



Braidwood Station

After Action Report/ Improvement Plan

Exercise Date - March 24, 2010

Radiological Emergency Preparedness (REP) Program



FEMA

Published June 24, 2010

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Braidwood Station After Action Report/Improvement Plan

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

On March 24, 2010, a Radiological Emergency Preparedness (REP) Full Participation Plume Exposure Pathway Exercise Evaluation was conducted by the U.S. Department of Homeland Security (DHS)/Federal Emergency Management Agency (FEMA) for the 10-mile Emergency Planning Zone (EPZ) around the Braidwood Station (BS). The purpose of the exercise was to assess the level of State and local preparedness in responding to a radiological emergency. This exercise was held in accordance with DHS/FEMA's 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 November 19, 2008. The qualifying emergency preparedness exercise was conducted on November 6, 1985.

DHS/FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise. In the State of Illinois, the risk counties of Grundy, Kankakee and Will participated along with State Government. The state of Indiana did not participate in the exercise since it was not an Ingestion Pathway exercise.

Protecting the public health and safety is 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 the participants were evident during this exercise.

This Final After Action Improvement Plan Report contains the evaluation of the biennial exercise and the evaluation of the following out-of-sequence interviews and activities:

- Illinois State Police (ISP) District 5 Headquarters Dosimetry Control Officers Briefing
- ISP District 5 Headquarters Traffic and Access Control Post
- Medical Services Transportation and Hospital evaluation at the Silver Cross Hospital
- Protective Actions for Schools (EV-2) for the M.V.K. Elementary / Middle School
- Protective Actions for Schools (EV-2) for the Reddick Elementary School Herscher District 2
- Protective Actions for Schools (EV-2) for the Reed-Custer Community District 225
- Monitoring and Decontamination of Evacuees and Emergency Workers

-
- Monitoring and Decontamination of Emergency Workers equipment
 - Public Registration
 - Congregate Care Center

Except where noted in this report, the State and local organizations demonstrated knowledge of and adequately implemented their emergency response plans and procedures.

There were no Deficiencies identified for the State of Illinois or the Counties of Grundy, Kankakee, or Will.

There was one Area Requiring Corrective Action (ARCA) identified and corrected during this exercise for Grundy County. Grundy County received an ARCA finding under Protective Action Implementation Criterion 3.d.2. – Impediments to Evacuation are Identified and Resolved. The ARCA assessed was based on our findings that an impediment to evacuation was resolved in a manner that would have resulted in traffic gridlocked at an intersection designated for evacuation. This would have impeded the public's ability to evacuate a portion of Sub-Area 10.

This criterion was successfully redemonstrated when the IEMA Controller provided remedial instruction to the Sheriff and the impediment was reintroduced. The Sheriff recognized that the accident would impede the flow of traffic leaving the area and that he would therefore establish additional TACPs using Grundy County Sheriff's Deputies to direct traffic and provide an effective evacuation route. Section 3 of this report, entitled "Analysis of Capabilities" presents detailed information on the ARCA.

There were no ARCAs identified during this exercise for the State of Illinois or the Counties of Kankakee or Will.

There were two Plan Issues identified during this exercise for the Radiological Emergency Assessment Center (REAC). The first Plan Issue was a carry-over from the Clinton Exercise conducted in November 2009 during which the REAC received a Plan Issue under Emergency Information and Instructions for the Public and the Media criterion 5.b.1. – OROs provide accurate emergency information and instructions to the public and the news media in a timely manner. Residents within the 10-mile EPZ were not notified that they may need to ingest KI after such a recommendation was made for emergency workers and immobile persons. Information contained within the Illinois Plan for Radiological Accidents (IPRA), Volume I

Concept of Operations and Radiological Task Force (RTF) procedures RTF-PARS-2 and RFT-POS-14 are not consistent regarding KI information that is provided to the public.

The second Plan Issue was identified during this exercise for the Radiological Emergency Assessment Center (REAC). The REAC received a Plan Issue finding under Protective Action Decision-Making Criterion 2.a.1. - Emergency Worker Exposure Control; OROs use a decision-making process to insure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of admin or PAGs. The Plan Issue assessed was based on findings that the REAC Health Physics (HP) Specialist procedures do not provide a method for calculating a Direct-Reading Dosimeter (DRD) dose conversion factor based on source term. Additionally, in the event that a calculated administrative limit is too low to read on the 0-20 R DRDs provided to Emergency Workers (EWs), procedures do not provide an alternative method for controlling radiation exposure. Section 3 of this report, entitled "Analysis of Capabilities" presents detailed information on the Plan Issue.

There were no Plan Issues identified for the Counties of Grundy, Kankakee, or Will.

INTRODUCTION - 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 June 17, 1993 (Federal Register, Vol. 58, No. 176, September 14, 1993); 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,
 - U.S. Food and Drug Administration, and
 - U.S. Nuclear Regulatory Commission.

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

Formal submission of the RERPs for the Braidwood Station to FEMA Region V by the State of Illinois and involved local jurisdictions occurred on January 9, 1987. Formal approval of these RERPs was granted by FEMA on April 15, 1988, under 44 CFR 350.

A REP Full Participation Plume Exposure Pathway Exercise was conducted on March 24, 2010, 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 health and safety during a radiological emergency involving the Braidwood Station. The purpose of this exercise report is to present the exercise results and findings on the performance of the Offsite Response Organizations (ORO) 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 Chairperson, 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;
- FEMA-REP-14, "Radiological Emergency Preparedness Exercise Manual," September 1991; and
- FEMA "Radiological Emergency Preparedness: Exercise Evaluation Methodology; Notice" as published in the Federal Register Notice, Vol. 67, No. 80, dated April 25, 2002.

Section 1 of this report, entitled "Exercise Overview", presents information pertaining to the team that planned and coordinated the exercise. This section also provides listing of all participating jurisdictions and functional entities that were evaluated.

Section 2 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 3 of this report, entitled "Analysis of Capabilities," presents detailed information on the demonstration of applicable exercise criteria at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues-only format. This section also contains: (1) descriptions of all Deficiencies and ARCAs (if any) assessed during this exercise, recommended corrective actions, and the State and local governments schedule of corrective actions, if applicable, for each identified exercise issue; and (2) descriptions of unresolved ARCAs assessed during previous

exercises and the status of the OROs efforts to resolve them.

Section 4 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.

EMERGENCY PLANNING ZONE (EPZ) DESCRIPTION

The Braidwood Station is located on a 4,162 acre site in Reed Township in southwest Will County, two miles south of Braidwood, Illinois, and three miles west of the Kankakee River. The station site is relatively flat with an elevation of 589 feet above sea level.

The population distribution in the 10-mile Emergency Planning Zone (EPZ) surrounding the Braidwood Station is relatively low. The year 2000 total population data is 36,493 persons living in the following protective action Sub-Areas 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16 included within the 10-mile EPZ.

The primary land use around the Braidwood Station is agriculture, with cash grain crops of corn and soybeans. The closest industries are located in the communities of Wilmington, Gardner, and Coal City. There are six recreational facilities in the EPZ which can accommodate between 1000 and 3000 people each.

Major transportation facilities in the Braidwood Station EPZ are limited to Interstate 55, which passes one and one-half (1½) miles west of the Station itself, and five railroads. The Railroads are: the Union Pacific Company which is one (1) mile west of the Station; the Burlington Northern and Santa Fe Railway Company which is four (4) miles northwest of the Station; the Norfolk Southern Railway Company which is nine and one-half (9½) miles south of the Station; the Elgin, Joliet and Eastern Railway Company which is ten (10) miles northwest of the Station; and the CSX Transportation, Inc. which is fourteen (14) miles northwest of the Braidwood Station.

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name

Braidwood Station

Type of Exercise

Plume

Exercise Date

March 24, 2010

Program

Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

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 Braidwood Station exercise:

State Jurisdictions

- Illinois Department of Human Services
- Illinois Department of Natural Resources
- Illinois Department of Transportation
- Illinois Emergency Management Agency
- Illinois Environmental Protection Agency
- Illinois National Guard
- Illinois State Police

Risk Jurisdictions

- Grundy County Government
- Grundy County Emergency Management Agency
- Grundy County Health Department
- Grundy County Highway Department
- Grundy County Regional Office of Education

Grundy County Sheriff's Department
Kankakee County Government
Kankakee County Board Chairman
Kankakee Emergency Services and Disaster Agency (ESDA)
Kankakee County Coroner
Kankakee County Emergency Operations Staff
Kankakee County Health Department
Kankakee County Highway Department
Kankakee County Patrol Commander
KanCom
Kankakee County Public Information Officer
Kankakee County Regional Superintendent of Schools
Kankakee County Sheriff's Department
Kankakee County Sheriff's Dispatch
Will County Government
Will County Executive
Will County Emergency Management Agency
Will County Coroner's Office
Will County Fire Department and Rescue Service
Will County Forest Preserve Police
Will County Health Department
Will County Highway Department
Will County Public Information Officer
Will County Sheriff's Department
Essex / Reddick Fire Department
Pontiac Fire Department
Pontiac Police Department
Private Organizations
American Red Cross
Amateur Radio Emergency Services
Chicagoland Speedway
Emergency Broadcast System Station (WCSJ/WJDK)
Emergency Broadcast System Station (WVLI/WIVR)
Emergency Broadcast System Station (WJOL/WSSR/WCCR/WRXQ)

Exelon Nuclear

Kurtz Ambulance Service

Lyondell Basell

Mazon-Verona-Kinsman Elementary / Middle School

Morris Hospital

Pontiac Township High School

Radio Amateur Civil Emergency Services

Reddick Elementary School

Reed-Custer Community Unit School District 225

Silver Cross Hospital

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

The DHS/FEMA Region V Office evaluated the Braidwood Station Radiological Emergency Preparedness (REP) Full Participation Plume Exposure Pathway Exercise conducted on March 24, 2010, to assess the capabilities of local emergency preparedness organizations in implementing their Radiological Emergency Response Plans (RERP) and procedures to protect the public health and safety during a radiological emergency involving Braidwood Station. The purpose of this report is to present the results and findings on the performance of the Offsite Response Organizations (OROs) during a simulated radiological emergency.

