how the potential situation of returning students to their homes within the Subareas #1 & #5 would be handled; especially for situations where the parent(s)/guardian(s) may not be at home (or even aware of the emergency situation) when the students are dropped off.

POSSIBLE CAUSE: Although the Clinton County and State of Iowa Radiological Response plans/procedures provide for an "early dismissal" option, this type of decision path was a clear departure from past Iowa exercise practice. FEMA Region VII's concerns lie not in the competence and appropriateness of this decision; but rather that the current plans simply need to be more detailed for this decision path.

REFERENCES: NUREG-0654/FEMA-REP-1 D.4, J.9, J.10.d and Clinton County Plan

EFFECT: Potential effect is a lack of accountability for students who return to their homes without a parent or guardian present.

RECOMMENDATION: FEMA recognizes that Clinton County made a deliberate decision to implement this early dismissal option. FEMA recommends the county include in their plans more definitive information about how to address situations for "latchkey" children. The county should specifically consult with the appropriate schools' officials for their expertise and experience for a reference in the plan that clearly addresses this particular scenario of "latchkey" children and early dismissal. The plan revision about "latchkey" children should be completed by the end of the second quarter of CY 2017.

STATE RESPONSE: The State of Iowa disagrees with FEMA's assertion that plans/procedures must clarify how the potential situation of returning students to their homes within Subareas #1 & #5 under the stated circumstances would be handled; especially for situations where the parent(s)/guardian(s) may not be at home (or even aware of the emergency situation) when the students are dropped off.

The State of Iowa also finds it highly unlikely that parents would be unaware of an emergency situation under the circumstances of this scenario, considering the extensive measures already in place, certified annually, and routinely demonstrated to FEMA that ensure the public will receive prompt notification of an event. Per our plans and program requirements, the Primary Alert and Notification System (ANS) would have been activated on two separate occasions prior to any evacuation recommendation - at the declaration of a Site Area Emergency and again at the declaration of a General Emergency. All Primary ANS systems in the REP Program are certified by FEMA and the NRC of being capable of reaching essentially 100% of the EPZ population within 15

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minutes of the decision to activate. This demonstrated capability, coupled with the abundant local, national, and international media coverage that would undoubtedly be in place for an event of this magnitude further reinforces the state's belief that the risk of an uninformed parent is minimal to non-existent.

Regarding the risk of a parent or guardian not being home at the time of student drop-off, school policies establish that upon notification of an early dismissal by school officials, it is the responsibility of parents and guardians to take custody of their child(ren) upon dismissal, either via parent pick-up at the school or upon drop-off via established school bus routes. Regardless of the cause for dismissal, measures are in place to ensure parents (or guardians) are notified that an emergency situation at the QCGS exists; that an early dismissal of their child(ren) is scheduled to occur and that parents or guardians are also aware of the need to take custody of their child(ren) upon early dismissal.

Finally, the current requirements of NUREG-0654 and the REP Program Manual (RPM) do not stipulate that such extensive planning measures as described above by FEMA must be incorporated into plans and procedures.

Therefore, the State of Iowa intends to correct this planning issue through modification of existing procedures used by Clinton County officials. Procedures will be modified to include, in instances where an evacuation is recommended before a school early dismissal can be completed, prompts to appropriate officials to consider relevant factors based on the FEMA RPM Assessment Criteria 2.c.1. Revised procedures will be submitted to FEMA no later than December 31, 2017.

Finally, the state intends to negotiate very clear and specific language into all future REP Extent of Play agreements concerning the demonstration of Assessment Criteria 2.c.1 to ensure all parties agree to how exercise time compression will be addressed to include the necessary artificial acceleration of completion of activities to ensure an adequate demonstration in the future.

- e. NOT DEMONSTRATED: None
- f. JOINTLY IDENTIFIED ISSUES: 3.f.1

Jointly-Identified Enhancement Number: IA-16-QUAD-3f1-J-01

Clinton County had a general knowledge of the re-entry process but did not know the details for the re-entry process and the participants did not use their re-entry procedure. For the first demonstration the person requesting re-entry was not issued dosimetry at the EOC. The officer at the ACP checkpoint did not check for dosimetry and sent the record form into the restricted zone with the individual instead of keeping the form so they would not have had knowledge of who was in the restricted zone and when they should return. Although this process is detailed in their re-entry procedures, the participants did not reference them during this demonstration. The second request for re-entry went better due to some questioning of the participants by the individual seeking re-entry, which resulted

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in the EOC Manager referring to the SOP. However the process did not go as well as outlined in the procedures.

Jointly-Identified Enhancement Number: IA-16-QUAD-3f1-J-02

The Relocation and the Return phases need to have better written policy guidance for the officials to make consistent, informed decisions. All participants need to remember to use the procedures and guidance documents that are available to them.

- g. PRIOR ISSUES - RESOLVED: None
- h. PRIOR ISSUES - UNRESOLVED: None
- i. ORO-IDENTIFIED OPPORTUNITIES FOR ENHANCEMENT: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 3.a.1, 3.f.1

ORO-Identified Enhancement Number: IA-16-QUAD-1a1-01

The Iowa State Patrol (ISP) Liaison to the Clinton County EOC is delayed in responding to the EOC due to the fact that they must retrieve dosimetry from the State Patrol Post Headquarters in Stockton prior to responding. Having the ISP Liaison report immediately to the Clinton County EOC and receive dosimetry from the EOC staff should be explored as an option to expedite that position's response to the Clinton County EOC.

ORO-Identified Enhancement Number: IA-16-QUAD-1a1-02

There were two SMS delivery failures during mobilization of the Clinton County EOC responders. The cause of these failures should be investigated and notification listings should be updated accordingly.

ORO-Identified Enhancement Number: IA-16-QUAD-1c1-05

The Cities of Camanche and Clinton were not notified of the need to participate in the Return, Re-entry, and Relocation (RRR) portion of the exercise and were therefore not represented during that portion of the event. Having these specific elected officials present at the RRR portion of the exercise would have been beneficial. Measures should be taken to ensure the appropriate communities that will be impacted during RRR activities are notified of the need to participate in the exercise.

ORO-Identified Enhancement Number: IA-16-QUAD-1c1-06

The transition of personnel responsible for answering the Exelon Nuclear Accident Reporting System (NARS) line can be improved. The replacement staff member was unclear on the phone's operation and on whom was responsible for responding on behalf of the county during roll calls (EOC vs. Communication Center).

ORO-Identified Enhancement Number: IA-16-QUAD-1d1-01

The Clinton County EOC should consider developing a better internal EOC messaging system (written or electronic) so all EOC groups remain aware of key activities being conducted throughout the incident. Although EOC messaging forms appear to exist, better use of these forms combined with keeping the WebEOC scribe informed of major events so they can be posted and shared will improve situational awareness during the

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event.

ORO-Identified Enhancement Number: IA-16-QUAD-1d1-02

Superfluous copies of paperwork (NARS forms, Press Releases, etc.) are distributed to all tables, often times after a lengthy delay, which can create confusion for EOC responders. Measures to reduce the amount of paperwork distributed to EOC participants should be explored.

ORO-Identified Enhancement Number: IA-16-QUAD-1d1-03

A dedicated phone with a connected headset for the Exelon representative was found to be inoperable during the exercise. Repair or replacement of this unit is necessary.

ORO-Identified Enhancement Number: IA-16-QUAD-1e1-03

Recognizing the Clinton County EOC space is challenging, there could be a better utilization of the sub-area wall map to highlight the potentially affected subareas for the entire EOC to have better situational awareness. Additionally, detailed maps of the cities of Camanche and Clinton, while available, were not requested by law enforcement to assist with traffic and access control planning. While wall space is limited in the current EOC, ensuring EOC responders are aware of the maps and displays that are available upon request will help to improve efficiency and situational awareness.

ORO-Identified Enhancement Number: IA-16-QUAD-1e1-04

An acronym list is recommended to be included in Clinton County EOC position binders.

ORO-Identified Enhancement Number: IA-16-QUAD-2a1-01

An exercise inject presented a scenario where a worker in the field was reporting an off-scale dosimeter. When presented with this information, the Dosimetry Control Officer (DCO) in Clinton County made the assumption the dosimetry was faulty and made the decision to replace the dosimetry for the worker without any further consultation or validation with the Iowa Department of Public Health. The DCO should have consulted with the IDPH prior to making the decision to replace the dosimetry.

ORO-Identified Enhancement Number: IA-16-QUAD-3a1-01

A new process of conducting area monitoring for EOC responders in the Clinton County EOC was demonstrated during this exercise. The Clinton County DCO was reading scale on area monitors incorrectly, recording them in millirem instead of microrem and also did not include any unit scale on the log. The DCO was also recording the dose rate initially rather than the accumulated dose as required, however, this was corrected by the third reading. Concerning monitoring activities of the jail/dispatch area, the DCO did not attempt to regularly check the area monitor. The DCO also did not attempt to use their job aid when setting up area monitoring. Procedures and training related to this process should be enhanced.

ORO-Identified Enhancement Number: IA-16-QUAD-3a1-02

The Clinton County EOC DCOs need to use and follow procedures when performing

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emergency worker briefings. Potassium Iodide (KI) was not mentioned in the initial briefing to the EOC. The DCO was not observed discussing the option to declare pregnancy during the briefings and was not observed collecting the associated forms from Emergency Worker books. The briefing was performed from memory instead of using a procedure or job aid to guide the DCO, which likely resulted in key items of information being left out of the briefing.

ORO-Identified Enhancement Number: IA-16-QUAD-3f1-01

A shorter exercise cycle for RRR activities would ensure participants are more familiar with their roles and responsibilities during this type of event. A four year cycle is recommended to ensure proficiency of responders.

3.3.2.2 Scott County Emergency Operations Center

The Scott County Emergency Operations Center is located in Davenport, Iowa. Mobilization of the Scott County EOC was performed in a very organized manner, with staff working well together as a team to notify EOC responders as quickly as possible.

During the QCGS exercise, the Scott County Emergency Management Coordinator conducted numerous, well-coordinated briefings with strong direction and control and overall there was excellent communications between all participants.

The Scott County EOC experienced a real-world failure of the NARS line, resulting in a delay in receipt of the Site Area Emergency Notification. EOC staff worked quickly to immediately implement a work-around solution to receive the updated information from Clinton County and the State EOC. Staff in the Scott County EOC also demonstrated excellent teamwork to rapidly troubleshoot the technical issue and correct the matter in time to receive the next escalation notification at the General Emergency.

New Emergency Support Function (ESF) display boards were implemented to better identify EOC positions within the room. These boards were much larger and easier to see from across the room. The Scott County Sheriff's Office and the Scott County DCO were very familiar with the radiological equipment and responsibilities. Dosimetry control was demonstrated well, with informative briefings by the DCO. EOC staff made excellent use of the available displays in the EOC and the scrolling log display was very beneficial.

Scott County EOC participants held excellent, proactive PAD discussions as the EOC was activating during the Alert Phase. This better prepared them to make a rapid decision concerning special populations should the event escalate.

Outstanding communication between representatives of the Scott County Sheriff's Office, the Secondary Roads Department, and the Iowa State Patrol was demonstrated in the way they addressed a road impediment.

