U.S. Department of Homeland Security
Region V
536 South Clark Street, Floor 6
Chicago, IL 60605

FEMA

JUL 29 2009

NRC Headquarters Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

To Whom It May Concern:

Enclosed is one copy of the Final Report for the June 24, 2009, Radiological Emergency Preparedness (REP) Ingestion Pathway Exercise for the Point Beach Nuclear Plant. Under separate cover, three copies of this report are being sent to the Planning Section Supervisor, The State of Wisconsin, Kewaunee and Manitowoc Counties, and the utility owner/operator, FPL Energy, LLC, participated in this exercise.

No Deficiencies were identified for any jurisdiction during this exercise. There were no Areas Requiring Corrective Action (ARCAs) identified for the State of Wisconsin, Kewaunee and Manitowoc Counties during this exercise.

There were no previous ARCAs for the State of Wisconsin, Kewaunee and Manitowoc Counties.

Based on the results of the June 24, 2009, exercise, the offsite radiological emergency response plans and preparedness for the State of Wisconsin and affected local jurisdictions, site-specific to the Point Beach Nuclear Plant, can be implemented and are adequate to provide reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public in the event of a radiological emergency at the site.

Therefore, the Title 44 CFR, Part 350, approval of the offsite radiological emergency response plans and preparedness for the State of Wisconsin site-specific to the Point Beach Nuclear Plant, granted on June 14, 1985, remains in effect.

Copies of this report have been provided to the DHS/FEMA National Office, Nuclear Regulatory Commission (NRC) Region III, and the State of Wisconsin.

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

Sincerely,

Janet M. Odeshoo
Acting Regional Administrator

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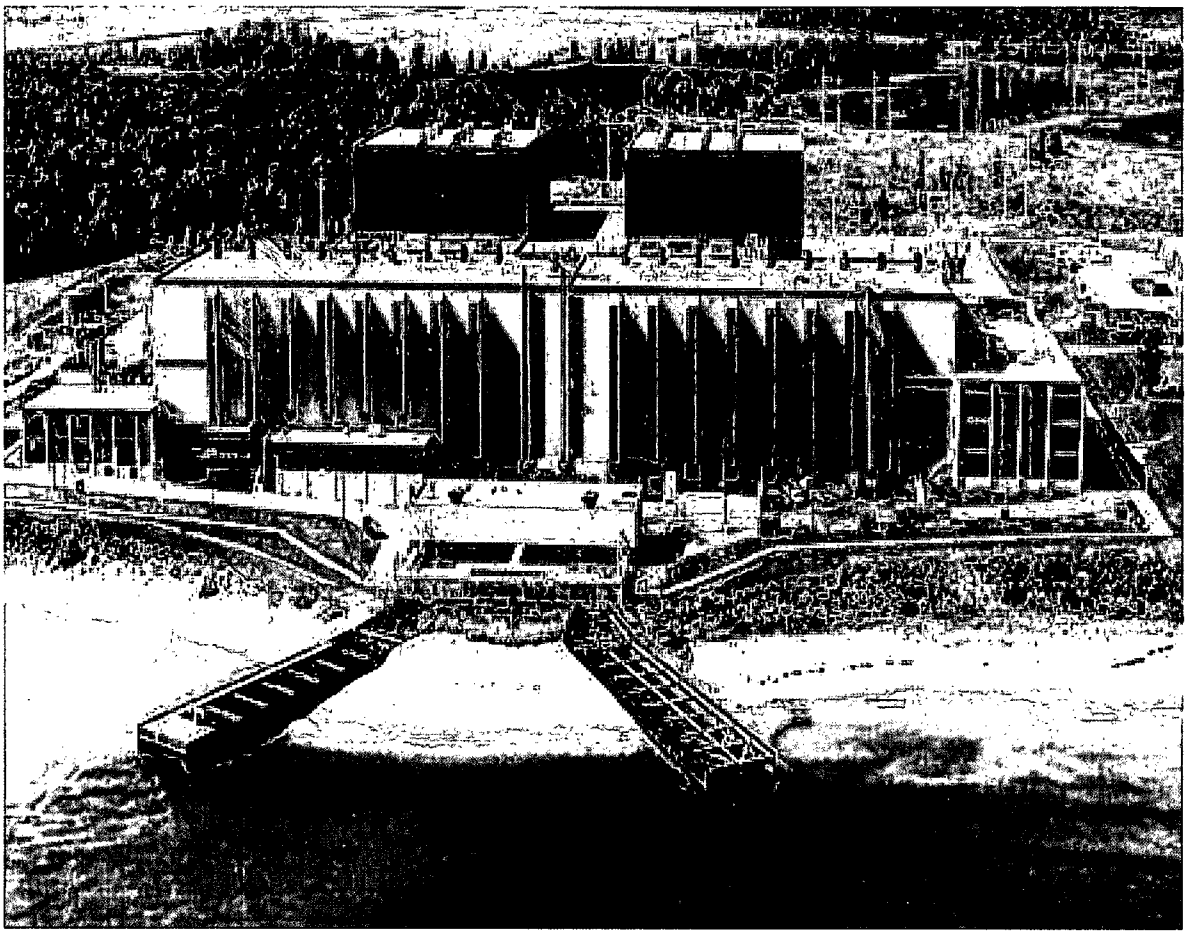
NRR

Enclosure (1)

Point Beach Nuclear Plant

Exercise Report - 2009-06-24
Final Report - Radiological Emergency Preparedness (REP) Program
2009-07-22

FEMA



FEMA

Exercise Report

Point Beach Nuclear Plant

Exercise Date: 2009-06-24

Report Date: 2009-07-22

U.S. DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

REP Program

536 S. Clark St. 6th floor

Chicago, IL 60605

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1. Executive Summary

On June 24, 2009, a Radiological Emergency Preparedness (REP) Ingestion Exposure Pathway Exercise was conducted for the 50-mile Emergency Planning Zone (EPZ) around the Point Beach Nuclear Plant (PBNP) 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 June 24, 2009, Ingestion Exposure Pathway Exercise completed the commitment by the State of Wisconsin to reschedule the Ingestion Exposure Pathway Exercise that was originally to take place on December 9 and 10, 2008. This exercise was terminated early by the State of Wisconsin due to a real-world weather emergency. The early termination precluded the completion of virtually all activities for both the plume and ingestion phases of the exercise that were scheduled for December 9 and 10, 2008.

A determination was made by DHS/FEMA that credit would be given only for the Plume Phase out-of-sequence activities completed on December 8, 2008, and for prior issues corrected during exercise play up until the time the State terminated play in the exercise. The exercise activities for which credit was given were 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 previous Ingestion Pathway exercise was conducted on Augest 6-7, 1996. The qualifying emergency preparedness exercise for the PBNP was conducted on March 9, 1982.

DHS/FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise. In the State of Wisconsin the risk counties of Kewaunee and Manitowoc participated along with the State Government.

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 Ingestion Exposure Pathway Exercise. There were no out of sequence activities for the State of Wisconsin or Kewaunee and Manitowoc Counties.

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

There were no Deficiencies identified during this exercise for the State of Wisconsin or the Counties of Kewaunee and Manitowoc. There were no Areas Requiring Corrective Action (ARCAs) identified for the State of Wisconsin and Kewaunee and Manitowoc Counties during this exercise. The were no previous ARCAs for the State of Wisconsin and Kewaunee and Manitowoc Counties that required correction during this exercise. There were no ARCAs identified for the State of Wisconsin and Kewaunee and Manitowoc Counties that were successfully redemonstrated during the exercise.

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 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 DHS/FEMAs 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 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 Regional Assistance Committee (RAC), which is chaired by DHS/FEMA.

Formal submission of the RERPs for the PBNP 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 on June 14, 1985, under 44 CFR 350.

A REP Ingestion Exposure Pathway Exercise scheduled for June 24, 2009, was conducted by DHS/FEMA to assess the capabilities of State and local offsite emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving the PBNP. The purpose of this exercise report is to present the exercise results and findings on the performance of the offsite response organizations (ORO) during a simulated radiological emergency.

The findings presented in this report are based on the evaluations of the Federal evaluator team, with final determinations made by the DHS/FEMA RAC Chairman, and approved by the Regional Administrator.

The criteria utilized in the DHS/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 III 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

Ingestion Pathway EPZ and a listing of all participating jurisdictions and functional entities, which were evaluated. The report does not include a tabular presentation of the time of actual occurrence of key exercise events and activities, as all of the ingestion phase demonstrations were conducted out of sequence.

Section IV 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: (1) descriptions of all Deficiencies and ARCAs assessed during this exercise, recommended corrective actions and the State and local governments' schedule of corrective actions, if applicable, for each identified exercise issue and (2) descriptions of unresolved ARCAs assessed during previous exercises, if applicable and the status of the OROs' efforts to resolve them.

3. Exercise Overview

Contained in this section are data and basic information relevant to the June 24, 2009, REP Ingestion Exposure Pathway Exercise to test the offsite emergency response capabilities in the area surrounding the PBNP. This section of the exercise report includes a description of the 50-mile Emergency Planning Zone and a listing of all participating jurisdictions and functional entities that were evaluated. A timeline of exercise events and activities is not provided, as all activities occurred out of sequence.

3.1. EPZ Description

The PBNP is owned and operated by FPL Energy, LLC. The plant consists of two-loop pressurized water reactors (Units 1 and 2) supplied by Westinghouse Electric Company, rated at 512 and 514 megawatts (MW), respectively. The operating licenses for the facility were granted in August 1973 (Unit 1) and October 1974 (Unit 2). Commercial operations began at the site during December 1973 (Unit 1) and December 1974 (Unit 2).

The plant site is located about 30 miles southeast of the city of Green Bay in Two Rivers, Wisconsin. Population centers within 50 miles of the site with more than 25,000 people include: Manitowoc (2000 census population: 32,547), located 13 miles southwest of the site; Green Bay (2000 census population: 87,899), located 30 miles northwest of the site; Appleton (2000 census population: 59,032), located 43 miles southwest of the site; and Sheboygan (2000 census population: 48,085), located 36 miles southwest 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.

Ingestion Emergency Planning Zone Description

State of Wisconsin Counties including Brown, Calumet, Door, Fond du Lac, Kewaunee, Manitowoc, Marinette, Oconto, Outagamie, Shawano, and Winnebago lie within the 50-mile ingestion exposure pathway. Recreational facilities include Point Beach State Park, Camp Manitou, and Camp TaPaWingo. Recreational boating and water sports activities are prevalent during the summer months along the Lake Michigan shoreline.

According to the 2000 census report the total 50-mile ingestion exposure pathway population for planning use is 240,917, fluctuating during the summer months.

3.2. Exercise Participants

Agencies and organizations of the following jurisdictions participated in the Point Beach Nuclear Plant exercise:

State Jurisdictions

- Wisconsin Emergency Management
- Wisconsin Department of Health Services - Radiation Protection Section

Risk Jurisdictions

- Kewaunee County Emergency Management Agency
- Manitowoc County Emergency Management Agency

3.3. Exercise Timeline

The REP Ingestion Exposure Pathway Exercise for the PBNP involved only the out-of-sequence activities conducted on June 24, 2009. Consequently, no timeline is required.

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 June 24, 2009, REP Ingestion Exposure Pathway Exercise to test the off-site emergency response capabilities of State and local governments in the 50-mile IPZ surrounding the PBNP.

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 IV.B.)