2.2 Exercise Objectives, Capabilities and Activities

Exercise objectives and identified Capabilities/REP Criteria selected to be demonstrated are discussed in Appendix G “Exercise Plan.”

2.3 Scenario Summary

Appendix H “Scenario Details,” contains a summary of the Exercise Scenario, a simulated sequence of events that was used as the basis for invoking emergency response actions by Offsite Response Organizations (OROs) in the Braidwood Station REP Full Participation Plume Exposure Pathway exercise on March 24, 2010.

This exercise scenario was submitted by the State of Illinois and Exelon Nuclear and accepted by DHS/FEMA Region V on February 19, 2010.

During the exercise, in addition to information and data provided through the Braidwood Station 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.

The details of the scenario are included in Appendix H “Scenario Details.”

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 March 24, 2010, REP Full Participation Plume Exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Braidwood Station.

Each jurisdiction and functional entity was evaluated based on its demonstration of exercise criteria delineated in Federal Register Notice: Vol. 67, No. 80, dated April 25, 2002. Detailed information on the exercise criteria and the extent-of-play agreement used in this exercise are found in Appendix G of this report.

3.2 Summary Results of Exercise Evaluation

The matrix presented in Table 3.1, on the following page(s), presents the status of all exercise criteria from Federal Register Notice: Vol. 67, No. 80, dated April 25, 2002, which were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise criteria are listed by number and the demonstration status of those criteria are indicated by the use of the following letters:

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

D – Deficiency assessed

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

N – Not Demonstrated

Blank – Not scheduled for demonstration

Table 3.1 - Summary of Exercise Evaluation (4 pages)

<p align="center">DATE: 2010-03-24 SITE: Braidwood Station, IL</p> <p align="center">M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated</p>		State - IWP	State EOC/SIRC	REAC	State Public Inquiry Phone Bank	UAC	RAFT	M&DEWE - RAFT	FT - 1	FT - 2	EOF	JIC
Emergency Operations Management												
Mobilization	1a1	M	M	M		M	M		M	M	M	M
Facilities	1b1											
Direction and Control	1c1		M	M		M	M				M	M
Communications Equipment	1d1	M	M	M		M	M		M	M		M
Equip & Supplies to support operations	1e1		M	M	M	M	M	M	M	M	M	M
Protective Action Decision Making												
Emergency Worker Exposure Control	2a1		M	P								
Radiological Assessment and PARs	2b1		M	M								
Decisions for the Plume Phase -PADs	2b2		M	M		M						
PADs for protection of special populations	2c1		M	M								
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1											
Rad Assess/Decision making concerning Relocation, Reentry, and Return	2e1											
Protective Action Implementation												
Implementation of emergency worker exposure control	3a1						M		M	M		
Implementation of KI decision	3b1								M	M		
Implementation of protective actions for special populations - EOCs	3c1											
Implementation of protective actions for Schools	3c2											
Implementation of traffic and access control	3d1					M						
Impediments to evacuation are identified and resolved	3d2					M						
Implementation of ingestion pathway decisions - availability/use of info	3e1											
Materials for Ingestion Pathway PADs are available	3e2											
Implementation of relocation, re-entry, and return decisions	3f1											
Field Measurement and Analysis												
Adequate Equipment for Plume Phase Field Measurements	4a1								M	M		
Field Teams obtain sufficient information	4a2						M					
Field Teams Manage Sample Collection Appropriately	4a3						M		M	M		
Post plume phase field measurements and sampling	4b1											
Laboratory operations	4c1											
Emergency Notification and Public Info												
Activation of the prompt alert and notification system	5a1		M									
Activation of the prompt alert and notification system - Fast Breaker	5a2											
Activation of the prompt alert and notification system - Exception areas	5a3											
Emergency information and instructions for the public and the media	5b1		M	P	M	M						M
Support Operations/Facilities												
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1											
Mon / decon of emergency worker equipment	6b1							M				
Temporary care of evacuees	6c1											
Transportation and treatment of contaminated injured individuals	6d1											

Table 3.1 - Summary of Exercise Evaluation (Continued. page 2/4)

		IL State Rad Advisor - Grundy	IL State Liason - Grundy	IL State Rad Advisor - Kankakee	IL State Liason - Kankakee	IL State Rad Advisor - Will	IL State Liason - Will	DCO Briefing - ISP District 5 HQ	TACP - ISP District 5	MEEW - Pontiac Township HS	DEEW - Pontiac Township HS	M&DEWE - Pontiac Township HS
DATE: 2010-03-24 SITE: Braidwood Station, IL M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated												
Emergency Operations Management												
Mobilization	1a1	M		M		M						
Facilities	1b1											
Direction and Control	1c1	M	M	M	M	M	M					
Communications Equipment	1d1	M	M	M	M		M		M		M	
Equip & Supplies to support operations	1e1					M		M	M	M	M	M
Protective Action Decision Making												
Emergency Worker Exposure Control	2a1					M						
Radiological Assessment and PARs	2b1											
Decisions for the Plume Phase -PADs	2b2	M		M		M						
PADs for protection of special populations	2c1											
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1											
Rad Assess/Decision making concerning Relocation, Reentry, and Return	2e1											
Protective Action Implementation												
Implementation of emergency worker exposure control	3a1	M		M		M		M	M	M	M	M
Implementation of KI decision	3b1							M	M			
Implementation of protective actions for special populations - EOCs	3c1											
Implementation of protective actions for Schools	3c2											
Implementation of traffic and access control	3d1								M			
Impediments to evacuation are identified and resolved	3d2											
Implementation of ingestion pathway decisions - availability/use of info	3e1											
Materials for Ingestion Pathway PADs are available	3e2											
Implementation of relocation, re-entry, and return decisions	3f1											
Field Measurement and Analysis												
Adequate Equipment for Plume Phase Field Measurements	4a1											
Field Teams obtain sufficient information	4a2											
Field Teams Manage Sample Collection Appropriately	4a3											
Post plume phase field measurements and sampling	4b1											
Laboratory operations	4c1											
Emergency Notification and Public Info												
Activation of the prompt alert and notification system	5a1	M	M	M	M	M	M					
Activation of the prompt alert and notification system - Fast Breaker	5a2											
Activation of the prompt alert and notification system - Exception areas	5a3											
Emergency information and instructions for the public and the media	5b1											
Support Operations/Facilities												
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1									M	M	
Mon / decon of emergency worker equipment	6b1											M
Temporary care of evacuees	6c1											

Unclassified

Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

Braidwood Station

Transportation and treatment of contaminated injured individuals	6d1													
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Table 3.1 - Summary of Exercise Evaluation (Continued. page 3/4)

<p align="center">DATE: 2010-03-24 SITE: Braidwood Station, IL</p> <p align="center">M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated</p>			Pub Reg - Pontiac Township HS	CCC - Pontiac Township HS	MS-1 Transportation - Kurtz Ambulance	MS-1 H - Silver Cross Hosp	Grundy - IWP	Grundy - EOC	Grundy - EBS - WCSJ/WJDK	DCO - Grundy County	Grundy - EV-2 M-K-V SD	Kankakee - IWP	Kankakee - EOC
Emergency Operations Management													
Mobilization	1a1						M	M				M	M
Facilities	1b1												
Direction and Control	1c1							M					M
Communications Equipment	1d1		M	M	M	M	M	M			M	M	M
Equip & Supplies to support operations	1e1	M	M	M	M		M		M	M			M
Protective Action Decision Making													
Emergency Worker Exposure Control	2a1												
Radiological Assessment and PARs	2b1												
Decisions for the Plume Phase -PADs	2b2							M					M
PADs for protection of special populations	2c1							M					M
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1												
Rad Assess/Decision making concerning Relocation, Reentry, and Return	2e1												
Protective Action Implementation													
Implementation of emergency worker exposure control	3a1	M	M	M	N				M	M			
Implementation of KI decision	3b1								M	M			
Implementation of protective actions for special populations - EOCs	3c1							M					M
Implementation of protective actions for Schools	3c2							M		M			M
Implementation of traffic and access control	3d1												M
Impediments to evacuation are identified and resolved	3d2							M					M
Implementation of ingestion pathway decisions - availability/use of info	3e1												
Materials for Ingestion Pathway PADs are available	3e2												
Implementation of relocation, re-entry, and return decisions	3f1												
Field Measurement and Analysis													
Adequate Equipment for Plume Phase Field Measurements	4a1												
Field Teams obtain sufficient information	4a2												
Field Teams Manage Sample Collection Appropriately	4a3												
Post plume phase field measurements and sampling	4b1												
Laboratory operations	4c1												
Emergency Notification and Public Info													
Activation of the prompt alert and notification system	5a1							M	M				M
Activation of the prompt alert and notification system - Fast Breaker	5a2												
Activation of the prompt alert and notification system - Exception areas	5a3												
Emergency information and instructions for the public and the media	5b1							M					M
Support Operations/Facilities													
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1	M											
Mon / decon of emergency worker equipment	6b1												

Unclassified
Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

Braidwood Station

Temporary care of evacuees	6c1		M										
Transportation and treatment of contaminated injured individuals	6d1			M	M								

Table 3.1 - Summary of Exercise Evaluation (Continued. page 4/4)