The Scott County Decision Making group functioned well as a team and were proactive in

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discussing situations and possible scenarios, particularly during Return, Re-entry, and Relocation (RRR) portion of the exercise. Decision-makers worked well together to establish the restricted zone and good discussion was observed on how to notify residents that they were going to be relocated and how that might be accomplished. Scott County also discussed the need to send in utility companies first to ensure the area was safe for return. Law enforcement also held detailed discussions on the need to drive through the area first to make sure the area was safe and to look for signs of looting. Scott County quickly and easily identified re-entry access control points and also made the prompt decision to close US Highway 67 as it traversed through the 50-year restricted area and was therefore unlikely to be used for the foreseeable future.

The PIOs in Scott County worked well together to ensure subsequent emergency information was prepared and transmitted to the State EOC for timely release to the public. Emergency Information Messages are pre-drafted in the Scott County plan for ease of use, however, the scenario called for modification of a pre-scripted message in order to reflect the current status of school children. The Scott County PIOs were able to prepare and transmit the modified messaging with no issue.

Thirteen (13) of fourteen (14) criteria were successfully demonstrated in accordance with the plans, procedures, and extent of play agreement. 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, 3.a.1, 3.b.1, 3.d.1, 3.d.2, 3.f.1, 5.a.1, 5.b.1.
- b. LEVEL ONE: None
- c. LEVEL TWO: None
- d. PLAN ISSUES: 2.C.1.

CRITERION NO: 51-17-2c1-P-02

CONDITION: During the November 16, 2016 REPP Plume exercise, the Scott County Emergency Management Agency made the decision to implement the early dismissal option for Scott County schools at approximately 1012 Central Standard Time (CST). At 1039 CST, the situation at QCGS escalated to a General Emergency (GE) Emergency Classification Level (ECL). At 1115, the State of Iowa made a Special News Broadcast Message (SNB) to evacuate Subarea #2. In close coordination with Clinton County and State of Iowa representatives, the Scott County EMA decided to proceed with the early dismissal of the Scott County schools to be effective at 1200 CST. This was a deliberate decision to not revise/add to the evacuation message regarding the early dismissal of students.

Iowa provided information to FEMA, following exercise demonstration, stating they felt the decision to implement the early dismissal option was the right decision path for this scenario. It is FEMA's position that this decision was not supported by current plans/procedures in that they do not contain sufficient information for the early

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dismissal option to be implemented completely. The aforementioned plans/procedures need to clarify specifically how the potential situation of returning students to their homes within the Subarea #2 would be handled; especially for situations where the parent(s)/guardian(s) may not be at home (or even aware of the emergency situation) when the students are dropped off.

POSSIBLE CAUSE: Although the Scott County, and State of Iowa, Radiological Response plans/procedures provide for an "early dismissal" option, this type of decision path was a clear departure from past Iowa exercise practice. FEMA Region VII's concerns lie not in the competence and appropriateness of this decision; but rather that the current plans simply need to be more detailed for this decision path.

REFERENCES: NUREG-0654/FEMA-REP-1 D.4, J.9, J.10.d and Scott County Plan

EFFECT: Potential effect is a lack of accountability for students being dropped off to return to their homes without a parent or guardian at home.

RECOMMENDATION: FEMA recognizes that Scott County made a deliberate decision to implement this early dismissal option. FEMA recommends the county include in their plans more definitive information about how to address situations for "latchkey" children. The county should specifically consult with the appropriate schools' officials for their expertise and experience for a reference in the plan that clearly addresses this particular scenario of "latchkey" children and early dismissal. It is also recommended that the county assures presence of designated school representatives as liaisons for plans as well as operations. The plan revision about "latchkey" children should be completed by the end of the second quarter of CY 2017.

STATE RESPONSE: The State of Iowa does disagree with FEMA's assertion that plans/procedures must clarify how the potential situation of returning students to their homes within Subarea #2 under the stated circumstances would be handled; especially for situations where the parent(s)/guardian(s) may not be at home (or even aware of the emergency situation) when the students are dropped off.

The State of Iowa finds it highly unlikely that parents would be unaware of an emergency situation under the circumstances of this scenario, considering the extensive measures already in place, certified annually, and routinely demonstrated to FEMA that ensure the public will receive prompt notification of an event. Per our plans and program requirements, the Primary Alert and Notification System (ANS) would have been activated on two separate occasions prior to any evacuation recommendation - at the declaration of a Site Area Emergency and again at the declaration of a General Emergency. All Primary ANS systems in the REP Program are certified by FEMA and the NRC of being capable of reaching essentially 100% of the EPZ population within 15 minutes of the decision to activate. This demonstrated capability, coupled with the abundant local, national, and international media coverage that would undoubtedly be in place for an event of this magnitude further reinforces the state's

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belief that the risk of an uninformed parent is minimal to non-existent.

Regarding the risk of a parent or guardian not being home at the time of student drop-off, school policies establish that upon notification of an early dismissal by school officials, it is the responsibility of parents and guardians to take custody of their child (ren) upon dismissal, either via parent pick-up at the school or upon drop-off via established school bus routes. Regardless of the cause for dismissal, measures are in place to ensure parents (or guardians) are notified that an emergency situation at the QCGS exists; that an early dismissal of their child (ren) is scheduled to occur and that parents or guardians are also aware of the need to take custody of their child(ren) upon early dismissal.

Finally, the current requirements of NUREG-0654 and the REP Program Manual (RPM) do not stipulate that such extensive planning measures as described above by FEMA must be incorporated into plans and procedures.

Therefore, the State of Iowa intends to correct this planning issue through modification of existing procedures used by Scott County officials. Procedures will be modified to include, in instances where an evacuation is recommended before a school early dismissal can be completed, prompts to appropriate officials to consider relevant factors based on the FEMA RPM Assessment Criteria 2.c.1. Revised procedures will be submitted to FEMA no later than December 31, 2017. Furthermore, Scott County intends to implement the use of a school liaison team concept to better represent the schools in the EOC during an exercise and actual events. See ORO Enhancement Number IA-16-QUAD-2c1-01 for more information.

Additionally, the state intends to negotiate very clear and specific language into all future REP Extent of Play agreements concerning the demonstration of Assessment Criteria 2.c.1 to ensure all parties agree to how exercise time compression will be addressed to include the necessary artificial acceleration of completion of activities to ensure an adequate demonstration in the future.

- e. NOT DEMONSTRATED: None
- f. JOINTLY IDENTIFIED ISSUES: None
- g. PRIOR ISSUES - RESOLVED: None
- h. PRIOR ISSUES - UNRESOLVED: None
- i. ORO-IDENTIFIED OPPORTUNITIES FOR ENHANCEMENT: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.b.2, 2.c.1, 3.d.1, 3.f.1, 5.a.1, 5.b.1

ORO-Identified Enhancement Number: IA-16-QUAD-1a1-03

Some participants did not receive the notification calls and the notification list used by the Scott Emergency Communications Center (SECC) staff was incorrect or not clear.

Updates are needed to the EOC call-out listing and Scott County should strongly consider the use of the automated system Alert Iowa to mobilize their EOC.

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ORO-Identified Enhancement Number: IA-16-QUAD-1c1-07

Due to the location and position of the communications staff in the Scott County EOC, they were unable to hear the decision-making group or the law enforcement group discussions. Consideration should be given to reconfiguring the EOC layout to better ensure all parties can overhear or partake in discussions as necessary.

ORO-Identified Enhancement Number: IA-16-QUAD-1d1-04

The utility liaison to the Scott County EOC was unable to utilize the designated headset while fulfilling their role during the exercise. The liaison was under the impression that an analog phone line must be used in order for the headset to function, however all phones in the Scott County EOC are Voice Over Internet Protocol (VOIP). Working with Scott County EOC staff, the utility liaison used their mobile phone with a separate headset during the exercise in order to fulfill their responsibilities.

ORO-Identified Enhancement Number: IA-16-QUAD-1e1-05

Individual EOC participants have direct access to WebEOC from their workstations. Scott County should consider removing the dedicated staff position whose responsibility includes WebEOC entry on behalf of the EOC.

ORO-Identified Enhancement Number: IA-16-QUAD-1e1-06

Scott County dispatchers have requested maps depicting the subarea boundaries for their use. Scott County GIS identified an opportunity to enhance the dispatcher CAD system by adding the subarea boundaries directly into the system as a reference layer for the dispatchers. Scott County GIS also identified an opportunity to add county census data to the electronic maps used during these events to enable staff to quickly generate population figures for evacuation.

ORO-Identified Enhancement Number: IA-16-QUAD-1e1-07

The addition of digital clocks as well as small whiteboards/whiteboard paint on the cabinets above the ESF desks to write names/organizations of ESF representatives to better facilitate communication and collaboration among EOC staff who may be unfamiliar with each other has been recommended.

ORO-Identified Enhancement Number: IA-16-QUAD-2b2-02

ESF leads and decision makers were initially asked by the EOC manager to relocate to the main table in the EOC to facilitate timely discussion and decision-making. Only one representative actually relocated, requiring the EOC manager to move about the room a great deal to consult with the necessary representatives. While this activity did not affect timely decision-making, the Scott County EOC should continue to request key representatives remain at the main table to facilitate discussion and decision-making.

ORO-Identified Enhancement Number: IA-16-QUAD-2c1-01

The Scott County EOC does not typically assign an individual who works for one of the school districts to respond to the EOC but rather a county employee who is responsible for coordinating with school officials on any actions needed. It is recommended that the EOC

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adopt the practice of having an actual school district representative respond to the EOC and participate in exercises to ensure the appropriate expertise is available for consultation as needed.

ORO-Identified Enhancement Number: IA-16-QUAD-3d1-03

Scott County GIS has identified an opportunity to work with the Scott County Sheriff's Office to develop an internal GIS/Web Application to display subarea boundaries, traffic and access control points, evacuation routes and other pertinent data for use by law enforcement and other users for situational awareness.

ORO-Identified Enhancement Number: IA-16-QUAD-3f1-02

Participants failed to utilize procedures when defining the restricted zone boundary. Procedures and plans may also need enhanced to provide better guidance on what is a useable land feature/road when defining the restricted zone boundary.

Participants failed to utilize procedures when conducting relocation discussions as well. Plans and procedures may need to be enhanced to provide better written policy/guidance for relocation, to include a general outline with some policy considerations on relocation issues.

Participants failed to utilize procedures when discussing return operations. The existing SOG may need enhanced to provide better guidance on developing a return plan. Plans and procedures should delineate rural vs. urban plans and considerations for example.

Participants did review the procedures during re-entry activities and had good discussion on what was an "essential purpose for re-entry;" however they did not recognize from the procedure that the IDPH makes decision on which tasks are essential in consultation with county officials. The procedure may need enhanced to better outline where citizens are to go to pick up dosimetry, receive their briefing, and where they go to be monitored and drop off their assigned dosimetry.

The re-entry form should be enhanced to include a prompt to issue dosimetry to the individual requesting re-entry.

