# Monticello Nuclear Generating Plant

## Exercise Report - 2009-08-18
## Final Report - Radiological Emergency Preparedness (REP) Program
## 2009-11-03

FEMA


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# Exercise Report

## Monticello Nuclear Generating Plant

Exercise Date: 2009-08-18

Report Date: 2009-11-16

U.S. DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

REP Program

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# 1. Executive Summary

On August 18 and 19, 2009, a Radiological Emergency Preparedness (REP) Full Participation Plume and Ingestion Exposure Pathway Exercise was conducted for the 10-mile Emergency Planning Zone (EPZ) and 50-mile Ingestion Pathway Zone (IPZ) around the Monticello Nuclear Generating Plant (MNGP) by the U. S. Department of Homeland Security (DHS)/Federal Emergency Management Agency (FEMA). The purpose of this 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 policies and guidance concerning the exercise of State and local radiological emergency response plans (RERPs) and procedures.

The most recent Radiological Emergency Preparedness (REP) Full Participation Plume Exposure Pathway Exercise at this site was conducted on November 6, 2007. The most recent REP Full Participation Plume and Ingestion Exposure Pathway Exercise at this site was conducted on November 18 and 19, 2003. The qualifying emergency preparedness exercise was conducted on January 7, 1981.

DHS/FEMA wishes to acknowledge the efforts of the many individuals in the State of Minnesota and the Counties of Sherburne and Wright who participated in this exercise.

Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork on the part of all participants was evident during this exercise.

This Final Report contains the evaluation of the biennial exercise and the evaluation of the following out-of-sequence activities:

State of Minnesota: Evacuee and Emergency Worker Monitoring, Decontamination, Registration, and Vehicle Monitoring and Decontamination were demonstrated at Rogers High School;
Medical Services (MS-1) demonstration involving transporting and caring for a potentially contaminated and injured individual at North Memorial Hospital;

Sherburne County: Zimmerman Fire Department Emergency Worker and Vehicle

Monitoring and Decontamination Center;
Implementation of Protective Actions - School Interview (EV-2) – Big Lake School District (Big Lake High School);

Wright County: Implementation of Protective Actions - School Interview (EV-2) – Buffalo School District (District Office);
Implementation of Protective Actions - School Interview (EV-2) – St. Michael - Albertville School District (District Office).

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

No Deficiencies were identified for any jurisdiction during this exercise.

There were four Areas Requiring Corrective Action (ARCAs) identified for the State of Minnesota, one of which was resolved after additional training was conducted, as documented in the Schedule of Corrective Actions letter from the State dated October 21, 2009, and one which was successfully re-demonstrated on October 19, 2009. There were two ARCAs identified for Wright County, one of which was successfully re-demonstrated during the exercise. No ARCAs were identified for Sherburne County.

There were no previous ARCAs for the State of Minnesota, Wright and Sherburne Counties that were resolved.

The first ARCA for the State of Minnesota was identified under Criterion 1.e.1 - Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations, whereby the thermoluminescent dosimeters utilized at the North Memorial Medical Center did not have an exchange date and there were no instructions on when the dosimeters needed to be exchanged. This ARCA remains unresolved.

The second ARCA for the State of Minnesota was identified under Criterion 4.a.3 – Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams must move to an appropriate low background location to determine whether any significant (as specified in the plan and /or procedures) amount of radioactivity has been collected on the sampling media, whereby the teams exhibited a lack of contamination control by failing to wear proper

protective equipment ( gloves). This ARCA was resolved after additional training was conducted, as documented in the Schedule of Corrective Actions letter from the State dated October 21, 2009.

The third ARCA for the State of Minnesota was identified under Criterion 4.c.1 – Laboratory is capable of performing required radiological analyses to support PADs, whereby results of laboratory isotopic analysis of samples counted in Marinelli beakers were not reliable, and there was no assurance in the quality and quantity of the isotopic concentrations. This ARCA was successfully re-demonstrated on October 19, 2009, which was completed within the 60 day timeframe requested by FEMA.

The fourth ARCA for the State of Minnesota was identified under Criterion 6.d.1 - The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals, whereby The Model 3 survey meters were checked for operability using a Cs-137 check source attached to the case. The instruments were not operability checked using a specified range of readings for a particular source. This ARCA remains unresolved.

The first ARCA for Wright County was identified under Criterion 1.c.1 – Key personnel with functional roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible, whereby the Operations Chief (Nuclear Director) and other key EOC staff were not informed by staff that a decision to evacuate the County Jail population had been made. This ARCA remains unresolved.