<p align="center">DATE: 2010-03-24 SITE: Braidwood Station, IL</p> <p align="center">M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated</p>										
		Kankakee - EAS - WVLJ/WIVR	DCO Briefing - Kankakee County	TACP - Kankakee	Kankakee - EV-2 Reddick Grd School	Will - IWP	Will - EOC	Will - EAS - WJOL/WSSR/WCQR/WRXQ	DCO - Will County	TACP - Will
										Will - EV-2 Reed-Custer SD 255
Emergency Operations Management										
Mobilization	1a1					M	M			
Facilities	1b1									
Direction and Control	1c1						M			
Communications Equipment	1d1		M	M	M	M	M		M	M
Equip & Supplies to support operations	1e1	M	M	M		M			M	M
Protective Action Decision Making										
Emergency Worker Exposure Control	2a1									
Radiological Assessment and PARs	2b1									
Decisions for the Plume Phase -PADs	2b2						M			
PADs for protection of special populations	2c1						M			
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1									
Rad Assess/Decision making concerning Relocation, Reentry, and Return	2e1									
Protective Action Implementation										
Implementation of emergency worker exposure control	3a1	M	M	M				M	M	M
Implementation of KI decision	3b1	M	M	M				M	M	M
Implementation of protective actions for special populations - EOCs	3c1						M			
Implementation of protective actions for Schools	3c2			M		M				M
Implementation of traffic and access control	3d1		M			M			M	
Impediments to evacuation are identified and resolved	3d2					M				
Implementation of ingestion pathway decisions - availability/use of info	3e1									
Materials for Ingestion Pathway PADs are available	3e2									
Implementation of relocation, re-entry, and return decisions	3f1									
Field Measurement and Analysis										
Adequate Equipment for Plume Phase Field Measurements	4a1									
Field Teams obtain sufficient information	4a2									
Field Teams Manage Sample Collection Appropriately	4a3									
Post plume phase field measurements and sampling	4b1									
Laboratory operations	4c1									
Emergency Notification and Public Info										
Activation of the prompt alert and notification system	5a1	M					M	M		
Activation of the prompt alert and notification system - Fast Breaker	5a2									
Activation of the prompt alert and notification system - Exception areas	5a3									
Emergency information and instructions for the public and the media	5b1						M			
Support Operations/Facilities										
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1									

Unclassified
Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

Braidwood Station

Mon / decon of emergency worker equipment	6b1											
Temporary care of evacuees	6c1											
Transportation and treatment of contaminated injured individuals	6d1											

3.3 Criteria Evaluation Summaries

3.3.1 Illinois Jurisdictions

3.3.1.1 State Initial Warning Point

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

3.3.1.2 SEOC/SIRC

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2, 2.c.1, 5.a.1, 5.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.3 Radiological Emergency Assessment Center

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.b.1, 2.b.2, 2.c.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: 2.a.1.

ISSUE NO.: 06-10-2a1-P-01

CRITERION: OROs use a decision-making process to insure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of admin or PAGs.

CONDITION: The REAC Health Physics (HP) Specialist procedures do not provide a method for calculating a Direct-Reading Dosimeter (DRD) dose conversion factor

based on source term. Additionally, in the event that a calculated administrative limit is too low to read on the 0-20 R DRDs provided to Emergency Workers (EW), procedures do not provide an alternative method for controlling radiation exposure such as use of a clock based stay-time.

POSSIBLE CAUSE: During the exercise, the HP Specialist in the Radiological Emergency Assessment Center (REAC) estimated a dose conversion factor that could be used to control emergency worker dose due to the high internal dose component based on the release source term. Per discussion with the HP Specialist, the estimated conversion factor would have resulted in an administrative exposure limit too low to read on the 0-20 R DRD supplied to EWs. As an alternative method of controlling exposure, the HP Specialist requested Radiological Assessment Field Team (RAFT) and Unified Area Command (UAC) monitor EW stay times in the plume exposure area; no clock based stay-time limits were specified based on projected dose rates at EW assignment locations.. Nor was a lowered administrative limit specified that could be read on the DRD (e.g. 1 R vs. the default 3 R) as another method of minimizing excess exposure due to inhalation dose from an unfiltered release of radioactive material.

Radiological Assessment Field Team procedure, RTF-RFT-11, Rev. 3, states, Emergency workers and IEMA personnel shall immediately report cumulative DRD readings equal to or in excess of 3R to their DCO. The Health Physics Specialist in REAC should use current source term information to determine the conversion factor to use for converting radiation exposure to TEDE. The default conversion factor is 1.67 (e.g., $3R \times 1.67 \text{ TEDE/R} = 5 \text{ Rem TEDE}$). The method for performing an updated dose conversion factor calculation is not contained or referenced in REAC or RAFT procedures.

REFERENCE: NUREG 0654, K.3.a-b
RTF-RAFT-11, Rev. 3, Emergency Worker Dosimetry

EFFECT: Radiation dose from internal exposure could result in an EW exceeding EPA Protective Action Guidelines (PAG) unless a mechanism for controlling and tracking their exposure is established either through a lowered administrative limit or a clock based stay-time.

RECOMMENDATION: Modify the HP Specialist's procedure to include a method for calculating a DRD conversion factor based on source term; provide DRDs or Electronic Dosimeters that would allow EWs to monitor lowered radiation exposures; provide a method for calculating stay-times for EWs in lieu of a lower range DRD.

- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: 5.b.1.

ISSUE NO.: 13-09-5b1-P-01

ISSUE: Residents of the Clinton 10-mile EPZ were not notified that they may need to ingest KI after such a recommendation was made for emergency workers and immobile persons.

REASON UNRESOLVED: Dissemination of the KI recommendation for the general public was not demonstrated at the JIC during the Braidwood exercise. Recommend revision of the IPRA, Braidwood Volume VII, Joint Information Center Procedure, to include a check list item reminding the PIO that when they are informed KI is recommended for Emergency Workers and immobile populations, they should issue a news release/media brief informing the public that those with KI in their possession should consider consuming the drug at that time.

3.3.1.4 Public Inquiry Phone Bank

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

3.3.1.5 Unified Area Command

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

3.3.1.6 Radiological Assessment Field Team

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

3.3.1.7 Monitoring and Decontamination of Emergency Worker Equipment at the RAFT

- a. MET: 1.e.1, 6.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.8 Field Team 1

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

3.3.1.9 Field Team 2

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

3.3.1.10 Emergency Operations Facility

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

3.3.1.11 Joint Information Center

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

3.3.1.12 Illinois State Radiological Advisor - Grundy County

- a. MET: 1.a.1, 1.c.1, 1.d.1, 2.b.2, 3.a.1, 5.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.13 Illinois State Liaison - Grundy County

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

3.3.1.14 Illinois State Radiological Advisor - Kankakee County

- a. MET: 1.a.1, 1.c.1, 1.d.1, 2.b.2, 3.a.1, 5.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.15 Illinois State Liaison - Kankakee County

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

3.3.1.16 Illinois State Radiological Advisor - Will County

- a. MET: 1.a.1, 1.c.1, 1.e.1, 2.a.1, 2.b.2, 3.a.1, 5.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.17 Illinois State Liaison - Will County

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

3.3.1.18 Dosimetry Control Officer's Briefing - Illinois State Police District 5 Headquarters

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

3.3.1.19 Traffic and Access Control Post at the Illinois State Police District 5 Headquarters

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

3.3.1.20 Monitoring of Evacuees and Emergency Workers - Pontiac Township High School

- a. MET: 1.e.1, 3.a.1, 6.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.21 Decontamination of Evacuees and Emergency Workers - Pontiac Township High School

- a. MET: 1.d.1, 1.e.1, 3.a.1, 6.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.22 Monitoring and Decontamination of Emergency Worker Equipment - Pontiac Township High School

- a. MET: 1.e.1, 3.a.1, 6.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.23 Public Registration Pontiac Township High School

- a. MET: 1.e.1, 3.a.1, 6.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.24 Congregate Care Center - Pontiac Township High School

- a. MET: 1.d.1, 1.e.1, 3.a.1, 6.c.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None

- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.25 Medical Services (MS-1) Transportation - Kurtz Ambulance Service

- a. MET: 1.d.1, 1.e.1, 3.a.1, 6.d.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.26 Medical Services (MS-1) Hospital - Silver Cross Hospital

- a. MET: 1.d.1, 1.e.1, 6.d.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: 3.a.1.
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.2 Risk Jurisdictions

3.3.2.1 Grundy County - Initial Warning Point

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

3.3.2.2 Grundy County - Emergency Operations Center

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.b.2, 2.c.1, 3.c.1, 3.c.2, 3.d.2, 5.a.1, 5.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: 3.d.2.

ISSUE NO.: 06-10-3d2-A-02

CRITERION: Impediments to evacuation are identified and resolved. (NUREG-0654, J.10.j.k.)

CONDITION: Inject No. 25 (exercise message No. 126) identified an impediment at the intersection of Broadway and Braceville Roads prohibiting potential evacuation traffic leaving the towns of Godley and Braceville. The Grundy County Sheriff in the EOC stated that this was east of a Traffic and Access Control Post (TACP) No. 10-5 and was not a part of a potential evacuation route. Thus no action was required.

POSSIBLE CAUSE: The Sheriff's Deputy appeared to look at the location of the traffic impediment in relation to the nearby TACP No. 10-5 and determined that the TACP would keep vehicles from entering the area being evacuated. He did not appear to realize that evacuees may be planning to use those roads to leave the area.

REFERENCE: NUREG-0654 Planning Standards and Evaluation Criteria J.10.k

EFFECT: The potential impact would have been evacuation traffic backed up and stalled at the intersection, unable to leave a portion of the Sub-Area 10.

CORRECTIVE ACTION DEMONSTRATED: This criterion was successfully redemonstrated when the IEMA Controller provided remedial instruction to the Sheriff and message inject No. 25 was reintroduced to the Sheriff. The Sheriff utilized IPRA Map-A (Braidwood Traffic and Access Control, which was posted on the EOC wall). The Sheriff stated that the accident (at Broadway and Braceville Road intersections) would impede the flow of traffic leaving the area and that he would therefore establish additional TACPs using Grundy County Sheriff's Deputies at the next intersection north on Broadway Road to direct traffic further west to the next north-south highway, and at locations on Braceville Road east of the accident site to direct evacuation traffic onto Highway 129 South. This action was simulated.