Blank – Not scheduled for demonstration

Table 2 - Summary of Exercise Evaluation

DATE: 2009-06-24 SITE: Point Beach Nuclear Plant, WI A: ARCA, D: Deficiency, M: Met, N: Not Demonstrated		WI-RRR-ING Decision-Making	WI-FOC/MRL	WI-UA Team #3	WI-UA Team #4	WI-Implement RRR+ING Decisions	K-Co-RRR+ING Decision-Making	K-Co - RRR & ING Implementation	M-Co-RRR+ING Decision-Making	M-Co - RRR & ING Implementation
Emergency Operations Management										
Mobilization	1a1			M	M					
Facilities	1b1									
Direction and Control	1c1		M							
Communications Equipment	1d1		M	M	M					
Equip & Supplies to support operations	1e1		M	M	M					
Protective Action Decision Making										
Emergency Worker Exposure Control	2a1									
Radiological Assessment and PARs	2b1									
Decisions for the Plume Phase -PADs	2b2									
PADs for protection of special populations	2c1									
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1	M					M		M	
Rad Assessment and Decision making concerning Relocation, Reentry, and Return	2e1	M					M		M	
Protective Action Implementation										
Implementation of emergency worker exposure control	3a1		M	M	M					
Implementation of KI decision	3b1									
Implementation of protective actions for special populations - EOCs	3c1									
Implementation of protective actions for Schools	3c2									
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		M			M		M		M
Materials for Ingestion Pathway PADs are available	3e2					M		M		M
Implementation of relocation, re-entry, and return decisions	3f1					M		M		M
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		M	M	M					
Laboratory operations	4c1		M							
Activation of the prompt alert and notification system	5a1									
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									
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1									
Mon / decon of emergency worker equipment	6b1									
Temporary care of evacuees	6c1									
Transportation and treatment of contaminated injured individuals	6d1									

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 Regional Office. 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 Administrator. 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. Wisconsin Jurisdictions

4.2.1.1. Wisconsin - State Field Measurements & RAD Assessment for RRR & Ingestion Decision-Making

Criterion 2.d.1:
The Point Beach Nuclear Power Plant (PBNPP) ingestion pathway exercise began at 0730 hours with a briefing of ingestion pathway support staff by the State Radiological Coordinator (SRC). The briefing emphasized the need to request field data (including more than needed) and to perform timely actions on all data received. The individual serving as Federal Liaison noted that a FRMAC had been requested, including a minimum of 25 sampling teams (and up to 50 if possible), a mobile laboratory, and mapping capability.

A meeting of the SRC staff, Wisconsin support agencies and Federal advisors was convened at 0945 hours. The stated purpose of this meeting was to develop an ingestion sampling plan, develop material for press releases, and determine whether a food embargo for Brown County was appropriate.

The first topic discussed was a livestock advisory (sheltering of animals and placing them on stored feed). Based on the plume footprint which had been developed via dose models, a decision was made to issue the livestock advisory to Manitowoc, Kewaunee, Brown, and Shawano Counties. The next topic was a food embargo (e.g., dairy products, meat, fruits, vegetables, and feed grain). Again, based on a consideration of the plume footprint, a decision was reached to place an embargo on food products associated with the same four Counties. The livestock advisory and food embargo formed the basis for protective actions in the areas impacted by the I-131 deposition.

The decision to issue an embargo for food products in four Counties was made by the Department of Agriculture, Trade, and Consumer Protection (DATCP) in concert with the SRC. This decision was premised on computer-generated maps which showed the location of calculated I-131 deposition contours. It appeared that if any portion of a County was impacted by a deposition contour, then the entire County was included in

the embargo. The next topic discussed, press release material, was not explored to any depth at this point – it was merely serving as a statement of need. The last topic discussed during the first meeting was the food sampling plan for Manitowoc, Kewaunee, Brown, and Shawano Counties. The food sampling plan development included all of the candidate media to be sampled, the relative priority of each food type, and sources of data regarding locations and types of crops to be sampled. Sample analysis support was to be provided initially by the State of Wisconsin and supplemented by FRMAC after it was established. The latter discussion consumed considerable time, ending at approximately 1130 hours.

During the above-mentioned meeting, it was noted that all measured radionuclide concentration in food and water would be compared with pre-determined Derived Intervention Levels (DILs) contained in FDA 1998 guidance, "Accidental Contamination of Human Food and Animal Feeds: Recommendations for State and Local Agencies." The DILs were based on Protective Action Guides of a committed effective dose equivalent of 0.5 rem and a committed dose equivalent of 5 rem to any individual organ. This information could then be used to develop PARs which would define smaller areas within the Counties where food embargoes needed to be applied.

After receiving results of radiological analyses of agricultural products later in the afternoon, the SRC and staff were in a position to re-review the food embargo imposed as a result of the first meeting. After the re-review was completed, only the embargo for Shawano County was removed. Embargoes for the other three Counties were not modified, i.e., they remained in effect for the entire area of each County. The decision to not modify the food embargoes for the three Counties from full to partial County areas of concern was conservative. This was due to the inclusion of food products with measured concentrations of I-131 and other radionuclides (such as Cs-137) that were well within the DILs.

All activities described in the demonstration criterion were carried out accordance with the plan, procedures and extent of play agreement.

Criterion 2.e.1:
The Point Beach Nuclear Power Plant (PBNP) Ingestion Pathway Exercise began at 0730 hours with a briefing of ingestion pathway support staff by the State Radiological Coordinator (SRC).

A meeting of the SRC staff, Wisconsin support agencies and Federal advisors was

convened at 1140 hours to discuss relocation, re-entry, and return issues. Although there were breaks at key points, this meeting lasted until approximately 1500 hours.

The relocation discussion included the above-mentioned agencies and advisors, plus Manitowoc, Kewaunee, and Brown Counties. It was initially noted that a relocation PAG had been estimated based on soil sample analyses and supplemented by exposure rate measurements. A value of 3.4 mR/hr was estimated as the value of interest. This exposure rate, when corrected for radioactive decay associated with the specific radionuclides found in the soil sample analysis, was equivalent to a default value of 0.23 mR/hr. Both would result in a dose equivalent of 2 rem at the end of the first year of exposure.

From this analysis, it was concluded that the area that had been evacuated was adequate unless additional aerial monitoring or ground-truthing activities identified an unknown hot spot. Later, an aerial survey identified a hot spot on the Kewaunee-Manitowoc County border, near the intersection of County Highways BB and Q. The area was circumscribed by nearby highways to the West, South, North, and East. The radiation levels in this exceeded the 3.4 mR/hr value used as a relocation criterion, thus warranting protective action for this population. Kewaunee and Manitowoc Counties were aware of this relocation recommendation based on their participation in the conference call.

The re-entry discussion focused on the manner in which requests for re-entry would be handled. All individuals having an appropriate justification (e.g., to tend to their dairy cows, retrieve a valuable commodity from their home) were to be processed through each County's Reception Center prior to entering the restricted area. Each individual would be issued a direct-reading dosimeter, provided with radiation protection training, and be accompanied by an individual carrying a radiation monitoring instrument. An 8-hour access time during any 24-hour period was established, along with an exposure limit of 100 mR for the eight hours, and a turnback value of 200 mR/hr. All individuals re-entering would also be required to take KI. Following an entry, to service dairy animals, for example, the individual would exit the area via a Reception Center.

The return discussion focused on reducing the scope of the restricted area based on field team surveys which had been completed at the time. An exposure rate criterion of 20 µR/hr (twice background) was used to determine which areas could be re-occupied by residents that had been evacuated. Boundaries to the area were defined in terms of roads which ran in each of the four major directions. An additional consideration was

the removal of restrictions from an area that needed to be traversed by Kewaunee Nuclear Power Plant workers on their way to and from the plant. It was determined that sufficient exposure rate measurements and sample results existed to permit this plant access route to be defined and removed from the restricted area.

All activities described in the demonstration criteria were carried out in accordance with the plan, procedures, and extent of play agreement.

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

a. MET: 2.d.1, 2.e.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 Forward Operations Center/Mobile Radiological Laboratory/Mobile Communications Center

Criterion 1.c.1:

The State of Wisconsin Forward Operating Center/Mobile Radiological Laboratory (FOC/MRL) was located at the National Guard Armory at 2225 Sandy Bay Road, Two Rivers. In accordance with the Plan and procedures, the State Radiological Coordinator located at the State EOC in Madison directs the deployment of the FOC/MRL and also directs its activities. The Field Team Coordinator (FTC) located at the FOC/MRL coordinated the activities of the FOC/MRL.

During the Point Beach Ingestion Exercise, the demonstration of the FOC/MRL was out of sequence and independent of the demonstration at the State EOC in Madison. The Field Team Coordinator was in charge of the out-of-sequence demonstration. The communications in the FOC part of the facility was not demonstrated as it was an out of sequence demonstration.

At 0853 hours, the FTC performed a briefing of the four Ingestion Sampling Teams just prior to their deployment to pre designated sampling locations. He used the checklist in

Appendix G, Item IV.A of the Department of Health and Family Services Radiation Protection Plan, Version 1.1, April 14, 2006. He covered heat stress, driving safety, placement of dosimeters, read and record the DRD reading every 30 minutes, use of procedures contained in the kits, use the cell phone to call the FTC or Dosimetry Coordinator if there are any questions, cross contamination of samples, chain of custody and procedure to be used in the sample receiving area. The teams were given an opportunity to ask questions and these were answered in a clear and concise manner.

The FTC coordinated the set up of the sample receiving area in the FOC/MRL and coordinated as appropriate the actions of the Ingestion Sampling Teams and the Sampling Receiving Area personnel when samples were delivered.

There were no conflicts to resolve and the FOC/MRL personnel followed their procedures.

All activities described in the demonstration criterion were carried out in accordance with the plans, procedures and extent of play agreement.

Criterion 1.d.1:
Successfully demonstrated – This criterion requires no narrative.

Criterion 1.e.1:
Successfully demonstrated – This criterion requires no narrative.

Criterion 3.a.1:
The State of Wisconsin Forward Operating Center/ Mobile Radiological Laboratory (FOC/MRL) was located at the National Guard Armory at 2225 Sandy Bay Road, Two Rivers. The location is about nine miles SSW of the Point Beach Nuclear Plant. For this exercise the FOC/MRL was outside the projected plume footprint and the demonstration was out-of-sequence with the Ingestion Pathway exercise in the State EOC.

At 0816 hours, the Dosimetry Coordinator commenced the issuance of dosimetry packets to the staff of the FOC/MRL and the Ingestion Sampling Teams. He instructed them to read and record their DRD reading.

At 0853 hours, a pre-job radiological briefing was conducted by the Field Team

Coordinator (FTC). Personnel at the FOC/MRL including the Ingestion Sampling Teams were treated as radiation workers. They were issued thermoluminescent dosimeters (Landauer LUXEL, calibration date 03/01/2009) and a DRD (Arrow Tech Inc, Model W138, 0 to 200mR, calibration date 06/11/2009). Personnel were instructed on the proper placement of the dosimeters and to read and record the DRD reading every 30 minutes. Since the teams were being deployed to locations that were not in the Restricted Area they were not expected to get any significant readings on their dosimeters. They were to call in if they got any reading above zero or if the dosimeter malfunctioned. Dosimeters were to be returned to the Dosimetry Coordinator at the end of the day.

The Evaluator interviewed the FTC about the more appropriate use of occupational (annual) dose limits (versus emergency dose limits) during the post emergency ingestion phase. The State of Wisconsin is a Nuclear Regulatory Commission agreement state and has adopted the NRC occupational dose limits. It was indicated that although the April 2006 version of the procedures did not address this, the proposed 2009 version included this feature.

During the exercise two individuals in the FOC/MRL experienced malfunctions of their DRD. This occurred at different times. One of these individuals was the Dosimetry Coordinator. The DRD readings went to about 120 mR in the span of 30 minutes. Both individuals recalled bumping the DRD against furniture. The Dosimetry Coordinator issued a new dosimeter and a new recording sheet.

All activities described in the demonstration criterion were carried out in accordance with the plans, procedures and extent of play agreement.

Criterion 3.e.1:

The State of Wisconsin Forward Operating Center/ Mobile Radiological Laboratory (FOC/MRL) was located at the National Guard Armory at 2225 Sandy Bay Road, Two Rivers. The deployment of Ingestion Sampling Teams and their demonstration was done out of sequence with and separate from the rest of the Ingestion Pathway Exercise.

In accordance with the extent of play agreement the sampling locations were pre-designated for convenience and were not based on any scenario driven sampling strategy. The pre-designated locations were for sampling milk, water, vegetation, soil and fish. Ingestion Sampling Team members were from the Department of Health and

Family Services, Department of Agriculture, Trade and Consumer Protection and, Department of Natural Resources. They indicated that they were field personnel who had a working knowledge of the locations of the different dairy, fruit farms, vegetable farms and food produce.

The Field Team Coordinator was interviewed as to the FOC/MRL capability in a real event to access the data base of fruit, vegetable and dairy farms that would be used to develop a sampling strategy. It was indicated that this action was the responsibility of the State Radiological Coordinator (SRC) in the State EOC who had access to the electronic database. The FOC/MRL would be provided with a list of sampling locations by the SRC.

All activities described in the demonstration criterion were carried out in accordance with the plans, procedures and extent of play agreement.

