



FEMA

MAR 5 2008

Mr. Jim Caldwell
Regional Administrator
U.S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road
Lisle, Illinois 60542-4351

Dear Mr. Caldwell:

Enclosed is one copy of the Final Report, including narratives, for the December 4, 2007, Radiological Emergency Preparedness Full Participation Plume Pathway Exercise for the Kewaunee Power Station. Under separate cover, three copies of this report are being sent to the Planning Section Supervisor, Wisconsin Emergency Management, for the State's use and for distribution to the Counties of Kewaunee and Manitowoc. The State of Wisconsin, Kewaunee and Manitowoc Counties, and the utility owner/operator, Dominion Energy Kewaunee, Incorporated, participated in this exercise. The Final Report was prepared by the Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA) Region V, Radiological Emergency Preparedness Program.

One Deficiency and six associated Areas Requiring Corrective Action (ARCAs) concerning State Field Team operations were identified for the State of Wisconsin during this exercise. The Deficiency was assessed under Criterion 2.a.1 – Emergency Worker Exposure Control – whereby the health and safety of State Field Team members would have been compromised because they were dispatched without proper regard to administrative exposure control limits, the field team members did not recognize the limits and they did not act upon them when observed.

The first ARCA for the State of Wisconsin was identified under Criterion 1.c.1 – Direction and Control – whereby the Forward Operations Center did not provide adequate direction and control to State Field Teams concerning KPS Declarations and radiological release status.

The second ARCA for the State of Wisconsin was identified under Criterion 3.a.1 – Implementation of Emergency Worker Exposure Control – whereby State Field Team 1 was not briefed on radiological exposure limits and did not adequately manage radiological exposure.

The third ARCA for the State of Wisconsin was identified under Criterion 3.b.1 – Implementation of KI Decisions – whereby the Forward Operations Center did not brief State

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Field Teams on the proper use of potassium iodide (KI) in accordance with procedures prior to dispatch to their field assignments.

The fourth ARCA for the State of Wisconsin was identified under Criterion 4.a.1 – Plume Phase Field Measurements (Instrumentation) – whereby State Field Teams were not adequately equipped to perform field measurements and did not understand the limitations of the instruments issued.

The fifth ARCA for the State of Wisconsin was identified under Criterion 4.a.2 – Plume Phase Field Measurements (Release Characterization and Exposure Control) – whereby the State Field Teams were not familiar with and incorrectly reported radiation instrument units of measure.

The sixth ARCA for the State of Wisconsin was identified under Criterion 4.a.3 – Plume Phase Field Measurements (Plume Identification) – whereby State Field Teams did not make and record ambient radiation measurements at appropriate locations before, during or after the collection of radioiodine and particulate air samples and did not collect appropriate low-background measurements on sample media.

In addition, there was an ARCA identified for the State of Wisconsin under Criterion 6.a.1 – Monitoring and Decontamination of Evacuees, and Registration of Emergency Workers – whereby Monitoring and Decontamination staff did not maintain contamination control in accordance with their plans and procedures.

There were no Areas Requiring Corrective Action (ARCAs) identified for the State of Wisconsin and Kewaunee and Manitowoc Counties that were successfully redemonstrated during the exercise.

There was one ARCA for Kewaunee County that was identified under Criterion 5.b.1 – Emergency Information and Instructions for the Public and the Media – whereby the County PIO at the JIC provided conflicting information to the media concerning protective action instructions for livestock farmers.

There was one ARCA (Number 49-06-5.b.1-A-02) from a previous exercise for Kewaunee County under Criterion 5.b.1 – Emergency Information and Instructions for the Public and the Media – whereby EAS stations were not advised to terminate a Livestock Advisory instructing farmers to shelter their animals once the public was directed to evacuate – that was resolved during this exercise.

There was one ARCA for Manitowoc County that was identified under Criterion 5.b.1 – Emergency Information and Instructions for the Public and the Media – whereby the County PIO at the JIC provided conflicting information to the media concerning protective action instructions for livestock farmers.

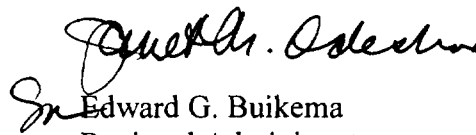
There was one ARCA (Number 49-06-5.b.1-A-03) from a previous exercise for Manitowoc County under Criterion 5.b.1 – Emergency Information and Instructions for the Public and the

Media – whereby an incorrect “hotline” special assistance telephone number was provided to the media – that was resolved during this exercise.

On December 21, 2007, the State of Wisconsin submitted a Schedule of Corrective Actions (SCAs) to address the six ARCAs and single Deficiency identified in the December 4, 2007, Radiological Emergency Preparedness (REP) Full Participation Plume Exposure Pathway Exercise for the Kewaunee Power Station (KPS). The State’s proposed SCAs included Field Team training and a remedial demonstration scheduled to take place on March 11, 2008. The DHS/FEMA Region V has received and approved the State’s SCAs and will prepare a follow-up report upon completion of the evaluated remedial demonstration.

If you should have any questions, please contact William E. King, Chairman, Regional Assistance Committee, DHS/FEMA Region V, at (312) 408-5575.

Sincerely,


Edward G. Buikema
Regional Administrator

Enclosure

cc: Mr. Anthony McMurtray, Chief
Inspection and Communication Section
U.S. Nuclear Regulatory Commission

U. S. NRC Public Document Room
Attn: Ron Schmidt

Kewaunee Power Station
Exercise Report - 2007-12-04
Final Report - Radiological Emergency
Preparedness (REP) Program
2008-02-29



FEMA





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Exercise Report

Kewaunee Power Station

Exercise Date: 2007-12-04

Report Date: 2008-02-29

U.S. DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

REP Program

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1. Executive Summary

On December 4, 2007, a Radiological Emergency Preparedness (REP) Full Participation Plume Exposure Pathway Exercise was conducted for the 10-mile Emergency Planning Zone (EPZ) around the Kewaunee Power Station (KPS) by the U.S. Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA), Region V. The purpose of the exercise was to assess the level of 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 1, 2005. The qualifying emergency preparedness exercise was conducted on January 21, 1981.

DHS/FEMA wishes to acknowledge the efforts of the many individuals in the State of Wisconsin and the Counties of Kewaunee and Manitowoc who participated in this 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 was evident during this exercise.

This Final Report contains the evaluation of the biennial exercise and the following activities that were conducted out-of-sequence on December 3, 2007:

State of Wisconsin: Evacuee / Emergency Worker Monitoring and Evacuee Vehicle Monitoring and Decontamination, and Emergency Worker Vehicle Monitoring and Decontamination were demonstrated at the Algoma High School

Kewaunee County: Dosimetry Distribution, Evacuee / Emergency Worker Registration, Congregate Care, and a Medical Services (MS-1) demonstration involving transporting and caring for a potentially contaminated and injured individual were demonstrated at the Algoma High School.

Manitowoc County: There were no out of sequence activities.

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

One Deficiency and six associated Areas Requiring Corrective Action (ARCAs) concerning State Field Team operations were identified for the State of Wisconsin during this exercise. The Deficiency was assessed under Criterion 2.a.1 – Emergency Worker Exposure Control – whereby the health and safety of State Field Team members would have been compromised because they were dispatched without proper regard to administrative exposure control limits, the field team members did not recognize the limits, and they did not act upon them when observed.

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The third ARCA for the State of Wisconsin was identified under Criterion 3.b.1 – Implementation of KI Decisions – whereby the Field Operations Center did not brief State Field Teams on the proper use of potassium iodide (KI) in accordance with procedures prior to dispatch to their field assignments.

The fourth ARCA for the State of Wisconsin was identified under Criterion 4.a.1 – Plume Phase Field Measurements (Instrumentation) – whereby State Field Teams were not adequately equipped to perform field measurements and did not understand the limitations of the instruments issued.

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There was one ARCA for Manitowoc County that was identified under Criterion 5.b.1 – Emergency Information and Instructions for the Public and the Media – whereby the County PIO at the JIC provided conflicting information to the media concerning protective action instructions for livestock farmers.

There was one ARCA (Number 49-06-5.b.1-A-03) from a previous exercise for Manitowoc County under Criterion 5.b.1 – Emergency Information and Instructions for the Public and the Media – whereby an incorrect “hotline” special assistance telephone number was provided to the media – that was resolved during this exercise.

A detailed discussion of these issues can be found in Part IV of this Report.

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2. Introduction

On December 7, 1979, the President directed FEMA to assume the lead responsibility for all off-site nuclear planning and response. DHS/FEMA's activities are conducted pursuant to 44 Code of Federal Regulations (CFR) Parts 350, 351, and 352. 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.

FEMA Rule 44 CFR 350 establishes the policies and procedures for 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 off-site 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, dated 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 Kewaunee Power Station to FEMA Region V by the State of Wisconsin and involved local jurisdictions occurred on April 4, 1984. Formal approval of these RERPs was granted by FEMA to the State of Wisconsin during June 14, 1985, under 44 CFR 350.

A REP Full Participation Plume Exposure Pathway Exercise was conducted on December 4, 2007, by DHS/FEMA Region V to assess the capabilities of State and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving the Kewaunee Power Station. The purpose of this exercise report is to present the exercise results and findings on the performance of the offsite response organizations (OROs) during a simulated radiological emergency.

The findings presented in this report are based on the evaluations of the Federal evaluator 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 3 of this report, entitled "Exercise Overview," presents basic information and data relevant to the exercise. This section of the report contains a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities which were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

Section 4 of this report, entitled "Exercise Evaluation and Results," 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: descriptions of all Deficiencies and ARCAs assessed during this exercise, recommended corrective actions and descriptions of unresolved ARCAs assessed during previous exercises and the status of the OROs' efforts to resolve them.

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3. Exercise Overview

Contained in this section are data and basic information relevant to the December 4, 2007, REP Full Participation Plume Exposure Pathway Exercise to test the offsite emergency response capabilities in the area surrounding the Kewaunee Power Station. This section of the exercise report includes a description of the 10-mile Emergency Planning Zone, a listing of all participating jurisdictions and functional entities that were evaluated, and a tabular presentation of the time of the actual occurrence of key exercise events and activities.

3.1. EPZ Description

The Kewaunee Power Station occupies a 900-acre site that is located on the Lake Michigan shore, in the town of Carlton, nine miles south of Kewaunee, Wisconsin, and 35 miles southeast of Green Bay, Wisconsin. The plant began commercial operation on June 16, 1974.

The Kewaunee Power Station, which is owned and operated by Dominion Energy Kewaunee, Inc., has one Westinghouse Electric pressurized water nuclear reactor that generates about 560 megawatts of electrical power. In an average year, the plant generates about 2.26 billion kilowatt-hours of electricity, which is sufficient to supply the yearly energy needs of the Green Bay metropolitan area plus the remaining homes and farms in Brown, Kewaunee, Door, Marinette, Oconto, and Winnebago Counties. These counties have a population of about one-half million people.

The nearest population centers of 25,000 people or more are, according to the 2000 census, Manitowoc 13 miles south-southwest of the site, with 32,547 people; Green Bay 35 mile northwest of the site, with 87,899 people; Appleton 43 miles west of the site, with 59,032 people; and Sheboygan 36 miles southwest of the site, with 48,085 people. There are no other population centers with populations greater than 25,000 people that lie within 50-miles of the site. The town of Two Rivers, which is located 10 miles south of the site, had a 2000 census population of 13,354. The total population located within the 10-mile plume pathway EPZ was 22,700.

The following radiological emergency planning Sub-areas are included within the 10-mile EPZ: 5, 10N, 10NW, 10W, 10SW and 10S.

3.2. Exercise Participants

Agencies and organizations of the following jurisdictions participated in the Kewaunee Power Station exercise:

State Jurisdictions

Wisconsin Emergency Management
Wisconsin Department of Health and Family Services - Radiation Protection Section
Wisconsin Department of Health and Family Services - Human Services
Wisconsin Department of Health and Family Services - Public Health
Wisconsin Department of Natural Resources - Bureau of Drinking Water
Wisconsin Department of Natural Resources - Bureau of Forest Protection
Wisconsin Department of Natural Resources - Bureau of Law Enforcement
Wisconsin Department of Agriculture, Trade and Consumer Protection - Office of the Secretary
Wisconsin Department of Agriculture, Trade and Consumer Protection - Animal Health
Wisconsin Department of Agriculture, Trade and Consumer Protection - Food Safety
Wisconsin Department of Agriculture, Trade and Consumer Protection - Agrichemical
Wisconsin Department of Justice
Wisconsin Department of Transportation - Highways
Wisconsin Department of Transportation - State Patrol
Department of Military Affairs - Wisconsin National Guard
Wisconsin Public Service Commission

Risk Jurisdictions

Kewaunee County Board of Supervisors
Kewaunee County Emergency Management
Kewaunee County Fire and Rescue
Kewaunee County Health Department
Kewaunee County Highway Department
Kewaunee County Human Services
Kewaunee County Sheriff's Department
Kewaunee County Agriculture Extension Service
Kewaunee School District - Transportation Services
Luxemburg-Casco School District

Manitowoc County Board of Supervisors
Manitowoc County Emergency Management / Joint Dispatch
Manitowoc County Fire and Rescue
Manitowoc County HazMat
Manitowoc County Health Department
Manitowoc County Highway Commission
Manitowoc County Human Services
Manitowoc County Sheriff's Department
Manitowoc County Agriculture Extension Service - University of Wisconsin

Support Jurisdictions

- Michicot School District
- Michicot School District - Transportation Services
- Valders School District (Host District)
- Kewaunee School District
- Kewaunee School District - Transportation Services
- Luxemburg-Casco School District (Host District)
- City of Algoma Police Department

Private Jurisdictions

- American Red Cross
- Dominion Energy Kewaunee, Inc.
- Dworak Bus Company
- Lakeshore Aviation
- Amateur Radio Emergency Services
- Radio Amateur Civil Emergency Services
- Radio Stations WCUB / WLTU
- Radio Station WBDK

Federal Jurisdictions

- Federal Emergency Management Agency - Region V
- U.S. Coast Guard - Two Rivers Station
- U.S. Nuclear Regulatory Commission

3.3. Exercise Timeline

Table 1, on the following page, presents the times at which key events and activities occurred during the Kewaunee Power Station Radiological Emergency Preparedness (REP) Full Participation Plume Exposure Pathway Exercise conducted on December 4, 2007. Also included are times that notifications were made to the participating jurisdictions/functional entities.

TABLE 1. EXERCISE TIMELINE

DATE AND SITE: December 4, 2007 – Kewaunee Power Station

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken					
		Radiological Coordinator Room	State of Wisconsin	FOC MRL MCC	Kewaunee County	Manitowoc County	Joint Information Center
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	0815	0836	0825	0845	0836	0836	0934
Site Area Emergency	1007	1013	1023	1015	1023	1023	1037
General Emergency	1116	1118	1125	1124	1129	1129	1131
Release of Radioactive Material Started	1116	1118	1125	1124	1129	1129	1131
Release of Radioactive Material Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		0940	0907	0845	0918	0917	1031
Declaration of State of Emergency - State		N/A	1122	N/A	1125	1128	N/A
Declaration of State of Emergency - County		N/A	N/A	N/A	1137	1141	N/A
Exercise Terminated		1350	1353	1346	1350	1350	1355
Early Informational Message: Notice of KPS Incident.		N/A	0916	N/A	0916	0916	N/A
1 st Early Precautionary Action Decision - Counties Evacuate Special Populations (Schools, etc.)		N/A	N/A	N/A	1032	1030	N/A
2 nd Early Precautionary Action - State AG Advisory - Shelter livestock and place on stored feed / protected water in 10-mile EPZ.		N/A	1040		1034	1035	N/A
1 st Protective Action Decision: Evacuate Sub-area 5		NA	1133	NA	1133	1133	NA
1 st Siren Activation		NA	NA	NA	1135	1135	NA
1 st EAS Message		NA	NA	NA	1139	1139	NA
2 nd Protective Action Decision: Evacuate Sub-areas 5, 10W, 10SW		NA	1250	NA	1257	1257	NA
2 nd Siren Activation		NA	NA	NA	1305	1305	NA
2 nd EAS Message		NA	NA	NA	1309	1309	NA
KI Administrative Decision - State PAR for Emergency Workers and Immobile Populations in 10-mile EPZ take KI		1133	1125	1132	1134	1135	1135

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4. 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 December 4, 2007, REP Full Participation Plume Exposure Pathway Exercise to test the off-site emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Kewaunee Power 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 3 of this report.