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

3.3.2.3 Grundy County - Emergency Broadcast System Station - WCSJ/WJDK

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

3.3.2.4 Dosimetry Control Officer Briefing - Grundy County EOC

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

3.3.2.5 Grundy County - EV-2 Interview - M-V-K School District

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

3.3.2.6 Kankakee County Initial Warning Point

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

3.3.2.7 Kankakee County - Emergency Operations Center

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.b.2, 2.c.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.8 Kankakee County Emergency Alert System - WVLI/WIVR

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

3.3.2.9 Dosimetry Control Officer's Briefing - Kankakee County EOC

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

3.3.2.10 Kankakee County Traffic and Access Control Post

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

3.3.2.11 Kankakee County - EV-2 Interview - Reddick Elementary School

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

3.3.2.12 Will County - Initial Warning Point

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

3.3.2.13 Will County - Emergency Operations Center

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.b.2, 2.c.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.14 Will County - Emergency Alert System Station - WJOL/WSSR/WCCQ/WRXQ

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

3.3.2.15 Dosimetry Control Officer Briefing - Will County EOC

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

3.3.2.16 Will County Traffic and Access Control Post

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

3.3.2.17 Will County - EV-2 Interview - Reed-Custer Community School District 255

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

SECTION 4: CONCLUSION

There were no Deficiencies identified for the State of Illinois or the Counties of Grundy, Kankakee, or Will.

There was one Area Requiring Corrective Action (ARCA) identified and corrected during this exercise for Grundy County. Grundy County received an ARCA finding under Protective Action Implementation Criterion 3.d.2 – Impediments to Evacuation are Identified and Resolved. The ARCA assessed was based on findings that an impediment to evacuation was resolved in a manner that would have resulted in traffic gridlocked at an intersection designated for evacuation. This would have impeded the public's ability to evacuate a portion of Sub-Area 10.

This criterion was successfully redemonstrated when the IEMA Controller provided remedial instruction to the Sheriff and the impediment was reintroduced. The Sheriff recognized that the accident would impede the flow of traffic leaving the area and that he would therefore establish additional TACPs using Grundy County Sheriff's Deputies to direct traffic and provide an effective evacuation route. Section 3 of this report, entitled "Analysis of Capabilities" presents detailed information on the ARCA.

There were no ARCAs identified during this exercise for the State of Illinois or the Counties of Kankakee or Will.

There were two Plan Issues identified during this exercise for the Radiological Emergency Assessment Center (REAC). The first Plan Issue was a carry-over from the Clinton Exercise conducted in November 2009 during which the REAC received a Plan Issue under Emergency Information and Instructions for the Public and the Media criterion 5.b.1 – OROs provide accurate emergency information and instructions to the public and the news media in a timely manner. Residents within the 10-mile EPZ were not notified that they may need to ingest KI after such a recommendation was made for emergency workers and immobile persons. Information contained within the Illinois Plan for Radiological Accidents (IPRA) and Radiological Task Force (RTF) procedures RTF-PARS-2 and RFT-POS-14 are not consistent regarding KI information that is provided to the public.

The second Plan Issue was identified during this exercise for the Radiological Emergency Assessment Center (REAC). The REAC received a Plan Issue finding under Protective Action

Decision-Making Criterion 2.a.1.-Emergency Worker Exposure Control; OROs use a decision-making process to insure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of admin or PAGs. The Plan Issue assessed was based on our findings that the REAC Health Physics (HP) Specialist procedures do not provide a method for calculating a Direct-Reading Dosimeter (DRD) dose conversion factor based on source term. Additionally, in the event that a calculated administrative limit is too low to read on the 0-20 R DRDs provided to Emergency Workers (EW), procedures do not provide an alternative method for controlling radiation exposure. Section 3 of this report, entitled “Analysis of Capabilities” presents detailed information on the Plan Issue.

There were no Plan Issues identified for the Counties of Grundy, Kankakee, or Will.

APPENDIX A: IMPROVEMENT PLAN

Issue Number: 06-10-2a1-P-01		Criterion: 2a1
ISSUE: The REAC Health Physics (HP) Specialist procedures do not provide a method for calculating a Direct-Reading Dosimeter (DRD) dose conversion factor based on source term. Additionally, in the event that a calculated administrative limit is too low to read on the 0-20 R DRDs provided to Emergency Workers (EW), procedures do not provide an alternative method for controlling radiation exposure such as use of a clock based stay-time.		
RECOMMENDATION: Modify the HP Specialist's procedure to include a method for calculating a DRD conversion factor based on source term; provide DRDs or Electronic Dosimeters that would allow EWs to monitor lowered radiation exposures; provide a method for calculating stay-times for EWs in lieu of a lower range DRD.		
CORRECTIVE ACTION DESCRIPTION:		
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:	
CAPABILITY ELEMENT:	START DATE:	
AGENCY POC:	COMPLETION DATE:	

Issue Number: 13-09-5b1-P-01		Criterion: 5b1
ISSUE: Residents of the Clinton 10-mile EPZ were not notified that they may need to ingest KI after such a recommendation was made for emergency workers and immobile persons.		
RECOMMENDATION: Review the information contained within the IPRA and RTF-PARS-2 regarding KI information that is provided to the public and revise the procedures as required to ensure that they contain the same information and direction.		
CORRECTIVE ACTION DESCRIPTION:		
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:	
CAPABILITY ELEMENT:	START DATE:	
AGENCY POC:	COMPLETION DATE:	

APPENDIX B: LESSONS LEARNED

1. KI and Shellfish

Summary: iOSAT (KI) and shellfish contraindication.

The DCO then explained the dose for KI is one tablet (130 mg) per day and that taking additional tablets would not offer more protection. He indicated that in certain individuals, especially those sensitive to shellfish, may react to the drug. There are some people who may be allergic to KI and others who may experience adverse side effects such as a metallic taste, rashes, diarrhea, and other symptoms.

Description: Shellfish is not a contraindication for ingestion of KI. This was briefed during the 2009 Clinton REP Exercise during the Participants Briefing.

2. KI and Shellfish

Summary: Shellfish is not a contraindication to having an allergic reaction to iOSAT KI.

Description: During 2009 Clinton REP Exercise, this issue was addressed and is not resolved at this point in time.

APPENDIX C: BEST PRACTICES

1. Emergency Notification Service to Support Emergency Communications

Summary: The Reed-Custer Community School District 255 employs an emergency notification service, AlertNow, to rapidly communicate with employees and families using cellular, landline, text messaging and e-mails. The service has the capacity to make up to 2000 telephone calls at a time, increasing the effectiveness of District staff in making timely notifications to employees and families during emergencies.

Description: The District regularly uses the service to notify parents of early dismissals, last minute changes to bus routes or other issues that impact the school population. The system is also used to contact District staff to deliver operational updates and messages. The inclusion of text messaging and e-mail provides an alternative message pathway in the event cellular systems become incapacitated. The system leverages the efforts of Reed-Custer School District 255 staff to keep employees and families informed in a timely manner during crisis events. The system provides a report showing the status of each call made. The status report allows staff to target receipt confirmation and follow up efforts on those individuals who did not receive the general communication.

APPENDIX D: EXERCISE TIMELINE

Table 1, on the following page, presents the times at which key events and activities occurred during the REP Full Participation Plume exercise conducted on March 24, 2010, for the Braidwood Station.

Table 1 - Exercise Timeline
DATE: 2010-03-24, SITE: Braidwood Station, IL

Emergency Classification Level or Event	Time Utility Declared	State EOC/SIRC	REAC	UAC	JIC	Grundy - EOC	Kankakee - EOC
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	0817	0829	0842	0835	0840	0844	0844
Site Area Emergency	0923	0938	0926	0947	0928	0948	0949
General Emergency	1053	1110	1056	1125	1056	1124	1124
Simulated Rad. Release Started	1052	N/A	N/A	N/A	N/A	N/A	N/A
Simulated Rad. Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		0844	0849	0855	0920	0919	1033
Declaration of State of Emergency		1122	N/A	N/A	1129	1021	1125
Exercise Terminated		1245	1246	1241	1245	1306	1246
Early Precautionary Action: The State issued evacuation of state parks and hunting areas		1011	N/A	1000	N/A	N/A	N/A
Early Precautionary Action: The State issued a Livestock Advisory-sheltered and placed on stored feed/water within the 10-mile EPZ		0936	0936	1008	0942	N/A	N/A
Early Precautionary Action: Air and rail traffic restriction 5-mile radius		1012	1012	1050	N/A	N/A	N/A
Early Precautionary Action: Will County Braidwood Dunes Forest Preserves-evacuated		N/A	N/A	N/A	N/A	N/A	N/A
General Information Message: Public advised of incident at Braidwood Station		N/A	N/A	N/A	N/A	N/A	1010
Siren Activation: at Site Area Emergency		N/A	N/A	N/A	N/A	N/A	1010
EAS Message: at Alert		N/A	N/A	N/A	N/A	0946	1005
EAS Message: General Message		N/A	N/A	N/A	N/A	1045	N/A
Protective Action Recommendation Evacuation of Sub-Areas: 1, 3, 6, 7, 9, 10		1122	1117	1122	N/A	1124	1126
Protective Action Decision		N/A	N/A	N/A	N/A	1142	1126
Siren Activation		N/A	N/A	N/A	N/A	1149	1135
EAS Message		N/A	N/A	N/A	N/A	1150	1140
KI Administration Decision:		1122	1117	N/A	N/A	1124	1126