Criterion 4.b.1:

The State of Wisconsin Forward Operating Center/ Mobile Radiological Laboratory (FOC/MRL) was located at the National Guard Armory at 2225 Sandy Bay Road, Two Rivers. The FOC/MRL demonstration was done out of sequence with and separate from the rest of the Ingestion Pathway Exercise demonstration at the State EOC.

In accordance with the extent of play agreement the sampling locations were pre-designated for convenience and were not based on any scenario driven sampling strategy. The pre-designated locations for sampling milk, water, vegetation, soil and fish were assigned to the Ingestion Sampling Teams by the Field Team Coordinator. He indicated that for the purposes of the exercise all these locations were outside the Restricted Area and hence they should not encounter significant radiation exposure rates. Ingestion Sampling Team members were from the Department of Health and Family Services, Department of Agriculture, Trade and Consumer Protection and, Department of Natural Resources. The Team members were field personnel and had a working knowledge of the locations of the different farms.

A Sample Receiving Area was set up in the assembly area of the National Guard Armory. It consisted of two tables set up as an L just inside the back entrance. One table was for the drop off of the samples and the other table was for the turn in of the Chain of Custody Form. Another table was placed a little way behind and parallel to the sample drop off table. All table surfaces and the floor from the entrance doorway to the tables were covered with paper. A rope barrier segregated this area from the rest of the

Armory. Survey instruments were positioned for use on each of the tables.

The sample receipt technician used a Ludlum Model 12 low range Count Rate Meter with a Model 44 pancake probe (calibration date 04/29/09) and, a Victoreen Model 451B-RYR mid range survey meter (calibration date 04/01/2009). The Chain of Custody Form Receipt technician used a Ludlum Model 12 low range Count Rate Meter with a Model 44 pancake probe (calibration date 04/29/09). The Sample Receipt technician wore a plastic apron and gloves.

The Field Team Coordinator instructed the Ingestion Sampling Teams to bring their samples to the FOC/MRL Sample Receiving Area. The Ingestion Sampling Team handed in the Chain of Custody form for the sample and it was signed by the technician and the data on the form was entered into the computer log. Each sample had its own Chain of Custody form. The Ingestion Sampling Team then handed in their sample to the technician at the sample receipt table.

The exterior of the bag containing the sample was surveyed using the Ludlum Model 12 instrument. The technician indicated she was using a reading of 100 cpm plus background as the threshold value. This was the State of Wisconsin criterion for designating contamination. The sample bag was placed on another table behind the sample drop off table. On this table the sample was removed from its bag and placed in a new clean large plastic bag. The sample label was placed in a smaller sandwich bag and this bag was inserted into the sample bag. If the count rate was above the designated threshold level the sample would be re-bagged as usual however the new clean sample bag would be tagged to alert the Laboratory.

The 100 cpm above background was used as an alert level for the Laboratory. The Evaluator noted that the MRL procedures specified a contact exposure rate of 0.1 mR/hr to flag samples so that they would not be stored in the MRL. This was reasonably consistent with the criterion being used in the Sample Receiving Area. All discarded sample bags and other materials were put in a large trash bag.

Milk and fish samples were placed in a cooler in the designated sample storage area in the Armory. All other sample bags (sand, vegetation, water) were placed in the designated sample storage area. Samples in the storage area were considered as being ready for transfer to the Mobile Radiological Laboratory parked outside the Armory.

All activities described in the demonstration criterion were carried out in accordance with the plans, procedures and extent of play agreement.

Criterion 4.c.1:
The State of Wisconsin Forward Operating Center/ Mobile Radiological Laboratory (FOC/MRL) was located at the National Guard Armory at 2225 Sandy Bay Road, Two Rivers. The FOC/MRL demonstration was done out of sequence with and separate from the rest of the Ingestion Pathway Exercise demonstration at the State EOC. The large Recreation Van style vehicle was parked near the room in the Armory designated as the Sample Receiving Area.

The FOC/MRL vehicle was acquired within the last year and was still a work in progress. During the exercise there was no gamma spectrometer in the MRL. The gamma spectrometer had been installed and was operational but within the last month the Canberra Cryo-Pulse 5 Electrically Refrigerated Cryostat used to cool the germanium detector malfunctioned and had to be shipped back to the manufacturer. The Laboratory Services Coordinator indicated that if it was a real emergency an older gamma spectrometry system in service at the State Health Laboratory in Madison would be installed in the MRL.

The Mobile Radiological Laboratory (MRL) occupied one half of the space in the vehicle, the other half was dedicated to the Forward Operating Center. A sliding door separated the two areas. All surfaces in the MRL including the ceiling were designed to be easily decontaminated. During an event access to the MRL was by a separate door on the rear of the Vehicle. There was also a window through which samples could be delivered to a small table that served as the sample receiving area.

The MRL was monitored by an area radiation monitor (Ludlum Model 375 Digital Area Monitor, calibration date 01/14/2009). The detector had a low alarm set point of 2.0 mR/hr and a high alarm set point of 5 mR/hr. These set points can be adjusted. The lowest reading on the monitor would be 0.1 mR/hr. The sample receiving window was monitored by a Ludlum Model 177 Count Rate Meter, calibration date 01/12/2009 (showed a background reading of about 80 cpm). Also available for radiation survey was a Thermo Micro Rem Dose Rate Meter, Model Micro REM AO, calibration date 09/17/2008 (showed a background reading of 3 micro rem/hr).

Through an interview process the Laboratory Services Coordinator described how he would receive samples and prepare them for counting. All surfaces of the tables in the

MRL were covered with paper. A laboratory coat and gloves would be worn at all times. Sample size was prescribed in the Unrestricted Area Sampling Team procedures. The MRL would process all samples irrespective of radiation level. Containers for discarded sample bags, gloves and other trash were available.

The MRL in order to minimize background levels would not store any sample with a contact exposure rate reading of greater than 0.1 mR/hr. These samples would be stored inside the National Guard Armory. This description was reasonably consistent with the criteria used in the Sample Receiving Area and Sample Storage Area inside the National Guard Armory.

The samples would be extracted from their bags and placed on the table. The sandwich bag containing the sample label and the chain of custody form would be placed aside. The data on the sample label (type, location, date and time of collection) would be entered into the Gamma Spectrometer computer software. Samples would be assigned a sequential MRL number. The sample label data would be printed out on the sample analysis sheet.

The capability to add preservative to some samples such as milk is available in the MRL. Sample preparation for placing samples in the Marinelli beakers for gamma spectrometry was minimal. A scale was available to weigh samples such as fish, vegetation etc.

The default count time for samples on the gamma spectrometer was 10 minutes. Different geometries were used depending on the sample type. The largest geometry was a 3.5 liter Marinelli Beaker (typically used for water, milk, vegetation) and the smallest was a 0.5 liter Marinelli beaker (typically used for filter papers, iodine cartridges). Calibrations for each of these counting geometries had been set up using mixed gamma counting standards from Eckert and Ziegler (a copy was provided to the Evaluator). These counting standards were traceable to the National Institute of Standards and Technology (NIST). The counting standards included gamma radiation energies from 0.088 Mev to 1.836 Mev. This range of energies would cover all of the gamma radiation emitting isotopes that would typically be found in a nuclear plant accident.

The software purchased for the gamma spectrometer was Canberra Genie-2000 version v3.1. The Laboratory Services Coordinator demonstrated use of this software to analyze the counts from a sample collected in 2008. A copy of the results was

provided to the Evaluator. The gamma spectrometer results could be expressed in any combination of units. The Laboratory Services Coordinator indicated he would ask the State Radiological Coordinator and the dose assessment staff what units they would prefer for results for the different sample types. This would facilitate the input of the sample analysis results into the dose models / spreadsheets. The sample analysis result sheet would be faxed to the State Radiological Coordinator in the State EOC (using Hewlett Packard Office Jet Pro model L 7590, scan/fax/copy/print).

The library of isotopes included with the Canberra Genie-2000 software was extensive and included isotopes typically encountered in nuclear power plant accidents. Gamma radiation emitting transuranic isotopes were included in this library providing the MRL with the capability to detect them.

All activities described in the demonstration criterion were carried out in accordance with the plans, procedures and extent of play agreement.

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

a. MET: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.e.1, 4.b.1, 4.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

4.2.1.3. Wisconsin - Unrestricted Area Field Team #3

Criterion 1.a.1:
Successfully demonstrated – This associated criterion requires no narrative.

Criterion 1.d.1:
Successfully demonstrated – This associated criterion requires no narrative.

Criterion 1.e.1:
On Wednesday, June 24, 2009 from 0805 hours to 0903 hours, at the Wisconsin Army National Guard Armory located at 2225 Sandy Bay Road, Two Rivers, Wisconsin, the State of Wisconsin demonstrated it had equipment, maps, dosimetry, and other supplies

sufficient to support emergency operations by Wisconsin Unrestricted Area Field Team #3 (UAFT #3).

The Dosimetry Coordinator (DC) provided each team member with a Landauer thermoluminescent dosimeter (TLD) and an Arrow Tech Model W138 Direct-Reading dosimeter (DRD) (0-200 mR). The TLDs had an issue date of March 1, 2009, and are good for one year. The DRDs were calibrated on June 11, 2009. At the end of the exercise the dosimetry was returned to the DC at the Forward Operations Center.

From 0826 hours to 0832 hours, UAFT #3 completed the inventory of team equipment and materials using the Unrestricted Area Field Team Kit Inventory in the Radiological Incident Response Plan. This equipment included documents (maps, procedures, forms, note tablet, pens, markers, logs and sample labels), sampling tools (pail, funnel, grass clipper, knife, trowel, dust pan and measuring rope), containers (re-closable plastic bags, gallon containers, plastic trash bags, large plastic bags, wire twist ties and tape), protective clothing (disposal gloves and aprons), decontamination supplies (Rad-Con spray and paper towels) and miscellaneous (dosimeter charger, flash light and batteries).

All activities described in the demonstration criteria were carried out in accordance with the plan, procedures and extent of play agreement.

Criterion 3.a.1:

On Wednesday, June 24, 2009 from 0805 hours to 1226 hours, the State of Wisconsin demonstrated the ability to issue appropriate dosimetry and procedures, and manage radiological exposure to Wisconsin Unrestricted Area Field Team #3 (UAFT #3) in accordance with the plans and procedures. (The evaluator was scheduled to evaluate Field Team #1, but based upon the extent of play, the Field Team Coordination (FTC) chose Unrestricted Area Field Team #3 & 4 to be evaluated.) UAFT #3 periodically and at the end of each mission read dosimeters and recorded the readings on the appropriate exposure record.

Each team member was issued a Landauer thermoluminescent dosimeter (TLD) and an Arrow-Tech Model W138 direct-reading dosimeter (DRD) (0-200 mR) in accordance with the plans and procedures.

From 0854 hours to 0900 hours, the FTC conducted a briefing for the ingestion field teams. The following information was included: where to wear dosimetry on the upper

torso, how to read a DRD by lookin through to the light, how often to read the DRD (every 30 minutes), record-keeping for DRD readings and where and to whom to return dosimetry at the end of the exercise. No administrative exposure limit or turnback values were specified, but the team members were directed to report any DRD deflection to the FTC for further direction.

From 0825 hours to 1221 hours, each member of UAFT #3 read their DRD nine times. All readings were recorded on the RPS Response Team Member Personal Dosimeter Log. Radiological exposure control was discussed with two members of UAFT #3. Both displayed a good understanding of dosimetry use, exposure control and reporting of exposure.

All activities described in the demonstration criteria were carried out in accordance with the plan, procedures, and extent of play agreement.

Criterion 4.b.1:
On Wednesday, June 24, 2009 from 0903 hours to 1226 hours, Wisconsin Unrestricted Area Field Team #3 (UAFT #3) demonstrated the capability to make appropriate measurements and to collect appropriate samples (fish, milk, soil, vegetation, ground water and surface water) to support adequate assessments and protective action decision-making.

The members of UAFT#3 are employees of the Wisconsin Department of Agriculture, Trade and Consumer Protection and the Wisconsin Department of Health Services. The Wisconsin Division of Public Health, Radiation Protection Section oversaw contamination control and exposure for UAFT #3.

The equipment and supplies for each type of sampling are included in the sampling procedure in the Radiological Incident Response Plan. The Plan also contains the Unrestricted Area Field Team Kit Inventory which list all equipment and supplies needed by UAFT #3.