4.1. Summary Results of Exercise Evaluation

The matrix presented in Table 2, 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 ARCAs assessed and no unresolved ARCAs from prior exercises)

D – Deficiency/(ies) assessed

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

N – Not Demonstrated (reason explained in Section 4.2)

Blank – Not scheduled for demonstration

Table 2 - Summary of Exercise Evaluation (3 pages)

DATE: 2007-12-04 SITE: Kewaunee Power Station, WI A: ARCA, D: Deficiency, M: Met		Wisconsin - JWP - State WC #2	Wisconsin - SLEOC	Wisconsin - SRC Room	Wisconsin - FOC/MRL/MCOM	Wisconsin - State FMT #1	Wisconsin - State FMT #2	Wisconsin State Liaison - WEM Regional Dir - K-Co	Wisconsin State Liaison - WEM Regional Dir - M-Co	Wisconsin - JIC/Hotline	Wisconsin - EVAC E/W M/D - M-Co RC - Co Hwy Commission	Wisconsin - EVAC Veh M/D - M-Co RC - Co Hwy Commission	Wisconsin - E/W Veh Equip M/D - M-Co RC - Co Hwy Commission	Wisconsin - MS-I Drift - Facility (M-Co) - Holy Family MedCenter
Emergency Operations Management														
Mobilization	1a1	M	M	M	M	M	M			M				
Facilities	1b1													
Direction and Control	1c1		M	M	A			M	M	M				
Communications Equipment	1d1	M	M	M	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	M	D									
Radiological Assessment and PARs	2b1		M	M										
Decisions for the Plume Phase -PADs	2b2		M	M				M	M					
PADs for protection of special populations	2c1		M	M										
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1													
Rad Assessment and Decision making concerning Relocation, Reentry, and Return	2e1													
Protective Action Implementation														
Implementation of emergency worker exposure control	3a1				M	A	M				M	M	M	M
Implementation of KI decision	3b1				A	M	M				M	M	M	
Implementation of protective actions for special populations - EOCs	3c1													
Implementation of protective actions for Schools	3e2													
Implementation of traffic and access control	3d1													
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					A	M							
Field Teams obtain sufficient information	4a2				A									
Field Teams Manage Sample Collection Appropriately	4a3					A	M							
Post plume phase field measurements and sampling	4b1													
Laboratory operations	4e1													
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	M	M								
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																		
Transportation and treatment of contaminated injured individuals	6d1																		M

Table 2 - Summary of Exercise Evaluation (Continued, page 2/3)

DATE: 2007-12-04 SITE: Kewaunee Power Station, WI A: ARCA, D: Deficiency, M: Met																																				
		Wisconsin - EVAC	E-W M/D	K-Co RC	Algoma HS	Wisconsin - EVAC	Veh M/D	K-Co RC	Algoma HS	Wisconsin - E-W Veh Equip M/D	K-Co RC	Algoma HS	K-Co - IWP	Sheriff's Dispatch Center	K-Co - EOC	K-Co - JIC	Co PIO	K-Co - EAS	WBDK	K-Co - EV-2	Kewaunee SD	K-Co - DDP	Annex Bldg	K-Co - Primary RA	Exception Areas	K-Co - DDP	Algoma HS	K-Co - EVAC/E-W Reg	K-Co RC	Algoma HS	K-Co - CCC	Algoma HS				
Emergency Operations Management																																				
Mobilization	1a1									M	M													M												
Facilities	1b1																																			
Direction and Control	1c1												M																							
Communications Equipment	1d1	M	M	M	M	M	M			M	M							M	M	M	M	M	M	M	M	M	M	M	M	M	M	M				
Equip & Supplies to support operations	1e1	M	M	M	M	M	M			M									M	M	M	M	M	M	M	M	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																							
PADs for protection of special populations	2c1												M																							
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1																																			
Rad Assessment and 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	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M		
Implementation of KI decision	3b1	M	M	M	M	M	M			M									M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
Implementation of protective actions for special populations - EOCs	3c1												M																							
Implementation of protective actions for Schools	3e2												M							M																
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																		
Activation of the prompt alert and notification system - Fast Breaker	5a2																																			
Activation of the prompt alert and notification system - Exception areas	5a3																								M											
Emergency information and instructions for the public and the media	5b1												M		A																					

Support Operations/Facilities																		
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1	A	M															M
Mon / decon of emergency worker equipment	6b1			M														
Temporary care of evacuees	6c1																	M
Transportation and treatment of contaminated injured individuals	6d1																	

Table 2 - Summary of Exercise Evaluation (Continued. page 3/3)

DATE: 2007-12-04 SITE: Kewaunee Power Station, WI A: ARCA, D: Deficiency, M: Met														
			K-Co - MS-I Drift - Transportation - K-Co RC - Algoma Resene	M-Co - IWP - Sheriff's Dept - Joint Dispatch Center	M-Co - EOC	M-Co - DDP - Sheriff's Dept.	M-Co - TACP	M-Co - Supplementary RA - Lakeshore Aviation	M-Co - JIC - Co PIO	M-Co - EAS - WCUB WL TU	M-Co - EV-2 - Mishicot SD	M-Co - DDP - Co Hwy. Commission	M-Co - EVAC EW Reg - M-Co RC - Co Hwy Dept	M-Co - CCC - Lutheran HS
Emergency Operations Management														
Mobilization	1a1		M	M										
Facilities	1b1													
Direction and Control	1c1			M										
Communications Equipment	1d1	M	M	M	M	M	M	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										
PADs for protection of special populations	2c1			M										
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1													
Rad Assessment and 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			
Implementation of KI decision	3b1	M		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				
Implementation of traffic and access control	3d1			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				

Activation of the prompt alert and notification system - Fast Breaker	5a2																		
Activation of the prompt alert and notification system - Exception areas	5a3						M												
Emergency information and instructions for the public and the media	5b1			M					A										
Support Operations/Facilities																			
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1																		M
Mon / decon of emergency worker equipment	6b1																		
Temporary care of evacuees	6c1																		M
Transportation and treatment of contaminated injured individuals	6d1	M																	

4.2. Status of Jurisdictions Evaluated

This subsection provides information on the evaluation of each participating jurisdiction and functional entity in a jurisdiction-based, issues-only format. Presented below are definitions of the terms used in this subsection relative to criteria demonstration status.

- **Met** – Listing of the demonstrated exercise criteria under which no Deficiencies or ARCAs were assessed during this exercise and under which no ARCAs assessed during prior exercises remain unresolved.
- **Deficiency** – Listing of the demonstrated exercise criteria under which one or more Deficiencies were assessed during this exercise. Included is a description of each Deficiency and recommended corrective actions.
- **Area Requiring Corrective Actions** – Listing of the demonstrated exercise criteria under which one or more ARCAs was assessed during the current exercise or ARCAs assessed during prior exercises remain unresolved. Included is a description of the ARCAs assessed during this exercise and the recommended corrective action to be demonstrated before or during the next biennial exercise.
- **Not Demonstrated** – Listing of the exercise criteria that were not demonstrated as scheduled during this exercise and the reason(s) they were not demonstrated.
- **Prior Issues – Resolved** – Descriptions of ARCAs assessed during previous exercises that were resolved in this exercise and the corrective actions demonstrated.
- **Prior Issues – Unresolved** – Descriptions of ARCAs assessed during prior exercises that were not resolved in this exercise. Included is the reason the ARCA remains unresolved and recommended corrective actions to be demonstrated before or during the next biennial exercise.

The following are definitions of the two types of exercise issues that are discussed in this report.

- A Deficiency is defined in FEMA-REP-14 as "...an observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that

appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant."

- An ARCA is defined in FEMA-REP-14 as "...an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety."

DHS/FEMA has developed a standardized system for numbering exercise issues (Deficiencies and ARCAs). This system is used to achieve consistency in numbering exercise issues among DHS/FEMA Regions and site-specific exercise reports within each Region. It is also used to expedite tracking of exercise issues on a nationwide basis.

The identifying number of Deficiencies and ARCAs includes the following elements, with each element separated by a hyphen (-).

- Plant Site Identifier – A two-digit number, corresponding to the Utility Billable Plant Site Code.
- Exercise Year – The last two digits of the year the exercise was conducted.
- Criterion Number – An alpha and two-digit number corresponding to the criteria numbers in the six Exercise Evaluation Areas described in Federal Register Notice/Vol. 67, No. 80 dated April 25, 2002, which amends FEMA-REP 14, Radiological Emergency Preparedness Exercise Manual.
- Issue Classification Identifier – (D = Deficiency, A = ARCA). Only Deficiencies and ARCAs are included in exercise reports. Plan Issues are reported to the State(s) via a letter from the Regional Director. Therefore, standardized issue numbers are not assigned to Plan Issues.
- Exercise Identification Number – A separate two- (or three-) digit indexing number assigned to each issue identified in the exercise.

4.2.1. State Jurisdictions

4.2.1.1. Wisconsin - Initial Warning Point - State Warning Center #2

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

4.2.1.2. Wisconsin - State Emergency Operations Center

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

4.2.1.3. Wisconsin - State Radiological Coordinator Room

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

4.2.1.4. Wisconsin - State Forward Operations Center/Mobile Radiological Laboratory/Mobile Communications Center

- a. MET: 1.a.1, 1.d.1, 1.e.1, 3.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: 1.c.1, 3.b.1, 4.a.2.

ISSUE NO.: 33-07-1c1-A-01

ISSUE: Key personnel with functional roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible.

CONDITION: The FTC failed to give the appropriate information to the field teams including the declaration of the Site Area Emergency at 1015 hours, the declaration of the General Emergency, that there "might be a release" at 1124 hours and when the release increased due to fuel damage at 1234 hours.

POSSIBLE CAUSE: The FTC is new to the position and may not completely understand the significance of keeping the field teams informed of the changing and current situation.

REFERENCE: NUREG-0654, A.1.d; A.2.a, b

EFFECT: The Field Teams were unaware of changing degrading conditions. The Field Team personnel could have been placed into a more hazardous situation without being informed of the situational changes. They were placed in the projected path of the plume and should have been informed when the release started.

RECOMMENDATION: The FTC should be informed of the reasons for keeping the Field Teams informed of changing conditions and trained in keeping the field teams informed of these changing conditions.

A checklist or other method to ensure communication of important information is accomplished should be developed and proceduralized trained upon and used.

SCHEDULE OF CORRECTIVE ACTIONS: The State and Utility jointly developed and presented a three-day training session that was conducted on February 19-21, 2008, for Field Team and State EOC personnel, including

decision-makers involved in field activities. The training consisted of classroom sessions covering those concepts relevant to effective and safe field operations (including the reasons for keeping Field Teams informed of changing conditions and the use of checklists and other methods to ensure timely communication of important information), procedural compliance; and a practice drill to ensure adequate upgrade of field personnel skills and knowledge. This ARCA is scheduled to be corrected during a remedial demonstration to be conducted on March 11, 2008.

ISSUE NO.: 33-07-3b1-A-02

ISSUE: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the admin of KI for emergency workers and institutionalized individuals (not general public) is maintained. (NUREG-0654, E.7., J.10.e.f.)

CONDITION: Field Team #1 did not receive a KI briefing during the pre-deployment briefing on any aspects concerning the ingestion of KI, including possible medical side affects and the dosage to be taken, and its members were not trained in the proper use and precautions associated with taking KI.

When Field Team #1 was directed to ingest KI, no instructions or precautions were discussed or provided by the Field Team Coordinator or the FOC/MRL Communicator, nor did the team members review the information cards provided in their supply kits.

Field Team #1 did not understand that they should not ingest KI if they were allergic to it.

POSSIBLE CAUSE: The requirement to brief the team on KI is not included in the "Field Team Briefing Checklist." Procedures and forms are not adequately designed to capture information that would prevent a medical incident for an emergency worker. Personnel monitoring records do not include a sign-off section that requires acknowledgment by an emergency worker that he/she may be directed to ingest KI, is aware of the possible medical side affects and the dosage to be taken, or is not allergic to KI.

The pre-deployment brief was not performed according to procedures.

The Field Team members were not aware of the potential adverse medical side-effects of taking KI.

REFERENCE: NUREG 0654 J.9.f, 10.e; K.3.b; Extent of Play Agreement, Criterion 3.b.1

EFFECT: Field Team members could suffer a severe allergic reaction to KI because they were unaware of harmful side-effects.

RECOMMENDATION: Retrain Field Team members and the FTC on all aspects regarding KI ingestion.

Upgrade the procedural guidance on the medical side-effects of KI and add steps to insure that each person assigned to duties where the ingestion of KI may be recommended understands the precautions to be taken by requiring a signature certifying that they understand the reasons for taking KI, the dosage and frequency of ingestion, the possible harmful side-effects, and whether they are or may be allergic to KI.

Upgrade procedures to include a review of the proper use of KI at the time it is recommended. Emphasize the need to follow verbatim all briefing steps to ensure all concerns and precautions are stated, reviewed, and questions asked.

Provide training to all Field Team members and their managers, and provide a comprehensive briefing prior to being dispatched.

SCHEDULE OF CORRECTIVE ACTIONS: The State and Utility jointly developed and presented a three-day training session that was conducted on February 19-21, 2008, for Field Team and State EOC personnel, including decision-makers involved in field activities. The training consisted of classroom sessions covering those concepts relevant to effective and safe field operations (including the use of checklists and other methods to ensure communication of important information about the prophylactic use of potassium iodide during radiological incidents, potential adverse medical side-effects, and the circumstances under which it should and should not be

taken), procedural compliance; and a practice drill to ensure adequate upgrade of field personnel skills and knowledge. This ARCA is scheduled to be corrected during a remedial demonstration to be conducted on March 11, 2008.

ISSUE NO.: 33-07-4a2-A-03

ISSUE: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure. (NUREG-0654, I.8., 11., J.10.a)

CONDITION: Field Teams were not familiar with radiation instrument unit; they confused exposure with dose rate units and used milliroentgen per hour (mR/hr), microroentgen per hour (uR/hr) and millirem per hour (mRem/hr) inappropriately. Direct-Reading Dosimeter readings were reported in mR/hr rather than mR.

POSSIBLE CAUSE: Field Teams and the FTC did not receive adequate training or practice with radiological instrumentation and measurement units doe reporting exposure and dose rates.

REFERENCE: NUREG-0654, H.12; I.8, 11; J.10.a

EFFECT: Field teams using improper terminology may have reported dose rates in the field incorrectly and this could adversely affect Dose Assessment verification.

RECOMMENDATION: Retrain Field Team members and the FTC on using instrumentation, reading DRDs, and the correct use of radiation units.

SCHEDULE OF CORRECTIVE ACTIONS: The State and Utility jointly developed and presented a three-day training session that was conducted on February 19-21, 2008, for Field Team and State EOC personnel, including decision-makers involved in field activities. The training consisted of classroom sessions covering those concepts relevant to effective and safe field operations (including the proper use of instrumentation, reading DRDs, and the correct use of radiation units); procedural compliance; and a practice

drill to ensure adequate upgrade of field personnel skills and knowledge. This ARCA is scheduled to be corrected during a remedial demonstration to be conducted on March 11, 2008.

c. DEFICIENCY: 2.a.1.

ISSUE NO.: 33-07-2a1-D-01

ISSUE: 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: This deficiency is the result of seven different but related aspects of exposure control. These aspects have exacerbated the concern for the health and safety of the Emergency Responders comprising the State Field Team.

Field Teams were dispatched to sample points without proper regard for administrative exposure control limits nor were these limits recognized and acted on by field team members when observed.

Field Team #1 was sent without SRC concurrence to take an air sample in a location known to have a dose rate > 200 mR/hr.

Field Team #2 was sent to a sample point of unknown radiation levels and the team did not properly respond when (simulated) dose rate levels of 400 mR/hr and 2,000 mR/hr were observed.

Field Team members did not call in their DRD readings every thirty minutes.

POSSIBLE CAUSE: The FTC and Field Team members are not knowledgeable of administrative dose limits or radiation instrument capabilities and limitations.

The FTC was so focused on defining the plume and moving teams that the thirty-minute requirement for reading dosimetry was missed by both the FTC and the Field Teams.

REFERENCE: NUREG-0654, K.4, J.10. e., f.

EFFECT: FTC violated procedures resulting in State Field Teams exceeding their exposure limits. It is estimated that at least one of the field teams received an exposure of 1.2 R, as read on a DRD, and this exposure could relate to a dose as high as 4.5 REM (being totally immersed in a cloud of radioactive materials). This exceeds the 3 REM whole body dose limit.

State Field Team members exceeded exposure limits. They lingered in areas exceeding an exposure rate limit of 100 mR/hr and did not turnback when exposure rates exceeded 200 mR/hr. Teams proceeded into areas greater than 200 mR/hr without direction from the SRC.