Table 1 - Exercise Timeline
DATE: 2010-03-24, SITE: Braidwood Station,
IL

Emergency Classification Level or Event	Time Utility Declared	Will - EOC
Unusual Event	N/A	N/A
Alert	0817	0842
Site Area Emergency	0923	0950
General Emergency	1053	1126
Simulated Rad. Release Started	1052	N/A
Simulated Rad. Release Terminated	N/A	N/A
Facility Declared Operational		0928
Declaration of State of Emergency		1005
Exercise Terminated		1249
Early Precautionary Action: The State issued evacuation of state parks and hunting areas		N/A
Early Precautionary Action: The State issued a Livestock Advisory-sheltered and placed on stored feed/water within the 10-mile EPZ		N/A
Early Precautionary Action: Air and rail traffic restriction 5-mile radius		N/A
Early Precautionary Action: Will County Braidwood Dunes Forest Preserves-evacuated		0957
General Information Message: Public advised of incident at Braidwood Station		N/A
Siren Activation: at Site Area Emergency		1007
EAS Message: at Alert		1008
EAS Message: General Message		N/A
Protective Action Recommendation Evacuation of Sub-Areas: 1, 3, 6, 7, 9, 10		1126
Protective Action Decision		1127
Siren Activation		1135
EAS Message		1135
KI Administration Decision:		1126

APPENDIX E: EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel that evaluated the Braidwood Station REP Full Participation Plume Exposure Pathway Exercise on March 24, 2010. The list includes the evaluation team leadership and all evaluators. The organization each evaluator represents is indicated by the following abbreviations:

DHS/FEMA Department of Homeland Security/Federal Emergency Management Agency

ICF Consulting

Title	Name	Organization
Radiological Assistance Committee, Chairman	William E. King	DHS/FEMA
Exercise Director	Dwaine Warren	DHS/FEMA
Senior Specialist	Stephen Tulley	DHS/FEMA
Site Specialist	Deborah Fulk	DHS/FEMA
Team Leader - Illinois	Todd M. Gemskie	DHS/FEMA
Team Leader - Grundy County	Bridget Ahlgrim	DHS/FEMA
Team Leader - Kankakee County	James King	DHS/FEMA
Team Leader - Will County	David Ortman	DHS/FEMA

DATE: 2010-03-24, SITE: Braidwood Station, IL

LOCATION	EVALUATOR	AGENCY
State Initial Warning Point	Robert Duggleby	ICF
SEOC/SIRC	Robert Black William Vocke	ICF ICF
Radiological Emergency Assessment Center	Marcy Campbell Stephen Chambers	ICF ICF
Public Inquiry Phone Bank	Robert Duggleby	ICF
Unified Area Command	Steve Denson Edward Golinski	ICF DHS/FEMA
Radiological Assessment Field Team	Patrick Taylor	ICF
Monitoring and Decontamination of Emergency Worker Equipment at the RAFT	Patrick Taylor	ICF
Field Team 1	Earl Shollenberger	ICF
Field Team 2	Richard Watts	ICF
Emergency Operations Facility	Wendy Swygert	ICF
Joint Information Center	Eric Carter Wendy Swygert	ICF ICF
Illinois State Radiological Advisor - Grundy County	Thomas Gahan Delwyn Kinsley	ICF DHS/FEMA
Illinois State Liaison - Grundy County	Thomas Hegele	ICF
Illinois State Radiological Advisor - Kankakee County	Tracey Green Michael Petullo	ICF ICF
Illinois State Liaison - Kankakee County	Lynn Steffensen	ICF
Illinois State Radiological Advisor - Will County	Lenora Borchardt Richard Grundstrom	ICF ICF
Illinois State Liaison - Will County	Deborah Fulk	DHS/FEMA
Dosimetry Control Officer's Briefing - Illinois State Police District 5 Headquarters	William Vocke	ICF
Traffic and Access Control Post at the Illinois State Police District 5 Headquarters	Robert Duggleby	ICF
Monitoring of Evacuees and Emergency Workers - Pontiac Township High School	Robert Black	ICF
Decontamination of Evacuees and Emergency Workers - Pontiac Township High School	Edward Golinski	DHS/FEMA
Monitoring and Decontamination of Emergency Worker Equipment - Pontiac Township High School	Steve Denson	ICF
Public Registration Pontiac Township High School	Clinton Crackel	DHS/FEMA
Congregate Care Center - Pontiac Township High School	Clinton Crackel	DHS/FEMA
Medical Services (MS-1) Transportation - Kurtz Ambulance Service	Michael Petullo	ICF
Medical Services (MS-1) Hospital - Silver Cross Hospital	Thomas Gahan	ICF
Grundy County - Initial Warning Point	Delwyn Kinsley	DHS/FEMA
Grundy County - Emergency Operations Center	Thomas Hegele Delwyn Kinsley Karl Rabenhorst	ICF DHS/FEMA DHS/FEMA
Grundy County - Emergency Broadcast System Station - WCSJ/WJDK	Delwyn Kinsley	DHS/FEMA
Dosimetry Control Officer Briefing - Grundy County EOC	Thomas Gahan	ICF
Grundy County - EV-2 Interview - M-V-K School District	Wendy Swygert	ICF
Kankakee County Initial Warning Point	Clinton Crackel	DHS/FEMA

Unclassified
Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

Braidwood Station

Kankakee County - Emergency Operations Center	Christopher Bellone Lynn Steffensen	DHS/FEMA ICF
Kankakee County Emergency Alert System - WVLI/WIVR	Clinton Crackel	DHS/FEMA
Dosimetry Control Officer's Briefing - Kankakee County EOC	Michael Petullo	ICF
Kankakee County Traffic and Access Control Post	Tracey Green	ICF
Kankakee County - EV-2 Interview - Reddick Elementary School	Bruce Swiren	ICF
Will County - Initial Warning Point	Bruce Swiren	ICF
Will County - Emergency Operations Center	Lenora Borchardt Deborah Fulk Douglas Lawson	ICF DHS/FEMA DHS/FEMA
Will County - Emergency Alert System Station - WJOL/WSSR/WCCQ/WRXQ	Bruce Swiren	ICF
Dosimetry Control Officer Briefing - Will County EOC	Richard Grundstrom	ICF
Will County Traffic and Access Control Post	Clark Cofer	ICF
Will County - EV-2 Interview - Reed-Custer Community School District 255	Eric Carter	ICF
* Team Leader		

APPENDIX F: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
ALS	Advanced Life Support
ARC	American Red Cross
ARM	Alarming Rate Meter
BLS	Basic Life Support
BS	Braidwood Station
CCA	Contamination Control Area
CCC	Congregate Care Center
CCS	Contamination Control Supervisor
CDE	Committed Dose Equivalent
CUSD	Community Unit School District
DCO	Dosimetry Control Officer
DO	Duty Officer
DRD	Direct Reading Dosimeter
EAL	Emergency Action Level
EAS	Emergency Alert System
EBS	Emergency Broadcast System
ECL	Emergency Classification Level
ED	Emergency Department
EMA	Emergency Management Agency
EMD	Emergency Management Director
EMS	Emergency Medical Services
EMT	Emergency Medical Technicians
EOC	Emergency Operations Center
EOF	Emergency Operating Facility
EPZ	Emergency Planning Zone
ER	Exelon Representative
ERCV	Emergency Response Communications Vehicle
EW	Emergency Workers
GE	General Emergency
GEMS	Gaseous Effluent Monitoring System
GIS	Global Information System
HD	Health Department
HP	Health Physics
HPS	Health Physics Specialist

IAP	Incident Action Plan
IC	Incident Commander
IEMA	Illinois Emergency Management Agency
IEPA	Illinois Environmental Protection Agency
ING	Illinois National Guard
IPRA	Illinois Plan Radiological Accidents
ISP	Illinois State Police
IWIN	Illinois Wireless Internet Network
IWP	Initial Warning Point
JIC	Joint Information Center
LD	Luminescent Dosimeter
LEADS	Law Enforcement Agency Data System
LS	Life Support
MRT	Medical Radiation Technician
NARS	Nuclear Accident Reporting System
NRC	Nuclear Regulatory Commission
PAD	Protective Action Decision
PAG	Protective Action Guides
PAR	Protective Action Recommendation
PDP	Personnel Dosimetry Packet
PFD	Pontiac Fire Department
PIO	Public Information Officer
PORV	Power Operated Relief Valve
PPE	Personal Protective Equipment
PTHS	Pontiac Township High School
RAFT	Radiological Assessment Field Team
RCS	Reception Center Supervisor
REA	Radiological Emergency Area
REAC	Radiological Emergency Assessment Center
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RO	Radiological Officer
RRO	Rainbow Radio Operator
RS	Reactor Specialist
SAE	Site Area Emergency
SAM	Staging Area Manager
SEOC	State Emergency Operations Center
SIRC	State Incident Response Center
SO	Safety Officer
SOP	Standard Operating Procedures

TAR	Tone Alert Radios
TEDE	Total Effective Dose Equivalent
UAC	Unified Area Command
UHF	Ultra High Frequency
VHF	Very High Frequency

APPENDIX G: EXERCISE PLAN

This appendix lists the exercise criteria, which were scheduled for demonstration in the Braidwood Station Radiological Emergency Preparedness Full Participation Plume Exposure Pathway Exercise on March 24, 2010, and the offsite extent-of-play agreement accepted by DHS/FEMA Region V on February 19, 2010. The exercise criteria, contained in the FEMA “Radiological Emergency Preparedness Exercise Evaluation Methodology; Notice,” as published in the Federal Register Notice/Vol. 67, dated April 25, 2002, 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 DHS/FEMA to provide evaluators with guidance on expected actual demonstration of the criteria.

Exercise Criteria

Listed on the following pages are the specific radiological emergency preparedness criteria that were scheduled for demonstration during this exercise.

State of Illinois Extent-of-Play Agreement Week of March 24, 2009

Criteria that can be re-demonstrated immediately for credit, at the discretion of the evaluator, include the following: 3.a.1, 3.d.1, 3.d.2, 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, 5.a.1 and 5.b.1.