The following equipment and supplies were required for each sample: fish (disposable gloves, two 18" X 20" re-closable bags, sampling label, cooler, dark plastic trash bag and clear plastic trash bag), milk (one-gallon container, funnel, pail, sampling label, 18" X 20" re-closable bag, disposable gloves, Rad-Con spray, paper towels, cooler, dark plastic trash bag and clear plastic trash bag), soil (12" X 15" re-closable bag, 18" X 20" re-closable bag, soil plug cutter or trowel, Rad-Con spray, paper towels, sampling label

and shipping tag, disposable gloves, meter rope, dark plastic trash bag and clear plastic trash bag), vegetation (12" X 15" re-closable bag, 18" X 20" re-closable bag, grass clippers, Rad-Con spray, paper towels, sampling label and shipping tag, disposable gloves, dark plastic trash bag and clear plastic trash bag), ground water (disposable gloves, one-gallon container, paper towels, sampling label, 18" X 20" re-closable bag, dark plastic trash bag and clear plastic trash bag), and surface water (one-gallon container, funnel, pail, sampling label and shipping bag, 18" X 20" re-closable bag, disposable gloves, paper towels, Rad-Con spray, dark plastic trash bag and clear plastic trash bag).

The specified minimum samples sizes were fish (three pounds – actually bought 0.48 pounds perch), milk (one gallon), soil (five plugs, three inches in diameter and two inches deep, with vegetation), vegetation (enough to fill a 12" by 15" re-closable bag), ground water (one gallon) and surface water (one gallon).

Direct radiation readings on the samples were taken at the Forward Operations Center (FOC) by the receiving personnel when the samples were delivered by UAFT#3. In accordance with the extent of play, the exposure rate readings were provided to the State Radiological Coordinator via controller inject.

UAFT #3 delivered the samples to the FOC. The FOC was responsible for delivering the samples to a laboratory for analysis.

No agencies other than the Offsite Response Organization participated in the sampling activities.

From 0854 hours to 0900 hours, the FTC conducted a briefing for the Unrestricted Area Field Teams. The following information was included in the briefing: reminder to stay hydrated while working outside in the hot weather, be careful of traffic conditions, verification of completed inventory of team materials, proper use of dosimetry (TLD, DRD, record keeping and return), procedure use, periodic return of collected sample to the Forward Operations Center (don't hold them all until the end of the exercise), and completion of the Chain of Custody Log on the RPS Response Team Field Sample Collection Form.

Controllers identified the sampling locations for the following samples: soil, vegetation, milk and surface water.

There was one call to the FOC from UAFT #3. At 1037 hours, UAFT#3 called to ask permission to pick up the fish sample before delivering the milk sample. Permission was granted. At 1114 hours, the milk and fish samples were turned over to the FOC. The Chain of Custody Log was properly completed.

All activities described in the demonstration criteria were carried out in accordance with the plan, procedures and extent of play agreement.

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

a. MET: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 4.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

4.2.1.4. Wisconsin - Unrestricted Area Field Team #4

Criterion 1.a.1:
Successfully demonstrated – This associated criteria requires no narrative.

Criterion 1.d.1:
This was an out of sequence demonstration, beginning at 0809 hours on June 24, 2009.

The State of Wisconsin, Unrestricted Area Field Team #4, demonstrated two communication systems to support emergency operations. The primary means of communication with the Field Team Coordinator (FTC) located in the Forward Operations Center/Mobile Radiological Laboratory (FOC/MRL) was personal cellular telephones. There were three members comprising the field team and each member had a personal cellular telephone. The FTC also had a personal cellular telephone.

One backup communication system was also available to the field team. The FOC/MRL had five State issued US Cellular Inc. cellular telephones available as backups.

The communication systems were fully operational during the exercise. A communication check with the cellular phones was made by the team to the FTC at

1017 hours.

There were no communications failures observed during the exercise.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent of play.

Criterion 1.e.1:
Successfully demonstrated – This associated criteria requires no narrative.

Criterion 3.a.1:
This was an out of sequence demonstration, beginning at 0809 hours on June 24, 2009.

The State of Wisconsin, Unrestricted Area Field Team #4 (UAFT #4), was pre-positioned at the Forward Operations Center/Mobile Radiological Laboratory (FOC/MRL) according to the extent of play agreement. This is located at the Wisconsin National Guard Armory, 2225 Sandy Bay Road, Two Rivers, Wisconsin.

The decision to dispatch the UAFT #4 was made by the FOC/MRL Field Team Coordinator (FTC). The team was dispatched to collect samples during the post plume phase of the Point Beach Nuclear Power Plant exercise.

Each of the three team members received a dosimetry packet when they arrived at the FOC/MRL at 0816 hours. Since the team operates outside radiologically controlled areas, personnel monitoring is limited to one low range (0-200 milliRoentgen) Direct-Reading Dosimeter (DRD) and one optically stimulated thermoluminescent (OSL) permanent record dosimeter. The packet also contained a State of Wisconsin form titled "RPS Response Team Member Personal Dosimeter Log". The dosimetry kits contained all items specified in the Radiological Incident Response Plan, Appendix E, Ingestion Sampling Team – Kit Inventory (State), dated April 14, 2006.

After the dosimetry packets had been issued and the field team kits were inventoried, the FTC began a briefing on the use of dosimetry at 0853 hours. This briefing included the zeroing of DRDs, checking the DRDs every 30 minutes, recording the readings on the Dosimeter Log Form, the proper use of permanent record dosimeters, and returning all dosimetry to the Dosimetry Issuance Station at the conclusion of the exercise.

The team's occupational dose limits are 25 rem for the thyroid, and 5 rem for the total

effective dose equivalent. The team was dispatched to collect samples at 0901 hours. During the exercise, the team read their dosimetry every 30 minutes and recorded their readings on the RPS Response Team Member Personal Dosimeter Log. The team did not receive any simulated exposure and no actions requiring exposure control was observed. By interview it was determined that the team would report any readings on their DRD to the FTC.

The team returned all dosimetry and logs to the Dosimetry Issuance Station at 1135 hours.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent of play.

Criterion 4.b.1:
This was an out of sequence demonstration, beginning at 0809 hours on June 24, 2009.

The State of Wisconsin, Unrestricted Area Field Team #4 (UAFT #4), was comprised of three members. All members were employed by the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP).

Contamination and exposure control was overseen by the Forward Operations Center/Mobile Radiological Laboratory (FOC/MRL) Field Team Coordinator (FTC). During the exercise, the team did not receive any simulated exposure or contamination and no actions requiring contamination or exposure control were observed. By interview it was determined that the team would report any readings on their DRD or contamination levels to the FTC.

The equipment and supplies that are required for each type of sample is specified in the Radiological Incident Response Plan, dated April 14, 2006. The team inventoried the sampling kit that was assigned to them at 0820 hours. This inventory was successfully completed at 0841 hours. The evaluator verified that all required equipment and supplies for each sample type identified in the plan were in the sampling kit.

This plan identifies 13 different sample types. During the exercise, the UAFT #4 was directed to take six different sample types. These were a ground water sample, a surface water sample, a milk sample, a soil sample, a vegetation sample and a fish sample.

The minimum sample size for each of the six sample types are specified in the Radiological Incident Response Plan, dated April 14, 2006. These were to fill one gallon containers for milk, ground water, and surface water. The soil sample was five soil plugs (including vegetation) approximately 2.5 inches wide by 2 inches deep. The vegetation sample was to fill a 12 inch by 15 inch zip-lock bag with vegetation. The fish sample was 4 pounds of whole fish or a minimum of 3 pounds of fish flesh of one type. The evaluator verified that the appropriate sample sizes were collected for each sample type. The exception was the fish sample. The team collected 0.48 pounds of fresh fish to reduce the associated cost. The evaluator noted that 3 pounds of fish as specified in the plan was available.

The team delivered all bagged and labeled samples to the FOC/MRL Sample Receipt Station. At this time the form "Field Sample Collection" was completed. This form included necessary information for sample counting at the FOC/MRL (e.g. sample time, sample identification number, sample type, and sample location). A section of this form contained a Chain of Custody Log. The Chain of Custody Log included the "relinquished by" name, "received by" name, initials, date and time.

Sample collection and delivery was completed at 1135 hours and the exercise was terminated for UAFT #4 at this time.

All activities described in the demonstration criteria were carried out in accordance with the plan, procedures and extent of play agreement.

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

a. MET: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 4.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

4.2.1.5. Wisconsin - Implement RRR & Ingestion Decisions

Criterion 3.e.1:

There were a multitude of both federal and state agencies that were able to provide information on the location of water supplies, dairy farms, various crop farms, and the location of food processing plants.

The agencies that could speak to water supply issues were the US Environmental Protection Agency (EPA) and the Wisconsin Department of Natural Resources-Drinking Water Division. The water supply was not considered a major issue in the priority of ingestion decisions because most of the water supplies are from wells.

Dairy farms were the top priority in making an evaluation of radiological conditions that may have affected the industry. Both the US Department of Agriculture and the Wisconsin Department of Agriculture were able to provide valuable information on the size and location of the major dairy farms. The Manitowoc, Kewaunee, and Brown County Extension Services also provided detailed information on the dairy farms in their respective counties.

At 0945 hours, the State Radiological Coordinator (SRC) made a decision to broadcast a livestock advisory for Manitowoc, Kewaunee, Brown, and Shawano Counties and the Public Information Officer (PIO) immediately began the process. The PIO coordinated for the advisory with the counties, the Joint Information Center (JIC) in Green Bay and the Officer-in Charge (OIF) operations staff to complete the process. The advisory states all animals should be put on stored feed and water.

The Wisconsin Department of Agriculture issued a Agriculture Product Hold Order at 1242 hours indicating the following products can not move within or out of Kewaunee and Manitowoc Counties: all foodstuffs, livestock, dairy products, vegetables, animal feed and grains. The hold order is in effect until further notice.

All activities described in the demonstration criteria were carried out in accordance with the plan, procedures, and extent of play agreement.

Criterion 3.e.2:

The first briefing at the State Emergency Operations Center (SEOC) began at 0832 hours. The Officer-in-Charge (OIF) made a brief statement and asked the State Radiological Coordinator (SRC) for an update on the current situation everyone in the room could stay informed.

The first order of business was to determine what federal assistance was needed and

who would complete the logistics on what airport to use, hotel space, etc. The OIC asked his operations to work on the logistics for the federal response personnel.

The SRC listed the top priorities for federal assistance: 1. Provide a flyover so any radiological contamination on the ground could be clearly defined. 2. Provide a minimum of 25 field-sampling teams. 3. Lab analysis capability for map making.

At 0945 hours, the SRC conducted a meeting of all key personnel in order to set priorities. The meeting involved all key state and federal personnel and all the surrounding counties.
There was a lot of discussion and the priorities were finally agreed on. Dairy farms were the top priority, followed by feed warehouses as there is one in Manitowoc and Kewaunee County. This was a top priority in the event local feed was contaminated so dairy farmers could still care for their herd. Other priorities included forage and soil, poultry, fresh food and vegetables, alfalfa (which is ready for a second cut), and pig farms.

At 1140 hours, the SRC conducted a meeting to provide results of field team monitoring so the issue of relocation could be discussed. By taking soil samples and also instrument measurements and inputting this data in RASCAL it was determined the highest readings within 2-3 miles of the PBNP were 3.4 mR/hr and 11.7 mR. Because evacuation was in a 5 miles radius around the plant, there were no re-location to be done.

At 1250 hours, the SRC conducted another meeting. It is now day 2 at 0800 hours and FRMAC data from the flyover is available. With a clearly defined map indicating hot spots, it was now possible to talk about re-entry. Re-entry will be coordinated at the county level.

At 1435 hours, the issue of return was discussed. There was additional maps available showing both the I-131 footprint and the C-137 concentrations on the ground.

The Wisconsin Department of Agriculture was responsible for any embargo notices for food or dairy and has this authority through state statute. Condemned foods are taken for disposal under authority of the Wisconsin Department of Natural Resources. It is the responsibility of the farmer to dispose of condemned food or dairy products at the owner's expense.

All activities described in the demonstration criteria were carried out in accordance with the plan, procedures, and extent of play agreement.

Criterion 3.f.1:
The capability for the State Radiological Coordinator (SRC) to make recommendations in terms of relocation, re-entry and return are based on having very clear and detailed data on where any radiological contamination exists. If the radiological contamination can be clearly defined, it is likely people would be able to return to their homes in the short- term.

In working on short-term re-entry, the limits were clearly defined by the SRC and were made available to the counties as individuals asked for re-entry permission. Individuals were allowed a 100 mR exposure limit over an 8-hour period using a direct-reading dosimeter.