ORO-Identified Enhancement Number: IA-16-QUAD-5a1-01

NARS notification at the Site Area Emergency was delayed/not received by Scott County. After having coordinated siren sounding to occur at 1000, Scott County then requested a delay in siren sounding until the NARS form could be provided to Scott County. Clinton County initially agreed to delay siren sounding just minutes prior 1000. After questioning from Clinton County, Scott County agreed to proceed with siren sounding at 1002. Scott and Clinton County should consider identifying a mutual understanding on siren sounding and EAS initiation in situations such as this where there is a delay in the NARS Message being received by one of the counties.

ORO-Identified Enhancement Number: IA-16-QUAD-5b1-03

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The initial evacuation message from Scott County included inaccurate information concerning the status of school children. All pre-scripted messages include a statement that school children were relocated at the Site Area Emergency classification, when in fact, the schools made the decision to perform an early dismissal. This statement was not identified and removed during the review of the message by the PIOs or the EOC Manager. The error was identified after the message was transmitted to the State EOC and subsequently released to the public. The Scott County PIOs quickly issued a message correcting the inaccurate information, however, a more thorough review of messages may be needed to ensure inaccurate information is not released. Pre-scripted messages to account for early dismissal of students may also need to be drafted and included in the plans.

ORO-Identified Enhancement Number: IA-16-QUAD-5b1-04

Pre-scripted emergency messages use the term "Registration Centers" while public information brochures refer to them as "Reception Centers." Pre-scripted messages should be updated to reflect consistent terminology with the public information brochures to prevent confusion of the public.

3.3.3 Support Jurisdiction

3.3.3.1 Genesis Medical Center-Davenport

The Genesis Medical Center staff worked and communicated well as a team, demonstrating they knew their roles and responsibilities well. There was good coordination between Genesis Medical Center staff members and the MedicEMS ambulance crew regarding patient transfer. The hospital staff was knowledgeable and remained very aware to cross contamination procedure and demonstrated proper contamination control procedures throughout the drill. Most notable was the way the entire hospital staff reacted to a "real world" medical emergency right as the drill began. The matter was handled professionally and the drill resumed with minimal interruption.

- a. MET: 1.e.1, 3.a.1, 6.d.1
- b. LEVEL ONE: None
- c. LEVEL TWO: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.3.2 MedicEMS-Davenport

The MedicEMS-Davenport ambulance crew was knowledgeable in their duties, and properly followed their procedures and checklists. They worked well as a team, staying focused on medical treatment while demonstrating excellent contamination control procedures from first contact with simulated patient, until transfer to Genesis Medical Center-Davenport Staff.

- a. MET: 1.e.1, 3.a.1, 6.d.1
- b. LEVEL ONE: None
- c. LEVEL TWO: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

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3.3.3.3 Gooselake Reception Center

A facility review was conducted on November 17, 2016. Adequate space, furnishings lighting, restrooms, and ventilation were found to be present as required to support operations.

- a. MET: 1.b.1
- b. LEVEL ONE: None
- c. LEVEL TWO: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

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SECTION 4: CONCLUSION

There was a total of 46 instances of a participating ORO meeting a demonstration criteria. Two planning issues were identified by FEMA. Two issues were jointly-identified by FEMA and the OROs and the OROs also identified 38 Opportunities for Enhancement. The following Table provides a consolidated snapshot of participating ORO performance against REPP demonstration criteria.

Table 4.1 ORO Performance

Description	Criterion	Number of OROs that met (M) the criterion	Number of OROs with planning issues (P)	Number of OROs with Level 1 (L1) Findings	Number of OROs with Level 2 (L2) Findings	Number of Jointly Identified Issues	Number of ORO Enhancement Opportunities Identified
Emergency Operations Management							
Mobilization	1.a.1	4	-	-	-	-	3
Facilities	1.b.1	1	-	-	-	-	-
Direction and Control	1.c.1	3	-	-	-	-	7
Communications Equipment	1.d.1	4	-	-	-	-	4
Equipment and Supplies to Support Operations	1.e.1	6	-	-	-	-	7
Protective Action Decision Making							
EW Exposure Control Decision Making	2.a.1	3	-	-	-	-	1
Protective Action Recommendations	2.b.1	1	-	-	-	-	1
Protective Action Decisions	2.b.2	4	-	-	-	-	2
PADs for Disabled/Functional Needs	2.c.1	-	2	-	-	-	1
Ingestion Pathway Decisions	2.d.1	-	-	-	-	-	-
Relocation, Reentry, Return Decisions	2.e.1	-	-	-	-	-	-
Protective Action Implementation							
Implementation of Emergency Worker Exposure Control	3.a.1	4	-	-	-	-	2

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Description	Criterion	Number of OROs that met (M) the criterion	Number of OROs with planning issues (P)	Number of OROs with Level 1 (L1) Findings	Number of OROs with Level 2 (L2) Findings	Number of Jointly Identified Issues	Number of ORO Enhancement Opportunities Identified
Implementation of KI Decision for Institutionalized Individuals and the Public	3.b.1	2	-	-	-	-	-
Imp. of Protective Actions for persons with disabilities and access/functional needs	3.c.1	-	-	-	-	-	-
Imp. of Protective Actions for Schools	3.c.2	-	-	-	-	-	-
Implementation of Traffic and Access Control	3.d.1	3	-	-	-	-	3
Impediments to Evacuation	3.d.2	3	-	-	-	-	-
Implementation of Ingestion Pathway Decisions	3.e.1	-	-	-	-	-	-
Ingestion Strategies and Information	3.e.2	-	-	-	-	-	-
Imp. of Relocation, Reentry, and Return Decisions	3.f.1	1	-	-	-	2	2
Field Measurement and Analysis							
RESERVED	4.a.1	-	-	-	-	-	-
Field Team Management	4.a.2	-	-	-	-	-	-
Field Team Operations	4.a.3	-	-	-	-	-	-
Field Team Sampling	4.b.1	-	-	-	-	-	-
Laboratory Operations	4.c.1	-	-	-	-	-	-
Emergency Notification and Public Information							
Initial Alert & Notification	5.a.1	2	-	-	-	-	1
RESERVED	5.a.2	-	-	-	-	-	-
Backup Alert & Notification	5.a.3	-	-	-	-	-	-
Exception Area Alerting	5.a.4	-	-	-	-	-	-
Emergency Information and Instructions for the Public and the Media	5.b.1	3	-	-	-	-	4

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Description	Criterion	Number of OROs that met (M) the criterion	Number of OROs with planning issues (P)	Number of OROs with Level 1 (L1) Findings	Number of OROs with Level 2 (L2) Findings	Number of Jointly Identified Issues	Number of ORO Enhancement Opportunities Identified
Support Operations/Facilities							
Reception Center Operations	6.a.1	-	-	-	-	-	-
EW Monitoring & Decon	6.b.1	-	-	-	-	-	-
Congregate Care	6.c.1	-	-	-	-	-	-
Contaminated Injured Transport & Care	6.d.1	2	-	-	-	-	-

Based on the results of this exercise and the out-of-sequence drill, the offsite radiological emergency response plans and preparedness for the State of Iowa 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 Iowa site-specific to the Quad Cities Generating Station will remain in effect.

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APPENDIX A: EXERCISE TIMELINE

The following graphic represents the times recorded for various activities and decisions at each of the evaluated locations during the Quad Cities Generating Station (QCGS) exercise held on November 16, 2016.

Note: A disparity in times is normal given the need for message transmissions and decision-making at the various locales. The times are recorded as dictated by the scenario, which for this exercise reflects the nature of the off-hours (simulated) exercise.

Emergency Classification Level or Event		Time Utility Declared	A1 SEOC (IA)	A2 DOSE ASSESS	A4 CLINTON County EOC	A5 SCOTT County EOC
Unusual Event (NOUE)		N/A				
Alert (ALERT)		0809	0824	0828	0821	0832
Site Area Emergency (SAE)		0937	0946	0946	0946	0950
General Emergency (GE)		1029	1039	1033	1039	1034
Radiation Release Started		0937	0939	0939	0947	0947
Radiation Release Terminated		N/A				
Facility Declared Operational			0950	0918	0853	0852
Governor Declared State Emergency			0929			0929
1st Precautionary &/or Protective Action Decision (SAE) Closed Recreational & Dairy			0929	0931/1005	1002	1002
1st Siren Activation					1002	1005
Initial EAS Message & SNB			1002		1005	1005
2nd Prot. Action Decision (GE) Evacuate Subareas 1, 2 & 5			1047	1049	1054	1054
2nd Siren Activation					1054	1054
2nd EAS Message & SNB			1053		1057	1057
Exercise Terminated			1225	1224	1221	1215

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APPENDIX B: EVALUATORS/TEAM LEADERS

The evaluation team for this exercise and out-of-sequence drill consisted of DHS/FEMA Radiological Emergency Preparedness Program personnel, Region Assistance Committee (RAC) members from various Federal agencies, and ICF, a federal contractor.

DATE: 11-16-2016

SITE: Quad Cities Generating Station (QCGS)

LOCATION	EVALUATOR	AGENCY
Iowa State Emergency Operations Center	* Sharron McDuffie Alonzo McSwain\ Deborah Schneck	FEMA RVII FEMA HQ ICF
Iowa Dose Assessment	Chuck Hooper	EPA
Clinton County Emergency Operations Center	* Jeff Clark Lisa Hamilton Jill Leatherman	FEMA RVII FEMA HQ ICF
Scott County Emergency Operations Center	* Dan Kanakares Jesse King Thomas Gahan	FEMA VII FEMA HQ ICF
Genesis Medical Center-Davenport	Dennis Branson	FEMA RVII
MedicEMS-Davenport	Dan Kanakares	FEMA RVII
Gooselake Reception Center	Jeff Clark Chuck Hooper	FEMA RVII EPA
* Denotes Team Leader		

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APPENDIX C: SPECIAL OBSERVERS (SOs)

The Special Observers for this exercise consisted of State, local, and utility personnel and one independent contractor.

DATE: 11-16-2016

SITE: Quad Cities Generating Station (QCGS)

LOCATION	EVALUATOR	AGENCY
Iowa State Emergency Operations Center	* Larry Oliver Doug Reed Kim Elder Collette Linder Jim Kelsay	Harrison County, IA – EMA Pottawattamie County, IA – EMA Marshall County, IA – EMA State of Missouri – EMA Cooper Nuclear Station – EP
Iowa Dose Assessment	Steve Gebers	Independent Contractor
Clinton County Emergency Operations Center	* Scott Hansen Rebecca Palmer	Benton County, IA – EMA NextEra Energy, DAEC – EP
Scott County Emergency Operations Center	* Rick Wulfekuhle Dave Wilson Kevin Esmail Eric Plautz	Buchanan County, IA – EMA Johnson County, IA – EMA Linn County, IA – EMA Fort Calhoun Station – EP
* Denotes Team Leader		

APPENDIX D: IMPROVEMENT PLAN (IOWA)

The Radiological Emergency Preparedness (REP), Partial Participation, Plume Exposure Pathway Exercise conducted November 16, 2016, in the 10-mile Emergency Planning Zone (EPZ) around the Quad Cities Generating Station (QCGS) included a pioneering effort to increase collaboration between FEMA Regions, participating States, and Offsite Responder Organizations (OROs). A steering committee led all activities towards this purpose, which they collectively referred to as the Exercise Enhancement Initiative (EEI).