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 houses the IEMA Communications Center (Initial Warning Point), the State of Illinois Response Center (SIRC) 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 SIRC will be fully activated with a variety of State agencies. REAC will be fully activated. Rosters will be provided to demonstrate 24-hour staffing of the SIRC and REAC. The evaluator will not be allowed to remove the rosters.

An actual phone call will be made to the FEMA Duty Officer advising him/her of the situation at Braidwood Station. Follow up calls to FEMA will be simulated.

The Unified Area Command (UAC) will be activated at the Chicagoland Speedway with State district and regional personnel. Radiological Assessment Field Team (RAFT) and mobile lab (not evaluated) will be activated in Mazon. IEMA personnel will be prepositioned in the local area and dispatched to the County EOCs, UAC, EOF, Technical Support Center (TSC) and the JIC. FEMA will not evaluate the TSC.

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 demonstrated 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 be demonstrated at the SIRC, REAC, RAFT, the UAC and the JIC. Coordination will be demonstrated between the SIRC, the REAC, RAFT, the UAC, the JIC, the EOF and the County EOCs.

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, commercial telephone, 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. Dosimetry Control Officer (DCO) logs will be available from an IEMA Radiological Advisors in the County EOCs.

A DCO briefing/Traffic and Access Control (TAC) interview will be conducted by the Illinois State Police on March 22, at 4:00 p.m. at the ISP District 5 Headquarters. During this event, the availability of dosimetry will be demonstrated. No more than 10% of ISP District 5 dosimetry kits will be inspected during the interview to confirm serial numbers.

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.

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

A message will be injected to the Radiological Advisor in the Will County EOC to drive the decision to authorize exposure in excess of administrative limits.

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.

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 to the SIRC.

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 protective action recommendations (PARs) based upon available shelters, evacuation time estimates and other relevant factors will be demonstrated between the SIRC and REAC. 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 demonstrated at UAC, with input from the SIRC and REAC.

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups.

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

Criterion 2.e.1: Timely 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 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.

This will be demonstrated during the ISP DCO briefing/TAC interview that will be conducted on March 22, at 4:00 p.m. at the ISP District 5 Headquarters. This criterion will also be demonstrated at the field team staging area.

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained.

This will be demonstrated during the ISP DCO briefing/TAC interview that will be conducted on March 22, at 4:00 p.m. at the ISP District 5 Headquarters. This criterion will also be demonstrated at the field team staging area.

Criterion 3.c.1: Protective action decisions are implemented for special population groups 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 will be demonstrated by the State through coordination between the UAC and the County EOCs, in accordance with the Braidwood Station EPZ Traffic and Access Control procedures. The staffing of the State posts will be simulated during the exercise.

A TAC interview will be conducted in conjunction with the DCO briefing on March 22, at 4:00 p.m. at the ISP District 5 Headquarters.

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

This will be demonstrated through discussions at the UAC between the Illinois State Police and Illinois Department of Transportation. A message will be injected at the UAC that will drive this demonstration.

State personnel will deal with the impediment by discussing the need for equipment, and its estimated time of arrival, etc. Actual contacts with resource providers will be made and logged.

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 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: The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates.

This criterion will be demonstrated at RAFT with field teams performing radiation measurements with various monitoring equipment. Air samples will be taken with charcoal cartridges and the availability of silver zeolite cartridges will be indicated. Two field teams will be evaluated.

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

This criterion will be demonstrated at RAFT.

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.

This criterion will be demonstrated by the field teams and information will be coordinated with RAFT. Two field teams will be evaluated. Each team will take an air sample with particulate filters.

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 DHS REP guidance.

The State's role in demonstrating this criterion is limited to transmitting the State's protective action recommendation (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: Activities associated with DHS 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. Backup alert and notification of the public is completed within 45 minutes 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.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 SIRC, 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 from the JIC or the SIRC when appropriate.

A rumor control phone bank for public inquiries will be operated by the State during the exercise in a room adjacent to the SIRC.

EVALUATION AREA 6 - SUPPORT OPERATION/FACILITIES

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

This criterion will be demonstrated at Pontiac Township High School during an out of sequence of demonstration conducted on March 23, with set up beginning at 9:00 a.m. Two portal monitors will be set up during the demonstration. Evacuee and emergency worker monitoring and decontamination will be demonstrated. The appropriate number of evacuees will be processed to meet 20% in 12 hours requirement.

Field team staff will discuss procedures for handling personal belongings and evacuee vehicles. An evacuee vehicle will not be monitored and decontaminated.

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.

This criterion will be demonstrated at Pontiac Township High School during an out-of-sequence

demonstration conducted on March 23, with set up beginning at 9:00 a.m. An emergency worker vehicle will be monitored and decontaminated by field team staff.

During the exercise, at the RAFT Staging Area, field team staff will demonstrate monitoring of a field team vehicle. Decontamination of that vehicle will be simulated via an interview.

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

This criterion will be demonstrated at Pontiac Township High School during an out of sequence demonstration conducted on March 23, with set up beginning at 9:00 a.m. Local organizations responsible for operating a reception and congregate care center will be present to demonstrate this criterion.

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 conducted at Silver Cross Hospital in Joliet on March 23 at 9 a.m.

Kurtz Ambulance Service will participate in the drill.

Grundy County Extent-of-Play Agreement March 24, 2010

Criteria that can be re-demonstrated immediately for credit, at the discretion of the evaluator, include the following: 3.a.1, 3.d.1, 3.d.2, 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, 5.a.1 and 5.b.1.

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.

Grundy County will fully activate the Emergency Operations Center (EOC) in Morris, Illinois. The County will implement notification procedures as defined in IPRA-Braidwood. 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.

The Grundy County Sheriff's Department will allow an evaluator to observe and evaluate the initial NARS message and notification at the Sheriff's Communications Center. The following conditions apply:

Telecommunicators shift change takes place at 7 a.m. There is an exchange of information between shifts, usually from 6:50 a.m. to 7:10 a.m. Evaluators are asked not to be disruptive to this process.

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

This criterion will not be demonstrated 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 Grundy County EOC. Coordination of decisions and emergency activities will be demonstrated between Grundy County, the SIRC, UAC and the JIC, and between the County and municipalities within the EPZ. Coordination between Grundy County, Will County and Kankakee County will be demonstrated.

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.

Grundy 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.

Grundy County will adequately 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 school interview.

EVALUATION AREA 2 - PROTECTIVE ACTION DECISION MAKING

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to insure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides.

This criterion does not apply to Grundy 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 Grundy 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 to Grundy County officials in the County EOC. The Grundy 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 special population groups.

The State of Illinois will make protective action recommendations to Grundy County officials in the County EOC. The Grundy County officials will make the final decision regarding what protective actions will be recommended for special population groups.

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 Grundy County.

Criterion 2.e.1: Timely 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 was last demonstrated in 2005 in conjunction with the Dresden exercise and will not be demonstrated during this exercise.

EVALUATION AREA 3 - PROTECTIVE ACTION IMPLEMENTATION

Criterion 3.a.1: The OROs issue appropriate dosimetry 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.

Grundy County will demonstrate this criterion by close coordination with the IEMA Radiological Advisor and timely dissemination and exchange of information within the County Dosimetry Control Officer network. Exercise messages will be injected which will ensure the opportunity to demonstrate this criterion in the County EOC. This criterion will also be demonstrated during the school interview.

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained.

When notified by the State of Illinois to distribute and administer KI, Grundy County officials will discuss the issuance of KI to emergency workers and immobile populations, as a voluntary measure, and will notify the municipalities of the State's recommendation. This criterion will also be demonstrated at the school interview.

Criterion 3.c.1: Protective action decisions are implemented for special population groups within areas subject to protective actions.

This will be demonstrated by Grundy County through the simulated implementation of the appropriate task assignments. The appropriate officials will coordinate transportation and receiving facilities for special populations. 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.

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

One school interview will be conducted at Mazon-Verona-Kinsman (MVK) Elementary/Middle Schools on March 22, 2010 at 1:00 p.m.

The District Superintendent, Principal, a Teacher, the transportation coordinator (DCO), the maintenance supervisor and a bus driver will be present at the interviews.

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

This criterion does not apply to Grundy County. Grundy County is not responsible for staffing any of the designated traffic and access control posts.

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

The Grundy County EOC staff will demonstrate the capability to identify and take appropriate actions concerning impediments to evacuation. A message will 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.

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 Grundy 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.

This criterion does not apply to Grundy County.

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

This criterion was last demonstrated in 2005 in conjunction with the Dresden exercise and will not be demonstrated during this exercise.

EVALUATION AREA 4 - FIELD MEASUREMENT AND ANALYSIS

This evaluation area does not apply to Grundy 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 FEMA REP guidance.

Grundy County will demonstrate the capability to provide both an alert signal and an initial instructional message to populated areas throughout 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 (PAR).

This capability will be demonstrated through the simulated activation of the Braidwood Station EPZ Prompt Notification System as defined in IPRA-Braidwood. The Prompt Notification System (outdoor warning sirens) will not be activated during the exercise.

The ability to provide instructions to the public will be demonstrated through the simulated activation of the local radio station (WCSJ/WJDK). 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 for a message containing a PAR.

The IEMA Controller will terminate the demonstration if the demonstration interferes with the radio station's daily operations.

Coordination between Grundy County, Will County and Kankakee County will be demonstrated.

Criterion 5.a.2: [RESERVED]

Criterion 5.a.3: 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. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system.

This criterion does not apply to Grundy County.

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

Grundy County will demonstrate this criterion by using pre-scripted messages as indicated in IPRA-Braidwood or ad hoc messages will be developed. Contact with the radio station will be simulated for each alert and notification sequence following the initial protective action recommendation.