The second ARCA for Wright County was identified under Criterion 1.e.1 - Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations, whereby during the operations check, DRDs were zeroed at the top of the scale, 200 mR rather than 0 mR. This ARCA was successfully re-demonstrated 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. FEMA's activities are conducted pursuant to 44 Code of Federal Regulations (CFR) Parts 350, 351, and 352. These regulations are a key element in the Radiological Emergency Preparedness (REP) Program that was established following the Three Mile Island Nuclear Station accident in March 1979.

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

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 the evaluation of the plans and procedures conducted by State and local governments;

• Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated June 17, 1993 (Federal Register, Vol. 58, No. 176, September 14, 1993); and

• Coordinating the activities of Federal agencies with responsibilities in the radiological emergency planning process:

- U.S. Department of Agriculture;
- U.S. Department of Commerce;
- U.S. Department of Energy;
- U.S. Department of Health and Human Services;
- U.S. Department of the Interior;
- U.S. Department of Transportation;
- U.S. Environmental Protection Agency;
- U.S. Food and Drug Administration; and

- U.S. Nuclear Regulatory Commission.

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

Formal submission of the RERPs for the MNGP to FEMA Region V by the State of Minnesota and involved local jurisdictions occurred on February 1, 1983. Formal approval of these RERPs was granted by FEMA on May 10, 1985, under 44 CFR 350.

A Radiological Emergency Preparedness (REP) Full Participation Plume and Ingestion Exposure Pathway Exercise was conducted on August 18 and 19, 2009, by DHS/FEMA Region V to assess the capabilities of State and local off-site emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving the MNGP. The purpose of this exercise report is to present the exercise results and findings on the performance of the off-site response organizations (ORO's) during a simulated radiological emergency.

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

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

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

• FEMA-REP-14, "Radiological Emergency Preparedness Exercise Manual," September 1991; and

• FEMA "Radiological Emergency Preparedness: Exercise Evaluation Methodology" 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 plume pathway EPZ and an ingestion pathway IPZ, a listing of all participating jurisdictions and functional entities which were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

Section 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 for each identified exercise issue; and (2) descriptions of unresolved ARCAs assessed during previous exercises and the status of the ORO's efforts to resolve them.

# 3. Exercise Overview

Contained in this section are data and basic information relevant to the August 18 and 19, 2009, Radiological Emergency Preparedness (REP) Full Participation Plume and Ingestion Exposure Pathway Exercise to test the off-site emergency response capabilities in the area surrounding the Monticello Nuclear Generating Plant. This section of the exercise report includes a description of the 10-mile Emergency Planning Zone (EPZ) and a description of the 50-mile Ingestion Pathway Zone (IPZ), a listing of all participating jurisdictions and functional entities which were evaluated, and a tabular presentation of the time of the actual occurrence of key exercise events and activities.

## 3.1. EPZ Description

The MNGP is located within the city limits of Monticello, Minnesota. The plant consists of approximately 1500 acres of land. The northwest and southwest sectors are mainly agricultural. The northeast and southeast sectors are urban and manufacturing. Part of this property is on the north bank of the Mississippi River in Sherburne County and part is on the south bank of Wright County. The northwestern suburbs of Minneapolis are about 30 miles southeast of the MNGP.

The 10-mile EPZ for the MNGP consists of a circle with the utility at the center point. The EPZ extends 10-miles outward in all directions from the plant for the plume exposure pathway planning zone and 50 miles outward for the IPZ. In the event of a serious accident, the plume exposure-planning zone will be in the area in which intensive efforts will be made to notify and protect residents and transient populations from exposure to radiation. The population in the MNGP 10-mile EPZ is 64,184. This figure represents the permanent population in the municipalities and unincorporated areas located in the 10-mile EPZ.

There are numerous lakes in the 10-mile EPZ, which are used for recreational purposes. Parts of Lake Saint Marie Park, Sandune State Park, and Game Refuge are within the 10-mile EPZ. The Mississippi River flows from the northwest to southeast through the 10-mile EPZ. The three major highways passing through the area are Interstate 94, U.S. 10, and State Highways 25 and 55. Railroad access is available from the Burlington Northern. Major waterways are the Mississippi Scenic River and Crow River and the Elk River and Saint Francis River watersheds; however these waterways are not navigable. There are no major airports in the 10-mile EPZ.