The EEI was a collaborative departure from the traditional FEMA-only evaluation of REP exercises and placed a greater emphasis on the OROs to self-identify, document and openly critique their own performance; as well as provide FEMA opportunities to shed light on the all hazards, whole government concepts that the REP program provides.

The following improvement plan includes details on all issues identified by FEMA, all issues that were jointly identified by FEMA and the OROs, and all ORO self-identified enhancement opportunities. For each identified item in the improvement plan, the following information is provided: a summary of the issue, the planned enhancement action, the primary responsible agency with an agency point of contact (POC), the enhancement mechanism, a start date for the enhancement action, and an estimated completion date for the enhancement action.

NOTE: This Improvement Plan captures the planned enhancement actions as of the date of issuance of this report. For detailed and up to date information on the current status of any improvement plan item listed below, please contact the individual(s) listed in the "Agency POC" field associated with the improvement plan item.

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ORO Enhancement Number: IA-16-QUAD-1a1-01		Criterion: 1.a.1 Location: Clinton County EOC
Enhancement Opportunity: The Iowa State Patrol (ISP) Liaison to the Clinton County EOC is delayed in responding to the EOC due to the fact that they must retrieve dosimetry from the State Patrol Post Headquarters in Stockton prior to responding. Having the ISP Liaison report immediately to the Clinton County EOC and receive dosimetry from the EOC staff should be explored as an option to expedite that position's response to the Clinton County EOC.		
Planned Enhancement Action: A change in policy and process must be weighed against the impact experienced by having a relatively minor delay in response time. Consideration must also be given to the possibility that the minor delay is likely only an issue during the compressed timeframe of an exercise. The State of Iowa intends to negotiate pre-positioning of the Iowa State Patrol Liaison for exercises, similar to how HSEMD Liaisons are exempted from responding in real time.		
Primary Responsible Agency: Iowa Department of Homeland Security and Emergency Management		
Enhancement Mechanism: Potential Plan Revision/Exercise Conduct Revision	Start Date: 01/31/2017	
Agency POC: Jacob Nicholson, 515-323-4337	Estimated Completion Date: 7/1/2018	

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ORO Enhancement Number: IA-16-QUAD-1a1-02		Criterion: 1.a.1 Location: Clinton County EOC
Enhancement Opportunity: There were two SMS delivery failures during mobilization of the Clinton County EOC responders. The cause of these failures should be investigated and notification listings should be updated accordingly.		
Planned Enhancement Action: Clinton County Emergency Management have identified the cause of the error as a transition of elected officials. Call rosters and Alert Iowa user information have been updated accordingly. Additionally, existing procedures ensure call rosters and Alert Iowa user information are tested bi-monthly, with corrections made as necessary.		
Primary Responsible Agency: Clinton County Emergency Management Agency		
Enhancement Mechanism: Procedure Revisions/System Update	Start Date: 11/16/2016	
Agency POC: Chance Kness, 563-219-5050	Completion Date: 11/17/2016	

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ORO Enhancement Number: IA-16-QUAD-1c1-05		Criterion: 1.c.1 Location: Clinton County EOC
Enhancement Opportunity: The Cities of Camanche and Clinton were not notified of the need to participate in the Return, Re-entry, and Relocation (RRR) portion of the exercise and were therefore not represented during that portion of the event. Having these specific elected officials present at the RRR portion of the exercise would have been beneficial. Measures should be taken to ensure the appropriate communities that will be impacted during RRR activities are notified of the need to participate in the exercise.		
Planned Enhancement Action: Specific locations impacted by an exercise scenario cannot be divulged to exercise participants in advance, limiting the exercise design team's ability to provide targeted invites to specific jurisdictions. However, the Iowa Department of Homeland Security and Emergency Management will adopt a standard practice of ensuring elected officials from all jurisdictions in the Emergency Planning Zone are invited to participate in future RRR exercises. The Iowa Department of Homeland Security and Emergency Management will work closely with the County Emergency Management Offices to ensure local elected officials and decision makers are invited to future RRR events.		
Primary Responsible Agency: Iowa Department of Homeland Security and Emergency Management		
Enhancement Mechanism: Operational Modification	Start Date: 01/31/2017	
Agency POC: Jacob Nicholson, 515-323-4337	Estimated Completion Date: Ongoing	

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ORO Enhancement Number: IA-16-QUAD-1c1-06		Criterion: 1.c.1 Location: Clinton County EOC
Enhancement Opportunity: The transition of personnel responsible for answering the Exelon Nuclear Accident Reporting System (NARS) line can be improved. The replacement staff member was unclear on the phone's operation and on whom was responsible for responding on behalf of the county during roll calls (EOC vs. Communication Center).		
Planned Enhancement Action: Clinton County Emergency Management will ensure any staff that could be responsible for answering the NARS line during an exercise or actual event are adequately trained on the NARS phone's operation as well as expectations for use.		
Primary Responsible Agency: Clinton County Emergency Management Agency		
Enhancement Mechanism: Training	Start Date: 11/16/2016	
Agency POC: Chance Kness, 563-219-5050	Completion Date: 11/16/2016	

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ORO Enhancement Number: IA-16-QUAD-1d1-01		Criterion: 1.d.1 Location: Clinton County EOC	
Enhancement Opportunity: The Clinton County EOC should consider developing a better internal EOC messaging system (written or electronic) so all EOC groups remain aware of key activities being conducted throughout the incident. Although EOC messaging forms appear to exist, better use of these forms combined with keeping the WebEOC scribe informed of major events so they can be posted and shared will improve situational awareness during the event.			
Planned Enhancement Action: Establish a central point for messaging, encourage use of message forms, central point will communicate with the WebEOC technician. Additionally, officials from Clinton County EMA intend to observe EOC messaging processes at other risk county EOCs in Iowa in order to gather best practices from their counterparts throughout the state.			
Primary Responsible Agency: Clinton County Emergency Management Agency			
Enhancement Mechanism: Training/Operational Process Modification		Start Date: 01/31/2017	
Agency POC: Chance Kness, 563-219-5050		Estimated Completion Date: 11/14/2017	

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ORO Enhancement Number: IA-16-QUAD-1d1-02		Criterion: 1.d.1 Location: Clinton County EOC
Enhancement Opportunity: Superfluous copies of paperwork (NARS forms, Press Releases, etc.) are distributed to all tables, often times after a lengthy delay, which can create confusion for EOC responders. Measures to reduce the amount of paperwork distributed to EOC participants should be explored.		
Planned Enhancement Action: Distribute 1 copy of paperwork to each table instead of one copy to each participant. Distribute press releases to PIO's only. Additionally, Scott County intends to provide a copy of their internal EOC distribution list for use by Clinton County as a guide for developing their own distribution protocol.		
Primary Responsible Agency: Clinton County Emergency Management Agency		
Enhancement Mechanism: Procedure Revision	Start Date: 01/31/2017	
Agency POC: Chance Kness, 563-219-5050	Estimated Completion Date: 11/14/2017	

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ORO Enhancement Number: IA-16-QUAD-1d1-03		Criterion: 1.d.1 Location: Clinton County EOC
Enhancement Opportunity: A dedicated phone with a connected headset for the Exelon representative was found to be inoperable during the exercise. Repair or replacement of this unit is necessary.		
Planned Enhancement Action: Repair equipment.		
Primary Responsible Agency: Clinton County Emergency Management Agency		
Enhancement Mechanism: Equipment Repair	Start Date: 12/10/2016	
Agency POC: Chance Kness, 563-219-5050	Completion Date: 12/10/2016	

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ORO Enhancement Number: IA-16-QUAD-1e1-03		Criterion: 1.e.1 Location: Clinton County EOC
Enhancement Opportunity: Recognizing the Clinton County EOC space is challenging, there could be a better utilization of the sub-area wall map to highlight the potentially affected subareas for the entire EOC to have better situational awareness. Additionally, detailed maps of the cities of Camanche and Clinton, while available, were not requested by law enforcement to assist with traffic and access control planning. While wall space is limited in the current EOC, ensuring EOC responders are aware of the maps and displays that are available upon request will help to improve efficiency and situational awareness.		
Planned Enhancement Action: Participants have been made aware of the additional available maps and they will be placed in a visible location during future exercises and actual events.		
Primary Responsible Agency: Clinton County Emergency Management Agency		
Enhancement Mechanism: Training	Start Date: 11/16/2016	
Agency POC: Chance Kness, 563-219-5050	Completion Date: 11/16/2016	

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ORO Enhancement Number: IA-16-QUAD-1e1-04		Criterion: 1.e.1 Location: Clinton County EOC
Enhancement Opportunity: An acronym list is recommended to be included in EOC position binders in the Clinton County EOC.		
Planned Enhancement Action: Clinton County Emergency Management Agency will develop and add an acronym list to each EOC position binder. This list will also be shared with the Scott County EOC for inclusion in their EOC position binders as well.		
Primary Responsible Agency: Clinton County Emergency Management Agency		
Enhancement Mechanism: Procedure Revision	Start Date: 11/16/2016	
Agency POC: Chance Kness, 563-219-5050	Completion Date: 11/1/2017	

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ORO Enhancement Number: IA-16-QUAD-2a1-01		Criterion: 2.a.1 Location: Clinton County EOC
Enhancement Opportunity: An exercise inject presented a scenario where a worker in the field was reporting an off-scale dosimeter. When presented with this information, the Dosimetry Control Officer (DCO) in Clinton County made the assumption the dosimetry was faulty and made the decision to replace the dosimetry for the worker without any further consultation or validation with the Iowa Department of Public Health. The DCO should have consulted with the IDPH prior to making the decision to replace the dosimetry.		
Planned Enhancement Action: Clinton County Emergency Management Agency in coordination with the Iowa Department of Homeland Security and Emergency Management will review existing procedures for the Clinton County DCO to ensure clear guidance is provided on what actions are to be taken prior to replacing field dosimetry that is reading off-scale. Revisions to the DCO procedures will be made as necessary. Additional training will be provided to appropriate staff to ensure proficiency and compliance with procedures. The State of Iowa will also work with Exelon Generation scenario developers to adjust the timing and circumstance of similar injects in the future in order to better drive participant actions.		
Primary Responsible Agency: Clinton County Emergency Management Agency		
Enhancement Mechanism: Potential Procedure Revision/Additional Training/Exercise Scenario Modification	Start Date: 01/31/2017	
Agency POC: Chance Kness, 563-219-5050	Estimated Completion Date: 11/1/2017	

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FEMA ISSUE NUMBER:
FEMA #51-16-2c.1-01

Criterion: 2.c.1
Location: Clinton County EOC

Condition:

During the November 16, 2016 REPP Plume exercise, the Clinton County Emergency Management Agency (EMA) made the decision to implement the early dismissal option for Clinton County schools at approximately 1006 Central Standard Time (CST). At 1039 CST, the situation at QCGS escalated to a General Emergency (GE) Emergency Classification Level (ECL). At 1115, the State of Iowa made a Special News Broadcast Message (SNB) to evacuate Subareas #1 and 5, including the city of Camanche, Iowa. In close coordination with Scott County and State of Iowa representatives, the Clinton County EMA decided to proceed with the early dismissal of the Clinton County schools to be effective at 1200 CST.