The ability to provide information to the media will be demonstrated by Grundy County through a briefing held at the Grundy 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 Grundy County through coordination between the County EOC and the JIC. The Grundy 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.

County emergency broadcast messages and news releases, if issued, will be faxed to the JIC.

EVALUATION AREA 6 - SUPPORT OPERATION/FACILITIES

This evaluation area does not apply to Grundy County.

Kankakee County Extent-of-Play March 24, 2010

Criteria that can be re-demonstrated immediately for credit, at the discretion of the evaluator, include the following: 3.a.1, 3.d.1, 3.d.2, 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, 5.a.1 and 5.b.1.

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.

Kankakee County intends to fully activate the Emergency Operations Center (EOC) in Kankakee, Illinois.

The County will implement notification procedures as defined in IPRA-Braidwood. 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 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 demonstrated 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 Kankakee County EOC. Coordination of decisions and emergency activities will be demonstrated between Kankakee County, the SIRC, UAC and the JIC. Coordination between Kankakee County, Grundy County and Will County will be demonstrated.

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.

Kankakee 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.

Kankakee County will adequately demonstrate the ability to support operations through the use of maps, status boards and other displays as appropriate. Dosimetry Control 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, during the traffic and access control demonstration and the school interview.

The DCO briefing for the Sheriff's deputy demonstrating traffic and access control will be conducted at the Kankakee County EOC.

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 Kankakee 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 Kankakee 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 to Kankakee County officials in the County EOC. The Kankakee 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 special population groups.

The State of Illinois will make protective action recommendations to Kankakee County officials in the County EOC. The Kankakee County officials will make the final decision regarding what protective actions will be recommended for special population groups.

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 Kankakee County.

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

This criterion was last demonstrated in 2006 and will not be demonstrated during this exercise.

EVALUATION AREA 3 - PROTECTIVE ACTION IMPLEMENTATION

Criterion 3.a.1: The OROs issue appropriate dosimetry 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.

Kankakee County will demonstrate this criterion by close coordination with the IEMA Radiological Advisor and timely dissemination and exchange of information within the County Dosimetry Control Officer (DCO) network. Exercise messages will be injected which will ensure the opportunity to demonstrate this criterion in the County EOC.

This criterion will also be demonstrated during the traffic and access control demonstration and at the school interview.

The DCO briefing for the Sheriff's deputy demonstrating traffic and access control will be conducted at the Kankakee County EOC.

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained.

When notified by the State of Illinois to distribute and administer KI, Kankakee County officials will discuss the issuance of KI to emergency workers and immobile populations, as a voluntary measure. This criterion will also be demonstrated during the traffic and access control demonstration and the school interview.

The DCO briefing for the Sheriff's deputy demonstrating traffic and access control will be conducted at the Kankakee County EOC.

Criterion 3.c.1: Protective action decisions are implemented for special population groups within areas subject to protective actions.

This will be demonstrated by Kankakee County through the simulated implementation of the appropriate procedures. The appropriate officials will coordinate transportation and receiving facilities for special populations. 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.

Kankakee County officials will demonstrate this capability through the simulated implementation of the appropriate procedures in the County EOC. The EPZ school and transportation provider will be contacted during the exercise.

One school interview will be conducted at Reddick Elementary School (Herscher Dist. #2) on March 22, 2010 at 2:00 p.m.

The District Superintendent, Principal, a Teacher, the transportation coordinator (DCO), the maintenance supervisor and a bus driver will be present at the interviews.

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

Coordination between Kankakee County agencies designated to provide traffic and access control will be exhibited in the County EOC. A Sheriff's deputy will be available during the exercise to demonstrate the staffing of one post. The post for the demonstration will be selected by Kankakee County during the exercise based on exercise play. The deputy will drive to the selected post location for the demonstration. The staffing of the remaining posts will be simulated.

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

The Kankakee County EOC staff will demonstrate the capability to identify and take appropriate actions

concerning impediments to evacuation. A message will 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.

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 Kankakee 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.

This criterion does not apply to Kankakee County.

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

This criterion was last demonstrated in 2006 and will not be demonstrated during this exercise.

EVALUATION AREA 4 - FIELD MEASUREMENT AND ANALYSIS

This evaluation area does not apply to Kankakee 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 FEMA REP guidance.

Kankakee County will demonstrate the capability to provide both an alert signal and an initial instructional message to populated areas throughout 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 (PAR).

This capability will be demonstrated through the simulated activation of the Braidwood Station EPZ Prompt Notification System as defined in IPRA-Braidwood. The Prompt Notification System (outdoor warning sirens) will not be activated during the exercise.

The ability to provide instructions to the public will be demonstrated through the simulated activation of the local radio station (WVLI/WIVR). 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 for a message containing a PAR.

The IEMA Controller will terminate the demonstration if the demonstration interferes with the radio station's daily operations.

Coordination between Kankakee County, Grundy County and Will County will be demonstrated.

Criterion 5.a.2: [RESERVED]

Criterion 5.a.3: 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. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system.

This criterion does not apply to Kankakee County.

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

Kankakee County will demonstrate this criterion by using pre-scripted messages as indicated in IPRA-Braidwood. Contact with the radio station will be simulated for each alert and notification sequence following the sequence issuing the initial protective action recommendation.

The ability to provide information to the media will be demonstrated by Kankakee County through a

briefing held at the Kankakee 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 Kankakee County through coordination between the County EOC and the JIC. The Kankakee 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.

County emergency broadcast messages and news releases, if issued, will be faxed to the JIC.

EVALUATION AREA 6 - SUPPORT OPERATION/FACILITIES

This evaluation area does not apply to Kankakee County.

Will County Extent-of-Play Agreement March 24, 2010

Criteria that can be re-demonstrated immediately for credit, at the discretion of the evaluator, include the following: 3.a.1, 3.d.1, 3.d.2, 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, 5.a.1 and 5.b.1.

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.

Will County intends to fully activate the Emergency Operations Center (EOC) in Joliet, Illinois. The County will implement notification procedures as defined in IPRA-Braidwood. 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 demonstrated 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 Will County EOC. Coordination of decisions and emergency activities will be demonstrated between Will County, the SIRC, UAC and the JIC, and between the County and municipalities within the EPZ. Coordination between Will County, Grundy County and Kankakee County will be demonstrated.

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.

Will 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.

Will County will demonstrate the ability to support operations through the use of maps, status boards and other displays as appropriate. Dosimetry Control Logs will be available from the IEMA Radiological Advisor in the Will County EOC. The availability of dosimetry and KI will be demonstrated at the County EOC, during the traffic and access control demonstration and the school interview.

The DCO briefing for the Sheriff's deputy demonstrating traffic and access control will be conducted at the Will County EOC.

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 Will 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 Will 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 to Will County officials in the County EOC. The Will 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 special population groups.

The State of Illinois will make protective action recommendations to Will County officials in the County EOC. The Will County officials will make the final decision regarding what protective actions will be recommended for special population groups.

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 Will County.

Criterion 2.e.1: Timely 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 was last demonstrated in 2006 and will not be demonstrated during this exercise.

EVALUATION AREA 3 - PROTECTIVE ACTION IMPLEMENTATION

Criterion 3.a.1: The OROs issue appropriate dosimetry 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.

Will County will demonstrate this criterion by close coordination with the IEMA Radiological Advisor and timely dissemination and exchange of information within the County Dosimetry Control Officer (DCO) network. Exercise messages will be injected which will ensure the opportunity to demonstrate this criterion in the County EOC.

This criterion will also be demonstrated during the traffic and access control demonstration and the school demonstration.

The DCO briefing for the Sheriff's deputy demonstrating traffic and access control will be conducted at the Will County EOC.

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained.

When notified by the State of Illinois to distribute and administer KI, Will County officials will discuss the issuance of KI to emergency workers and immobile populations, as a voluntary measure, and will notify the municipalities of the State's recommendation. This criterion will also be demonstrated during the traffic and access control demonstration and school interview.

The DCO briefing for the Sheriff's deputy demonstrating traffic and access control will be conducted at the Will County EOC.

Criterion 3.c.1: Protective action decisions are implemented for special population groups within areas subject to protective actions.

This will be demonstrated by Will County through the simulated implementation of the appropriate procedures. The appropriate officials will coordinate transportation and receiving facilities for special populations. 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.

Will 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.

One school interview will be conducted at Reed-Custer Community Unit School Dist. #225U on March 22, 2010 at 3:00 p.m.

The District Superintendent, Principal, a Teacher, the transportation coordinator (DCO), the maintenance supervisor and a bus driver will be present at the interviews.

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

Coordination between Will County agencies designated to provide traffic and access control will be exhibited in the County EOC. A Sheriff's deputy will be available during the exercise to demonstrate the staffing of one post. The post for the demonstration will be selected by Will County during the exercise based on exercise play. The deputy will drive to the selected post location for the demonstration. The staffing of the remaining posts will be simulated.

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

The Will County EOC staff will demonstrate the capability to identify and take appropriate actions concerning impediments to evacuation. A message will 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.

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 Will 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.

This criterion does not apply to Will County.

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

This criterion was last demonstrated in 2006 and will not be demonstrated during this exercise.

EVALUATION AREA 4 - FIELD MEASUREMENT AND ANALYSIS

This evaluation area does not apply to Will 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 FEMA REP guidance.

Will County will demonstrate the capability to provide both an alert signal and an initial instructional message to populated areas throughout 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 (PAR).

This capability will be demonstrated through the simulated activation of the Braidwood Station EPZ Prompt Notification System as defined in IPRA-Braidwood. The Prompt Notification System (outdoor warning sirens) will not be activated during the exercise.

The ability to provide instructions to the public will be demonstrated through the simulated activation of the local radio station (WJOL/WSSR/WCCQ/WRXQ). 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 for a message containing a PAR.

The IEMA Controller will terminate the demonstration if the demonstration interferes with the radio station's daily operations.