RECOMMENDATION: Retrain the FTC on exposure limits, turnback values, and application and use of radiation detection instruments.

Retrain Field Team members on exposure limits, turnback values, and application and use of radiation detection instruments.

Develop procedures and a checklist for Field teams. Train the FTC and Field Team staff in the use of the procedures and checklist.

Region V is prepared to offer outside Technical Assistance to facilitate radiological exposure control program revisions.

Assign additional Field Team management personnel to participate in the radiological exposure control program.

SCHEDULE OF CORRECTIVE ACTIONS: On January 4, 2008, DHS/FEMA Region V approved the Extent of Play and Scenario that was submitted on December 24, 2007. This supports the redemonstration of the seven criteria for which one deficiency and six associated ARCAs were issued by DHS/FEMA during the December 4, 2007, Radiological Emergency Preparedness Full Participation Plume Pathway Exercise for the Kewaunee Power Station. The scenario contains a radiological release of sufficient magnitude to result in exposure rates that exceed the procedural turnback values and the limits of the Bicron meters issued to the field teams. The

scenario will also drive the recommendation of potassium iodide for emergency workers.

The State and Utility jointly developed and presented a three-day training session that was conducted on February 19-21, 2008, for Field Team and State EOC personnel, including decision-makers involved in field activities. The training consisted of classroom sessions covering those concepts relevant to effective and safe field operations, procedural compliance, and prophylactic use of potassium iodide during radiological incidents; field practice of sampling procedures; and a practice drill to ensure adequate upgrade of field personnel skills and knowledge.

The Wisconsin Department of Health and Family Services (DHFS) Radiation Protection Section is upgrading procedures as necessary to ensure effective coordination among the State Radiological Coordinator, the Field Team Coordinator, and field team personnel. Other procedural revisions will include changes to field personnel briefing checklists and potassium iodide documentation.

- The DHFS Radiation Protection Section will implement policy, equipment, and personnel changes as necessary to ensure field activities are conducted safely and effectively.
- The State and Utility will jointly conduct a remedial exercise on March 11, 2008, based upon the approved Extent of Play and Scenario Package. The State Radiological Coordinator's office in the State EOC will be fully staffed. Field activities will be controlled from the State's mobile laboratory sited at the National Guard Armory in Two Rivers, Wisconsin. A Field Team Coordinator and two State Field Teams will participate and be available for DHS/FEMA evaluation.

This Deficiency and associated ARCAs are scheduled to be corrected in accordance with the DHS/FEMA-approved Extent of Play and Scenario during a remedial demonstration to be conducted on March 11, 2008.

- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None

- f. PRIOR ISSUES - UNRESOLVED: None

4.2.1.5. Wisconsin - State Field Monitoring Team #1

- a. MET: 1.a.1, 1.d.1, 1.e.1, 3.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: 3.a.1, 4.a.1, 4.a.3.

ISSUE NO.: 33-07-3a1-A-04

ISSUE: OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers IAW plans and procedures. Emergency workers periodically and at the end of each mission read and record dosimeter reading. (NUREG-0654, K.3)

CONDITION: Prior to being dispatched from the FOC, State Field Teams were not briefed on their exposure limits and turnback value.

There are no administrative exposure limits based upon DRD readings specified in the plans and procedures, and emergency workers, including Field Teams, have no means by which to measure dose rates in excess of 200 mR/hr or to compare DRD readings to the 5 REM dose limit.

Field Team #1 lingered in areas having exposure rates greater than the 100 mR/hr reporting value with an action indicated to not linger in the area. The Field Teams entered into areas having exposure rates greater than the 200 mR/hr turnback value with an action to not proceed into those areas.

Field Team #2 members did not understand the measurement limitations of the instruments assigned to them.

Field Team # 2 members did not have a working knowledge of administrative dose rate limits requiring reporting or immediate action in the field.

POSSIBLE CAUSE: The FTC in the FOC did not know the exposure limits and turnback levels and they were not included as part of the briefing sheet.

Plans and procedures have not been modified to include an administrative exposure limit based upon DRD readings.

Field Teams enter into the plume and are immersed in the plume, a cloud of radioactive materials, resulting in a higher skin dose and an inhalation dose that is not factored-in, nor can it be measured by, DRD exposure readings. Depending upon the isotopic mix of the plume, the dose received can be as much as 3.5 times the DRD reading of exposure. This concept is not incorporated into plans and procedures. There is no means for the Field Teams to calculate a dosimeter correction factor in the field so that DRD readings can be compared to the 5 REM dose limit.

Field Team #2 members are not adequately trained on the capabilities and limitations of their instrument in relation to actions to be taken when administratively set radiation dose rate limits are encountered. Field Team #1 could not measure exposure rates in excess of the Bicron maximum reading of 200 mR/hr and a sense of urgency based upon the high exposure rates was not instilled in the team members. The team did not implement their "action level" instructions to not linger in areas having 100 mR/hr or greater exposure rates and not to proceed into areas having exposure rates of 200 mR/hr or greater. This could have been caused by inadequate briefing prior to being dispatched and the lack of a sense of urgency.

REFERENCE: NUREG 0654 H.10, I.7, 8, 9; K.3.a, K.3.b; Extent of Play Agreement Criterion 3.a.1

EFFECT: Field Team members would have substantially exceeded their exposure rates and incurred an avoidable dose.

Emergency workers, and particularly the field teams, could receive a dose substantially in excess of what their DRD exposure readings would suggest and could exceed the 5 REM dose limit.

State Field Team #1 received an exposure and resulting dose that could have been avoided if the action levels/exposure rate limits were implemented.

State Field Team #2, and emergency workers in general, could receive large and avoidable exposures while performing their response duties.

RECOMMENDATION: Retrain Field Team members and the FTC on the plan-specified exposure limits and turnback value and ensure there is a proper briefing prior to being dispatched.

Revise procedures to specify administrative exposure limits that can be compared to DRD exposure readings. Emergency workers should be trained in the proper use of the DRDs and comparison to exposure limits.

Emergency worker training should reinforce taking preventative and precautionary actions when the exposure rate limits are encountered. In addition, instruments should be provided that are capable of reading exposure rates that substantially exceed the exposure rate limits.

Retrain Field Teams on the capability, use, and limits of all radiation detection instruments in the Field Team inventory. Ensure that the capabilities of the instruments used are consistent with the administrative dose rate limits established to limit individual exposure and the potential for encountering dose rates that exceed these limits.

Retrain field monitoring staff on all administrative and dose limits, covering their purpose, urgency, and application to keep radiation exposure as low as reasonable achievable.

SCHEDULE OF CORRECTIVE ACTIONS: The State and Utility jointly developed and presented a three-day training session that was conducted on February 19-21, 2008, for Field Team and State EOC personnel, including decision-makers involved in field activities. The training consisted of classroom sessions covering those concepts relevant to effective and safe field operations (including the importance and content of comprehensive radiological briefings, administrative exposure limits and turnback values consistent with the DRD instruments issued to emergency workers, compliance with exposure rate standards established in plans and procedures, and the measurement limitations of instruments used in the field); field practice of sampling procedures; and a practice drill to ensure adequate upgrade of field personnel skills and knowledge.

The State will upgrade plans, procedures and checklists to provide

administrative exposure limits and turn-back values based upon DRD readings consistent with the dosimetry issued to emergency workers.

This ARCA is scheduled to be corrected during a remedial demonstration to be conducted on March 11, 2008.

ISSUE NO.: 33-07-4a1-A-05

ISSUE: Field teams are equipped to perform field measurements of direct radiation exposure (cloud & ground shine) and to sample airborne radioiodine and particulates (NUREG-0654, H.10., I.8., 9., 11.)

CONDITION: Field Team #1

Response ranges are not provided for the Bicron Dose Rate Meter or the Ludlum Count Rate meter to check operability of the instruments.

No high range instrument was provided to measure exposure rates over 200 mR/hr.

Field Team #2

There is no response range on instrument calibration labels.

Members did not understand the measurement range of the Bicron instrument.

POSSIBLE CAUSE: Procedures indicate the instruments are operable if there is any response to the check source.

Higher range instruments are not provided or listed the inventory.

Procedural guidance does not provide for a definitive check of instrumentation by providing a reading range within which an individual can determine that the instrument is responding as expected and will provide accurate readings.

Training does not adequately educate emergency workers on the limitation of the instruments provided to them.

REFERENCE: NUREG-0654, H.10; I.7, 8, 9

EFFECT: There is no assurance that the instruments are operating properly without a range specified. Consequently, there is no assurance in the accuracy of any measurements.

Without higher range instruments, field monitoring teams will not be able to measure exposure rates above the limit of the lower range instruments and may not be able to find the plume centerline. Additionally, Field Teams could be in higher exposure rate field than what is expected and could receive exposures that could be avoided if higher range instruments were available.

Instrument operation can not be definitively checked against manufacturer specifications.

Inaccurate measurement may be obtained that result in excess individual radiation exposure and inaccurate protective action recommendations.

RECOMMENDATION: When instruments are calibrated, provide an expected range of response to a specified source to ensure operability of the instruments. This should be indicated on a sticker or tag attached to the instrument.

Provide higher range exposure rate or dose rate instruments for the field monitoring teams.

Procedurally provide for the requirement to include source check range information to all radiation detection instruments. Include the use of source check range verification into equipment inventory and pre-deployment checks.

Train all radiation workers on the need and reason behind check source range verification.

SCHEDULE OF CORRECTIVE ACTIONS: The State and Utility jointly developed and presented a three-day training session that was conducted on February 19-21, 2008, for Field Team and State EOC personnel, including

decision-makers involved in field activities. The training consisted of classroom sessions covering those concepts relevant to effective and safe field operations (including instrument limitations, check source range verification, providing field monitoring teams with appropriate exposure rate/dose rate instrumentation, procedural compliance; field practice of sampling procedures; and a practice drill to ensure adequate upgrade of field personnel skills and knowledge. This ARCA is scheduled to be corrected during a remedial demonstration to be conducted on March 11, 2008.

ISSUE NO.: 33-07-4a3-A-06

ISSUE: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams must move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. (NUREG-0654, 1.8., 9., 11)

CONDITION: Several problems were noted regarding Field Team management and sample collection:

Field Team #1

Ambient radiation levels or "Gamma in air" measurements were not taken before, during or after the collection of the air sample for the collection of radioiodine and particulates.

The cartridge and particulate filter were counted holding the sample approximately a half-inch from the probe instead of against the probe as indicated in procedures.

Based upon instrumentation, the Field team could not find the centerline of the plume, because the Bicon Dose Rate meter had a maximum reading of 200 mREM/hr.

The Field Team inconsistently reported the Bicon measurements in units of REM, R, REM/hr and/or R/hr.

Contact exposure rate readings were not obtained on sample bags prior to, during or after sample transfer to the carrier.

Field Team #2

Ambient radiation readings were not taken at the beginning and end of the ten minute air pump run time for gathering a particulate and iodine sample.

POSSIBLE CAUSE: There are several possible causes for the conditions cited above:

Field Team #1

Procedures do not properly address taking ambient air measurements before, during or after the collection of air samples.

Members were not familiar with the procedure or the reasons why the cartridge and filter had to be counted with a reproducible geometry against the probe.

Procedures do not instruct the Field Teams or the Carrier to take a contact reading on the sample bag when transferring samples.

Field Team #1

The team was not supplied with appropriate instrumentation measuring exposure rates above 200 mR/hr.

Field team Members were not familiar with the Bicon Dose Rate meter and the units read on the meter.

Field Team #2

Procedural guidance does not provide for these measurements to be taken.

REFERENCE: NUREG-0654 H.10; I.7, 8, 9; J.11

EFFECT: Without ambient radiation measurements before, during and after air sampling, the air sample may have been taken outside of the plume or the plume may have shifted during air sampling. The intent is to take the air sample within the plume. Without the ambient radiation readings the sample may not be representative of the character of the plume and could lead to

erroneous or misleading information used in making Protective Action Recommendations.

Accurate sample count rates are needed for determining the radioiodine and particulate concentrations for verification of PARs. Unless the geometry is reproducible, the count rate and the subsequent calculations may not be reliable and can lead to false or misleading information for verification of the PARs.

The Field Team would be unable to locate the centerline of the plume if exposure rates exceed 200 mR/hr. In addition, a pegged meter did not instill a sense of urgency in the Field Team's response. They lingered in a field of 700 mR/hr for approximately 10 minutes while the meter was pegged.

The reporting of measurements using incorrect units leads to confusion and could result in a mischaracterization of the plume.

The Carrier. Without contact exposure rate readings, the Carrier, who receives and transports samples containing radioactive materials, would be unaware of his/her exposure and may not take appropriate precautions to limit exposure as low as reasonably achievable. The Carrier may deliver samples with higher exposure rates than are allowed by the receiving laboratory. Without contact measurements, the Carrier could deliver samples that exceed the limits established by the laboratory.

Field Team #2

During the course of drawing the air sample, the plume may move so that a portion to the sample run time is not gathering a representative sample. As a result, the sample may not be representative of the location, and protective actions recommendations may be based on inaccurate data.

RECOMMENDATION: Revise procedures to indicate that ambient, or "Gamma in air," measurements specified in procedures need to be taken before, during and after the collection of an air sample to ensure that the sample is collected within the plume. Training should be provided for Field Teams so they understand the need for taking ambient radiation measurements.

All Field Team members should be instructed on and the reasons and procedures for acquiring a reproducible geometry when counting cartridges and particulate samples.

Field Teams should be provided with instrumentation that measures exposure rates in excess of 200 mR/hr if the teams are expected to encounter a plume where there is a likelihood of exposure rates that exceed the limit of the current instrument.

Field Team members should receive training on the use of instruments and the units of measurement of each instrument. They should understand the differences and how to properly report instrument readings.

Revise forms and procedures and provide appropriate training to instruct Field Teams and Carriers (if technically trained) to take contact exposure rate measurements on samples that are transferred to a Carrier and subsequently to a laboratory.

Field Team #2 - Revise procedures to include steps that require ambient radiation readings are taken and recorded at the start and stop of the air pump.

SCHEDULE OF CORRECTIVE ACTIONS: The State and Utility jointly developed and presented a three-day training session that was conducted on February 19-21, 2008, for Field Team and State EOC personnel, including decision-makers involved in field activities. The training consisted of classroom sessions covering those concepts relevant to effective and safe field operations (including the reporting instrument readings using appropriate units of measure, the taking of ambient radiation measurements, collecting contact exposure rate measurements on samples), procedural and checklist upgrades and compliance regarding the collection of ambient radiation measurements; field practice of sampling procedures; and a practice drill to ensure adequate upgrade of field personnel skills and knowledge. This ARCA is scheduled to be corrected during a remedial demonstration to be conducted on March 11, 2008.

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

4.2.1.6. Wisconsin - State Field Monitoring 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. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None
- f. PRIOR ISSUES - UNRESOLVED: None

4.2.1.7. Wisconsin - State Liaison - Wisconsin Emergency Management Regional Director - Kewaunee County

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

4.2.1.8. Wisconsin - State Liaison - Wisconsin Emergency Management Regional Director - Manitowoc County

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

4.2.1.9. Wisconsin - Joint Information Center/Public Information Hotline

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

4.2.1.10. Wisconsin - Evacuee/Emergency Worker Monitoring/Decontamination - Manitowoc County Reception Center - County Highway Commission

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

4.2.1.11. Wisconsin - Evacuee Vehicle Monitoring/Decontamination - Manitowoc County Reception Center - County Highway Commission

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

4.2.1.12. Wisconsin - Emergency Worker Vehicle/Equipment Monitoring/Decontamination -

Manitowoc County Reception Center - County Highway Commission

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

4.2.1.13. Wisconsin - Medical Services Drill - Facility - Holy Family Memorial Medical Center

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

4.2.1.14. Wisconsin - Evacuee/Emergency Worker Monitoring/Decontamination - Kewaunee County Reception Center - Algoma High School

- a. MET: 1.d.1, 1.e.1, 3.a.1, 3.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: 6.a.1.

ISSUE NO.: 33-07-6a1-A-07

ISSUE: 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. (NUREG-0654, J.10.h., K.5.b)

CONDITION: A member of the general public with a simulated injury and radiological contamination arrived at the entrance to the Algoma Reception

Center (RC). Two members of the RC Monitoring/Decontamination staff assisted the victim to a simulated "HotZone" (marked by tape on the RC's gymnasium floor) and placed him on a backboard. The RC staff wore Personal Protective Equipment (PPE) consisting of booties and two pairs of latex gloves. While the two reception center staff moved the patient from the entranceway of RC to the HotZone, their outer clothing came in contact with the patient's clothing, which, according to the scenario, was contaminated. The possibility of cross-contamination was not recognized, and neither HotZone reception center staff was monitored for contamination.