Iowa provided information to FEMA, following exercise demonstration, stating they felt the decision to implement the early dismissal option was the right decision path for this scenario. It is FEMA's position that this decision was not supported by current plans/procedures in that they do not contain sufficient information for the early dismissal option to be implemented completely. The aforementioned plans/procedures need to clarify specifically how the potential situation of returning students to their homes within the Subareas #1 & #5 would be handled; especially for situations where the parent(s)/guardian(s) may not be at home (or even aware of the emergency situation) when the students are dropped off.

Possible Cause:

Although the Clinton County, and State of Iowa, Radiological Response plans/procedures provide for an "early dismissal" option, this type of decision path was a clear departure from past Iowa exercise practice. FEMA Region VII's concerns lie not in the competence and appropriateness of this decision; but rather that the current plans simply need to be more detailed for this decision path.

References: NUREG-0654/FEMA-REP-1 D.4, J.9, J.10.d and Clinton County Plan

Effect:

Potential effect is a lack of accountability for students who return to their homes without a parent or guardian present.

FEMA Recommendation:

FEMA recognizes that Clinton County made a deliberate decision to implement this early dismissal option. FEMA recommends the county include in their plans more definitive information about how to address situations for "latchkey" children. The county should specifically consult with the appropriate schools officials for their expertise and experience for a reference in the plan that clearly addresses this particular scenario of "latchkey" children and early dismissal. The plan revision about "latchkey" children should be completed by the end of the second quarter of CY 2017

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State Response:

The State of Iowa disagrees with FEMA's assertion that plans/procedures must clarify how the potential situation of returning students to their homes within Subareas #1 & #5 under the stated circumstances would be handled; especially for situations where the parent(s)/guardian(s) may not be at home (or even aware of the emergency situation) when the students are dropped off.

The State of Iowa finds it highly unlikely that parents would be unaware of an emergency situation under the circumstances of this scenario, considering the extensive measures already in place, certified annually, and routinely demonstrated to FEMA that ensure the public will receive prompt notification of an event. Per our plans and program requirements, the Primary Alert and Notification System (ANS) would have been activated on two separate occasions prior to any evacuation recommendation - at the declaration of a Site Area Emergency and again at the declaration of a General Emergency. All Primary ANS systems in the REP Program are certified by FEMA and the NRC of being capable of reaching essentially 100% of the EPZ population within 15 minutes of the decision to activate. This demonstrated capability, coupled with the abundant local, national, and international media coverage that would undoubtedly be in place for an event of this magnitude further reinforces the state's belief that the risk of an uninformed parent is minimal to non-existent.

Regarding the risk of a parent or guardian not being home at the time of student drop-off, school policies establish that upon notification of an early dismissal by school officials, it is the responsibility of parents and guardians to take custody of their child(ren) upon dismissal, either via parent pick-up at the school or upon drop-off via established school bus routes. In any case, measures are already in place to ensure parents or guardians are notified that an emergency situation at the QCGS exists, that an early dismissal of their child(ren) is scheduled to occur, and parents or guardians are also aware of the need to take custody of their child(ren) upon early dismissal, regardless of the cause for dismissal. Finally, the current requirements of NUREG-0654 and the REP Program Manual (RPM) do not stipulate that such extensive planning measures as described above by FEMA must be incorporated into plans and procedures.

Therefore, the State of Iowa intends to correct this planning issue through modification of existing procedures used by Clinton County officials. Procedures will be modified to include, in instances where an evacuation is recommended before a school early dismissal can be completed, prompts to appropriate officials to consider relevant factors based on the FEMA RPM Assessment Criteria 2.c.1. Revised procedures will be submitted to FEMA no later than December 31, 2017.

Finally, the state intends to negotiate very clear and specific language in to all future REP Extent of Play agreements concerning the demonstration of Assessment Criteria 2.c.1 to ensure all parties agree to how exercise time compression will be addressed to include the necessary artificial acceleration of completion of activities to ensure an adequate demonstration in the future

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Primary Responsible Agency: Clinton County Emergency Management Agency/Iowa Department of Homeland Security and Emergency Management	
Enhancement Mechanism: Procedure Revision	Start Date: 01/31/2017
Agency POC: Chance Kness, 563-219-5050 Jacob Nicholson, 515-323-4337	Estimated Completion Date: 12/31/2017

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ORO Enhancement Number: IA-16-QUAD-3a1-01		Criterion: 3.a.1 Location: Clinton County EOC
Enhancement Opportunity: A new process of conducting area monitoring for EOC responders in the Clinton County EOC was demonstrated during this exercise. The Clinton County DCO was reading scale on area monitors incorrectly, recording them in millirem instead of microrem and also did not include any unit scale on the log. The DCO was also recording the dose rate initially rather than the accumulated dose as required, however, this was corrected by the third reading. Concerning monitoring activities of the jail/dispatch area, the DCO did not attempt check the area monitor regularly. The DCO also did not attempt to use their job aid when setting up area monitoring. Procedures and training related to this process should be enhanced.		
Planned Enhancement Action: Additional training will be conducted for appropriate staff filling the position of DCO to include familiarization with the Electronic Personal Dosimetry and record keeping forms. Existing procedures and documentation regarding area monitoring will be reviewed and modified as necessary to ensure clear guidance is provided. The Iowa Department of Homeland Security and Emergency Management will explore options to have the Clinton County DCO's observe and train with other ORO DCOs in the state who currently perform area monitoring in an EOC in order to share best practices and to provide additional peer guidance and mentoring as necessary. Future extent of play negotiations will also include specific discussions concerning the need to establish area monitoring in the jail/dispatch area during an exercise vs. the option to simulate to ensure exercise participants are performing their duties to the full extent as stipulated in the extent of play agreement.		
Primary Responsible Agency: Clinton County Emergency Management Agency		
Enhancement Mechanism: Potential Procedure Revision/Additional Training	Start Date: 01/31/2017	
Agency POC: Chance Kness, 563-219-5050	Estimated Completion Date: 11/1/2018	

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ORO Enhancement Number: IA-16-QUAD-3a1-02		Criterion: 3.a.1 Location: Clinton County EOC
Enhancement Opportunity: The Clinton County EOC DCOs need to use and follow procedures when performing emergency worker briefings. Potassium Iodide (KI) was not mentioned in the initial briefing to the EOC. The DCO was not observed discussing the option to declare pregnancy during the briefings and was not observed collecting the associated forms from Emergency Worker books. The briefing was performed from memory instead of using a procedure or job aid to guide the DCO, which likely resulted in key items of information being left out of the briefing.		
Planned Enhancement Action: Existing procedures for the Clinton County DCO will be reviewed and modified as necessary to ensure clear guidance is being provided. As necessary, an Emergency Worker Briefing Job Aid will be implemented for use as a resource by the DCO to ensure all key information is communicated during emergency worker briefings and appropriate forms and documentation are completed and recovered by the DCO. Finally, a greater emphasis will be placed on use of procedures and job aids while participating in training, exercises, or actual events.		
Primary Responsible Agency: Clinton County Emergency Management Agency		
Enhancement Mechanism: Potential Procedure Revision/Job Aid Development	Start Date: 01/31/2017	
Agency POC: Chance Kness, 563-219-5050	Estimated Completion Date: 11/14/2017	

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Jointly-Identified Enhancement Number: IA-16-QUAD-3f1-J-01		Criterion: 3.f.1 Location: Clinton County EOC
Enhancement Opportunity: Clinton County had a general knowledge of the re-entry process but did not know the details for the re-entry process and the participants did not use their re-entry procedure. For the first demonstration the person requesting re-entry was not issued dosimetry at the EOC. The officer at the TACP checkpoint did not check for dosimetry and sent the record form into the restricted zone with the individual instead of keeping the form so they would not have had knowledge of who was in the restricted zone and when they should return. Although this process is detailed in their re-entry procedures, the participants did not reference them during this demonstration. The second request for re-entry went better due to some questioning of the participants by the individual seeking re-entry, which resulted in the EOC Manager referring to the SOP. However, the process did not go as well as outlined in the procedures.		
Planned Enhancement Action: Existing procedures for the Clinton County re-entry activities will be reviewed and modified as necessary to ensure clear guidance is being provided. Additional training as well as tabletop drills to ensure appropriate staff are familiar and comfortable with the process will be considered. Any future training or tabletop drills will be coordinated among the Clinton County Emergency Management Agency, the Scott County Emergency Management Agency, and the Iowa Department of Homeland Security and Emergency Management. Dosimetry will be available and issued to Return, Re-entry, and Relocation exercise participants as necessary during future exercises. Finally, a greater emphasis will be placed on use of procedures and job aids while participating in training, exercises, or actual events.		
Primary Responsible Agency: Clinton County Emergency Management Agency		
Enhancement Mechanism: Potential Procedure Revision/Additional Training and Tabletop Drills	Start Date: 01/31/2017	
Agency POC: Chance Kness, 563-219-5050	Estimated Completion Date: 11/1/2018	

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Jointly-Identified Enhancement Number: IA-16-QUAD-3f1-J-02		Criterion: 3.f.1 Location: Clinton County EOC
Enhancement Opportunity: The Relocation and the Return phases need to have better written policy guidance for the officials to make consistent, informed decisions. All participants need to remember to use the procedures and guidance documents that are available to them.		
Planned Enhancement Action: Existing plans, procedures, and policy guidance for the Clinton County relocation and return activities will be reviewed and modified as necessary to ensure clear guidance is being provided. Additional training as well as tabletop drills to ensure appropriate staff have ample opportunity to discuss and refine the process while identifying previously unknown considerations for return and relocation will be considered. Any future training or tabletop drills will be coordinated among the Clinton County Emergency Management Agency, the Scott County Emergency Management Agency, and the Iowa Department of Homeland Security and Emergency Management. Finally, a greater emphasis will be placed on use of procedures while participating in training, exercises, or actual events.		
Primary Responsible Agency: Clinton County Emergency Management Agency/Iowa Department of Homeland Security and Emergency Management		
Enhancement Mechanism: Potential Procedure Revision/Additional Training and Tabletop Drills	Start Date: 01/31/2017	
Agency POC: Chance Kness, 563-219-5050	Estimated Completion Date: 11/1/2018	

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ORO Enhancement Number:		Criterion: 3.f.1
IA-16-QUAD-3f1-01		Location: Clinton County EOC
Enhancement Opportunity:		
A shorter exercise cycle for RRR activities would ensure participants are more familiar with their roles and responsibilities during this type of event. A four year cycle is recommended to ensure proficiency of responders.		
Planned Enhancement Action:		
The Iowa Department of Homeland Security and Emergency Management, in coordination with the Clinton County Emergency Management Agency and the Scott County Emergency Management Agency intends to hold a tabletop exercise for RRR activities with all appropriate entities biennially going forward. RRR tabletop exercises will be held during non-FEMA evaluated years.		
Primary Responsible Agency:		
Iowa Department of Homeland Security and Emergency Management		
Enhancement Mechanism:	Start Date:	
Additional Tabletop Exercises	01/31/2017	
Agency POC:	Estimated Completion Date:	
Jacob Nicholson, 515-323-4337	01/31/2021	