Coordination between Will County, Grundy County and Kankakee County will be demonstrated.

Criterion 5.a.2: [RESERVED]

Criterion 5.a.3: 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. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system.

This criterion does not apply to Will County.

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

Will County will demonstrate this criterion by using pre-scripted messages as indicated in IPRA-Braidwood. Contact with the radio station will be simulated for each alert and notification sequence following the sequence issuing the initial protective action recommendation.

The ability to provide information to the media will be demonstrated by Will County through a briefing held at the Will 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 Will County through coordination between the County EOC and the JIC. The Will 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.

County emergency broadcast messages and news releases, if issued, will be faxed to the JIC.

EVALUATION AREA 6 - SUPPORT OPERATION/FACILITIES

This evaluation area does not apply to Will County.

APPENDIX H: SCENARIO DETAILS

OFFSITE EXERCISE TIMELINE

March 24, 2010

Approx.
Time

Event/Anticipated Response

0745 Initial conditions/weather forecast message to players.

0810 An Alert is declared at Braidwood Station.

0825 Exelon notifies the IEMA Telecommunicator of the ALERT via NARS.

IEMA Telecommunicator verifies the NARS message.

An IEMA Duty Officer contacts the Braidwood Station Shift Engineer.

IEMA Telecommunicator notifies IEMA personnel of the ALERT per SOP.

IEMA may activate the State of Illinois Response Center (SIRC) and Radiological Emergency Assessment Center (REAC), if appropriate.

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), if appropriate.

IEMA notifies Governor's Office of the ALERT. (Simulated)

IEMA Telecommunicator notifies appropriate State agencies of the ALERT.

IEMA notifies DHS/FEMA of the ALERT. (Simulated)

0840 IEMA Telecommunicator notifies the counties of the ALERT via NARS.

County telecommunicators complete and verify the NARS message.

County telecommunicators notify County officials and municipalities of the ALERT per SOP.

The counties may activate the EOCs, if appropriate.

Municipal telecommunicators complete and verify the NARS message.

Municipal telecommunicators notify officials of the ALERT per SOP.

<u>Approx. Time</u>	<u>Event/Anticipated Response</u>
0920	A SITE AREA EMERGENCY is declared at Braidwood Station.
0935	Exelon notifies the IEMA Telecommunicator of the SITE AREA EMERGENCY via NARS.
	IEMA Telecommunicator verifies the NARS message.
	REAC contacts the Braidwood Station Shift Engineer.
	SIRC is activated if not previously activated.
	SIRC notifies the Governor's Office and requests that a representative report to the State EOC. (Simulated)
	State dispatches liaisons to the County EOCs, UAC, RAFT, JIC, TSC and EOF, if not previously dispatched.
	SIRC notifies DHS/FEMA of conditions. (Simulated)
	IEMA notifies State agencies (Simulated): <ul style="list-style-type: none">- Illinois State Police- IDOT/Division of Highways- IDOT/Division of Aeronautics- IDNR- Illinois National Guard- ICC- American Red Cross- IDPH- IEPA- IDOC- Office of the State Fire Marshal- others as appropriate
	REAC contacts Federal agencies. (Simulated)
	REAC provides an update to the SIRC and County EOC Liaisons.

	REAC provides an update to the JIC.
0950	IEMA notifies the counties of the SITE AREA EMERGENCY via NARS. County telecommunicators complete and verify the NARS message.
Approx. Time	<u>Event/Anticipated Response</u> County telecommunicators notify County officials and municipalities of the SITE AREA EMERGENCY per SOP. County EOCs are activated if not previously activated. Counties implement public notification procedures, if appropriate. (Simulated) Municipal telecommunicators complete and verify the NARS message. Municipal telecommunicators notify officials per SOP. Dosimetry is issued to emergency personnel, EOC staff and exposure records are completed.

1050	A GENERAL EMERGENCY is declared at Braidwood Station.
1105	Exelon notifies the IEMA Telecommunicator of the GENERAL EMERGENCY via NARS. Protective actions are recommended. IEMA Telecommunicator verifies the NARS message. The SIRC and REAC evaluate the protective action recommendation. A recommendation is made to the Governor. The Governor recommends that protective actions be implemented. SIRC staff is advised of the situation. SIRC advises UAC, the County EOC liaisons and JIC staff of the situation. SIRC notifies FEMA of conditions. (Simulated) REAC provides an update to the SIRC and County EOC liaisons. REAC provides an update to the JIC.

1120 SIRC notifies the counties of the GENERAL EMERGENCY and the recommended protective actions via NARS.

County telecommunicators complete and verify the NARS message.

County telecommunicators notify County officials and municipalities per SOP.

Approx.
Time

Event/Anticipated Response

Counties implement public notification procedures and traffic and access control per SOPs, as applicable.

Municipal telecommunicators complete and verify the NARS message.

Municipal telecommunicators notify EOC staff.

1215 Terminate exercise play.

Braidwood 2010 NRC Graded Exercise

SCENARIO TIMELINE – MARCH 24, 2010

Unit 1 Initial Conditions		Unit 2 Initial Conditions
<ul style="list-style-type: none"> Unit 1 at 1256 MW. Equipment OOS – PZR Pressure channel 458 failed LOW – Tech Spec 3.3.1, Conditions A, E, K and Tech Spec 3.3.2, Conditions A, D – 1BWOA INST-2, Att. B, is in progress at step 6 waiting to trip bistables (brief at 1030). Failed Fuel Rad Monitor 1PR06J OOS. Major evolutions scheduled – none. 370 days on-line. 		<ul style="list-style-type: none"> Unit 2 is defueled, refueling outage in progress. Major equipment OOS – 2B SX pump O for pump replacement.
0800	Start Scenario Wind direction – from 300 degrees, 6 mph, Stability Class E	
0810 (10)	ALERT, HA5 - Natural and destructive phenomena affecting the VITAL AREA <ul style="list-style-type: none"> Flooding in the Auxiliary Building that results in EITHER: Degraded safety system performance as indicated in the Control Room OR Industry safety hazards (e.g. electric shock) that precludes access necessary to operate or monitor safety equipment – SM should declare ALERT - HA5.5 due to Flooding in SX room Main Control Board Annunciator(s): <ul style="list-style-type: none"> 1-2-A2: SX PUMP DSCH HDR PRESS LOW 1-2-C2: SX STRN DP HIGH (0811) Control Message will be delivered to SM / US – Security rover (OSA patrol) reports flooding in the Auxiliary Building B SX room (need picture showing flooding / damage for Control Messages). Ops crew will respond per 0 & 1BWOA PRI-8 & enter Tech Spec 3.7.8. ERO will be activated – PA and Dialogics. 	
0830 (30)	RCS begins to show signs of rising activity <ul style="list-style-type: none"> Containment Radiation levels will begin to slowly rise. 	
0835 (35) (ALERT + 25)	Equipment failures requiring OSC/TSC attention <ul style="list-style-type: none"> [IM task] – PZR Pressure channel failure; [EM task] – 1B SX pump trip. [MM task] – AB flooding – temporary pipe patch. [MM task] – 1SX259B, 1B CV pump FP cooling valve, cannot be opened locally. 	
0920 (80) (ALERT + 70)	SITE AREA EMERGENCY, MS3 - Failure of the Reactor Protection System to complete or initiate an automatic reactor trip once a Reactor Protection System setpoint has been exceeded and manual trip was not successful. <ul style="list-style-type: none"> 1A RCP Trips provides an auto Rx trip signal – manual Rx trip not successful (ATWS). Ops Crew will respond per 1BwFR-S.1, then 1BwEP-0, 1BwEP-2, 1BwEP ES-1.1. TSC should declare SITE AREA EMERGENCY - MS3. Unit 1 Rx will trip on operator locally opening Rx Trip Breakers – 2 Control Rods will NOT fully insert (J3 & J13). SG Safeties/Atmospheric Relief Valves open on Turbine Trip – the S/G PORV on 1B SG remains OPEN (2 Control Messages – 1st EO – (from switchyard) reports that 1B S/G PORV on 1B SG (one tail pipe) is discharging steam AND 2nd Security BRE reports steam blowing from one tailpipe from the 1B & C MSIV Room – does not see any damage caused by the steam) – 1B SG faulted – depressurizes to 0 psig. Site Assembly (Simulated) is initiated. Containment Rad Monitors rising - 1AR020(21) rise to 1.7 R/hr (0920 to 1015 – 1AR011(12) rise to 530 mR/hr (0920 to 1015). 	
0945 (105) (SAE + 25)	RCS Chemistry sample High Activity <ul style="list-style-type: none"> Chemistry result returned – RCS activity DE I-131 is 331 µCi/gm (Control Message) Loss of Fuel Clad Fission Product Barrier – FC2, concurrent EAL FA1 - no EAL escalation 	
1050 (170) (SAE + 90)	GENERAL EMERGENCY, FG1 – 1B SG - Faulted & Ruptured - Loss of 2 FPBs with Loss or Potential Loss of 3rd FPB Loss of ALL 3 FPBs - FC2 (Loss); RC6 (Loss); CT6.1/CT6.2 (Loss) [T=0 for GE is CT6.1/CT6.2] Release in Progress <ul style="list-style-type: none"> SGTR (500 gpm) in 1B SG Max PARs (Evacuate 0-5 mile radius, 10 miles downwind) Wind direction – from 300 degrees, 6 mph, Stability Class E (Subareas: 1, 2, 3, 6, 7, 9, 10, 11, 13, 14) Control Message – Security BRE “?” / EO reports steam relieving from one tailpipe Perform Environs Monitoring Drill in parallel to the exercise??? 	
1115 (195) (GE + 25)	Concurrent RG1 when release peaks <ul style="list-style-type: none"> DAPAR indicates PAGs exceeded at >5 miles - 	
1215 (255) (GE + 85)	Exercise Termination	

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