POSSIBLE CAUSE: The RC Monitoring/Decontamination staff was not properly trained in contamination control procedures. They did not recognize that they had become radiologically contaminated, could spread contamination from their clothing to people, equipment and supplies, should be monitored and decontaminated, as required.

REFERENCE: NUREG-0654, Criterion 6.d.1, f.2; h.10; k.5.a; k.5.b; l.1; l.4

EFFECT: The personal clothing of two reception center staff could have become contaminated, and contamination could have been spread by the their clothing to people, equipment and supplies.

RECOMMENDATION: Reception Center staff who handle potentially contaminated persons should receive training concerning proper contamination control techniques. In addition, reception staff who come in contact with potentially radiologically contaminated evacuees should be monitored for contamination prior to being relieved of their assignments to help assure effective contamination control.

SCHEDULE OF CORRECTIVE ACTIONS: Additional training for the Kewaunee Monitoring/Decontamination staff, including procedures for controlling the spread of contamination, is planned for the summer of 2008. This criterion will be redemonstrated during the 2008 Point Beach Nuclear Power Plant REP Exercise, scheduled for December 9 and 10, 2008.

- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None

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

4.2.1.15. Wisconsin - Evacuee Vehicle Monitoring/Decontamination - Kewaunee County Reception Center - Algoma High School

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

4.2.1.16. Wisconsin - Emergency Worker Vehicle/Equipment Monitoring/Decontamination - Kewaunee County Reception Center - Algoma High School

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

4.2.2. Risk Jurisdictions

4.2.2.1. Kewaunee County - Initial Warning Point - Sheriff's Dispatch Center

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

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

4.2.2.2. Kewaunee County - Emergency Operations Center

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

4.2.2.3. Kewaunee County - Joint Information Center - Public Information Officer

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

ISSUE NO.: 33-07-5b1-A-08

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

CONDITION: During Media Briefing #3, which was delivered during the SAE ECL, the PIO representing the Counties read a statement from a prescribed Livestock Agricultural Advisory, which was also released by the JIC at the Site Area Emergency ECL, that included contradictory instructions by stating: "THIS PRECAUTIONARY RECOMMENDATION IS FOR LIVESTOCK OWNERS WITHIN TEN MILES OF THE KEWAUNEE POWER STATION. SHOULD EVACUATION BECOME NECESSARY, WE RECOMMEND THAT LIVESTOCK BE MOVED TO SHELTER AND PLACED ON STORED FEED AND WATER ..." The Livestock Advisory is a precautionary action to be

taken before, rather than concurrently with, protective actions for the public.

POSSIBLE CAUSE: The wording of the current KPS Livestock Advisory message (dated 10/13/2005) contained conflicting information. County public information staff in the EOC and the JIC failed to recognize the contradiction in the statement.

REFERENCE: NUREG-0654, Criterion 5.b.1, E.5., E.7., G.3.a, G.4.c

EFFECT: Livestock farmers were directed to tend to their livestock at the same time that the general public was directed to evacuate. The contradictory information could have caused livestock farmers to not evacuate at a time when the County intended for them to do so. As a result, livestock farmers could have received an avoidable exposure to radioactive materials.

RECOMMENDATION: The prescribed Kewaunee County Livestock Agricultural Advisory message (dated 10/13/05) should be revised to eliminate the conflicting instructions. Message content used in media releases and media briefings should be reviewed by EOC and JIC public information staff for potentially conflicting information prior to release.

SCHEDULE OF CORRECTIVE ACTIONS: Kewaunee and Manitowoc Counties and the State of Wisconsin will jointly correct the language in the prescribed agricultural advisories given to the media and ensure that accurate and timely information is provided to the media. This criterion will be redemonstrated by both Counties during the 2008 Point Beach Nuclear Power Plant REP Exercise scheduled for December 9 and 10, 2008.

- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: 5.b.1.

ISSUE NO.: 49-06-5b1-A-02

ISSUE: During the exercise, the Livestock Advisory being aired (simulated) by WBDK 96.7 FM continued to air concurrently with the first EAS message and Special Public Broadcast, which included an order to evacuate the five-mile radius around Point Beach Nuclear Power Plant. The Livestock

Advisory also continued to air (simulated) concurrently with the second EAS message which expanded the evacuation area out to the 10-mile radius at 1255 hours.

CORRECTIVE ACTION DEMONSTRATED: When the evacuation EAS message was given to the radio station following notification of the GE ECL, the County PIO instructed Radio Station WBDK to terminate the Livestock Advisory that was put into effect following the SAE ECL notification. The PIO at the County EOC also informed the Kewaunee County PIO at the JIC that the WBDK had been advised that the Livestock Advisory had been terminated.

- f. PRIOR ISSUES - UNRESOLVED: None

4.2.2.4. Kewaunee County - Emergency Alert System - WBDK Radio Station

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

4.2.2.5. Kewaunee County - EV-2 Interview - Kewaunee 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. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None
- f. PRIOR ISSUES - UNRESOLVED: None

4.2.2.6. Kewaunee County - Dosimetry Distribution Point - County Annex Building

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

4.2.2.7. Kewaunee County - Primary Route Alerting in Exception Area

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

4.2.2.8. Kewaunee County - Dosimetry Distribution Point - Algoma High School

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

4.2.2.9. Kewaunee County - Evacuee/Emergency Worker Registration - Kewaunee County Reception Center - Algoma 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. NOT DEMONSTRATED: None

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

4.2.2.10. Kewaunee County - Medical Services Drill - Transportation - Kewaunee County Reception Center - Algoma Rescue Squad - Algoma High School

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

4.2.2.11. Manitowoc County - Initial Warning Point - Sheriff's Department - Joint Dispatch Center

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

4.2.2.12. Manitowoc County - Emergency Operations Center

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

4.2.2.13. Manitowoc County - Dosimetry Distribution Point - Sheriff's Department

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

4.2.2.14. Manitowoc County - Traffic and Access Control Point

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

4.2.2.15. Manitowoc County - Supplementary Route Alerting - Lakeshore Aviation

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

4.2.2.16. Manitowoc County - Joint Information Center - Public Information Officer

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

ISSUE NO.: 33-07-5b1-A-09

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

CONDITION: During Media Briefing #3, which was delivered during the SAE ECL, the PIO representing the Counties read a statement from a prescribed Livestock Agricultural Advisory, which was also released by the JIC at the Site Area Emergency ECL, that included contradictory instructions by stating: "THIS PRECAUTIONARY RECOMMENDATION IS FOR LIVESTOCK OWNERS WITHIN TEN MILES OF THE KEWAUNEE POWER STATION. SHOULD EVACUATION BECOME NECESSARY, WE RECOMMEND THAT LIVESTOCK BE MOVED TO SHELTER AND PLACED ON STORED FEED AND WATER ..." The Livestock Advisory is a precautionary action to be taken before, rather than concurrently with, protective actions for the public.

POSSIBLE CAUSE: The wording of the current KPS Livestock Advisory message (dated 10/13/2005) contained conflicting information. County public information staff in the EOC and the JIC failed to recognize the contradiction in the statement.

REFERENCE: NUREG-0654, Criterion 5.b.1, E.5., E.7., G.3.a, G.4.c

EFFECT: Livestock farmers were directed to tend to their livestock at the same time that the general public was directed to evacuate. The contradictory information could have caused livestock farmers to not evacuate at a time when the County intended for them to do so. As a result, livestock farmers could have received an avoidable exposure to radioactive materials.

RECOMMENDATION: The prescribed Kewaunee County Livestock Agricultural Advisory message (dated 10/13/05) should be revised to eliminate the conflicting instructions. Message content used in media releases and media briefings should be reviewed by EOC and JIC public information staff for potentially conflicting information prior to release.

SCHEDULE OF CORRECTIVE ACTIONS: Kewaunee and Manitowoc Counties and the State of Wisconsin will jointly correct the language in the prescribed agricultural advisories given to the media and ensure that

accurate and timely information is provided to the media. This criterion will be redemonstrated by both Counties during the 2008 Point Beach Nuclear Power Plant REP Exercise scheduled for December 9 and 10, 2008.

- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: 5.b.1.

ISSUE NO.: 49-06-5b1-A-03

ISSUE: An incorrect "hotline" special assistance telephone number was provided by the Manitowoc County PIO during the second media briefing at the JIC. The incorrect number, xxx-xxx-4749, was presented during the SAE ECL at approximately 1055 hours. After questioning by Mock Media following the briefing, the Manitowoc County PIO called the Lead PIO in the County EOC at 1121 hours to obtain clarification. At 1137 hours, a return call from the Lead PIO stated that the correct number was xxx-xxx-4797 (the number posted in the media briefing room). The media were not informed that the "4749" number was incorrect and had been withdrawn until 1153 hours at the third briefing, approximately an hour later.

CORRECTIVE ACTION DEMONSTRATED: The Kewaunee Power Station (KPS) Utility's Customer Call Center located in in Richmond, Virginia, which is staffed on a 24-hour basis, is the designated location for receiving public inquiries via an toll-free "Hotline" telephone number for emergencies at KPS. The Hotline telephone number was emphasized at each of the five media briefings. The number was posted on three walls in the JIC State/County workroom, and was listed numerous times in three languages in the 2007 Nuclear Emergency Planning Information Calendar. The Hotline number for KPS emergencies was answered by the Utility's Call Center staff. The Utility JIC Public Inquiry/Call Center Manager and staff maintained communications with the Public Hotline staff when the emergency at KPS started generating calls. Use of the correct Hotline telephone number resolved prior ARCA 49-06-5.b.1-A-03.

- f. PRIOR ISSUES - UNRESOLVED: None

4.2.2.17. Manitowoc County - Emergency Alert System - WCUB/WLTU Radio Station

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

4.2.2.18. Manitowoc County - EV-2 Interview - Mishicot 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. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None
- f. PRIOR ISSUES - UNRESOLVED: None

4.2.2.19. Manitowoc County - Dosimetry Distribution Point - County Highway Department

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

4.2.2.20. Manitowoc County - Evacuee/Emergency Worker Registration - Manitowoc County Reception Center - County Highway Department

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

4.2.3. Support Jurisdictions

4.2.3.1. Kewaunee County - Congregate Care Center - Algoma High School

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

4.2.3.2. Manitowoc County - Congregate Care Center - Lutheran High School

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

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APPENDIX 1

ACRONYMS AND ABBREVIATIONS

The following is a list of the acronyms and abbreviations used in this report.

ARC	American Red Cross
ARES	Amateur Radio Emergency Services
CBC	County Board Chairman
CCC	Congregate Care Center
DDP	Dosimetry Distribution Points
DRD	Direct-Reading Dosimeter
EAS	Emergency Alert System
ECL	Emergency Classification Level
EM	Emergency Management
EMD	Emergency Management Director
EMS	Emergency Medical System
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EOP	Emergency Operations Plan
EPZ	Emergency Planning Zone
ERV	Emergency Response Vehicle
EW	Emergency Worker
FAA	Federal Aviation Administration
FOC	Field Operations Center
FTC	Field Team Coordinator
GAR	Governor's Authorize Representative
GE	General Emergency
GIS	Geographical Information System
HF	High Frequency
HO	Health Officer
INP	Initial Warning Point
JDC	Joint Dispatch Center
JIC	Joint Information Center
JPIC	Joint Public Information Center
KCHD	Kewaunee County Highway Department
KCHS	Kewaunee County Human Services
KNPP	Kewaunee Nuclear Power Plant
KPS	Kewaunee Power Station
MBC	Media Briefing Center
MCRC	Manitowoc County Reception Center
MSD	Mishicot School District
NARS	Nuclear Accident Reporting System

NRC	Nuclear Regulatory Commission
ORO	Offsite Response Organizations
OSL	Optically Stimulated Luminescent
PA	Public Address
PAD	Protective Action Decision
PAG	Protective Action Guides
PAR	Protection Action Recommendations
PIO	Public Information Officers
RACES	Radio Amateur Civil Emergency Services
RAS	Radio Alert System
RC	Radiological Coordinator
RCC	Reception Center Coordinator
REA	Radiological Emergency Area
REP	Radiological Emergency Preparedness
RN	Registered Nurse
RO	Radiological Officer
RPS	Radiation Protection Section
SAE	Site Area Emergency
SEOC	State Emergency Operations Center
SNB	Special News Broadcast
SOP	Standard Operating Procedure
SRC	State Radiological Coordinator
TEDE	Total Effective Dose Equivalent
TLD	Thermo Luminescent Dosimeter
TS	Transportation Supervisor
UHF	Ultra High Frequency
VHF	Very High Frequency
VSD	Valders School District
WEM	Wisconsin Emergency Management

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEAERS

The following is a list of the personnel who evaluated the Kewaunee Power Station REP Full Participation Plume Exposure Pathway Exercise on December 4, 2007. “*” indicates that the evaluator was also a Team Leader. The organization each evaluator represents is indicated by the following abbreviations:

DHS/FEMA	U.S. Department of Homeland Security / Federal Emergency Management Agency
ICF	ICF Consulting, Inc.

TITLE	NAME	AGENCY
Regional Assistance Committee Chairman	William King	DHS/FEMA
Exercise Director	Dwaine Warren	DHS/FEMA
Site Specialist	Carl Bebrich	DHS/FEMA

LOCATION	EVALUATOR	AGENCY
Wisconsin - Initial Warning Point - State Warning Center #2	Clinton Crackel	DHS/FEMA
Wisconsin - State Emergency Operation Center	Clinton Crackel *Delwyn Kinsley	DHS/FEMA DHS/FEMA
Wisconsin - State Radiological Coordinator Room	Patrick Taylor	ICF
Wisconsin - State Forward Operations Center/Mobile Radiological Laboratory/Mobile Communications Center	Marynette Herndon	ICF
Wisconsin - State Field Monitoring Team #1	Richard Grundstrom	ICF
Wisconsin - State Field Monitoring Team #2	David Seebart	ICF
Wisconsin - State Liaison - Wisconsin Emergency Management Regional Director - Kewaunee County	Carl Bebrich	DHS/FEMA
Wisconsin - State Liaison - Wisconsin Emergency Management Regional Director - Manitowoc County	Sandra Bailey	DHS/FEMA
Wisconsin - Joint Information Center/Public Information Hotline	George MacDonald	ICF
Wisconsin - Evacuee/Emergency Worker Monitoring/Decontamination - Manitowoc County Reception Center - Manitowoc County Highway Commission	Bart Ray	ICF
Wisconsin - Evacuee Vehicle Monitoring/Decontamination - Manitowoc County Reception Center - Highway Commission Reception Center	Robert Duggleby	ICF
Wisconsin - Emergency Worker Vehicle/Equipment Monitoring/Decontamination - Manitowoc County Reception Center - County Highway Commission	Robert Duggleby	ICF
Wisconsin - Medical Services Drill - Facility - Holy Family Memorial Medical Center	Ronald Biernacki	ICF

Wisconsin - Evacuee/Emergency Worker Monitoring/Decontamination - Kewaunee County Reception Center - Algoma High School	Robert Black David Jacobson	ICF ICF
Wisconsin - Evacuee Vehicle Monitoring/Decontamination - Kewaunee County Reception Center - Algoma High School	Robert Black	ICF
Wisconsin - Emergency Worker Vehicle/Equipment Monitoring/Decontamination - Kewaunee County Reception Center - Algoma High School	Robert Black	ICF
Kewaunee County - Initial Warning Point - Sheriff's Dispatch Center	Richard Echavarria	DHS/FEMA
Kewaunee County - Emergency Operations Center	*Carl Bebrich Richard Echavarria Robert Rospenda	DHS/FEMA DHS/FEMA ICF
Kewaunee County - Joint Information Center - Public Information Officer	George MacDonald	ICF
Kewaunee County - Emergency Alert System - WBDK Radio Station	David Jacobson	ICF
Kewaunee County - EV-2 Interview - Kewaunee School District	Richard Wessman	ICF
Kewaunee County - Dosimetry Distribution Point - County Annex Building	Todd Davidson	ICF
Kewaunee County - Primary Route Alerting in Exception Area	Todd Davidson	ICF
Kewaunee County - Dosimetry Distribuion Point - Algoma High School	David Petta	ICF
Kewaunee County - Evacuee/Emergency Worker Registration -Kewaunee County Reception Center - Algoma High School	Bart Ray	ICF
Manitowoc County - Initial Warning Point - Sheriff's Department - Joint Dispatch Center	Carolyn Sturghill	DHS/FEMA
Manitowoc County - Emergency Operations Center	*Sandra Bailey Mike Hammond Carolyn Sturghill	DHS/FEMA DHS-FEMA DHS/FEMA
Manitowoc County - Dosimetry Distribution Point - Sheriff's Department	Mike Hammond	DHS-FEMA
Manitowoc County - Traffic and Access Control Point	Michael Burriss	ICF
Manitowoc County - Supplementary Route Alerting - Lakeshore Aviation	Michael Burriss	ICF
Manitowoc County - Joint Information Center - Public Information Officer	George MacDonald	ICF
Manitowoc County - Emergency Alert System - WCUB/WLTU Radio Station	Robert Black	ICF
Manitowoc County - EV-2 Interview - Mishicot School District	David Petta	ICF
Manitowoc County - Dosimetry Distribution Point - County Highway Department	Richard Smith	ICF
Manitowoc County - Evacuee/Emergency Worker Registration Manitowoc County Reception Center - County Highway Department	Frank Cordaro	ICF
Kewaunee County - Congreate Care Center - Algoma High School	Bart Ray	ICF
Manitowoc County - Congregate Care Center - Lutheran High School	Frank Cordaro	ICF
* Team Leader		

APPENDIX 3

EXERCISE CRITERIA AND EXTENT OF PLAY AGREEMENTS

This appendix lists the exercise criteria that were scheduled for demonstration in the Kewaunee Power Station REP Full Participation Plume Exposure Pathway Exercise that was conducted on December 4, 2007, and the off-site extent-of-play agreement approved by DHS/FEMA Region V on November 21, 2007.