ORO Enhancement Number:		Criterion: 1.a.1
IA-16-QUAD-1a1-03		Location: Scott County EOC
Enhancement Opportunity: Some participants did not receive the notification calls and the notification list used by the Scott Emergency Communications Center (SECC) staff was incorrect or not clear. Updates are needed to the EOC call-out listing and Scott County should strongly consider the use of the automated system Alert Iowa to mobilize their EOC.		
Planned Enhancement Action: Scott County EMA will implement the use of Alert Iowa for automated EOC call-out.		
Primary Responsible Agency: Scott County Emergency Management Agency		
Enhancement Mechanism: Implement New System	Start Date: 01/31/2017	
Agency POC: David Donovan, 563-484-3050	Estimated Completion Date: 9/1/2017	

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ORO Enhancement Number: IA-16-QUAD-1c1-07		Criterion: 1.c.1 Location: Scott County EOC
Enhancement Opportunity: Due to the location and position of the communications staff in the Scott County EOC, they were unable to hear the decision-making group or the law enforcement group discussions. Consideration should be given to reconfiguring the EOC layout to better ensure all parties can overhear or partake in discussions as necessary.		
Planned Enhancement Action: Scott County EMA intends to encourage key decision-makers, including law enforcement, remain seated at the policy table throughout the event to ensure a centralized location for key event information and decisions. The EOC law enforcement representative will keep the communications staff advised of key decisions and information via internal radio traffic.		
Primary Responsible Agency: Scott County Emergency Management Agency		
Enhancement Mechanism: Operational Process Modification	Start Date: 01/31/2017	
Agency POC: David Donovan, 563-484-3050	Estimated Completion Date: 11/1/2017	

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ORO Enhancement Number: IA-16-QUAD-1d1-04		Criterion: 1.d.1 Location: Scott County EOC
Enhancement Opportunity: The utility liaison to the Scott County EOC was unable to utilize the designated headset while fulfilling their role during the exercise. The liaison was under the impression that an analog phone line must be used in order for the headset to function, however all phones in the Scott County EOC are Voice Over Internet Protocol (VOIP). Working with Scott County EOC staff, the utility liaison used their mobile phone with a separate headset during the exercise in order to fulfill their responsibilities.		
Planned Enhancement Action: Scott County officials in coordination with the State of Iowa and Exelon will determine if in fact analog line is required for the proper use of the designated utility liaison headset. If an analog line is necessary, an alternative headset will be purchased that is VOIP compatible.		
Primary Responsible Agency: Scott County Emergency Management Agency/Iowa Department of Homeland Security and Emergency Management/Exelon Generation		
Enhancement Mechanism: Potential Equipment Purchase	Start Date: 01/31/2017	
Agency POC: David Donovan, 563-484-3050 Jacob Nicholson, 515-323-4337 Mike Muth, 630-657-4674	Estimated Completion Date: 11/1/2017	

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ORO Enhancement Number: IA-16-QUAD-1e1-05		Criterion: 1.e.1 Location: Scott County EOC
Enhancement Opportunity: Individual EOC participants have direct access to WebEOC from their workstations. Scott County should consider removing the dedicated staff position whose responsibility includes WebEOC entry on behalf of the EOC.		
Planned Enhancement Action: Scott County officials see great value in continuing to have a dedicated scribe whose responsibility it is to ensure pertinent information is posted to WebEOC in a timely manner. This position will be moved to the policy table within the EOC to better perform this function.		
Primary Responsible Agency: Scott County Emergency Management Agency		
Enhancement Mechanism: EOC Configuration Modification	Start Date: 01/31/2017	
Agency POC: David Donovan, 563-484-3050	Estimated Completion Date: 11/1/2017	

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ORO Enhancement Number: IA-16-QUAD-1e1-06		Criterion: 1.e.1 Location: Scott County EOC
Enhancement Opportunity: Scott County dispatchers have requested maps depicting the subarea boundaries for their use. Scott County GIS identified an opportunity to enhance the dispatcher CAD system by adding the subarea boundaries directly into the system as a reference layer for the dispatchers. Scott County GIS also identified an opportunity to add county census data to the electronic maps used during these events to enable staff to quickly generate population figures for evacuation.		
Planned Enhancement Action: Scott County GIS intends to add data layers for the EPZ sub areas and the traffic and access control points for use by the dispatchers in their CAD system. Scott County GIS will work with the Iowa Department of Homeland Security and Emergency Management to ensure census data as well as all other applicable data sets are available for use with digital mapping tools used during exercises and actual events.		
Primary Responsible Agency: Scott County Emergency Management Agency		
Enhancement Mechanism: Systems Enhancement	Start Date: 01/31/2017	
Agency POC: David Donovan, 563-484-3050	Estimated Completion Date: 7/31/2017	

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ORO Enhancement Number: IA-16-QUAD-1e1-07		Criterion: 1.e.1 Location: Scott County EOC
Enhancement Opportunity: The addition of digital clocks as well as small whiteboards/whiteboard paint on the cabinets above the ESF desks to write names/organizations of ESF representatives to better facilitate communication and collaboration among EOC staff who may be unfamiliar with each other has been recommended.		
Planned Enhancement Action: Scott County EMA intends to purchase the additional referenced supplies necessary to enhance EOC operations.		
Primary Responsible Agency: Scott County Emergency Management Agency		
Enhancement Mechanism: Equipment/Supply Purchase	Start Date: 01/31/2017	
Agency POC: David Donovan, 563-484-3050	Estimated Completion Date: 12/31/2017	

ORO Enhancement Number: IA-16-QUAD-2b2-02		Criterion: 2.b.2 Location: Scott County EOC	
Enhancement Opportunity: ESF leads and decision makers were initially asked by the EOC manager to relocate to the main table in the EOC to facilitate timely discussion and decision-making. Only one representative actually relocated, requiring the EOC manager to move about the room a great deal to consult with the necessary representatives. While this activity did not affect timely decision-making, the Scott County EOC should continue to request key representatives remain at the main table to facilitate discussion and decision-making.			
Planned Enhancement Action: Scott County EMA intends to continue to reinforce the practice of having ESF leads remain seated at the main table during exercises and actual events. To further reinforce this practice going forward, Scott County EMA will have the EOC set-up during annual EOC training to reflect the EOC configuration for response and will ensure ESF leads sit at the main table in order to become accustomed to the practice.			
Primary Responsible Agency: Scott County Emergency Management Agency			
Enhancement Mechanism: Training Modification		Start Date: 01/31/2017	
Agency POC: David Donovan, 563-484-3050		Estimated Completion Date: 12/31/2017	

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FEMA ISSUE NUMBER:

FEMA #51-16-2c.1-02

Criterion: 2.c.1

Location: Scott County EOC

Condition:

During the November 16, 2016 REPP Plume exercise, the Scott County Emergency Management Agency (EMA) made the decision to implement the early dismissal option for Scott County Schools at approximately 1012 Central Standard Time (CST). At 1039 CST, the situation at QCGS escalated to a General Emergency (GE) Emergency Classification Level (ECL). At 1115, the State of Iowa made a Special News Broadcast Message (SNB) to evacuate Subarea #2. In close coordination with Clinton County and State of Iowa representatives, the Scott County EMA decided to proceed with the early dismissal of the Scott County schools to be effective at 1200 CST.

Iowa provided information to FEMA, following exercise demonstration, stating they felt the decision to implement the early dismissal option was the right decision path for this scenario. It is FEMA's position that this decision was not supported by current plans/procedures in that they do not contain sufficient information for the early dismissal option to be implemented completely. The aforementioned plans/procedures need to clarify specifically how the potential situation of returning students to their homes within the Subarea #2 would be handled; especially for situations where the parent(s)/guardian(s) may not be at home (or even aware of the emergency situation) when the students are dropped off.

Possible Cause:

Although the Scott County, and State of Iowa, Radiological Response plans/procedures provide for an "early dismissal" option, this type of decision path was a clear departure from past Iowa exercise practice. FEMA Region VII's concerns lie not in the competence and appropriateness of this decision; but rather that the current plans simply need to be more detailed for this decision path.

References: NUREG-0654/FEMA-REP-1 D.4, J.9, J.10.d and Scott County Plan

Effect:

Potential effect is a lack of accountability for students who return to their homes without a parent or guardian present.

FEMA Recommendation:

FEMA recognizes that Scott County made a deliberate decision to implement this early dismissal option. FEMA recommends the county include in their plans more definitive information about how to address situations for "latchkey" children. The county should specifically consult with the appropriate schools officials for their expertise and experience for a reference in the plan that clearly addresses this particular scenario of "latchkey" children and early dismissal. It is also recommended that the county assures presence of designated school representatives as liaisons for plans as well as operations. The plan revision about "latchkey" children should be completed by the end of the second quarter of CY 2017.

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State Response:

The State of Iowa disagrees with FEMA's assertion that plans/procedures must clarify how the potential situation of returning students to their homes within Subarea #2 under the stated circumstances would be handled; especially for situations where the parent(s)/guardian(s) may not be at home (or even aware of the emergency situation) when the students are dropped off.

The State of Iowa also finds it highly unlikely that parents would be unaware of an emergency situation under the circumstances of this scenario, considering the extensive measures already in place, certified annually, and routinely demonstrated to FEMA that ensure the public will receive prompt notification of an event. Per our plans and program requirements, the Primary Alert and Notification System (ANS) would have been activated on two separate occasions prior to any evacuation recommendation - at the declaration of a Site Area Emergency and again at the declaration of a General Emergency. All Primary ANS systems in the REP Program are certified by FEMA and the NRC of being capable of reaching essentially 100% of the EPZ population within 15 minutes of the decision to activate. This demonstrated capability, coupled with the abundant local, national, and international media coverage that would undoubtedly be in place for an event of this magnitude further reinforces the state's belief that the risk of an uninformed parent is minimal to non-existent.

Regarding the risk of a parent or guardian not being home at the time of student drop-off, school policies establish that upon notification of an early dismissal by school officials, it is the responsibility of parents and guardians to take custody of their child(ren) upon dismissal, either via parent pick-up at the school or upon drop-off via established school bus routes. In any case, measures are already in place to ensure parents or guardians are notified that an emergency situation at the QCGS exists, that an early dismissal of their child(ren) is scheduled to occur, and parents or guardians are also aware of the need to take custody of their child(ren) upon early dismissal, regardless of the cause for dismissal.

The current requirements of NUREG-0654 and the REP Program Manual (RPM) do not stipulate that such extensive planning measures as described above by FEMA must be incorporated into plans and procedures. Therefore, the State of Iowa intends to correct this planning issue through modification of existing procedures used by Scott County officials.

Procedures will be modified to include, in instances where an evacuation is recommended before a school early dismissal can be completed, prompts to appropriate officials to consider relevant factors based on the FEMA RPM Assessment Criteria 2.c.1. Revised procedures will be submitted to FEMA no later than December 31, 2017. Furthermore, Scott County intends to implement the use of a school liaison team concept to better represent the schools in the EOC during an exercise and actual events. See ORO Enhancement Number IA-16-QUAD-2c1-01 for more information.