The following Sub-Areas are included within the 10-mile EPZ: Sub-Areas 2, 5N, 5E, 5S, 5W, 10N, 10E, 10SE, 10S, 10SW, 10W and 10NW.

The 50-mile IPZ for the MNGP has an estimated population of approximately 3,591,108 as of the year 2008. Approximately 90% reside in the Minneapolis-St. Paul metropolitan area. There are 22 counties in the 50-mile EPZ. They are: Anoka, Benton, Carver, Chisago, Dakota, Hennepin, Isanti, Kanabec, Kandiyohi, McLeod, Meeker, Mille Lacs, Morrison, Pine, Ramsey, Renville, Scott, Sherburne, Sibley, Stearns, Washington, and Wright.

## 3.2. Exercise Participants

Agencies and organizations of the following jurisdictions participated in the Monticello Nuclear Generating Plant exercise:

State Jurisdictions

- State of Minnesota Governor's Office
- Department of Public Safety, Division of Homeland Security and Emergency Management
- Minnesota Department of Health
- Minnesota Department of Agriculture
- Emergency Medical Services Regulatory Board
- Minnesota Department of Natural Resources
- Minnesota Department of Education
- Minnesota Department of Human Services
- Minnesota Voluntary Organizations Active in Disasters
- Minnesota Department of Transportation
- Minnesota State Patrol
- Minnesota Department of Military Affairs
- University of Minnesota
- Bureau of Criminal Apprehension
- Office of Technical Support Services
- Minnesota Geospatial Information Office
- Department of Public Safety, Office of Communication
- School Safety Center (State of Minnesota)
- Minnesota Department of Health, Public Health Laboratory
- State of Minnesota National Guard

- 55th Civil Support Team

Risk Jurisdictions

- City of Monticello Civil Defense Director
- Sherburne County Emergency Management Agency
- Sherburne County Public Health
- Sherburne County Public Works
- Sherburne County Sheriff's Dispatch Center
- Sherburne County Sheriff's Office
- Sherburne County Social Services
- Wright County Board of Commissioners
- Wright County Civil Defense Director/Wright County Nuclear Director
- Wright County Emergency Management Agency
- Wright County Engineer
- Wright County Highway Department
- Wright County Human Services
- Wright County Public Information Officer
- Wright County Law Enforcement Explorers
- Wright County Radiological Officer
- Wright County Sheriff''s Office
- Wright County Sheriff's Dispatch Center
- Buffalo School District
- Rockford School District
- St. Michael Albertville - Albertville School District
- Big Lake School District
- Zimmerman Fire Department
- Livonia Fire Department
- Plymouth Fire Department
- Maple Grove Fire Department
- Hennepin County Emergency Management
- Ramsey County Emergency Management
- Rogers High School Reception Center
- Brooklyn Park Fire Department

Support Jurisdictions

- State of Wisconsin
- Dakota County Emergency Management
- Goodhue County Emergency Management
- Steele County Emergency Management

- Private Jurisdictions
  - Amateur Radio Emergency Services
  - American Red Cross
  - Vision Big Lake Transportation
  - Xcel Energy
  - Heritage Montessori School
  - Salvation Army
  - Metro Transit
  - Don's Bus Company
  - American Student Transportation
  - Robbinsdale Amatuer Radio Club
  - North Memorial Medical Center
  - West Metro North Memorial Ambulance
- Federal Jurisdictions
  - Federal Emergency Management Agency
  - Nuclear Regulatory Agency
  - Environmental Protection Agency
  - U.S. Department of Transportation
  - Food and Drug Administration
  - Center for Disease Control
  - Department of Homeland Security
  - United States Department of Agriculture
  - Federal Radiological Monitoring and Assessment Center
  - Department of Defense
  - Civil Air Patrol

## 3.3. Exercise Timeline

Table 1, on the following page, presents the time at which key events and activities occurred during the Monticello Nuclear Generating Plant Radiological Emergency Preparedness (REP) Full Participation Plume and Ingestion Exposure Pathway Exercise held on August 18 and 19, 2009. Also included are times that notifications were made to the participating jurisdictions/functional entities.