The exercise criteria, contained in FEMA-REP-15, Radiological Emergency Preparedness Exercise Evaluation Methodology, September 1991, 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 off-site plans and procedures, an extent-of-play agreement is prepared by the State and approved by DHS/FEMA to provide evaluators with guidance on expected actual demonstration of the criteria.

A. Exercise Criteria and Extent-of-Play

Listed below are the specific REP criteria scheduled for demonstration during this exercise.

Kewaunee Power Station Exercise Extent of Play Agreement State of Wisconsin / Kewaunee County / Manitowoc County

Exercise Date: December 4, 2007

Locations: The State of Wisconsin Emergency Operation Center (EOC) in Madison, the Kewaunee County EOC in Algoma, the Manitowoc County EOC in Manitowoc as well as

reception centers and congregate care centers in Algoma and Manitowoc. Also participating is the Joint Information Center in Green Bay, the Dominion Call Center in Richmond, Virginia, Holy Family Memorial Hospital in Manitowoc, as well as various field operations in Kewaunee and Manitowoc Counties.

This one day exercise is a full participation plume exposure pathway exercise, with full participation by the State of Wisconsin, Kewaunee and Manitowoc counties. The State of Wisconsin and Kewaunee and Manitowoc Counties are the off-site response organizations (OROs).

Criteria that can be re-demonstrated for credit during or immediately following the exercise, at the decision of the federal evaluator, include the following: 3.a.1, 3.b.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: Mobilization: *OROs use effective procedures to alert, notify and mobilize emergency personnel and activate facilities in a timely manner.*

State of Wisconsin

This is a full-participation plume pathway exercise. Most activities, including decision making and radiological control/dose assessment, will occur at the State Emergency Operations Center (SEOC) and the State Radiological Coordinator (SRC) Room (Room 105), both located at 2400 Wright Street, Madison, Wisconsin. Field sampling teams, including teams from the Civil Support Team (CST) and the U.S. Department of Energy, Radiological Assistance Program (RAP), will collect samples within the 10 mile Emergency Planning Zone (EPZ).

The initial notification will occur via Dial Select system and will be passed to the Wisconsin Emergency Management (WEM) Duty Officer (DO). The DO will use the WEM Standard Operating Procedure for activation. All staff from participating state agencies or organizations will be notified using their on-call system (in the WEM DO book) or by using the emergency contact list in the State Emergency Operations Plan.

Pre-positioned staff for this exercise will be:

- The Forward Operations Center/Mobile Radiological Laboratory (FOC/MRL) will be pre-positioned at the Wisconsin National Guard Armory located at 2225 Sandy Bay Road in Two Rivers, Wisconsin.
- State Field Teams will be pre-positioned at the Best Western Lakefront Hotel, 101 Maritime Drive, Manitowoc, Wisconsin, and be deployed from there to the FOC/MRL at the Site Area Emergency by a phone call from the SRC to the Field Team Coordinator (FTC). The FTC will coordinate field team operations from the FOC/MRL.
- The Emergency Police Services (EPS) Director will be pre-positioned at the Kewaunee County EOC. The Emergency Fire Services (EFS) Director will be pre-positioned at the State EOC in Madison.
- The Wisconsin Emergency Management Regional Directors will be pre-positioned in the vicinity of the Kewaunee and Manitowoc EOCs, and will be contacted to report to the EOCs at the appropriate time during the exercise, as per the scenario.
- State Joint Information Center (JIC) staff will be pre-positioned in the area and will be notified by the WEM Public Information Officer (PIO) to report to the JIC when the Alert is declared. They will wait 20 minutes after notification before reporting to the JIC. The JIC is located at 3060 Voyager Drive, in Green Bay, Wisconsin. The Public Inquiry Hotline will be located at the Dominion Call Center, at 7500 West Broad Street, Richmond, Virginia. The Call Center is staffed on a 24-hour basis.

The State will provide a 24-hour staffing list (staff to be identified by positions) to the federal evaluator.

Kewaunee County

Activities will occur both in sequence and out-of-sequence at various sites around Kewaunee County. The base of operations will be the Kewaunee County Emergency Operations Center, which is located in the lower level of the Algoma City Hall, 416 Fremont Street, Algoma, Wisconsin. Alert and staff call-up procedures will be followed as outlined in the plan. The 24-hour shift change staffing list can be seen in the EOC. The Officer-in-Charge (OIC) will determine and announce when the EOC is operational and fully staffed. Public Information staff will be pre-positioned in the general area of the JIC and will wait approximately 20 minutes to mobilize after notification, similar to the State procedures.

Manitowoc County

Most activities will occur in sequence at various sites around Manitowoc County, with the exception of the Reception Center/Congregate Care Center activations. Both centers will be activated out-of-sequence on the day of the exercise. The base of operations will be the Manitowoc County Emergency Operations Center, which is located in the lower level of the Sheriff's Department, Conference Rooms A-B-C, 1025 South 9th Street, Manitowoc, Wisconsin. Alert and staff call-up procedures will be followed as outlined in the plan using the Joint Dispatch Center (JDC) Emergency Checklist, which also denotes 24 hour shift coverage. Public Information staff will be directed to the JIC after being briefed in the EOC. The OIC or Chief Elected Official will determine and announce when the EOC is operational and fully staffed.

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

State of Wisconsin

Wisconsin has a new call center for incidents at Kewaunee Power Station. The Public Inquiry Hotline will be located at the Dominion Planning & Analysis Customer Service Center, (Dominion Call Center) 7500 West Broad Street, Richmond, Virginia.

Kewaunee County

Kewaunee County facilities have been previously demonstrated.

Manitowoc County

Manitowoc County facilities have been previously demonstrated.

Criterion 1.c.1 Direction and Control: *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.*

State of Wisconsin

The State will demonstrate decision-making capabilities in the SEOC. The State will demonstrate coordination between the SEOC, the JIC, Kewaunee and Manitowoc County EOCs and the utility, and other appropriate off-site response

organizations.

Kewaunee County

The Kewaunee County EOC will direct and control emergency operations within their county and coordinate decisions and emergency activities with the state, the other risk county (Manitowoc), the JIC, and other appropriate OROs.

Manitowoc County

The Manitowoc County EOC will direct and control emergency operations within their county and coordinate decisions and emergency activities with the state, the other risk county (Kewaunee), the JIC, and other appropriate OROs.

Criterion 1.d.1: Communications Equipment: *At least two communication systems are available, at least one operates properly and communication links are established with appropriate locations. Communications capabilities are managed in support of emergency operations.*

State of Wisconsin

The State of Wisconsin has available and will use several of the following communication systems: Dial Select, commercial telephones, cellular phones, satellite phone, amateur radio, TDD, or facsimile to communicate with other locations. The state will also utilize electronic mail to communicate with others in the State EOC and the JIC, but not as a primary means of communication – traditional phone, fax, and paper systems will be used as primary means of communication. E-Sponder will be used in a limited capacity. The Event Log and Briefing Forms will primarily be done on E-Sponder, however, EOC staff may choose to handwrite their logs and forms. So while the documents produced by E-Sponder will be presented for evaluation, the use of E-Sponder by EOC staff will not be. Ham radio operators will also test radio communications with the county EOCs.

Kewaunee County

Kewaunee County will use a variety of communication systems. Dial-Select, commercial telephones, cellular telephones, and fax machines will be used to communicate with the utility and other locations. The PIOs and the JIC will use a laptop computer and an electronic e-mail program for communications with the EOC. Laptops and e-mail will be used as the primary form of messaging. Paper messaging will be used as a backup or when e-mail is not an option. RACES will

also be testing and utilizing their equipment.

Manitowoc County

Manitowoc County uses a variety of communication systems. Dial-Select, commercial telephones, cellular telephones, and fax machines will be used to communicate with the utility and other locations. Laptops and e-mail will be used as the primary form of messaging. Paper messaging will be used as a backup or when e-mail is not an option. RACES volunteers will demonstrate back-up radio communication from the RACES radio room in the EOC and at other sites as needed. County staff will not be using E-Sponder.

Criterion 1.e.1 Equipment and Supplies to Support Operations: *Equipment, maps, displays, dosimeters, potassium iodide (KI) and other supplies are sufficient to support emergency operations.*

State of Wisconsin

The State will demonstrate the use of equipment, maps and displays to support emergency operations in the SEOC and the JIC. The state will use its EOC software, E-Sponder, in conjunction with its GIS applications.

The state will demonstrate the availability of potassium iodide (KI). Documentation of the KI expiration date will be available at the EOC and other applicable locations for inspection by federal evaluators.

The state will demonstrate the use of dosimetry as a part of the demonstration of reception center operations and the response to a medical emergency involving a potentially contaminated evacuee. Survey instrument inventory and calibration records will be included as a part of the Annual Letter of Certification. Instrument inventory and calibration records are maintained by Wisconsin Department of Health and Family Services, Radiation Protection Section (DHFS-RPS), and will be available for review at 1 West Wilson Street, Room 148, Madison, Wisconsin.

Kewaunee County

Kewaunee County will adequately demonstrate their ability to support operations thru the use of maps, status boards, and other displays as appropriate. Some county emergency worker dosimetry kits will be pre-distributed and additional distribution will occur at two locations: (1) out-of-sequence on December 3, 2007 at the Reception Center at Algoma High School, 1715 Division, Algoma,

Wisconsin; and (2) in sequence on December 4, 2007 at the Count Annex building, 510 Kilbourn, Kewaunee, Wisconsin. The Algoma High School activities will be demonstrated out of sequence on December 3, 2007 beginning at ~6:30p.m. KI is stored at the EOC. The record of dosimeter calibration and the expiration date of the KI will be available for the evaluator in the EOC on the day of the exercise.

Manitowoc County

Manitowoc County will adequately demonstrate their ability to support operations through the use of maps, status boards and other displays as appropriate. Dosimeter and the KI distribution locations, procedures, and storage are described in the county's EOP, Annex I in the Radiological Officer and Health Department Checklists and in Attachment 2 (A, B, C). Some county emergency worker dosimetry kits will be pre-distributed and the remainder will be distributed at the Manitowoc County Highway Commission Reception Center, located at 3500 Highway 310, Manitowoc, Wisconsin, during play. The Reception Center will be activated out-of-sequence on the morning of the exercise, December 4, 2007. Demonstration of distributing dosimeter kits with a briefing can be observed for the Sheriff's deputies in the Sheriff's Department Patrol Squad Room and/or at the traffic control point for the Highway Commission workers. KI for emergency workers is stockpiled in the county's EOC. (For this exercise, the KI dosage in the dosimeter kits will be simulated using M&M's) The record of dosimeter calibration and the expiration date of KI will be available for the evaluator in the EOC.

EVALUATION AREA 2 – PROTECTIVE ACTION DECISION MAKING

Criterion 2.a.1: Emergency Work Exposure Control: *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.*

State of Wisconsin

The State Radiological Coordinator (SRC) is positioned at 2400 Wright Street, Room 105, Madison, Wisconsin. The SRC, based on his or her technical evaluation of the available data, will make recommendations for emergency worker exposure control. This includes recommendations to the Kewaunee and

Manitowoc County Radiological Officers for the ingestion of KI and, as appropriate, authorization to exceed plan-specified exposure limits.

Kewaunee County

The county's Radiological Officer (RO) will receive recommendations for the ingestion of KI from the SRC and will make his/her recommendation to the Officer-in-Charge (OIC) of the County EOC. Each County RO will also evaluate requests from public safety officials who request an exception to worker exposure limits and make a recommendation to the County OIC regarding the request. If the scenario does not drive exception to Emergency Worker exposure limits, this will be accomplished by an interview process.

Manitowoc County

The county's RO will receive recommendations for the ingestion of KI from the SRC and will make his/her recommendation to the OIC of the County EOC. In Manitowoc County, the RO and Public Health share responsibility for making the recommendation. Each County RO will also evaluate requests from public safety officials who request an exception to worker exposure limits and make a recommendation to the County OIC regarding the request. If the scenario does not drive exception to Emergency Worker exposure limit, this will be accomplished by an interview process.

Criterion 2.b.1: Radiological Assessment & Protective Action Recommendations:

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.

State of Wisconsin

The SRC will evaluate information provided by the licensee and complete independent dose projections based on that information and simulated field-monitoring data. Field monitoring data will be provided to the Field Team Coordinator and/or Field Team Communicator via controller inject messages. The SRC will evaluate the data and make a protective action recommendation to the OIC. Generally, early dose assessments performed by state dose assessment personnel will be based upon plant conditions obtained via telephone or facsimile from the affected plant. Later dose assessments will be developed based upon plant conditions and simulated field sampling results.

Kewaunee County, Manitowoc County

The counties will not demonstrate this criterion, since it is a state responsibility.

Criterion 2.b.2: Decisions for the Plume Phase of the Emergency: *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).*

State of Wisconsin

The Governor or his/her designee will demonstrate the ability to make appropriate protective action decisions based on recommendations from the OIC and the SRC in the SEOC. As a home rule state, the Governor or his/her designee makes protective action recommendations (PARs), but implementation decisions ultimately reside with the chief elected official in each county or his/her designee, who may modify PARs based on local needs or considerations. County protective action decisions (PADs) are coordinated between the Kewaunee and Manitowoc County EOCs and with the State EOC to ensure that the counties are able to fully respond at the designated time. The State Emergency Operations Plan (EOP) directs that KI is not made available to the general public. Decisions regarding the distribution of KI to institutionalized populations are a county responsibility.

Kewaunee County

Kewaunee County's Chief Elected Official or his/her designee will evaluate protective action recommendations from the State EOC and determine if those recommendations are appropriate for the local situation. The decision by county officials to implement state protective action recommendations is coordinated between the State EOC and both risk counties. Decisions regarding the distribution of KI to institutionalized individuals will be made when emergency workers are ordered to ingest KI.

Manitowoc County

Manitowoc County's Chief Elected Official or his/her designee will evaluate protective action recommendations from the State EOC and determine if those recommendations are appropriate for the local situation. The decision by county officials to implement state protective action recommendations is coordinated between the State EOC and both risk counties. Decisions regarding the distribution of KI to institutionalized individuals will be made when emergency

workers are ordered to ingest KI.

Distribution of dosimetry and a faux KI first dose will be demonstrated by a Sheriff's Department and Highway Department shift supervisor on the day of the exercise for their respective field staff at two locations: Patrol Squad Room, Sheriff's Department, 1025 S. 9th St., Manitowoc (adjacent to the Joint Dispatch Center in lower level of jail), and the traffic control point, as determined by the scenario. The exact time of the demonstration can be arranged for the convenience of the assigned evaluators.

Criterion 2.c.1 Protective Action Decisions for Protection of Special Populations:

Protective action decisions are made, as appropriate, for special population groups.

State of Wisconsin

Protective Action Decisions for special populations are determined by the counties. If the SRC determines that the situation is deteriorating based upon status information received from the utility and that an evacuation may be recommended, he/she will alert the counties so that they may begin preparing to implement this aspect of their plan.

Kewaunee County

The county will demonstrate the ability and resources to make appropriate protective action decisions. The County RO will receive information from the SRC regarding the protective actions recommended for special populations. The RO will relay that information to the County OIC and appropriate agencies for consideration. All protective action decisions will be made by the Chief Elected Official or his/her designee. There are special population groups that reside within the ten mile EPZ.