For long- term relocation, the EPA Protective Action Guidelines (PAG's) allows for 2 REM a year dose equivalent.

Decisions for relocation begin with the SRC and if agreed on with the Officer-in-Charge (OIC) at the State Emergency Operations Center (SEOC) are then discussed with the affected counties and an agreement is reached. The counties have the final say.

Instructions are communicated to the public through EAS messages at the County Emergency Operations Center (EOC). For short- term re-entry, the counties assist the public back to their homes.

Both Manitowoc and Kewaunee maintain a list of individuals who are transportation dependent and the highway department assists these individuals.

Should an individual need to relocate short-term as a result of contamination, the plan calls for the county reception center to be opened to assist. The Red Cross could provide long-term housing assistance. The Red Cross is represented at the SEOC.

All activities described in the demonstration criteria were carried out in accordance with the plan, procedures and extent of play agreement.

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

a. MET: 3.e.1, 3.e.2, 3.f.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 - RRR & Ingestion Decision-Making

Criterion 2.d.1:
Radiological consequences for the ingestion pathway were assessed and appropriate protective actions were made based on Kewaunee County planning criteria, in support of emergency operations.

The ingestion phase of the Point Beach Nuclear Plant (PBNP) exercise commenced at 0800 hours on June 24, 2009, at the Kewaunee County Emergency Operations Center (EOC). Copies of the initiating conditions were distributed to each exercise participant. During a participants briefing, the Kewaunee County Emergency Management Director (EMD) reviewed the initiating conditions.

The Chief Elected Official in conjunction with Kewaunee County EOC personnel made radiological decisions following discussions and technical information provided by the State Radiological Center (SRC) at the State EOC.

The issuance of a Site Area Emergency on June 23, 2009, precipitated a decision by both risk counties in conjunction with the State to implement an agricultural advisory requesting that farmers shelter and place livestock on stored feed and water for the entire 10-mile Emergency Planning Zone (EPZ) in Kewaunee County. Specific instructions were included that addressed sheltering and placing the livestock on stored feed and protected water.

As flyover data became available (simulated) and at the request of the State EOC and

the Kewaunee County EMD, the EOC personnel began at 0910 hours identifying food processing and agricultural producers located within the Ingestion Zone for Kewaunee County. The EOC personnel responsible for processing this information included: the University of Wisconsin Extension Service, the Radiological Officer (RO), the EMD, and the Public Information Officers (PIO's)

Previously at 0230 hours, the Wisconsin Department of Agricultural recommended an agricultural hold be placed on all products from both risk counties (Kewaunee and Manitowoc). At 0957 hours, the Wisconsin Department of Agricultural made a recommendation to extend the agricultural hold to Brown County for farms and food processors.

The SRC in conjunction with the risk counties was responsible for evaluating plume deposition and formulating a sampling plan to determine if food products were contaminated above the United States Food and Drug Administration (FDA) Derived Intervention Limits (DIL) for specific radionuclides. The SRC was responsible for making precautionary action for ingestion of food and water products based on available data.

These discussions and list produced indicated that Kewaunee County had one (1) dairy farm (300 cows) and one (1) retail meat producer within the 5-mile Ingestion EPZ, while it indicated that one (1) feed mill, one (1) winery, one (1) meat processing plant, one (1) food packaging plant, 75 small dairy farm (< 300 cows), 1 medium sized dairy farm (300-1000 cows), and 3 large dairy farms (1000-1500 cows) where within the 10-mile Ingestion EPZ. Based on an early PAD the area located within the 5-mile Ingestion Zone had been previously evacuated.

The following were determined to be sampling priorities: milk, food-processing facilities, harvestable crops meant for human consumption, both from local farms and homegrown foodstuffs.

The SRC worked with local, State, and Federal representatives to develop their sampling plans. They used available resources to identify farms, wineries, meat and food processing facilities within the 50-mile Ingestion Zone.

All activities described in the demonstration criterion were carried out in accordance with the plans, procedures and the extent of play agreement.

Criterion 2.e.1:
Timely relocation, re-entry, and return decisions were made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the Kewaunee County plans and procedures.

The ingestion phase of the Point Beach Nuclear Plant (PBNP) exercise commenced at 0800 hours on June 24, 2009, at the Kewaunee County Emergency Operations Center (EOC). Copies of the initiating conditions were distributed to each exercise participant. During a participants briefing, the Kewaunee County Emergency Management Director (EMD) reviewed the initiating conditions.

The Chief Elected Official in conjunction with Kewaunee County RO made radiological decisions following discussions and technical information provided by the State Radiological Center (SRC) at the State EOC.

The SRC was responsible for evaluating plume deposition and formulating a monitoring and sampling plan to determine which areas were contaminated above the United States Food and Drug Administration (FDA) Derived Response Levels (DRL) and the EPA PAGs for radiation exposure. During the exercise, the SRC in conjunction with the risk counties evaluated available data and made protective action recommendations for relocation based on projected doses. The DRL determined by the SRC was 3.4 mR/hr.

Kewaunee County personnel developed the following decisions, as part of the relocation process. The Emergency Management Director (EMD), the Radiological Officer (RO), the Kewaunee County Sheriff's Department (KCSD), and the Kewaunee County Highway Department (KCHD) initially developed the relocation boundaries and forwarded that information to the State EOC. They used county maps to refine the boundaries based on access and ease of egress. Kewaunee County began establishing traffic and access control points (TACPs) at 1400 hours in response to an ordered relocation. The boundary included those areas bounded by Boldt Road to the North, Harpt Road to the west, Zander Road to the south and County trunk AB to the east in Kewaunee County. Data obtained from initial flyovers was used by Kewaunee County to initial relocation boundaries. According to the Kewaunee County Human Services Department (KCHS) there were approximately 150 individuals within that boundary requiring relocation.

Kewaunee County personnel developed the following decisions, as part of the re-entry

process. The EMD, the RO, the KCSD, Fire and Rescue Services, and the KCHD specifically developed a plan to address issues involving ingress and egress by the general public into the restricted zone. These agencies discussed and developed a listing of all resources available countywide to support this operation, as well as, those resources available through mutual aid agreements. Discussion between the participants also included procedures to determine who should be allowed to re-enter the restricted zone.

Kewaunee County developed specific criterion for individuals requiring re-entry into the restricted area. Those criterions included a maximum of an 8 hour stay in any 24-hour period, the issuance of dosimetry and instruction on its use must have an escort with a survey meter, and upon exiting the area must precede to the designated Reception Center in Algoma for monitoring and decontamination. The RO indicated that if the survey rate meter read 200 mR/hr or the direct- reading dosimeter read 100 mR this would require immediate notification and turnback by those individuals.

For those individuals requesting re-entry would do so at the Kewaunee County Reception Center. The Reception Center would then fax that request to the RO. The RO in conjunction with the SRC would review and approve or deny the request. If the request were approved the RO would notify the Reception Center of that decision. At that time the reception Center would issue a pass, dosimetry, and assign an escort.

Kewaunee County personnel developed the following decisions, as part of the return process. Field sampling data and background information were used in discussion specifically related to return to restricted areas. Some topics discussed included: redefining restricted zone boundaries, potential for the establishment of permanent TACPs and return of the evacuated population.

The SRC in conjunction with the risk counties made the decision to allow for the return of previously evacuated populations in the area defined as R-6B to Q-4B on the west and Lake Michigan on the east.

All activities described in the demonstration criterion were carried out in accordance with the plans, procedures and the extent of play agreement.

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

a. MET: 2.d.1, 2.e.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 - Implementation of RRR & Ingestion Decisions

Criterion 3.e.1:
The Kewaunee County Emergency Operations Center (EOC) successfully demonstrated the ability and necessary information for the implementation of ingestion pathway decisions regarding water, food supplies, milk and agricultural production.

At 0851 hours, the Kewaunee County EOC received notification from the SRC that at 0230 hours an agricultural hold had been placed on the entire County due to an accident at the Point Beach Nuclear Plant (PBNP.) The agricultural hold included dairy products, feed, grain, processed foods, retail facilities, and meat processors. Evacuation had been completed in the Emergency Planning Zone (EPZ) out to 5-miles 360 degrees around the plant.

The issuance of a Site Area Emergency on June 23, 2009, precipitated a decision by both risk counties in conjunction with the State to implement an agricultural advisory requesting that farmers shelter and place livestock on stored feed and water for the entire 10-mile Emergency Planning Zone (EPZ) in Kewaunee County. Specific instructions were included that addressed sheltering and placing the livestock on stored feed and protected water.

The Wisconsin Extension Office identified one dairy farmer with 100 cows located in the 5-mile EPZ and one retailer that served unpackaged and packaged food. This farmer had a pit on site and could store milk at the facility. Kewaunee County accepted the offer of a transport truck from Manitowoc County to transport milk from the bulk tank to the manure pit on the farm. Every other day transport was deemed to be sufficient.

The Extension Officer identified Trega Foods, Tisch Mills Feed, Konops Meat, Parrallel 44 Winery, three large dairies (1000 – 1500 cows), one medium dairy (300 to 1000 cows), 75 small dairies (less than 300 cows), and one deer farm in the 10-mile EPZ.

There was one additional medium sized dairy farm outside the 10-mile EPZ in the same direction that the plume traveled. Names, addresses, and the number of livestock were available for each farm.

There were no cash crop farmers located in the 5-mile EPZ. All crops in this area were associated with dairy or beef operations. A total of 2140 acres of crops were in production in the 10-mile EPZ including 100 acres of wine grapes. 40 acres floral vegetation, 900 acres alfalfa, 700 acres corn, 300 acres winter wheat, and 200 acres soybeans.

There were no surface water intakes in the 10-mile EPZ. Therefore, water contamination was not considered.

At 1224, in a discussion with State Agriculture, Kewaunee Agriculture, and Manitowoc Agriculture, the decision was made to harvest and store (separately) feed stuffs and test for contamination. Feed stuffs would not be used until they reach an acceptable level of contamination. The next crop to be harvested was the second crop of hay in approximately one to two weeks.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent of play agreement.

Criterion 3.e.2:

The Kewaunee County Emergency Operations Center (EOC) successfully demonstrated the ability to develop appropriate measures, strategies and pre-printed instruction materials for contaminated water, food products, milk and agricultural production.

At 0851 hours, the Kewaunee County EOC received notification from the SRC that at 0230 hours an agricultural hold had been placed on the entire County due to an accident at the Point Beach Nuclear Plant. The agricultural hold included dairy products, feed, grain, processed foods, retail facilities, and meat processors. Farmers were advised to shelter livestock and place livestock on stored feed and water. Evacuation had been completed in the Emergency Planning Zone (EPZ) out to 5- miles 360 degrees around the plant.

An interview was conducted with EOC staff because the agricultural hold and livestock protective action decisions were taken before the start of the exercise. Federal

resources are identified and contacted through the State of Wisconsin. The Kewaunee Department of Public Health works with Wisconsin Emergency Management (WEM), Department of Health and Family Services (DHFS) and Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) on decisions to embargo or dispose of contaminated food or animals, shutting down surface water intakes for public water systems and issues regarding hunting and fishing. There were no surface water intakes in the 10-mile EPZ. Therefore, water contamination was not considered. Records of food processors, producers and distributors within Ingestion Emergency Planning Zone (IEPZ) are maintained by DATCP. The Agricultural Extension Officer would secure records of food processors, producers and distributors within IEPZ from DATCP. The County coordinates local law enforcement and other staff who could assist with enforcing any embargo or hold of agricultural products that has been ordered by the state.

Kewaunee County is conjunction with mutual aid resources would be responsible for removing and disposing of materials, equipment, soils, farm animals and pets, food products, farm or garden produce and other items that could not be contaminated or have perished/spoiled while the area is evacuated. The County will also support decontamination or otherwise restoring agricultural lands to productive use (i.e., crop rotation, tilling). Hunting and fishing areas with limitations (e.g., length of seasons, bag limits, etc.) will be posted and secured. These measures will help protect the general public and decrease the chance of spreading contamination.

During the exercise, the Agricultural Extension Officer collected and coordinated emergency information about the impact of the accident on food, animal feed and water in the county, in coordination with the Public Information. Approximately 200 pamphlets entitled, "Radiological Emergency Information for Wisconsin Farmers, Food Processors And Distributors Near The Nuclear Power Plants In And Surrounding The State Of Wisconsin", are strategically distributed throughout Kewaunee County. Wisconsin Emergency Management, Radiological Emergency Planning Division, will produce more if needed. Brochures are located at Algoma City Hall, Rio Creek Feed Mill, Kewaunee Cooperative' Bank of Luxemburg, Dyckesville, and the UW Extension office in Kewaunee. In addition, the Agricultural Extension Officer arranged for distribution of this information to county food processors, producers and distributors.