Finally, the state intends to negotiate very clear and specific language in to all future REP Extent of Play agreements concerning the demonstration of Assessment Criteria 2.c.1 to

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ensure all parties agree to how exercise time compression will be addressed to include the necessary artificial acceleration of completion of activities to ensure an adequate demonstration in the future.	
Primary Responsible Agency: Scott County Emergency Management Agency/Iowa Department of Homeland Security and Emergency Management	
Enhancement Mechanism: Procedure Revision	Start Date: 01/31/2017
Agency POC: David Donovan, 563-484-3050 Jacob Nicholson, 515-323-4337	Estimated Completion Date: 12/31/2017

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ORO Enhancement Number: IA-16-QUAD-2c1-01		Criterion: 2.c.1 Location: Scott County EOC
Enhancement Opportunity: The Scott County EOC does not typically assign an individual who works for one of the school districts to respond to the EOC but rather a county employee who is responsible for coordinating with school officials on any actions needed. It is recommended that the EOC adopt the practice of having an actual school district representative respond to the EOC and participate in exercises to ensure the appropriate expertise is available for consultation as needed.		
Planned Enhancement Action: Scott County EMA intends to implement the use of a school liaison team concept to better represent the schools in the EOC during an exercise and actual events. In addition to a representative from the EPZ schools, the team will consist of an Area Education Agency (AEA) representative as well as a representative from the school districts outside the EPZ as well, as the non-EPZ schools serve as the single largest provider of congregate care centers.		
Primary Responsible Agency: Scott County Emergency Management Agency		
Enhancement Mechanism: Operational Modification	Start Date: 01/31/2017	
Agency POC: David Donovan, 563-484-3050	Estimated Completion Date: 9/1/2017	

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ORO Enhancement Number: IA-16-QUAD-3d1-03		Criterion: 3.d.1 Location: Scott County EOC
Enhancement Opportunity: Scott County GIS has identified an opportunity to work with the Scott County Sheriff's Office to develop an internal GIS/Web Application to display subarea boundaries, traffic and access control points, evacuation routes and other pertinent data for use by law enforcement and other users for situational awareness.		
Planned Enhancement Action: Scott County GIS intends to use ArcGIS Online to provide a web-based mapping utility which will include all pertinent REP datasets. This online map would be available to all authorized users for reference and situational awareness. Scott County GIS will work with the Iowa Department of Homeland Security and Emergency Management to develop the mapping utility, which will also be made available to Clinton County officials.		
Primary Responsible Agency: Scott County Emergency Management Agency		
Enhancement Mechanism: Systems Enhancement/Implementation	Start Date: 01/31/2017	
Agency POC: David Donovan, 563-484-3050	Estimated Completion Date: 7/31/2017	

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ORO Enhancement Number:

IA-16-QUAD-3f1-02

Criterion: 3.f.1

Location: Scott County EOC

Enhancement Opportunity:

Participants failed to utilize procedures when defining the restricted zone boundary. Procedures and plans may also need enhanced to provide better guidance on what is a useable land feature/road when defining the restricted zone boundary.

Participants failed to utilize procedures when conducting relocation discussions as well. Plans and procedures may need to be enhanced to provide better written policy/guidance for relocation, to include a general outline with some policy considerations on relocation issues.

Participants failed to utilize procedures when discussing return operations. The existing SOG may need enhanced to provide better guidance on developing a return plan. Plans and procedures should delineate rural vs. urban plans and considerations for example.

Participants did review the procedures during re-entry activities and had good discussion on what was an "essential purpose for re-entry;" however they did not recognize from the procedure that the IDPH makes decision on which tasks are essential in consultation with county officials. The procedure may need enhanced to better outline where citizens are to go to pick up dosimetry, receive their briefing, and where they go to be monitored and drop off their assigned dosimetry.

The re-entry form should be enhanced to include a prompt to issue dosimetry to the individual requesting re-entry.

Planned Enhancement Action:

Existing plans, procedures, re-entry forms, and policy guidance for the Scott County return, re-entry, and relocation activities will be reviewed and modified as necessary to ensure clear guidance is being provided. Additional training as well as tabletop drills to ensure appropriate staff have ample opportunity to discuss and refine the process while identifying previously unknown considerations for return and relocation will be considered. Tabletop drills and additional training on the re-entry process to ensure appropriate staff are familiar and comfortable with the process will also be considered. Any future training or tabletop drills will be coordinated among the Scott County Emergency Management Agency, the Clinton County Emergency Management Agency, and the Iowa Department of Homeland Security and Emergency Management. Finally, a greater emphasis will be placed on use of procedures while participating in training, exercises, or actual events.

Primary Responsible Agency:

Scott County Emergency Management Agency

Enhancement Mechanism:

Potential Procedure Revision/Additional Training and Tabletop Drills

Start Date:

01/31/2017

Agency POC:

David Donovan, 563-484-3050

Estimated Completion Date:

12/31/2019

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ORO Enhancement Number: IA-16-QUAD-5a1-01		Criterion: 5.a.1 Location: Scott County EOC
Enhancement Opportunity: NARS notification at the Site Area Emergency was delayed/not received by Scott County. After having coordinated siren sounding to occur at 1000, Scott County then requested a delay in siren sounding until the NARS form could be provided to Scott County. Clinton County initially agreed to delay siren sounding just minutes prior 1000. After questioning from Clinton County, Scott County agreed to proceed with siren sounding at 1002. Scott and Clinton County should consider identifying a mutual understanding on siren sounding and EAS initiation in situations such as this where there is a delay in the NARS Message being received by one of the counties.		
Planned Enhancement Action: An agreement has been reached between Scott and Clinton County that only one County has to confirm NARS for actions to occur. This policy will be documented in both the Scott and Clinton County plans.		
Primary Responsible Agency: Scott County Emergency Management Agency		
Enhancement Mechanism: Plan Revision	Start Date: 01/31/2017	
Agency POC: Dave Donovan, 563-484-3050	Estimated Completion Date: 11/01/2017	

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ORO Enhancement Number: IA-16-QUAD-5b1-03		Criterion: 5.b.1 Location: Scott County EOC
Enhancement Opportunity: The initial evacuation message from Scott County included inaccurate information concerning the status of school children. All pre-scripted messages include a statement that school children were relocated at the Site Area Emergency classification, when in fact, the schools made the decision to perform an early dismissal. This statement was not identified and removed during the review of the message by the PIOs or the EOC Manager. The error was identified after the message was transmitted to the State EOC and subsequently released to the public. The Scott County PIOs quickly issued a message correcting the inaccurate information, however, a more thorough review of messages may be needed to ensure inaccurate information is not released. Pre-scripted messages to account for early dismissal of students may also need to be drafted and included in the plans.		
Planned Enhancement Action: Scott County officials intend to discontinue the practice of having all emergency messages pre-scripted and instead to begin to maintain pre-defined templates that may be modified at the time to address the emergency situation. Furthermore, an additional level of vetting may be implemented as part of the quality assurance/quality control process prior to any emergency messages being released.		
Primary Responsible Agency: Scott County Emergency Management Agency		
Enhancement Mechanism: Plan Revision/Operational Process Modification	Start Date: 01/31/2017	
Agency POC: David Donovan, 563-484-3050	Estimated Completion Date: 11/1/2017	

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ORO Enhancement Number: IA-16-QUAD-5b1-04		Criterion: 5.b.1 Location: Scott County EOC
Enhancement Opportunity: Pre-scripted emergency messages use the term "Registration Centers" while public information brochures refer to them as "Reception Centers." Pre-scripted messages should be updated to reflect consistent terminology with the public information brochures to prevent confusion of the public.		
Planned Enhancement Action: Any references to "Registration Centers" in plans or procedures will be revised to reflect the term "Reception Centers."		
Primary Responsible Agency: Scott County Emergency Management Agency		
Enhancement Mechanism: Plan/Procedure Revision	Start Date: 01/31/2017	
Agency POC: David Donovan, 563-484-3050	Estimated Completion Date: 12/31/2017	

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ORO Enhancement Number: IA-16-QUAD-1e1-02		Criterion: 1.e.1 Location: Iowa Dose Assessment
Enhancement Opportunity: RadResponder was used by both Iowa and Illinois during this exercise. Procedures need to be coordinated with Illinois to ensure Iowa is allowed access and granted the proper permissions to the RadResponder event created by Illinois. Recent enhancements to RadResponder also need to be reviewed and incorporated into existing procedures.		
Planned Enhancement Action: Iowa Department of Public Health will meet with the appropriate officials at Illinois Emergency Management Agency to develop a standard protocol for how information across both states will be shared in RadResponder. Existing procedures will be updated to reflect recent enhancements to the system as well as the standard information sharing protocols agreed upon between the two states. Small tabletop exercises and drills will be conducted to confirm the effectiveness of any new procedures/processes developed.		
Primary Responsible Agency: Iowa Department of Public Health		
Enhancement Mechanism: Plan/Procedure Revision	Start Date: 01/31/2017	
Agency POC: Angela Leek, 515-281-3478	Estimated Completion Date: 12/31/2017, Ongoing	

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ORO Enhancement Number: IA-16-QUAD-2b1-01		Criterion: 2.b.1 Location: Iowa Dose Assessment
Enhancement Opportunity: IDPH staff have a good understanding of the basics of dose assessment with RASCAL and URI RASCAL, but more training to understand URI RASCAL for QCGS would be beneficial for dose assessment staff to increase knowledge of other options and techniques available in the software. Staff would benefit from instruction/awareness of systems knowledge specific to the QCGS, i.e. correlation of plant release points to system data points, etc.		
Planned Enhancement Action: The Iowa Department of Public Health will explore training opportunities for appropriate staff to gain a better understanding of URI RASCAL specifically for the Quad Cities Generating Station. IDPH may work with partners at Illinois Emergency Management, Exelon, or the Nuclear Regulatory Commission to arrange for training. As appropriate, joint drills and training sessions will be conducted to enhance staff knowledge and proficiency in use of the software as it applies to the QCGS.		
Primary Responsible Agency: Iowa Department of Public Health		
Enhancement Mechanism: Additional Training	Start Date: 01/31/2017	
Agency POC: Angela Leek, 515-281-3478	Estimated Completion Date: 11/1/2017, Ongoing	

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ORO Enhancement Number: IA-16-QUAD-1c1-01		Criterion: 1.c.1 Location: Iowa State EOC
Enhancement Opportunity: Briefings to the State EOC did not always include all recommended components of information as outlined in the Chief of Operations Checklist. In some cases, the state agency participants were not immediately notified of an escalation in Emergency Action Level (EAL).		
Planned Enhancement Action: Revise Chief of Operations Procedure to ensure emphasis is placed on covering all required components of a State EOC briefing and to provide clear guidance to ensure the EOC is immediately notified of an escalation in emergency classification level.		
Primary Responsible Agency: Iowa Department of Homeland Security and Emergency Management		
Enhancement Mechanism: Procedure Revision	Start Date: 01/31/2017	
Agency POC: Jacob Nicholson, 515-323-4337	Estimated Completion Date: 12/31/2017	