Manitowoc County

The County RO will present the protective action recommendations regarding KI to the County Executive (or backup), and Health and Human Services representatives for discussion and implementation.

The county plan recommends evacuating schools and day care centers at a Site Area Emergency (SAE). KI is not given to school children in Manitowoc County. The Mishicot School District is within the 10 mile radius of the Kewaunee Power Station. The Manitowoc County OIC will discuss the protective actions with the

District Administrator. The Valders School District's buildings will function as the host schools for a Mishicot District evacuation. A representative from the Valders District will be present for interview with the Mishicot School District representatives. There are no nursing homes within the Kewaunee Power Station EPZ.

Criterion 2.d.1 Radiological Assessment and Decision Making for the Ingestion Exposure Pathway: *Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO planning criteria.*

State of Wisconsin, Kewaunee County and Manitowoc County

This criterion will not be demonstrated in this exercise.

Criterion 2.e.1 Radiological Assessment and Decision Making Concerning Relocation, Re-entry, and Return: *Timely relocation, re-entry and return decisions are made and coordinated as appropriate, based upon assessments of the radiological conditions and criteria in the OROs plan and/or procedures.*

State of Wisconsin, Kewaunee County and Manitowoc County

This criterion will not be demonstrated in this exercise.

EVALUATION AREA 3 – PROTECTIVE ACTION IMPLEMENTATION

Criterion 3.a.1 Implementation of Emergency Worker Exposure Control: *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.*

State of Wisconsin

This criterion will be demonstrated at the Forward Operating Center/Mobile Radiological Laboratory (FOC/MRL) by the State Field Team Coordinator (FTC) and State Field Teams. The FOC/MRL will be located at the Two Rivers National Guard Armory, 2225 Sandy Bay Road, Two Rivers, Wisconsin. Field team members will receive a radiological exposure control briefing and demonstrate the proper use of direct-reading and thermoluminescent dosimeters (DRDs and TLDs) to monitor and control their radiation exposure.

Kewaunee County

Emergency workers will demonstrate the proper use of DRDs and TLDs to monitor and control their exposure to radiation. Emergency workers will follow procedures in their respective plans regarding radiological equipment use and exposure limits and will monitor and record dosimeter readings.

Kewaunee County emergency workers, Traffic Access and Control Points (TACP) personnel and school bus drivers will have dosimetry distributed at the Annex Building, 510 Kilbourn, Kewaunee, Wisconsin in sequence on December 4, 2007. Reception Center personnel will be issued dosimetry at the Reception Center, out of sequence on December 3, 2007.

Manitowoc County

Emergency workers will demonstrate the proper use of DRDs and TLDs to monitor and control their exposure to radiation. Emergency workers will follow procedures in their dosimeter kit regarding radiological monitoring equipment use and exposure limits and will monitor and record dosimeter readings on the form provided.

Manitowoc County Sheriff's Department deputies assigned to work in the field and Manitowoc County Highway Commission workers assigned to the traffic/access control point will receive dosimeter kits and faux KI. They will be briefed by their shift supervisors on the day of the exercise at two locations: Patrol Squad Room, Sheriff's Department, 1025 S. 9th St. Manitowoc and/or the traffic control point, which will be determined by the scenario. Coast Guard personnel responding in the field would be expected to have their own dosimetry. If they do not, they would be advised to report to the Reception Center to be issued a dosimeter kit and be briefed before reporting to the field.

Criterion 3.b.1 Implementation of KI Decision: *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.*

State of Wisconsin

State field monitoring teams and the FOC will demonstrate in sequence, the availability of KI, appropriate instructions concerning the proper use of KI, and KI record-keeping. Monitoring team personnel will be instructed on the proper use

of KI during the pre-dispatch briefing at the FOC/MRL. The briefing will be presented by the Field Team Coordinator or FOC/MRL Communicator. The SRC, through the Field Team Coordinator, will instruct field teams when to simulate taking KI based on scenario radiological data or classification status provided during the course of the scenario. KI is part of the field team kit inventory.

Kewaunee County

Each county emergency worker dosimetry kit contains KI, instructions, and a form for recording KI ingestion. For exercising purposes, a faux KI tablet will be used. Some kits may be pre-distributed. These kits will be issued from and returned to the County Annex Building on 510 Kilbourn Street in Kewaunee, before assuming/completing shift duties. The Annex Nurse will give a briefing to a law enforcement officer assigned to the TACP and Bus Driver assigned to evacuate school children. The time of the briefing will be determined by the Kewaunee County Emergency Management Director in consultation with the lead Evaluator. Each county emergency worker dosimetry kit distributed from the Annex contains a three day supply of simulated KI. The Kewaunee County EOC will instruct emergency workers, through their supervisor, when they should take the simulated KI.

Manitowoc County

Each county emergency worker dosimetry kit used for the exercise contains one faux dose of KI, instructions and a form for recording KI ingestion and dosimeter readings. Demonstrations of kit distribution and briefings at the Sheriff's Department and TACP were discussed in 3.a.1. The Manitowoc County Health Officer's representative, in consultation with DHFS, the County's RO and OIC will advise emergency workers, through their respective department supervisors, when they should take the simulated KI.

Criterion 3.c.1 Implementation of Protective Action for Special Populations:

Protective action decisions are implemented for special population groups within area subject to protective actions.

State of Wisconsin

In accordance with the plan and procedures, this criterion will not be demonstrated at monitoring and decontamination facilities; this is a county function.

Kewaunee County

Kewaunee County will demonstrate the ability and describe the resources to implement appropriate protective actions for their special population groups. The County's Chief Elected Official or his/her designee will evaluate protective action recommendations from the State EOC and determine whether those recommendations are appropriate for the local situation. The County EOC staff maintains a list of people with special transportation needs and will simulate providing evacuation assistance for these people by contacting transportation providers. The list of people with special transportation needs is available for evaluators to review, but cannot be copied or removed from the county EOC in order to protect confidentiality. The County EOC staff will plan for people with special transportation needs and simulate providing evacuation assistance as driven by the scenario.

Kewaunee County will call three of their 12 contacts (i.e. PARA Tran, Medi Van and Erichsen Bus Service).

Manitowoc County

Manitowoc County will demonstrate the ability and describe the resources to implement appropriate protective actions for their special population groups. The County's Chief Elected Official or his/her designee will evaluate protective action recommendations from the State EOC and determine whether those recommendations are appropriate for the local situation. The County EOC staff maintains a list of people with special transportation needs as well as agencies who serve clients with special needs and will simulate providing evacuation assistance for these people by contacting transportation providers. The list of people with special transportation needs is available for evaluators to review, but cannot be copied or removed from the county EOC in order to protect confidentiality. The County EOC staff will plan for people with special transportation needs and simulate providing evacuation assistance as driven by the scenario.

Manitowoc County will call three of their five contacts (i.e. Brandt Buses, Two Rivers Buses, Maritime Metro Transit).

Criterion 3.c.2 Implementation of Protective Action for Schools: *OROs/school officials decide upon and implement protective actions for schools.*

State of Wisconsin

The State will not demonstrate this criterion; it is a county function.

Kewaunee County

Kewaunee County will simulate evacuation of Kewaunee School District out-of-sequence on the day of the exercise, December 4, 2007, by conducting an interview with key school personnel from the Kewaunee and Luxemburg Casco School Districts (the evacuating and host school districts). The interview will be conducted beginning at ~9:00 a.m. at the Luxemburg Casco High School (LCHS) Office, located at 512 Center Drive, Luxemburg, Wisconsin. The Kewaunee School District Superintendent, the Kewaunee High School principal, and a teacher and bus driver from Kewaunee High School will be interviewed. A copy of the school emergency operations plan will be available during the interview.

The Principal/designee of the Luxemburg Casco School District will also be interviewed regarding the procedures of the host school. A walk-through inspection of the LCHS facilities used to support the Kewaunee School District evacuation will be conducted by the evaluator.

Manitowoc County

Manitowoc County will simulate the evacuation of a school and make arrangements for interviews with the school superintendent, principal, bus company manager and a bus driver at the Mishicot School District Superintendent's Office, Mishicot High School, 660 Washington St., Mishicot, Wisconsin, at approximately 10:00 A.M. on December 4, 2007.

Manitowoc County will also make arrangements for the superintendent from the Valders School District (the host district) to participate in the interview. A county escort will be provided if requested by the evaluator.

Criterion 3.d.1 Implementation/Establishment of Traffic & Access Control:

Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

State of Wisconsin

The State will not demonstrate this criterion; it is a county function.

Kewaunee County

Kewaunee County will demonstrate this criterion at Highway 42 and Krok Rd.

County escorts will be provided upon request. The county is responsible for contacting the Federal Aviation Administration (FAA) and the Railroad (RR) Commission to close air space and restrict train movements. The Kewaunee County Sheriff's Department will call the U.S. Coast Guard in Sturgeon Bay and Manitowoc to keep them informed of the incident in the event that their resources are needed.

Manitowoc County

Manitowoc County will demonstrate this criterion at an appropriate location logical for the scenario and determined by the Highway Commission representative in the EOC. Evaluators will be informed of the location during play. County escorts will be provided if needed. The county is responsible for contacting the Federal Aviation Administration (FAA) and the Railroad (RR) Commission to close air space and restrict train movements. The U.S. Coast Guard Station in Two Rivers, Wisconsin is notified by the Manitowoc County Joint Dispatch Center whenever notifications are made via warning monitor when/if an incident occurs at either Point Beach Nuclear Plant or the Kewaunee Power Station. The Chief Boatswains Mate or designee is invited to locate a USCG representative with law enforcement personnel in the EOC. The Coast Guard would enforce any perimeter control required on Lake Michigan as dictated by the incident. They would also assist in warning boaters. Coast Guard personnel responding in the field would be expected to have their own dosimetry. If they do not, they would be advised to report to the Reception Center to be issued a dosimeter kit and be briefed before reporting to the field.

Criterion 3.d.2 Impediments to Evacuation are Identified and Resolved:

Impediments to evacuation are identified and resolved.

State of Wisconsin

The State will not demonstrate this criterion; it is a county function.

Kewaunee County

Kewaunee County will demonstrate in the County EOC the capability to identify and take appropriate actions concerning impediments to evacuation. Actual resources will not be dispatched, but one contact will be made and all others will be simulated based on the scenario. An impediment will block at least one major evacuation route. The location and timing of the impediment will be provided by Controller Inject.

Manitowoc County

Manitowoc County will demonstrate in the County EOC the capability to identify and take appropriate actions concerning impediments to evacuation. Actual resources will not be dispatched, but one contact will be made and all others will be simulated based on the scenario. An impediment will block at least one major evacuation route. The location and timing of the impediment will be provided by Controller Inject.

Criterion 3.e.1 Implementation of Ingestion Pathway Decisions: *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.*

State of Wisconsin, Kewaunee County, Manitowoc County

This criterion will not be demonstrated in this exercise.

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

State of Wisconsin, Kewaunee County, Manitowoc County

This criterion will not be demonstrated in this exercise.

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

State of Wisconsin, Kewaunee County, Manitowoc County

This criterion will not be demonstrated in this exercise.

EVALUATION AREA 4 – FIELD MEASUREMENT AND ANALYSIS

Criterion 4.a.1 Plume Phase Field Measurements and Analyses: *The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates.*

State of Wisconsin

Two State Field Teams will participate in the field monitoring portion of the exercise and will be evaluated. In addition, a Wisconsin National Guard Civil Support Team (CST) and a U.S. Department of Energy (DOE) Radiological Assistance Program (RAP) team will participate in the exercise. The coordination of the CST and RAP teams by state personnel will be evaluated, while the actual performance of these teams will not. The pre-deployment briefing given to all teams will be evaluated. Equipment inventory, and operational checks will be evaluated only for the two State Field Teams present at the FOC/MRL and will not be evaluated for the CST and RAP teams.

State Field Teams will have available both a count rate meter and an exposure rate meter. State Field Team instruments cannot perform open/closed window readings and do not use calibrated check sources.

A RADeCO H-890C Portable Air Sampler, Marinelli beakers, silver zeolite cartridges and particulate filters will be available to teams for air sampling. ***Silver zeolite cartridges, which do not require purging, are used for iodine air sampling.*** State Field Teams will demonstrate the capability to measure ambient radiation exposure levels, perform field iodine cartridge measurements, and take gas, iodine, and particulate samples. The Field Team Controller will inject simulated ambient radiation exposure levels and field iodine cartridge measurements. The State Field Teams will demonstrate the capability to communicate field measurements to the Field Team Coordinator at the FOC/MRL.

Kewaunee County

This is a State responsibility and will not be demonstrated by the county.

Manitowoc County

This is a State responsibility and will not be demonstrated by the county.

Criterion 4.a.2 Plume Phase Field Measurements & Analysis

Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure.

State of Wisconsin

State Field Teams are directed by the SRC, through the Field Team Coordinator

(FTC) in the FOC. The Field Team Coordinator will provide monitoring/sampling direction, as well as protective action and exposure control information, directly to the teams. The FTC will provide Controller-injected field measurements reported by the State Field Teams and Controller-injected laboratory results to the SRC.

Kewaunee County

This is a state responsibility and will not be demonstrated by the county.

Manitowoc County

This is a state responsibility and will not be demonstrated by the county.

Criterion 4.a.3 Plume Phase Field Measurements & Analysis *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.*

State of Wisconsin

Two State Field Teams will demonstrate approved field team procedures. The State Field Team Controller will identify the two State Field Teams to be evaluated. The teams will demonstrate the capability to measure ambient radiation exposure levels, do field iodine cartridge measurements, and take gas, iodine and particulate samples. The National Guard Civil Support Team (CST) and Radiological Assistance Team (RAP) teams will be participating, but will not be evaluated.

Once collected, the samples will be delivered to the FOC/MRL and inventoried by MRL personnel. Chain of custody for the samples will be evaluated through interview of MRL staff, inspection of completed chain-of-custody documentation, and review of procedures. Evaluation of the two State Field Teams selected will end when the collected samples have been delivered to the FOC/MRL and inventoried by MRL personnel.

Kewaunee County

This is a state responsibility and will not be demonstrated by the county.

Manitowoc County

This is a state responsibility and will not be demonstrated by the county.

Criterion 4.b.1: Post Plume Phase Field Measurements and Sampling

This criterion will not be demonstrated.

Criterion 4.c.1 Laboratory Operations

This criterion will not be demonstrated.

EVALUATION AREA 5 – EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

Criterion 5.a.1 Activation of the Prompt Alert and Notification System: *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 a minimum:*

- 1) *Identification of the state or local governmental organization and the official with the authority for providing the alert signal and instructional message.*
- 2) *Identification of the commercial nuclear power plant and a statement that an emergency situation exists at the plant.*
- 3) *Reference to the REP-specific emergency information (e.g. brochures and information in telephone books) for use by the general public during an emergency.*
- 4) *A closing statement asking the affected and potentially affected population to stay tuned for additional information.*

State of Wisconsin

After the State Protective Action Recommendation (PAR) has been concurred upon by the counties, and approved by the Governor, it becomes a Protective Action Decision (PAD). The state and counties then select the appropriate pre-scripted EAS and Special News Broadcast messages for the PAD. The counties review the message and content and approve it "as is," or modify the message to reflect local weather, road construction, or other conditions prior to its release. Once the message of the text is agreed upon by the state and the counties (the concurrence is done by telephone), the counties will broadcast the message. The counties follow their procedures to coordinate the time for sounding their sirens and broadcasting the EAS message by the EAS stations.

Kewaunee County

Kewaunee County will growl its sirens in accordance with procedures. The county will call WBDK-FM Radio, located at 3030 Park Drive, Sturgeon Bay (in Door County), Wisconsin. It will then transmit a pre-scripted EAS Message and Special News Broadcast Message to the station. The station will simulate the broadcast of both messages. Kewaunee County will fax a hard copy of the message to WBDK. Kewaunee County will demonstrate this procedure once for evaluation purposes. WBDK Radio station has given Kewaunee County 24 hour access to the station for broadcasting EAS messages. The county will provide evidence of a recent successful siren tests to the federal evaluator. WBDK-Radio Station will have staff available for interview during the exercise. A county escort will be available upon request.

Manitowoc County

Manitowoc County will growl its sirens. The county will transmit a pre-scripted EAS message and Special News Broadcast to WCUB/WQTC – FM/AM Radio, located at 1915 Mirro Drive, Manitowoc, Wisconsin. The station will simulate the broadcast of both messages. The station has 24-hour capability. The county will provide recent siren test documentation to the federal evaluator. WCUB-Radio will have staff available for evaluator interview during the exercise. A county escort will be available if needed.