The Kewaunee County PIO issued several press releases regarding the agricultural hold, livestock advisories, fish consumption, washing and peeling vegetables and fruits, and water.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent of play agreement.

Criterion 3.f.1:
The Kewaunee County Emergency Operations Center (EOC) successfully demonstrated the ability to implement and coordinate decisions regarding relocation, re-entry and return of the public.

The ingestion phase of the Point Beach Nuclear Plant exercise commenced at 0800 hours on June 24, 2009, at the Kewaunee County Emergency Operations Center (EOC). Copies of the initiating conditions were distributed to each exercise participant. During a participants briefing, the Kewaunee County Emergency Management Director (EMD) reviewed the initiating conditions.

At 0821 hours, the Kewaunee County EOC began identifying the boundary of the area affected by the plume. A plume map had been provided by controller inject at 0801 hours. The area was defined as North of Road BB, east of Road B, south of Hwy 29and west of Town Hall Road. By 0836 hours, the Public Information Officers (PIOs) scripted an associated press release. At 0845 hours, the SRC told the EOC to hold off on the relocation for more sampling data.

At 0930 hours, three inject messages were provided to the Radiological Officer. The three injects were Restricted Zone Reentry Admission Forms. The first inject was a request by a reporter to allow a news writer to accompany a local farmer back into the evacuated area. A discussion ensued in the EOC between the RO, Emergency Management Director, and the Sheriff where it was decided to reject the application. The Reception Center, which was where re-entry was coordinated, was notified of the rejection (simulated). The news writer was told to report to the Joint Information Center for information.

The second inject was a request to repair a downed power line from an earlier accident. The point of reentry was Hwy 42 at the 10-mile road block. The visiting location was listed as Nuclear Road and Hwy 42. The RO contacted the SRC for stay times. The SRC decided that an escort was required. A survey meter or DRD were required. A reading of greater than 200 mR on the survey meter or 100 mR on the DRD was the established turnback value. This information was relayed to the Reception Center (simulated at 1024 hours.)

The third inject was a request to feed and milk cows at Sandy Boy Road and Town Hall Road. The point of re-entry was the same as the second inject as was the exposure limits. This information was relayed to the Reception Center (simulated at 1024 hours.) All persons reentering the area were told to leave by the same route as entering and to report back to the Reception Center for monitoring and decontamination. The PIO issued a press release on the re-entry procedures for Kewaunee County. The release explained were to go, what items needed to be presented, where to return to after re-entry and the need to attend a briefing.

At 1250 hours additional sampling data had been reviewed by the SRC. In a conference call with the SRC, State EOC, Kewaunee County EOC, and Manitowoc County EOC the decision was made to relocate that area encompassing north of Bolt Road, east of Road B, south of Road BB (Zander Road), and west of Harpt Lake Road. The PIOs used a pre-scripted Special News Broadcast message to relay this information to the general public. The message contained a description of the areas being relocated, the location of the Reception Center with directions, telephone numbers for those members of the general public requiring transportation, items to bring along, and information on school children.

With additional sample data available, another conference call was conducted at 1435 hours. It was decided at this time to allow residents in quadrants R6B to Q4B and east to the lake (east of Town Hall Road and north of Hwy BB) to return to their homes. All vital services were operational at this time. The PIO issued an associated press release that included guidelines for food after an earlier extended power outage.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent of play agreement.

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

a. MET: 3.e.1, 3.e.2, 3.f.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. Manitowoc County - RRR & Ingestion Decision-Making

Criterion 2.d.1:
The radiological consequences for the ingestion pathway were assessed and appropriate protective action decisions were made in the Manitowoc County EOC during the Point Beach Ingestion Phase Exercise on June 24, 2009. The State of Wisconsin is responsible for assessing the radiological consequences and developing protective action recommendations for the ingestion pathway. The County provides assistance in defining boundaries and for identification of county specific items such as crops, farms, food producers, food processors and food retailers within the county.

The Manitowoc County Board Chair in conjunction with the Emergency Management Director for Manitowoc County was responsible for making protective action decisions for Manitowoc County. All decisions were made utilizing information received from the State of Wisconsin and in conjunction with input from staff members.

The exercise began at 0800 hours with a briefing from the State. The briefing included a history of the events which occurred prior to the ingestion phase portion of the response to the incident at Point Beach Nuclear Plant. During the Site Area Emergency, a joint press release was issued instructing farmers within the Emergency Planning Zone in Manitowoc County and Kewaunee County to shelter their livestock and place them on stored feed and water. This was extended to include Brown County at approximately 0930 hours, as briefed in the Manitowoc County EOC.

The Emergency Management Director briefed the EOC staff at 0840 hours. It was briefed that the State Department of Agriculture had issued a precautionary food hold for all of Manitowoc County, in addition to Kewaunee and Brown Counties. There were no protective action recommendations or decisions made regarding the reduction of the size of the precautionary agricultural hold placed on the County.

In response, the County identified one dairy, 50 dairy farms, 11 fish farms, four deer farms, two food warehouses, and 21 food retailers within the 10-mile Emergency Planning Zone within Manitowoc County. Plans were made to initiate contact with all of these operations as needed. This included contact by telephone and/or visits by the Extension Officer, Department of Agriculture, and/or the sheriff's office.

At approximately 1330 hours, a Relocation Area was identified along the boarder of Kewaunee and Manitowoc Counties. One dairy farm and one beef farm with a total of approximately 400 head of cattle was identified within the boundary of the Relocation Area.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and the extent of play agreement

Criterion 2.e.1:
Relocation, re-entry and return decisions were made and coordinated as appropriate, based on the assessment of radiological conditions and recommendations from the State, at the Manitowoc County EOC during the Point Beach Ingestion Phase Exercise on June 24, 2009.

The State of Wisconsin is responsible for performing field measurements and environmental sampling to determine areas which exceed the Relocation Protective Action Guide (PAG) and to identify a boundary. Once an area is identified, the County assists in determining a boundary including a buffer zone based upon geographical features and roads in the County, to provide access control to the Relocation Zone, notify the residents within the area, provide for a Reception Center for receiving and processing those being relocated, and to provide for re-entry.

At approximately 1330 hours, an initial Relocation Zone was identified by a fly over. It consisted of an area along the border of Kewaunee and Manitowoc Counties. The State discussed a boundary to enclose the area having exposure rates in excess of the Relocation PAG with both of the Counties involved. Manitowoc then developed a boundary bounded by Harpt Lake Road on the east, Zander Road on the south, Highway AB on the west and Highway VV on the north (also the road boundary between Manitowoc and Kewaunee Counties). The County determined that there were 10 homes in the designated area, averaging four people per home, with a total population of approximately 40 people. Discussion then began on how to implement the relocation of those residents. Law enforcement discussed the need for Access Control and identified traffic control points.

A second Relocation Zone was identified within the evacuated area (Sub-Area 5). This was identified by the State using field data, environmental sampling, dose projections and fly over data. The State and Manitowoc County conferred and concurred with a boundary defined and bounded by AB on the west, VV on the north (the County line),

Lake Michigan on the east, and Irish and E. Assman Roads on the south. Arrangements were made to allow Return of those residents previously evacuated in all areas except the area identified above. The Public Information Officer was then tasked with developing a News Release to inform the public of the decision to allow Return of evacuees to the previously evacuated except in the Relocation area. Arrangements were then made for the long term and continued care of those previously evacuated for the area identified.

Access control to re-entry into the Relocation zone was established at two locations. The general public and county or State emergency workers were to report to the Reception Center at the Manitowoc Highway building on Highway 310. The Point Beach employees were to use and assemble at the High School in Two Rivers.

Persons wanting to re-entry the Relocation Areas had to report to the designated Reception Center at the Manitowoc County Highway Department. A questionnaire was developed to determine the reason for the re-entry and location where they desired to go. From this information there was a determination as to allow or disallow the re-entry. If allowed, they would be provided with dosimetry, and an escort having a survey meter and they would receive training prior to being allowed re-entry. They would be allowed to stay no longer than eight hours. Exposure limits were set with a turnback limit of 200 mR/hr as read on the survey meter or a reading of 100 mR on any dosimetry. Re-entry was only allowed during designated daylight hours. Upon leaving the area they were to return to the Reception Center to turn in dosimetry and to get monitored for contamination and decontamination if needed.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and the extent of play agreement.

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

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

4.2.2.4. Manitowoc County - Implementation of RRR & Ingestion Decisions

Criterion 3.e.1:

The Manitowoc County Emergency Operations Center (EOC) successfully demonstrated the availability and appropriate use of adequate information regarding water, food supplies, milk and agricultural production within the ingestion exposure pathway planning zone for implementation of protective actions. Ingestion pathway activities included a continuation of precautionary actions to shelter and place livestock on stored feed and protected water and the evacuation of Sectors M, N, and P out to a distance of five miles from the Point Beach Nuclear Plant (PBNP).

Through interview with the EOC Agriculture Coordinator (University of Wisconsin County Extension Agent), it was determined that databases existed that contained the locations of all commercial livestock and poultry producing farms, locations and types of various crops, dairy operations and water intakes. Croplands impacted by the PBNP radioactive release consisted of approximately 3600 acres of alfalfa, 3500 acres of corn, 1000 acres of soy beans, 900 acres of winter wheat, 300 acres of oats, 100 acres of barley and 100 acres of snap beans. It was also determined that there were 17 dairies, one commercial herd of cattle, one fish farm, one deer farm and two retail food processing facilities in the impacted area. A "food hold" (quarantine) of all agricultural products within the impacted area was imposed by the Wisconsin Department of Agriculture to prevent the spread of contamination.

After due consideration of soil sampling data and the results of the Federal Radiological Monitoring and Assessment Center (FRMAC) flyover of the contaminated area, the EOC Agriculture Representative noted that appropriate protective actions regarding dairy and food products included: storing or destroying milk supplies, continuing the quarantine of livestock and food products, continuing to feed and monitor livestock using stored feed and water, and withholding from market food and dairy products being processed by commercial food processors.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent of play agreement.

Criterion 3.e.2:

The Manitowoc County Emergency Operations Center (EOC) successfully demonstrated the ability to develop appropriate measures, strategies and pre-printed material for implementing protective action decisions for contaminated water, food products, milk and agricultural production. Ingestion pathway activities included a continuation of precautionary actions to shelter and place livestock on stored feed and protected water and the evacuation of Sectors M, N, and P out to a distance of five miles from the Point Beach Nuclear Plant (PBNP).

At 0800 hours, on Day-One of the exercise, members of the EOC staff were briefed by teleconference regarding the situation at PBNP. The release or radioactive material had been terminated and the recovery phase of the emergency had begun. Following the conference call, the EOC staff were given a plume projection map (controller inject), that had been developed during the night by the Wisconsin State Radiological Coordinator (SRC), and began developing plans for protective measures for the food chain, e.g., milk, crops, food processing plants and food storage facilities. A "food hold" (quarantine) of all agricultural products within the impacted area was imposed by the Wisconsin Department of Agriculture to prevent the spread of contamination.

Through interview with the EOC Agriculture Coordinator (University of Wisconsin County Extension Agent), it was determined that databases existed that contained the locations of all commercial livestock and poultry producing farms, locations and types of various crops, dairy operations and water intakes. Croplands impacted by the PBNP radioactive release consisted of approximately 3600 acres of alfalfa, 3500 acres of corn, 1000 acres of soy beans, 900 acres of winter wheat, 300 acres of oats, 100 acres of barley and 100 acres of snap beans. It was also determined that there were 17 dairies, one commercial herd of cattle, one fish farm, one deer farm and two retail food processing facilities in the impacted area. The Agriculture Coordinator (AC) was familiar with the Wisconsin Radiological Emergency Information Booklet for Farmers, Food Processors and Distributors and was knowledgeable on State and County plans and procedures for impounding, embargoing and/or disposing of contaminated food products if necessary.