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ORO Enhancement Number: IA-16-QUAD-1c1-02		Criterion: 1.c.1 Location: Iowa State EOC
Enhancement Opportunity: A situation report was never issued by the State EOC for this event. Although a rough draft was compiled by State EOC staff, it was never finalized or issued at the conclusion of exercise play.		
Planned Enhancement Action: Development of a situation report template specific to Nuclear Power Plant incidents to ensure timely completion of the situation report		
Primary Responsible Agency: Iowa Department of Homeland Security and Emergency Management		
Enhancement Mechanism: Job Aid Development	Start Date: 01/31/2017	
Agency POC: Jacob Nicholson, 515-323-4337	Estimated Completion Date: 12/31/2017	

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ORO Enhancement Number: IA-16-QUAD-1c1-03		Criterion: 1.c.1 Location: Iowa State EOC
Enhancement Opportunity: The Iowa Department of Transportation (IDOT) checklist at the State EOC needs to be better coordinated with the IDOT checklist used at the Forward Command Post.		
Planned Enhancement Action: Review and revision of the Iowa DOT Checklist used at the FCP to ensure alignment with the State EOC DOT Checklist		
Primary Responsible Agency: Iowa Department of Transportation		
Enhancement Mechanism: Procedure Revision	Start Date: 01/31/2017	
Agency POC: Brian Pribyl, 515-233-7850	Estimated Completion Date: 12/31/2017	

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ORO Enhancement Number: IA-16-QUAD-1c1-04		Criterion: 1.c.1 Location: Iowa State EOC
Enhancement Opportunity: Although significant actions taken by state agency partners are communicated during the regular State EOC briefings, these actions are generally not documented anywhere else for review to ensure all appropriate actions are taken and followed up on accordingly. All State EOC positions should be encouraged to document all actions taken in a position log for review as needed.		
Planned Enhancement Action: Training for State EOC responders will be modified to encourage all State EOC participants to document all actions in the WebEOC Position Log, while still reserving the State Event Log for only significant actions.		
Primary Responsible Agency: Iowa Department of Homeland Security and Emergency Management		
Enhancement Mechanism: Training Modification	Start Date: 01/31/2017	
Agency POC: Jacob Nicholson, 515-323-4337	Estimated Completion Date: 12/31/2017	

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ORO Enhancement Number: IA-16-QUAD-1e1-01		Criterion: 1.e.1 Location: Iowa State EOC
Enhancement Opportunity: A set of Emergency Action Level (EAL) boards would be beneficial in the State EOC Executive Office.		
Planned Enhancement Action: The State EOC currently maintains two sets of EAL boards for each affected nuclear power plant, one set for use by Operations and a second set for use by the Iowa Department of Public Health. Staff will either ensure one set is positioned in the State EOC Executive Office in the future or a third set will be printed to maintain a set in all three locations.		
Primary Responsible Agency: Iowa Department of Homeland Security and Emergency Management		
Enhancement Mechanism: Operational Modification/New Display Creation	Start Date: 01/31/2017	
Agency POC: Jacob Nicholson, 515-323-4337	Estimated Completion Date: 12/31/2017	

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ORO Enhancement Number: IA-16-QUAD-2b2-01		Criterion: 2.b.2 Location: Iowa State EOC	
Enhancement Opportunity: Adoption of a formal communications protocol in the State EOC and especially the executive decision room is recommended. Adopting a three-way communications formality when critical information/orders is/are being communicated, limiting or actually eliminating sidebar conversations that are not relative to the emergency or drill/exercise scenario should be encouraged, and participants should be more attentive to incoming data/information by pausing conversations and other telephone calls when critical information (Higher Priority) is incoming or outgoing.			
Planned Enhancement Action: The importance and benefits of three-way communication and “drillmanship” will be conveyed to executive decision makers. Pre-drill briefings and training will be modified to place an added emphasis on these communication techniques. Additionally, appropriate state EOC staff will be afforded the opportunity to observe these practices being effectively utilized by utility staff at their ERO facilities during future training exercises.			
Primary Responsible Agency: Iowa Department of Homeland Security and Emergency Management			
Enhancement Mechanism: Training Modification		Start Date: 01/31/2017	
Agency POC: Jacob Nicholson, 515-323-4337		Estimated Completion Date: Ongoing	

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ORO Enhancement Number: IA-16-QUAD-3d1-01		Criterion: 3.d.1 Location: Iowa State EOC
Enhancement Opportunity: Further discussion and coordination needs to occur to ensure restrictions on rail, river, and air traffic can be implemented in a prompt and coordinated manner. These discussions need to include coordination with the State of Illinois to identify the primary responsible party for restrictions that affect both states. Due to the heavy simulation of activities during an exercise as they relate to transportation restrictions, existing procedures should be validated with the responsible federal partners to ensure there are no faulty assumptions in place and that they are effective. Finally, better information needs to be communicated to the counties on the status of these restrictions to ensure duplicative actions are not being taken by the counties.		
Planned Enhancement Action: HSEMD will coordinate with the Department of Transportation and the State of Illinois to designate the primary party responsible for implementing the various transportation restrictions. Appropriate DOT and HSEMD Procedures will be validated with the appropriate federal partners and modified as necessary. Finally, HSEMD procedures will be enhanced as necessary to ensure the counties are kept informed on the status of any transportation restrictions.		
Primary Responsible Agency: Iowa Department of Homeland Security and Emergency Management		
Enhancement Mechanism: Potential Procedures Revision	Start Date: 01/31/2017	
Agency POC: Jacob Nicholson, 515-323-4337	Estimated Completion Date: 11/1/2018	

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ORO Enhancement Number: IA-16-QUAD-3d1-02		Criterion: 3.d.1 Location: Iowa State EOC
Enhancement Opportunity: Additional markers or indicators within MACH for the location of active access control points would be beneficial for situational awareness.		
Planned Enhancement Action: HSEMD will coordinate with the Department of Public Safety and the Department of Transportation to explore the possibility of this enhancement to MACH. If possible, HSEMD can provide GIS datasets for traffic and access control points to the DOT and DPS for import and inclusion into MACH as appropriate.		
Primary Responsible Agency: Iowa Department of Homeland Security and Emergency Management		
Enhancement Mechanism: System Enhancement	Start Date: 01/31/2017	
Agency POC: Jacob Nicholson, 515-323-4337	Estimated Completion Date: 12/31/2017	

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ORO Enhancement Number: IA-16-QUAD-5b1-01		Criterion: 5.b.1 Location: Iowa State EOC
Enhancement Opportunity: Implementation of a new procedure was demonstrated during this exercise where the State EOC issued press releases on behalf of the counties with instructions to the public on protective actions. While the messages were issued in a timely manner without undue delay, they were not issued as quickly as expected. A review of the new process is needed to improve the timeliness of message issuance and to shorten the gap between the issuance of the EAS message and the issuance of the subsequent press release by the state.		
Planned Enhancement Action: A review of existing procedures will be conducted to identify opportunities to make the process more efficient. Potential improvement opportunities could include: Development of almost completely pre-canned messages for use by the State EOC; elimination of the internal review and approval process at the State EOC for county emergency messages; or, revision of the county procedures to ensure sirens are not sounded and EAS messages are not broadcast until the State EOC has finalized the follow-up messaging. The best option for enhancement will be selected in consultation with state and county public affairs and EMA staff and procedure modifications will be made as appropriate followed by familiarization training.		
Primary Responsible Agency: Iowa Department of Homeland Security and Emergency Management		
Enhancement Mechanism: Plan/Procedure Modification, Training	Start Date: 01/31/2017	
Agency POC: Jacob Nicholson, 515-323-4337	Estimated Completion Date: 11/1/2017	

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ORO Enhancement Number: IA-16-QUAD-5b1-02		Criterion: 5.b.1 Location: Iowa State EOC
Enhancement Opportunity: In addition to the issuance of follow-up emergency messages containing protective actions for the public, the State has also agreed to assist the counties in distributing other county press releases during an incident to ensure the widest distribution of the information possible. Greater guidance is needed for the State public affairs staff on when, how, and where to post these county press releases.		
Planned Enhancement Action: State Public Affairs procedures will be revised to provide additional guidance on how to receive and distribute county press releases. Modification to WebEOC system boards could also be implemented to allow for direct upload by the counties to WebEOC to facilitate a consistent process for transmission to the State EOC and subsequent dissemination to all other WebEOC users. County public affairs and EMA staff will be consulted prior to implementation of any new processes that will affect their activities and any necessary training will be provided as appropriate.		
Primary Responsible Agency: Iowa Department of Homeland Security and Emergency Management		
Enhancement Mechanism: Plan/Procedure Modification, Training	Start Date: 01/31/2017	
Agency POC: Jacob Nicholson, 515-323-4337	Estimated Completion Date: 11/1/2017	

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PART III.

The Enhanced Exercise Initiative (EEI) Overview

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THE ENHANCED EXERCISE INITIATIVE (EEI) OVERVIEW

The Quad Cities Generating Station (QCGS) REPP Partial Participation Plume Exercise was a pioneering effort to increase collaboration between FEMA Regions, participating States and other stakeholders. A steering committee led all activities towards this purpose, which they collectively referred to as the Exercise Enhancement Initiative (EEI). The steering committee set achievable goals for this exercise, with the hope of institutionalizing EEI practices for all REPP exercises moving forward.

The EEI concept was a collaborative departure from the traditional FEMA-only evaluation of REP exercises and places a greater emphasis on the Offsite Response Organizations (OROs) to self-identify, document and openly critique their own performance; as well as provide FEMA opportunities to shed light on the all hazards, “whole community” concepts that the REP program provides. The primary EEI goal was to increase federal, state, local, tribal, and private sector partnership; as well as to foster Continuous Improvement (CI) for the betterment of the REP program as a whole.

The specific EEI components included:

- **ORO Self-Critique** – greater emphasis on the part of ORO personnel and exercise participants to self-identify, document and openly critique their own performance – in full view of FEMA evaluators and staff. This includes the selection, training, and assignment of teams of ORO special observers to assist with the self-critique.
- **Thorough and facilitated “Hot Wash”** – captured feedback immediately from exercise participants and ORO special observers. Both paper and online feedback forms were used to capture ORO information. FEMA evaluation findings and ORO comments and observations were kept separate to ensure proper attribution of the source of the information for subsequent joint adjudication.
- **Joint Adjudication Meeting (JAM)** – provided opportunity for Illinois, Iowa, FEMA Region V, and FEMA Region VII to validate consensus regarding exercise performance against REPP criteria. Once applicability to an assessment area was determined, it was categorized into one of four categories:
 - FEMA-identified Items: Level 2 Findings or Plan Issues
 - ORO-Identified Items: Opportunities for enhancement
 - Jointly-Identified Items: Opportunities for enhancement with required corrective actions
 - Level 1 Findings: Issued in accordance with existing requirements
- **After-Action Conference (AAC)** – provided opportunity for exercise stakeholders to review and discuss findings in the draft After-Action Report (AAR) as well as review and concur upon proposed corrective actions in the Improvement Plan prior to finalization.

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