An aircraft mounted public address system will be used to provide back-up to the primary warning system, if weather permits. It is also used to warn boaters on Lake Michigan. The aircraft mounted public address system will be demonstrated unless adverse weather conditions exist. The staff operating the aircraft will be available for evaluator interview at the Manitowoc County Airport, 1815 Freedom Way, Manitowoc, Wisconsin.

Criterion 5.a.2 Activation of the Prompt Alert and Notification System (Fast Breaking): *Activities associated with primary alerting and notification of the public are completed within 15 minutes of verified notification from the utility of an emergency situation requiring urgent action (fast breaking situation). The initial instructional message to the public must include:*

- 1) *Identification of the State or local governmental organization and the official with the authority for providing the alert signal and instructional message;*
- 2) *Identification of the commercial nuclear power plant and a statement that an emergency situation exists at the plant;*

- 3) Reference to the REP-specific emergency information (e.g., brochures and information in telephone books) for use by the general public during an emergency;
- 4) A closing statement asking the affected and potentially affected population to stay tuned for additional information.

In addition, the ORO must demonstrate the capability to contact, in a timely manner, an authorized offsite decision maker relative to the nature and the severity of the event, in accordance with plans and procedures.

State of Wisconsin, Kewaunee County, Manitowoc County

This criterion will not be demonstrated.

Criterion 5.a.3 Activation of the Prompt Alert and Notification System (Exception Areas): *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 a the primary alert and notification system.*

State of Wisconsin

This criterion will not be demonstrated since it is a county responsibility.

Kewaunee County

One exception area is located within the Kewaunee Power Station's 10 mile EPZ. Primary route alerting will be conducted in this area, as stated in the county plan. The start point, route and time will be coordinated between the controller and evaluator.

Manitowoc County

There are no FEMA-approved exception areas in Manitowoc County within the Kewaunee Plant's 10 mile EPZ. If an unforeseen problem occurs with the siren system, the county will demonstrate back-up alerting procedures unless hazardous weather or road conditions prevent safe demonstration.

Criterion 5.b.1 Emergency Information and Instructions for Public and the Media:

OROs provide accurate emergency information and instructions to the public and news in a timely manner.

State of Wisconsin

The state will demonstrate the formulation and dissemination of accurate information and instructions including pre-scripted EAS and Special News Broadcast messages to the JIC. The State of Wisconsin PIOs in the JIC will coordinate with the State EOC and PIOs from the counties, and the utility to ensure the media is briefed in a clear, accurate, and timely manner. Procedures for early notification of the media will be demonstrated in the State EOC prior to the activation of the JIC. Public inquiry calls will be handled by the Dominion Call Center in Virginia, as stated in the State of Wisconsin/Dominion Letter of Agreement. The Call Center will be staffed by Dominion Call Center personnel.

The Ingestion Brochures are printed by the state and distributed to the counties within 24 hours of the declaration of a Site Area Emergency. Brochures will not be printed, but a sample brochure will be available for the federal evaluator and an Operations Officer will simulate the procedure of ordering the brochures to be printed and distributed by discussion with an evaluator.

Kewaunee County

Kewaunee County will have a Public Information Officer (PIO) present at the JIC who will work with the state, utility and other county PIOs to ensure that their county's interests and concerns are represented in the media briefings. The counties use the utility phone banks, which are located at the Dominion Call Center, 7500 West Broad Street, Richmond, Virginia, for rumor control. All media briefings will be done at the JIC in Green Bay. The Kewaunee County PIOs assigned to the JIC will work closely with the PIOs at the county EOC to make sure media releases are accurate and coordinated.

Manitowoc County

Manitowoc County will have a Public Information Officer (PIO) present at the JIC who will work with the state, utility and other county PIOs to ensure that their county's interests and concerns are represented in the media briefings. The counties use the utility phone banks, which are located at the Dominion Call Center, 7500 West Broad Street, Richmond, Virginia, for rumor control. All media briefings will be done at the JIC in Green Bay. The Manitowoc County PIOs assigned to the JIC will work closely with the PIOs at the county EOC to make sure media releases are accurate and coordinated.

EVALUATION AREA 6 – SUPPORT OPERATIONS/FACILITIES

Criterion 6.a.1 Monitoring and Decontamination of Evacuees and Emergency Workers and Registration of Evacuees: *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.*

State of Wisconsin

The State of Wisconsin will demonstrate the adequacy of procedures, facilities, equipment and personnel for radiological monitoring and decontamination. Health monitoring teams will demonstrate radiological monitoring and decontamination of evacuees at reception centers in accordance with the applicable County reception center procedures. Both counties will set up and operate three monitoring stations (i.e. two portal monitors and one hand monitor). The health teams do not use calibrated check sources. The instruments are calibrated annually by a certified calibration facility.

The health monitoring teams will include personnel from the DHFS-RPS and individuals from the counties who have received training as Auxiliary Health Monitors. The personnel from the county will work under the supervision of DHFS-RPS staff and will be evaluated as a part of the State of Wisconsin's response.

Once each reception center is operational and monitors have surveyed several evacuees to establish flow, at least six evacuees will be monitored and registered with one evacuee requiring decontamination. Two evacuee vehicles will be monitored, one of which will require decontamination. Staff will also demonstrate the monitoring of at least one emergency worker, who will require decontamination.

Reception center demonstrations for this criterion are a County responsibility and will be held out of sequence in Kewaunee County on Monday evening, December 3, 2007 beginning at ~6:30 p.m. In Manitowoc County, the Reception Center demonstration will be held in sequence on Tuesday, December 4, 2007.

Kewaunee County

Kewaunee County will demonstrate this criterion out of sequence on December 3, 2007 beginning at ~6:30 p.m. at the Algoma High School, 1715 Division,

Algoma, Wisconsin. Kewaunee County, with assistance from the American Red Cross, is responsible for registering evacuees and assigning them to appropriate congregate care facilities. There will be a demonstration of an electronic evacuee tracking system, but this system will not be evaluated.

Manitowoc County

Manitowoc County will demonstrate this criterion out of sequence with the scenario, on the day of the exercise, December 4, 2007, beginning at approximately 9:00 a.m. The demonstration will be conducted at the Manitowoc County Reception Center (County Highway Commission), 3500 Highway 310, Manitowoc, Wisconsin. Set-up for the drill will commence at ~8:30 a.m. at the Manitowoc Reception Center. Manitowoc County Human Services, with assistance from the American Red Cross, is responsible for registering evacuees and assigning them to appropriate congregate care facilities. Volunteer evacuees (actual people) will process through monitoring, registration and be transported to a congregate care center by bus. Manitowoc County will be testing a new software/ID bracelet program developed by EPTEC, Inc. that will enable reception and congregate care staff to track "evacuees" throughout an incident. This technology is not to be evaluated as it is being field tested for the first time.

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

State of Wisconsin

Health monitoring teams will demonstrate this criterion out of sequence, beginning at ~6:30 p.m. on Monday night, December 3, 2007, at the Kewaunee Reception Center (Algoma High School), 1715 Division, Algoma, Wisconsin, and out-of-sequence on the day of the exercise, December 4, 2007, at the Manitowoc County Reception Center (County Highway Commission), 3500 Highway 310, Manitowoc, Wisconsin at approximately 9:00 a.m. Reception Center personnel will demonstrate the monitoring of one emergency vehicle, which will require decontamination.

Kewaunee County, Manitowoc County

The counties will not demonstrate this criterion, since it is a state responsibility.

Criterion 6.c.1 Temporary Care of Evacuees: *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.*

State of Wisconsin

The state will not demonstrate this criterion, it is a county responsibility.

Kewaunee County

Kewaunee County will demonstrate this criterion out of sequence by opening a congregate care center following the reception center demonstration at approximately 6:30 p.m. on December 3, 2007. The congregate care center will be set up in the lunch room of the Algoma High School, located at 1715 Division Street. The Red Cross will bring inventory lists of equipment and will operate in accordance with their procedures. At least one evacuee will be processed through the congregate care center. A Red Cross representative will be available to the federal evaluator to answer questions about the congregate care center.

Manitowoc County

Manitowoc County will demonstrate this criterion by opening a congregate care center following the reception center demonstration at the County Highway Commission on December 4, 2007. The congregate care center will be located at Manitowoc Lutheran High School, 4045 Lancer Circle, Manitowoc, Wisconsin. Evaluators will be provided an escort if needed (via school bus). Evacuees will be volunteers.

Criterion 6.d.1 Transportation and Treatment of Contaminated Injured Individuals:

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

State of Wisconsin

The MS-1 hospital drill will be held out-of-sequence on the day of the exercise (December 4, 2007) at the Holy Family Memorial Hospital, 2300 Western Avenue, Manitowoc, Wisconsin. The hospital portion of the drill will be a

continuation of the Manitowoc County ambulance drill. Set-up for the drill will commence at ~8:30 a.m. at the Manitowoc Reception Center. The transportation portion of the drill will begin at ~9:30 a.m. and should transition to the hospital portion by ~10:00 a.m. The hospital will demonstrate setting up the Radiological Emergency area, providing appropriate medical care to the patient, and monitoring and decontamination of the patient.

Kewaunee County

The transportation section of the drill will be demonstrated out of sequence beginning at 6:30 p.m. at the Kewaunee County Reception Center (Algoma High School, 1715 Division Street) on December 3, 2007 during the Reception Center drill. Algoma Rescue Squad personnel will demonstrate the packaging and preparation for transport of a potentially contaminated medical victim. Ambulance personnel will make a report to Aurora BayCare Medical Center, Green Bay. Actual transport to the hospital will be simulated, and evaluation will be by interview. The drill will be terminated following the report to the hospital by the EMS personnel.

Manitowoc County

The transportation section of the drill will be demonstrated out-of-sequence in coordination with the monitoring demonstration at the Manitowoc County Reception Center (County Highway Commission) on December 4, 2007, starting at ~9:30. Manitowoc Fire Department EMS personnel will demonstrate the packaging and preparation for transport of a potentially contaminated medical victim to Holy Family Memorial Medical Center, 2300 Western Avenue, Manitowoc. The ambulance will also demonstrate communication with the hospital per its SOP.

Monitoring sick or injured individuals for contamination is not normally done at the reception center or at an incident scene in the field, since a full survey is always required at the hospital. Therefore, ambulance crews are issued survey instruments, but will be issued TLDs and DRDs in accordance with the plan.

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APPENDIX 4

EXERCISE SCENARIO

This appendix contains a summary of the simulated sequence of events – Exercise Scenario – that was used as the basis for invoking emergency response actions by OROs in the Kewaunee Power Station REP Full Participation Plume Exposure Pathway Exercise that was conducted on December 4, 2007.

This plume exercise scenario was submitted by the State of Wisconsin and Dominion Energy Kewaunee, Inc., and approved by DHS/FEMA Region V on November 21, 2007.

During the exercise, Controllers from the State of Wisconsin gave "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 response actions by OROs.

The following is the Off-Site Scenario and Timeline for the December 4, 2007, Kewaunee Power Station exercise for the State of Wisconsin and Kewaunee and Manitowoc Counties. All time intervals are approximate.

**State of Wisconsin
Kewaunee Power Station
Full-Scale Plume Exercise**

Off-Site Timeline

Events held on December 3 & 4, 2007

Following is the off-site exercise timeline for the December 4th Kewaunee Power Station Exercise, for the State of Wisconsin, Kewaunee and Manitowoc Counties. **Times listed are approximate.**

Scheduled Starting Times

Monday, December 3, 2007

2:00 PM FEMA Pre-Exercise Briefing – Holiday Inn, Manitowoc, WI.

6:30 PM Kewaunee County Reception Center Drill, including MS-1 transportation demonstration. (Algoma High School, 1715 Division, Algoma.)

Tuesday, December 4, 2007 – Exercise

-0730 Full-Scale Exercise begins

-0806 **Alert** declared per EAL HA2.1

-0821 **Alert** notification made to Wisconsin Duty Officer (via Warning Center 2) and Kewaunee and Manitowoc County Emergency Management Directors (via Dispatch).

State Duty Officer contacts State Radiological Coordinator and makes other contacts in accordance with Standard Operating Procedures.

1. Duty Officer notifies State Radiological Officer (SRC) of Alert status.
2. SRC recommends activation of EOC.
3. Senior DO officer activates EOC. Instructs Duty Officer to begin calldown.
4. Duty Officer calls Kewaunee and Manitowoc County Sheriff Departments to ensure they've been notified.

5. Duty Officer notifies the appropriate WEM Regional Directors and instructs them to report to the Kewaunee and Manitowoc County EOCs.
6. Duty Officer notifies FEMA.
7. Duty Officer reports to the EOC.
 - EOC security established
 - Esponder event site created, position manuals are distributed. SRC room set up.
 - Communications with Kewaunee County, Manitowoc County and the utility are established.
 - EOC personnel are briefed and instructed to log onto Esponder and sign into roster.
8. County EOC's are activated.
9. Local first responders are put on standby.
10. Joint Information Center (JIC) is activated.
 - Notification to State & County Public Information Officers (PIO) is made.
11. Reception Centers/Congregate Care Centers are put on standby.
12. Counties will broadcast "First Notice" advisory.

~1003

Site Area Emergency declared per EAL SS2.1.

~1018

SITE AREA EMERGENCY notification is made to State and Counties.

1. Reception Centers and Congregate Care Centers are activated. (Kewaunee Co. will be simulated)
 - Note:** Demonstration at Algoma High School Reception Center was conducted Monday, December 3rd at 6:30 PM.
2. Kewaunee District Schools are evacuated to Luxemburg High School (simulated, interviews will be done.) Mishicot Schools will be evacuated to Valders School. (simulated, interviews will be done.)
3. All daycares in EPZ are evacuated to the United Methodist Church in Algoma. (Manitowoc Co. has no daycares in the EPZ)
4. Livestock advisory issued to all farmers in EPZ.
5. Ingestion brochures are ordered from printer.

~1104

General Emergency declared per EAL FG1.

~1119

GENERAL EMERGENCY notification is made to State and County. Plant recommends **EVACUATION** of all sectors out to 2 miles and sectors NPQ out to 5 miles. The states default evacuation PAR is 5 miles, 360 degrees. **Affected sub-areas: 5.** Wind speed is 7 mph from 114 degrees.

SRC will quickly evaluate the utility recommendation and will then brief the OIC. The OIC/Ops staff will contact the counties with the recommendation and obtain concurrence.

Once the PAR has been approved by the governor and becomes a PAD, the appropriate EAS message will be selected, and the counties will determine a time to sound the sirens and broadcast the EAS message. (KEW Evac 1)

1. Exception area route alerting will be demonstrated, if necessary.
2. Traffic control/access points are activated.
3. Media briefings continue until termination.
4. A State of Emergency declaration is requested.
5. Federal assistance is requested

~1234

Dose assessment indicates PAG exceed greater than 5 miles.

~1249

Notification of 2nd PAR is made to the State and County.

Utility recommends EVACUATION of all sectors out to 5 miles and sectors NPQ out to 10 miles.

Affected sub-areas are 5, 10SW, 10W & 10 N.

Wind speed remains at 7 mph.

1. All EOC staff are notified of status change.
2. Second PAR is assessed by the SRC and discussed with the OIC.

Once the PAR has been approved by the governor and becomes a PAD, the appropriate EAS message will be selected, and the counties will determine a time to sound the sirens and broadcast

the EAS message. (KEW Evac 6)

~1330

Utility will terminate exercise. State, county and JIC may continue play until all objectives have been met.

Friday, December 7, 2007

10:00 a.m.

Participants' Meeting, Kewaunee County EOC, Algoma.

11:00 a.m.

Public/Media Briefing

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RADIOLOGICAL MEDICAL DRILL SCENARIO

KEWAUNEE COUNTY

ALGOMA RESCUE SQUAD

I. PROPOSED SCHEDULE

Date: December 3, 2007
Time: Between 6:00 pm and 9:00 pm
Location: Algoma High School (Reception Center)
1715 Division Street
Algoma, WI
Injury/Illness: Open fracture on right leg

II. PURPOSE

This simulated radiation medical emergency is being conducted to exercise the emergency medical response in Kewaunee County. The basic objective is to assess the ability of the pre-hospital medical service to handle a contaminated and injured patient.

III. OBJECTIVES OF THE DRILL

Terminal Objective

Demonstrate the adequacy of vehicles, equipment, procedures, and personnel for transporting contaminated, injured, or exposed individuals.