Table 1 - Exercise Timeline

DATE: 2009-08-18, SITE: Monticello Nuclear Generating Plant, MN

| Emergency Classification Level or Event | Time Utility Declared | MN State Initial Warning Point | MN State EOC | PAC (MN State EOC) | JIC (MN State EOC) | Sherburne County Initial Warning Point | Sherburne County EOC |
|---|---|---|---|---|---|---|---|
| Unusual Event | NA | NA | NA | NA | NA | NA | NA |
| Alert | 0828 | 0838 | 0849 | 0851 | 0852 | 0839 | 0842 |
| Site Area Emergency | 0945 | | 1008 | 1007 | 1008 | | 1006 |
| General Emergency | 1049 | | 1112 | 1112 | 1118 | | 1111 |
| Simulated Rad. Release Started | 1045 | | 1112 | 1056 | NA | | 1111 |
| Simulated Rad. Release Terminated | 1915 | | 1915 | 1915 | NA | | 1915 |
| Facility Declared Operational | | | 0932 | 0932 | 0932 | | 0900 |
| Declaration of State of Emergency | | | 1030 | 1030 | NA | | 1025 |
| Exercise Terminated | | | NA | NA | NA | | NA |
| 1st Precautionary Action: Place animals on stored feed and protected water out to 10-miles | | | 1027 | NA | NA | | NA |
| 2nd Precautionary Action: air, rail and water restriction-10-mile EPZ | | | 1036 | NA | NA | | NA |
| 3rd Early Precautionary Action: Park Evacuation | | | 1028 | NA | NA | | NA |
| Precautionary Action: Wright/Sherburne CO-Relocation/Evacuation Schools | | | NA | NA | NA | | 1014 |
| 1st PAR: Evacuate Sub - Areas 2, 5E and 5S, 2 mile 360 and 5 mile downwind, general population directed to ingest KI | | | NA | 1112 | NA | | NA |
| 1st PAD: Evacuate Sub - Areas 2, 5E and 5S, 2 mile 360 and 5 mile downwind, general population directed to ingest KI | | | 1119 | NA | 1119 | | 1119 |
| 1st Siren Activation | | | NA | NA | NA | | 1129 |
| 1st EAS Message | | | 1132 | NA | NA | | NA |
| 2nd PAR: Evacuate Sub - Areas 2, 5S, 5E, 10E and 10S, 2 mile 360, 10 mile downwind, general population directed to ingest KI | | | NA | 1221 | NA | | NA |
| 2nd PAD: Evacuate Sub - Areas 2, 5E, 5S, 10E and 10S, 2 mile 360, 10 mile downwind, general population directed to ingest KI | | | 1228 | NA | 1228 | | 1228 |
| 2nd Siren Activation | | | NA | NA | NA | | 1238 |
| 2nd EAS Message | | | 1241 | NA | NA | | NA |
| KI Administration Decision(s): Emergency Workers | | | 1102 | 1054 | NA | | NA |

## Table 1 - Exercise Timeline
## DATE: 2009-08-18, SITE: Monticello Nuclear Generating Plant, MN

| Emergency Classification Level or Event | Time Utility Declared | Wright County Initial Warning Point | Wright County EOC |
|---|---|---|---|
| Unusual Event | NA | NA | NA |
| Alert | 0828 | 0838 | 0846 |
| Site Area Emergency | 0945 | NA | 1003 |
| General Emergency | 1049 | NA | 1108 |
| Simulated Rad. Release Started | 1045 | | 1108 |
| Simulated Rad. Release Terminated | 1915 | | 1915 |
| Facility Declared Operational | | | 0917 |
| Declaration of State of Emergency | | | 1012 |
| Exercise Terminated | | | NA |
| 1st Precautionary Action: Place animals on stored feed and protected water out to 10-miles | | | NA |
| 2nd Precautionary Action: air, rail and water restriction-10-mile EPZ | | | NA |
| 3rd Early Precautionary Action: Park Evacuation | | | NA |
| Precautionary Action: Wright/Sherburne CO-Relocation/Evacuation Schools | | | 1015 |
| 1st PAR: Evacuate Sub - Areas 2, 5E and 5S, 2 mile 360 and 5 mile downwind, general population directed to ingest KI | | | NA |
| 1st PAD: Evacuate Sub - Areas 2, 5E and 5S, 2 mile 360 and 5 mile downwind, general population directed to ingest KI | | | 1119 |
| 1st Siren Activation | | | 1129 |
| 1st EAS Message | | | NA |
| 2nd PAR: Evacuate Sub - Areas 2, 5S, 5E, 10E and 10S, 2 mile 360, 10 mile downwind, general population directed to ingest KI | | | NA |
| 2nd PAD: Evacuate Sub - Areas 2, 5E, 5S, 10E and 10S, 2 mile 360, 10 mile downwind, general population directed to ingest KI | | | 1228 |
| 2nd Siren Activation | | | 1238 |
| 2nd EAS Message | | | NA |
| KI Administration Decision(s): Emergency Workers | | | NA |