Following a time jump to Day-Two, the EOC was provided updated plume projection maps and the field sample data and the results of the Federal Radiological Monitoring and Assessment Center (FRMAC) fixed wing flyover of the plume pathway (controller injects). After due consideration of the data provided and coordination with the SRC, it was determined that a "hot spot" of contamination existed in an area bounded from the west by Haupt Lake Road, north by Bolt Road in Kewaunee County, east by Collegiate

Road and south by Zandel Road. Detailed analysis of croplands in this area by the AC determined that there were 950 acres of alfalfa, 975 acres of corn, 280 acres of soy beans 230 acres of wheat, 75 acres of oats and 20 acres of barley. It was also determined that there were five dairies and one commercial herd of cattle in the impacted area.

Ensuing discussions between the AC, the Emergency Management Director (EMD), and members of the EOC staff resulted in the determination that appropriate protective actions regarding dairy and food products included: storing or destroying milk supplies, continuing the quarantine of livestock and food products, continuing to feed and monitor livestock using stored feed and water, and withholding from market food and dairy products being processed by commercial food processors. A particular concern was raised by the AC regarding a power loss in an evacuated area where eight dairies were located. The AC stated that without power for ventilation systems and milking machines that the dairy herds were in immediate danger of dying.

Discussions between the AC and the Kewaunee County AC resulted in the AC developing priorities for handling milk in the event that power could not be restored. Milk disposal priorities were: (1) Storing milk in a National Resource Conservation Service (NRCS) storage facility, (2) Land/Field spreading and (3) Upland dumping (small amounts over a period of time) Coordination was rapidly made with the state, local electrical equipment rental companies and adjacent counties to provide and distribute generators to the dairies at risk.

During successive time jumps in the exercise and through further discussions with the AC, it was determined that farmers in the area would receive continuous advice through the release of public information messages, pre-printed agricultural brochures and direct support from the University of Wisconsin County Extension Service.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent of play agreement.

Criterion 3.f.1:
The Manitowoc County Emergency Operations Center (EOC) successfully demonstrated the ability to implement decisions regarding the controlled re-entry of emergency workers and relocation and return of the public. A description of the Manitowoc County capability to coordinate and implement decisions concerning re-entry, relocation and return activities were contained in the Recovery Task Force annex

to the County Emergency Operations Plan.

At 0800 hours, on Day-One of the exercise, members of the EOC staff were briefed by teleconference regarding the situation at PBNP. The release of radioactive material had been terminated and the recovery phase of the emergency had begun. Prior evacuation orders for Sectors M, N, and P out to a distance of five miles from the Point Beach Nuclear Plant (PBNP) remained in effect. Following the conference call the EOC staff were given a plume projection map (controller inject) that had been developed during the night by the Wisconsin State Radiological Coordinator (SRC) and began developing plans for allowing emergency workers and residents, particularly dairy farmers, impacted by the emergency to re-enter evacuated areas.

Procedures were coordinated among EOC staff members and PBNP to establish a re-entry staging area for plant employees at Two Rivers High School, an Access Control Point (ACP) at the intersection of County Road VV and Highway 42 was established and the route for re-entry was defined as: north on Highway 42, east on County Road V and north on Lakeshore Road to PBNP.

During the exercise, three requests for re-entry were received (controller injects) by the County Health Department Representative. Two re-entry requests were from farmers who wanted to milk and feed their dairy herds and one request was from a resident who wanted to retrieve a valuable gun collection. Both requests from the farmers were granted and procedures were coordinated with county emergency workers (simulated) to escort the farmers into the restricted area. The request from the gun owner was denied.

Following a time jump to Day-Two, the EOC was provided updated plume projection maps and field sample data and the results of the Federal Radiological Monitoring and Assessment Center (FRMAC) fixed wing flyover of the plume pathway (controller injects). After due consideration of the data provided and coordination with the SRC, it was determined that a "hot spot" of contamination existed in an area beyond the previously evacuated area bounded from the west by Haupt Lake Road, north by Bolt Road in Kewaunee County , east by Collegiate Road and south by Zandel Road. Detailed analysis of croplands in this area by the AC determined that there were 10 residences in the impacted area. Subsequent coordination among the EOC staff resulted in the Emergency Management Director (EMD) approving a special news broadcast that ordered the relocation of all residents in the impacted area. Residents were advised to register at the reception centers in Kewaunee and Manitowoc Counties.

On Day-Three of the exercise, the EOC was provided updated plume projection, field sample and FRMAC flyover maps (controller injects). Coordination with the SRC and further analysis of the data provided resulted in the determination that residents in the Town of Two Rivers and Village of Mishicot south of Assman Road and Irish Road could return to their place of residence. The EMD subsequently approved a special news release advising residents that the area was now safe for their return. The news release contained detailed information on refreezing or disposing of thawed food products. Subsequent analysis of data and coordination with the SRC resulted in the determination that one area to the West-Northwest of PBNP would require relocation of the public.

Through interview with the EMD and other members of the EOC staff it was determined that procedures would be developed to notify residents who had evacuated the restricted area of the relocation requirement and to provide temporary lodging for relocated families until such time as permanent lodging or other arrangements could be made with the American Nuclear Insurers (ANI).

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent of play agreement.

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

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

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

AC	Agriculture Coordinator
ACP	Access Control Point
ANI	American Nuclear Insurers
DC	Dosimetry Coordinator
DIL	Derived Intervention Limits
DRL	Derived Response Levels
EMD	Emergency Management Director
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
FOC	Forward Operations Center
FTC	Field Team Coordinator
IEPZ	Ingestion Emergency Planning Zone
JIC	Joint Information Center
KCHD	Kewaunee County Highway Department
MRL	Mobile Radiological Laboratory
NRC	Nuclear Regulatory Commission
NRCS	National Resource Conservation Service
PAG	Protective Action Guide
PBNP	Point Beach Nuclear Plant
PIO	Public Information Officer
RAC	Regional Assistance Committee
REP	Radiological Emergency Preparedness
RO	Radiological Officer
SEOC	State Emergency Operations Center
SRC	State Radiological Coordinator
WEM	Wisconsin Emergency Management

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the Point Beach Nuclear Plant Participation Ingestion Pathway exercise on June 24, 2009. Evaluator Team Leaders are indicated by an asterisk "(*)" before their names. The organization which each evaluator represents is indicated by the following abbreviations:

DHS/FEMA - Department of Homeland Security/ Federal Emergency Management Agency
ICF - ICF Consulting

TITLE	NAME	ORGANIZATION
Radiological Assistance Committee, Chairman	William E. King	DHS/FEMA
Exercise Director	Gary Naskrent	DHS/FEMA
Site Specialist	James King	DHS/FEMA

DATE: 2009-06-24, SITE: Point Beach Nuclear Plant, WI

LOCATION	EVALUATOR	AGENCY
Wisconsin - State Field Measurements & RAD Assessment for RRR & Ingestion Decision-Making	Thomas Essig	ICF
Wisconsin - State Forward Operations Center/Mobile Radiological Laboratory/Mobile Communications Center	Reggie Rodgers	ICF
Wisconsin - Unrestricted Area Field Team #3	Steve Denson	ICF
Wisconsin - Unrestricted Area Field Team #4	David Jacobson	ICF
Wisconsin - Implement RRR & Ingestion Decisions	Larry Harrington	ICF
Kewaunee County - RRR & Ingestion Decision-Making	Richard Smith	ICF
Kewaunee County - Implementation of RRR & Ingestion Decisions	Wendy Swygert	ICF
Manitowoc County - RRR & Ingestion Decision-Making	Richard Grundstrom	ICF
Manitowoc County - Implementation of RRR & Ingestion Decisions	Robert Duggleby	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 REP Ingestion Exposure Pathway Exercise conducted for the PBNP on June 24, 2009, and includes the off-site extent-of-play agreement approved by DHS/FEMA for the State of Wisconsin on June 10, 2009.

The exercise criteria, contained in FEMA "Radiological Emergency Preparedness Exercise Evaluation Methodology," as published in the Federal Register Notice, Volume 67, No 80, dated April 25, 2002, represent a functional translation of the planning standards and evaluation criteria of NUREG-0654/FEMA-REP-1, Rev. 1, Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, November 1980.

Because the exercise criteria are intended for use at all nuclear power plant sites and because of variations among 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.

Point Beach Nuclear Plant Exercise
Extent of Play Agreement
State of Wisconsin / Kewaunee County / Manitowoc County

Exercise Date: June 24, 2009

Locations:

- State of Wisconsin Emergency Operation Center (SEOC) and Room 105, 2400 Wright St., Madison, Wisconsin
- Manitowoc County EOC, 1025 South 9th St., Manitowoc, Wisconsin
- Kewaunee County EOC, 416 Fremont St., Algoma, Wisconsin
- Ingestion sampling teams will be conducting field operations at various locations.

Re-demonstration:

Criterion 4.b.1, Post Plume Phase Field Measurements and Sampling, can be re-demonstrated for credit during or immediately following the exercise, at the discretion of the federal evaluator.

Activity	Date	Time	Location
Pre-exercise Briefing	6/22/09	2:00 p.m.	Holiday Inn, Manitowoc, WI
Ingestion Exercise	6/24/09	8:00 a.m.	State and County EOCs, Various Field Locations
Participants' Meeting	6/26/09	10:00 a.m.	Kewaunee County EOC
Public/Media Briefing	6/26/09	11:00 a.m.	Kewaunee County EOC

Logistics and Prepositioning:

The State of Wisconsin, Kewaunee and Manitowoc counties are the participating off-site response organizations (OROs). Although the participating OROs in the Kewaunee Power Station (KPS) plume phase exercise (to be held on June 23) and the Point Beach Nuclear Plant (PBNP) ingestion exercise are identical, the PBNP ***ingestion exercise is not a continuation of the KPS plume exercise.***

The PBNP exercise will begin with a controller briefing in the State Emergency Operations Center (SEOC) on June 24, 2009 at 8:00 a.m. All OROs will participate in this briefing, either in person or via conference call. This briefing shall include a summary of the plume-phase activities for PBNP, any protective actions that were taken, the condition of the plant, and any situations at the local level which would be relevant to exercise play. At this time, contact will be made with federal players, if participating. Exercise play will commence immediately following the briefing. Mobilization of the ingestion sampling teams will occur out of sequence.

Special arrangements regarding prepositioned staff are as follows:

- State of Wisconsin Emergency Operations Center and the State Radiological Coordinator room (105) are located at 2400 Wright St., Madison, WI
- Manitowoc County Emergency Operations Center is located in the lower level of the Sheriff's Department, Conference Rooms A-B-C, 1025 South 9th Street, Manitowoc, Wisconsin.
- Kewaunee County Emergency Operations Center is located in the lower level of the Algoma City Hall, 416 Fremont Street, Algoma, Wisconsin.
- 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 Ingestion Field Teams will be pre-positioned at the Best Western Lakefront Hotel, 101 Maritime Drive, Manitowoc, Wisconsin, and be deployed to the FOC/MRL. The FTC will coordinate field team operations from the FOC/MRL.
- State and county staff will be prepositioned in their respective EOCs at 8:00 a.m. on June 24, 2009.
- The Point Beach ingestion counties are normally notified at an Alert classification; however, participating ingestion counties will be included on the exercise briefing at 8:00 a.m. on June 24, 2009. Ingestion county activities may include: activation of a county EOC, participation from a conference room or office, or simply monitoring Esponder. Ingestion county activities are not to be evaluated.

AREAS REQUIRING CORRECTIVE ACTIONS (ARCAs)

There are no ingestion-related ARCAs from a previous exercise assessed to the State of Wisconsin, Kewaunee County or Manitowoc County.

EVALUATION AREA 1 – EMERGENCY OPERATIONS MANAGEMENT

Criterion 1.c.1: Direction and Control: *Key personnel with leadership roles for the Offsite Response Organization (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 state agencies, appropriate federal agencies, the JIC, Kewaunee and Manitowoc County EOCs, the utility, and other appropriate off-site response organizations (ORO's) including field operations. Direction and control areas of demonstration will include reentry into previously evacuated areas, determination of areas requiring relocation, return to previously evacuated areas, and determination of necessary ingestion actions.

Criterion 1.d.1: Communications Equipment: *At least two communication systems are available and operate 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 (response cell), but not as a primary means of communication – traditional phone, fax, and paper systems will be used as primary means of communication. Wisconsin's Incident Management software, E-Sponder, will be used in both the state and county EOCs.

Criterion 1.e.1: Equipment and Supplies to Support Operations: *Equipment, maps, displays, dosimetry, 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 Room 105 (the SRC Room). The state will use its EOC software, E-Sponder, and GIS.