Demonstration Objectives

To accomplish the terminal objective, drill participants will adequately:

- Implement appropriate contamination control measures during preparation and transport of individuals from the accident site.
- Determine the identity of the medical facility to which the individual will be transported and transport the individual without undue delay.
- Demonstrate the capability to maintain timely and accurate communications with the receiving medical facility.

- Demonstrate the capability to follow policies, implement procedures, and use equipment/facilities as delineated in the applicable emergency response plan.

IV. NARRATIVE SCENARIO

This simulated radiation accident begins as a member of the general population arrives at the Algoma Reception Center as a result of a simulated radiological release from the Kewaunee Power Station. This individual has been driven to the center as recommended by emergency messages delivered via the media. While exiting the house, the individual fell down his porch steps and fractured his right leg. The individual landed on his side and felt severe pain in his lower right leg. The individual was driven to the reception center. The personnel at this facility initiate action to medically evaluate the patient, request assistance from other workers, and call for an ambulance.

At the reception center, the ambulance crew is advised that the victim has driven through the radioactive plume and may be radiologically contaminated. Notification of the designated receiving hospital is simulated.

The ambulance crew treats the victim, implements contamination control measures, and loads the individual into the ambulance for transport to the hospital. Transport will be simulated and drill may be terminated when victim is loaded **and** the notification of the hospital has been completed.

V. SCENARIO

THIS IS A DRILL

DO NOT initiate actions affecting normal operations

Ambulance and hospital staff DRDs read <1 mR throughout the drill

<u>Scenario Phase</u>	<u>Controller Message</u>
Discovery of patient	Medical Conditions Conscious level: alert/oriented Respiration: 24 Pulse: 135 Blood pressure: 152/82 Skin: warm/dry/normal color Pupils: equal/reactive to light Other: open fracture to right lower leg (tibia/fibula)/minor bleeding /patient experiencing great pain

=====

EMS treatment	Medical Conditions Conscious level: unchanged Respiration: 24 Pulse: 98 Blood pressure: 148/82 Skin: unchanged Pupils: unchanged Other: unchanged
	Radiological Conditions (if surveyed prior to transport) Victim's clothing: 2000 cpm (0.5 mR/hr) Fracture site: 2000 cpm (0.5 mR/hr) Victim's palms: 2000 cpm (0.5 mR/hr)

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EMS transport	Medical Conditions Conscious level: unchanged Respiration: 18 Pulse: 84 Blood pressure: 138/78 Skin: unchanged Pupils: unchanged Other: unchanged
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RECEPTION CENTER DRILL SCENARIO

KEWAUNEE COUNTY

ALGOMA RECEPTION CENTER

I. PROPOSED SCHEDULE

Date: December 3, 2007
Time: 6:00 pm
Location: Algoma High School
1715 Division Street
Algoma, WI

II. PURPOSE

This simulated radiological emergency is being conducted to exercise the setup and operation of the reception center in Kewaunee County. The basic objective is to assess the ability of county and state personnel to setup and operate Algoma Reception Center in response to a radiological incident at Kewaunee Power Station.

III. OBJECTIVES OF THE DRILL

- Demonstrate the adequacy of procedures, facilities, equipment, and personnel for the radiological monitoring, decontamination, and registration of evacuees.
- Demonstrate the adequacy of procedures for the monitoring and decontamination of emergency workers, equipment, and vehicles.

IV. EXTENT OF PLAY

Kewaunee County and the State of Wisconsin will demonstrate these objectives between 6:00 pm and 9:00 pm on December 3, 2007, at Algoma High School in Algoma. Kewaunee County is responsible for registering evacuees and assigning them to appropriate congregate care facilities. The state is responsible for directing the radiological monitoring and decontamination portions of this objective.

State health monitoring teams will demonstrate radiological monitoring and decontamination of evacuees, emergency workers, and vehicles in accordance with the

procedures set forth in the county reception center plan and the WI DHFS-RPS *Nuclear Incident Response Plan*. Health monitoring teams will include personnel from the Department of Health and Family Services Radiation Protection Section, the University of Wisconsin Safety Department, and individuals from the county who have received training as Auxiliary Health Monitors. Health monitoring personnel from the county will work under the supervision of DHFS-RPS staff, and should be evaluated as part of the State of Wisconsin's response.

Once the reception center is operational and monitors have surveyed several evacuees to establish flow, at least six evacuees will be monitored and registered for evaluation purposes, with one evacuee requiring decontamination. At least two evacuee vehicles will be monitored with one vehicle requiring decontamination.

Following demonstration of monitoring and decontamination of evacuees and their vehicles, one emergency worker will be monitored and require decontamination. One emergency worker vehicle will be monitored and require decontamination.

V. NARRATIVE SCENARIO

Activation of the Algoma Reception Center will commence at approximately 6:00 pm, Monday, December 3rd in response to notification that a radiological incident has occurred at the Kewaunee Power Station.

Once the center is operational, processing of evacuees will commence. At least six evacuees will be monitored. Contamination at levels greater than 100 cpm above background will be detected on one evacuee, who will be sent to the decontamination area for decontamination. All evacuees will be registered in accordance with reception center procedures. One worker will also be monitored and will require decontamination.

Two evacuee vehicles will be monitored with one having contamination levels greater than 100 cpm above background detected on the wheel wells. This vehicle will be directed to the vehicle decontamination area for decontamination. One emergency worker vehicle will be monitored and require decontamination.

Section VI contains the controller data for contamination levels.

VI. SCENARIO

THIS IS A DRILL

<u>Scenario Phase</u>	<u>Controller Message/Notes</u>
Evacuee monitoring	Sixth evacuee will be contaminated Contamination levels - Left palm 250 cpm >bg - Right palm 300 cpm >bg - Left forearm 250 cpm >bg
=====	
Evacuee Decontamination	First decontamination lowers contamination levels to less than 100 cpm above background
=====	
Evacuee vehicle Monitoring	Second vehicle will be contaminated Contamination levels - Wheel wells 900 cpm >bg
=====	
Evacuee vehicle Decontamination	First decontamination lowers contamination levels to less than 100 cpm above background
=====	
Emergency worker Monitoring	- Seat of pants 700 cpm >bg - Both palms 1000 cpm >bg - Shoes 2000 cpm >bg
=====	
Emergency worker Decontamination	First decontamination lowers contamination levels to less than 100 cpm above background
=====	
Emergency vehicle Monitoring	- Wheel wells 1800 cpm >bg - Rear end 1200 cpm >bg
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Emergency vehicle Decontamination	First decontamination lowers contamination levels to less than 100 cpm >bg

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2007 RADIOLOGICAL MEDICAL DRILL SCENARIO

MANITOWOC COUNTY

MANITOWOC FIRE DEPARTMENT

HOLY FAMILY MEMORIAL MEDICAL CENTER

I. PROPOSED SCHEDULE

Date: December 4, 2007
Time: Between 9 a.m. and 12 p.m.
Start Location: Manitowoc County Highway Department
3500 Highway 310
Manitowoc, WI

End Location: Holy Family Memorial Medical Center
2300 Western Avenue
Manitowoc, WI 54221

Injury/Illness: Open fracture on right leg

II. PURPOSE

This simulated radiation medical emergency is being conducted to exercise the emergency medical response in Manitowoc County. The basic objective is to assess the ability of the pre-hospital and hospital emergency medical service to handle a contaminated and injured patient.

III. OBJECTIVES OF THE DRILL

Ambulance Crew:

Terminal Objective

Demonstrate the adequacy of vehicles, equipment, procedures, and personnel for transporting contaminated, injured, or exposed individuals.

Demonstration Objectives

To accomplish the terminal objective, drill participants will adequately:

- Determine the nature and extent of external radiological contamination of a contaminated injured individual.
- Implement appropriate contamination control measures during preparation and transport of individuals from the accident site.
- Determine the identity of the medical facility to which the individual will be transported and transport the individual without undue delay.
- Demonstrate the capability to maintain timely and accurate communications with the receiving medical facility.
- Demonstrate the capability to follow policies, implement procedures, and use equipment/facilities as delineated in the applicable emergency response plan.

Medical Facility:

Terminal Objective

Demonstrate the adequacy of the equipment, procedures, supplies, and personnel of medical facilities responsible for treatment of contaminated, injured, or exposed individuals.

Demonstration Objectives

To accomplish the terminal objective, drill participants will adequately:

- Demonstrate the timely availability of appropriate medical facility staff.
- Demonstrate the preparation of the receiving area for a contaminated individual and implement appropriate contamination control measures.
- Determine, by both survey and bioassay sample, the nature and extent of radiological contamination of a contaminated injured individual and demonstrate proper decontamination.
- Implement appropriate contamination control measures during and after treatment of a contaminated individual.

- Demonstrate the capability to follow policies, implement procedures, and use equipment/facilities as delineated in the applicable emergency response plan.

IV. NARRATIVE SCENARIO

This simulated radiation accident begins as a member of the general population arrives at the Manitowoc Reception Center as a result of a simulated radiological release from the Kewaunee Power Station. This individual has been driven to the center as recommended by emergency messages delivered via the media. While exiting the house, the individual fell down his porch steps and fractured his right leg. The individual landed on his side and felt severe pain in his lower right leg. The individual was driven to the reception center. The personnel at this facility initiate action to medically evaluate the patient, request assistance from other workers, and call for an ambulance.

Medical personnel from the Manitowoc Fire Department are requested to attend to the person. The individual is given supportive medical care and vital signs are taken both prior to and after the ambulance arrives. The ambulance arrives and initial advisement is that the individual is injured (fractured lower right leg) and is or may be radiologically contaminated. Holy Family Memorial Medical Center is notified, prepares the Radiation Emergency Area (REA), and notifies the appropriate staff according to procedures. The ambulance crew continues patient care and transports the patient to Holy Family Memorial Medical Center.

The hospital emergency staff meets the ambulance upon arrival. An initial report is received and the patient is transferred to the REA. The hospital staff evaluates the patient and initiates appropriate treatment. The hospital radiation safety personnel perform a radiological survey of the patient. Bioassay samples are taken from the wound area and intact skin areas. Decontamination efforts are performed until surveys indicate background readings on previously contaminated areas.

The patient is surveyed prior to transfer out of the REA. Appropriate exit procedures for the patient and attending personnel are performed. Surveys of the ambulance crew and vehicle are performed prior to releasing the crew and vehicle.

V. SCENARIO

THIS IS A DRILL

DO NOT initiate actions affecting normal operations

Note: Ambulance and hospital staff DRDs read <1 mR throughout the drill

Scenario Phase

Controller Message

Discovery of patient

Medical Conditions

Conscious level: alert/oriented
 Respiration: 24
 Pulse: 135
 Blood pressure: 152/82
 Skin: warm/dry/normal color
 Pupils: equal/reactive to light
 Other: open fracture to right lower leg (tibia/fibula)/ minor bleeding/ patient experiencing great pain

=====

EMS treatment

Medical Conditions

Conscious level: unchanged
 Respiration: 24
 Pulse: 98
 Blood pressure: 148/82
 Skin: unchanged
 Pupils: unchanged
 Other: unchanged

Radiological Conditions (if surveyed prior to transport)

Victim's clothing: 2000 cpm (0.5 mR/hr)
 Fracture site: 2000 cpm (0.5 mR/hr)
 Victim's palms: 2000 cpm (0.5 mR/hr)

=====

EMS transport

Medical Conditions

Conscious level: unchanged
 Respiration: 18
 Pulse: 84
 Blood pressure: 138/78
 Skin: unchanged
 Pupils: unchanged
 Other: unchanged

THIS IS A DRILL

Scenario Phase

Controller Message

Initial hospital
evaluation

Medical Conditions

Conscious level: unchanged
Respiration: 16
Pulse: 80
Blood pressure: 136/74
Skin: unchanged
Pupils: unchanged
Other: unchanged

Radiological Conditions

Victim's clothing: 2000 cpm (0.5 mR/hr)
Fracture site: 2000 cpm (0.5 mR/hr)
Victim's palms: 2000 cpm (0.5 mR/hr)

After first
decontamination

Radiological Conditions

Fracture site: 500 cpm (0.15 mR/hr)
Victim's palms: 1000 cpm (0.3 mR/hr)

After second
decontamination

Radiological Conditions

Fracture site: 200 cpm (< 0.1 mR/hr)
Victim's palms: background

After third
decontamination

Radiological Conditions

All areas: background

Post medical
treatment

Medical Conditions

Conscious level: unchanged
Respiration: 14
Pulse: 74
Blood pressure: 130/74
Skin: unchanged
Pupils: unchanged
Other: X-ray
• C-spine - negative
• Fracture to right distal
tibia/fibula

Termination

Termination message issued when authorized by Exercise
Manager

END OF DRILL

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RECEPTION CENTER DRILL SCENARIO

MANITOWOC COUNTY

MANITOWOC RECEPTION CENTER

I. PROPOSED SCHEDULE

Date: December 4, 2007
Time: ~8:30 am - ~12:30 pm
Location: Manitowoc County Highway Department
3500 Highway 310
Manitowoc, WI.

II. PURPOSE

This simulated radiological emergency is being conducted to exercise the setup and operation of the reception center in Manitowoc County. The basic objective is to assess the ability of county and state personnel to setup and operate Manitowoc County Reception Center in response to a radiological incident at the Kewaunee Power Station.

III. OBJECTIVES OF THE DRILL

- Demonstrate the adequacy of procedures, facilities, equipment, and personnel for the radiological monitoring, decontamination, and registration of evacuees.
- Demonstrate the adequacy of procedures for the monitoring and decontamination of emergency workers, equipment, and vehicles.

IV. EXTENT OF PLAY

Manitowoc County and the State of Wisconsin will demonstrate these objectives between ~8:30 am through ~12:30 pm on December 4, 2007, at Manitowoc County Highway Department Building in Manitowoc. Manitowoc County is responsible for registering evacuees and assigning them to appropriate congregate care facilities. The state is responsible for directing the radiological monitoring and decontamination portions of this objective.

State health monitoring teams will demonstrate radiological monitoring and decontamination of evacuees, emergency workers, and vehicles in accordance with the procedures set forth in the county's reception center plan, the State EOP, and the DHFS-RPS *Nuclear Incident Response Plan*. Health monitoring teams will include personnel from the Department of Health and Family Services Radiation Protection Section, the University of Wisconsin Safety Department, and individuals from the county who have received training as Auxiliary Health Monitors. Health monitoring personnel from the county will work under the supervision of DHFS-RPS staff, and should be evaluated as part of the State of Wisconsin's response.

Once the reception center is operational and monitors have surveyed several evacuees to establish flow, at least six evacuees will be monitored and registered for evaluation purposes, with one evacuee requiring decontamination. At least two evacuee vehicles will be monitored with one vehicle requiring decontamination.

Following demonstration of monitoring and decontamination of evacuees and their vehicles, at least one emergency worker will be monitored and require decontamination. At least one emergency worker vehicle will be monitored and require decontamination.

V. NARRATIVE SCENARIO

Activation of the Manitowoc Reception Center will commence at approximately 8:30 am, Tuesday, December 4th, in response to notification that a radiological incident has occurred at the Kewaunee Power Station.

Once the center is operational, processing of evacuees will commence. At least six evacuees will be monitored. Contamination at levels greater than 100 cpm above background will be detected on one evacuee, who will be sent to the decontamination area for decontamination. All evacuees will be registered in accordance with reception center procedures. One emergency worker will also be monitored and will require decontamination.

Two evacuee vehicles will be monitored with one having contamination levels greater than 100 cpm above background detected on the wheel wells. This vehicle will be directed to the vehicle decontamination area for decontamination. One emergency worker vehicle will be monitored and require decontamination.

Section VI contains the controller data for contamination levels.

VI. SCENARIO THIS IS A DRILL

<u>Scenario Phase</u>	<u>Controller Message/Notes</u>
Evacuee monitoring	Sixth evacuee will be contaminated Contamination levels - Left palm 250 cpm >bg - Right palm 300 cpm >bg - Left forearm 250 cpm >bg
Evacuee decontamination	First decontamination lowers contamination levels to less than 100 cpm above background
Evacuee vehicle monitoring	Second vehicle will be contaminated Contamination levels - Wheel wells 900 cpm >bg
Evacuee vehicle decontamination	First decontamination lowers contamination levels to less than 100 cpm above background
Emergency worker Monitoring	- Seat of pants 700 cpm >bg - Both palms 1000 cpm >bg - Shoes 2000 cpm >bg
Emergency worker decontamination	First decontamination lowers contamination levels to less than 100 cpm above background
Emergency vehicle monitoring	- Wheel wells 1800 cpm >bg - Rear end 1200 cpm >bg
Emergency vehicle decontamination	First decontamination lowers contamination levels to less than 100 cpm >bg

END OF DRILL