The availability of dosimetry for the ingestion teams will be demonstrated at the FOC. The FOC/MRL will be located at the Two Rivers National Guard Armory, 2225 Sandy Bay Road, Two Rivers, Wisconsin. The availability of potassium iodide (KI) will not be demonstrated.

Dosimetry inventory and calibration records will be provided in the Annual Letter of Certification.

EVALUATION AREA 2 – PROTECTIVE ACTION DECISION MAKING

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

In the event of a Site Area Emergency classification, the Department of Agriculture, Trade and Consumer Protection (DATCP) consults with the SRC regarding the issuance of a Livestock Advisory for the 10 mile EPZ during the plume phase of the exercise. If no other Protective Action recommendations have been issued that would conflict with an advisory, DATCP directs Public Information to issue a media release. Any protective actions, such as a livestock advisory or an evacuation, that were taken during the plume phase will be discussed in the controller briefing on June 24th, 2009.

An ingestion sampling plan will be developed and implemented to define the consequences of the release of a radioactive plume to the environment. This sampling plan will serve to prioritize ingestion samples based on plume and meteorological information. Additionally, the SRC and radiological assessment staff will assess simulated ingestion data provided by controller inject from either field locations or an SRC controller.

In consultation with all relevant local, state, and federal agencies, the SRC will make recommendations for minimizing the radiological consequences of any radiological release on the 50 mile ingestion planning zone. These recommendations will be shared with all affected off-site response organizations.

Kewaunee County

County EOC staff will participate in planning and decision-making with state and federal counterparts via conference call. Some recommendations may come into the EOC to the County Radiological Officer (RO) or the Emergency Management Director. Once these recommendations are received, they are discussed among the EOC members. All final decisions are made by the Chief Elected Official.

Manitowoc County

The County Radiological Officer (RO) and the Ag Extension Agent will participate in ingestion decision making with state and federal counterparts via conference call. The Chief Elected Official is the final decision maker, or will delegate this authority to the Manitowoc County Emergency Management Director.

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

The SRC will use information from the plant, simulated field sampling data, flyover

data if available, and any other relevant information, to make recommendations to the county ROs regarding areas that meet the Protective Action Guidelines (PAGs) for relocation, reentry or return. Discussions will take place between appropriate state and federal agencies, including the development of specific actions to be taken and assignment of responsibility for those actions. Typical actions to be taken include the imposition of agricultural holds within the affected area, public information bulletins, and the emergency printing and distribution of ingestion brochures.

Kewaunee County

County EOC personnel will review the recommendations from the state and discuss the resource requirements necessary to accomplish implementation of those recommendations. Resource and coordination issues will be discussed among the county and state Recovery Task Forces. Decision makers from the county will direct that the appropriate recommendations be implemented.

Manitowoc County

County EOC personnel will review the recommendations from the state and discuss the resource requirements necessary to accomplish implementation of those recommendations. Resource and coordination issues will be discussed among the county and state Recovery Task Forces. Decision makers from the county will direct that the appropriate recommendations be implemented.

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 plans 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 Operations Center/Mobile Radiological Laboratory (FOC/MRL) by the State Field Team Coordinator (FTC) and ingestion teams.

The FOC/MRL will be located at the Two Rivers National Guard Armory, 2225 Sandy Bay Road, Two Rivers, Wisconsin. Ingestion 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 in accordance with plans and procedures.

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

The SRC and state radiological assessment staff will demonstrate the capability to recommend protective actions by using controller data based on simulated laboratory analysis of ingestion samples. Data regarding water, food supplies, milk, and agricultural products will be utilized for implementation of protective actions. Department of Energy (FRMAC) simulated flyover data, if available, will also be used to aid in the implementation of protective action recommendations. Any additional information and data generated from federal play will also be used as appropriate for implementing protective action recommendations.

A File Transfer Protocol (FTP) site may be used for sharing GIS data and maps amongst the counties and other state agencies. If there is a communications failure with the e-mail or ftp site, hard-copy maps will be provided via controller injects.

Kewaunee County

The County RO will relay the State's recommendation to the County Recovery Task Force for consideration. The Chief Elected Official will make final decisions.

Manitowoc County

The County RO will relay the State's recommendation to the County Recovery Task Force for consideration. The Chief Elected Official will make final decisions.

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

The SRC and radiological assessment staff, in consultation with other appropriate agencies, will use current lists of farmers, food processors, distributors, and water supplies within the IPZ to demonstrate the capability to develop appropriate measures, strategies, and pre-printed instructional materials for implementing protective actions for contaminated water, food products, milk, and agricultural products within the ingestion exposure pathway. Demonstration of this will occur in the State EOC and Room 105, across the hall from the EOC out of sequence with the scenario. The printing and distribution of "Radiological Emergency Information for Wisconsin Farmers, Food Processors and Distributors" is performed at the Site Area Emergency classification, and will be discussed in the initial controller briefing.

Kewaunee County

Kewaunee County will demonstrate, through discussion, action, or document review, the capability to coordinate with the state to implement protective actions for the ingestion exposure pathway and to distribute ingestion information to members of the general public. The ingestion counties, participating in the respective county EOCs, will be involved in the decision making process, but will not be evaluated.

Manitowoc County

Manitowoc County will demonstrate, through discussion, action, or document review,

the capability to coordinate with the state to implement protective actions for the ingestion exposure pathway and to distribute ingestion information to members of the general public. The ingestion counties, participating in the respective county EOCs, will be involved in the decision making process, but will not be evaluated.

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

The state will demonstrate the capability to develop and implement actions required to allow for the controlled re-entry of emergency workers to the evacuated areas and for the return and any necessary relocation of the public. These actions will be coordinated with the appropriate county agencies.

Kewaunee County

County agencies will demonstrate the capability to coordinate with the state to implement controlled re-entry of emergency workers to the evacuated area and the return and any necessary relocation of the public.

Manitowoc County

County agencies will demonstrate the capability to coordinate with the state to implement controlled re-entry of emergency workers to the evacuated area and the return and any necessary relocation of the public.

EVALUATION AREA 4 – FIELD MEASUREMENT AND ANALYSIS

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

State of Wisconsin

The ingestion teams will be dispatched from the FOC/MRL to pre-designated sites where ingestion samples will be taken. Once dispatched, the actual sampling will be conducted **out of sequence**. In the interest of time, the results of the samples will be provided to the SRC via controller inject.

Two State Ingestion Teams will demonstrate approved ingestion sampling procedures for ingestion samples including ground and surface water, vegetation, freshly packaged food, milk, and soil. Additional ingestion teams may be participating for training purposes only. The teams to be evaluated will be chosen by the Field Team Coordinator. Both of the ingestion teams will take at least one full set of samples. Chain of custody for samples will be demonstrated in accordance with sampling procedures.

Kewaunee and Manitowoc Counties

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

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

State of Wisconsin

Radiological analysis of ingestion field samples will be demonstrated through interview, discussion, and procedure review at the MRL. The MRL will be located at the Two Rivers National Guard Armory, 2225 Sandy Bay Road, Two Rivers, Wisconsin.

APPENDIX 4

EXERCISE SCENARIO

This appendix contains a summary of the simulated sequence of events that was used as the basis for invoking emergency response actions by Offsite Response Organizations (OROs) in the REP Ingestion Exposure Pathway Exercise conducted for the PBNP on June 24, 2009.

This ingestion phase exercise scenario was submitted by the State of Wisconsin Emergency Management Division of the Wisconsin Department of Military Affairs on June 1. 2009, and was approved by DHS/FEMA on June 10, 2009.

During the exercise, Controllers from the State of Wisconsin either gave "inject messages", containing scenario events and/or relevant data, to those persons or locations who would normally receive notification of such events or information. These inject messages were the method used for invoking response actions by OROs.

The following is a summary and timeline of Controller injects for the June 24, 2009, PBNP REP Ingestion Exposure Pathway Exercise for the State of Wisconsin and Kewaunee and Manitowoc Counties. All time intervals are approximate.

Summary of Controller Injects

Sequence	What	Format	Who
		Day 0	
1	Initial Briefing	Hardcopy, E-Sponder	All
2	Advance Party Checklist	E-Sponder	OIC
3	RASCAL Run	digital file, printed file	SRC staff
4	Exposure rate map	Hardcopy, E-Sponder	SRC staff
5	Iodine Deposition map	Hardcopy, MXD	SRC, SRC-GIS
6	Cesium Deposition map	Hardcopy, MXD	SRC, SRC-GIS
7	Field Exposure rate data (Block 1)	Hardcopy, digital file	SRC staff
8	Re-Entry Requests	Hardcopy	County ROs
9	Field Exposure rate data (Block 2)	Hardcopy, digital file	SRC staff
10	Field Exposure rate data (Block 3)	Hardcopy, digital file	SRC staff
11	Soil Sample Analysis (Block 1)	Hardcopy, digital file	SRC staff
12	Soil Sample Analysis (Block 3)	Hardcopy, digital file	SRC staff
		Day 1	
13	Flyover Map (Exposure/Depo)	Hardcopy, E-Sponder	SRC staff
14	Flyover Map (Return)	Hardcopy, E-Sponder	SRC staff
15	Milk Sample Analysis Results	Hardcopy, digital file	SRC staff
16	Iodine Deposition map	Hardcopy, MXD	SRC, SRC-GIS
		Day 3	
17	Iodine Deposition map	Hardcopy, MXD	SRC, SRC-GIS
18	Milk Sample Analysis Results	Hardcopy, digital file	SRC staff
		Day 7	
19	Iodine Deposition map	Hardcopy, MXD	SRC, SRC-GIS
20	Milk Sample Analysis Results	Hardcopy, digital file	SRC staff
		Day 14	
21	Iodine Deposition map	Hardcopy, MXD	SRC, SRC-GIS
22	Milk Sample Analysis Results	Hardcopy, digital file	SRC staff

Controller Inject Timeline

Real Time	Task Duration	Task	**Inject Message #**	Data Products
0200-0600	N/A	Release occurring		
0700	30 min	SRC Room Setup	**N/A**	
0730	30 min	Initial briefing	**#1** **#2**	• Accident progression up to present • RASCAL map(s) from 0730 run as requested • RASCAL run from 0730 (injected as part of initial briefing @~0800)
0800	15 min	Initial briefing	**#1** **N/A**	• Accident progression up to present • RASCAL maps from 0730 run • Advance Party Checklist
~0830*	30 min* 90 min* 60 min	Immediate post-plume response (no time jump) • Rough verification of restricted area & plume footprint • Joint development of sampling plan • Implementation of sampling plan • Determination of relocation area • Determination of initial ingestion areas of concern	**#3** **#5 - #9** **#10**	• Initial exposure rate field data (Block 1 inject @ ~0900) • Re-entry requests for Manitowoc (2) and Kewaunee Counties (3) ~0910 • Exposure rate survey results (Block 2 inject @ ~0930)
~1130*	30 min*	Data evaluation of additional Day 0 data	**#11a, #11b, #11c** **#12** **#13** **#14**	• Day 0 I-131 & Cs-137 deposition maps • Field Exposure Rate Data (Block 3 inject @ ~1020) • Soil Analysis Results (Block 4 inject @ ~1030) • Soil Analysis Results (Block 5 Inject @ ~1145)
~1200	30 min	Lunch		

~1230*	90 min*	Time jump to 06/25 (**Day 1**)	**#15a, #15b, #15c** **#16**	• I-131 deposition map, Flyover Exposure rate map, Flyover return map • Sample results: soil, vegetation, milk and surface water (Block 2 Inject @ ~1245)
~1300*	30 min*	Day 1 (continued)	**#17** **#18**	• Field survey exposure rate results (Team #1, Team #2) (Block 3 Inject @ ~1300) • Field survey exposure rate results, Team #1 (Block 4 inject @ ~1345)
~1400*	30 min*	Time jump to 06/27 (**Day 3**)	**#19** **#19a**	• Field sample analysis – milk (Block 1 Inject @ ~1400) • I-131 deposition map
~1430	15 min*	Time jump to 07/1 (**Day 7**)	**#20** **#20a**	• Field sample analysis – milk (Block 1 Inject @ 14:30) • Iodine 131 deposition map
~1445	~15 min	Time jump to 07/08 (**Day 14**)	**#21** **#21**	• Field sample analysis – milk (Block 1 Inject @ ~1445) • Iodine 131 deposition map
~1500*		Termination		

* All times are approximate. Players' actions will dictate the times of the inject messages.