# 4. Exercise Evaluation and Results

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities, which participated in the August 18 and 19, 2009, Radiological Emergency Preparedness (REP) Full Participation Plume and Ingestion Exposure Pathway Exercise to test the off-site emergency response capabilities of State and local governments in the 10-mile EPZ and 50-mile IPZ surrounding the MNGP.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria delineated in exercise criteria contained 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 assessed

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

N - Not Demonstrated (Reason explained in Subsection B)

Table 2 - Summary of Exercise Evaluation (4 pages)

| DATE: 2009-08-18<br>SITE: Monticello Nuclear Generating Plant, MN<br><br>A: ARCA, D: Deficiency, M: Met, N: Not Demonstrated | | MN State Initial Warning Point | MN State EOC | MN State EOC Ingestion Phase | IPTF-MN State EOC | PAC (MN State EOC) | JIC (MN State EOC) | Public Inquiry Hotline (JIC) | State RPC (Sherburne County EOC) | State RPC (Wright County EOC) | State Helicopter - Sherburne County | State RAD Team #1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emergency Operations Management | | | | | | | | | | | | |
| Mobilization | 1a1 | M | M | | | M | M | | M | M | | M |
| Facilities | 1b1 | | | | | | | | | | | |
| Direction and Control | 1c1 | | M | M | | M | M | | | | | |
| Communications Equipment | 1d1 | M | M | | | M | M | M | | | M | M |
| Equip & Supplies to support operations | 1e1 | | M | | | M | M | | | | M | M |
| Protective Action Decision Making | | | | | | | | | | | | |
| Emergency Worker Exposure Control | 2a1 | | M | | | M | | | M | M | | |
| Radiological Assessment and PARs | 2b1 | | M | | | M | | | | | | |
| Decisions for the Plume Phase -PADs | 2b2 | | M | | | M | | | M | M | | |
| PADs for protection of special populations | 2c1 | | M | | | | | | M | M | | |
| Rad Assessment and Decision making for the Ingestion Exposure Pathway | 2d1 | | | M | M | M | | | | | | |
| Rad Assess/Decision making concerning Relocation, Reentry, and Return | 2e1 | | | M | M | M | | | | | | |
| Protective Action Implementation | | | | | | | | | | | | |
| Implementation of emergency worker exposure control | 3a1 | | | | | | | | | | M | M |
| Implementation of KI decision | 3b1 | | | | | | | | | | M | M |
| Implementation of protective actions for special populations - EOCs | 3c1 | | | | | | | | | | | |
| Implementation of protective actions for Schools | 3c2 | | M | | | | | | | | | |
| Implementation of traffic and access control | 3d1 | | M | | | | | | | | | |
| Impediments to evacuation are identified and resolved | 3d2 | | M | | | | | | | | | |
| Implementation of ingestion pathway decisions - availability/use of info | 3e1 | | | 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 | | | | | | | | | | | M |
| Field Teams obtain sufficient information | 4a2 | | | | | M | | | | | | |
| Field Teams Manage Sample Collection Appropriately | 4a3 | | | | | | | | | | | M |
| Post plume phase field measurements and sampling | 4b1 | | | | | M | | | | | | |
| Laboratory operations | 4c1 | | | | | M | | | | | | |
| Emergency Notification and Public Info | | | | | | | | | | | | |
| Activation of the prompt alert and notification system | 5a1 | | M | | | | | | M | M | M | |
| Activation of the prompt alert and notification system - Fast Breaker | 5a2 | | | | | | | | | | | |
| Activation of the prompt alert and notification system - Exception areas | 5a3 | | | | | | | | | | | |
| Emergency information and instructions for the public and the media | 5b1 | | M | M | | M | M | M | M | M | | |
| Support Operations/Facilities | | | | | | | | | | | | |
| Mon / decon of evacuees and emergency workers, and registration of evacuees | 6a1 | | | | | | | | | | | |
| Mon / decon of emergency worker equipment | 6b1 | | | | | | | | | | | |
| Temporary care of evacuees | 6c1 | | | | | | | | | | | |
| Transportation and treatment of contaminated injured individuals | 6d1 | | | | | | | | | | | |

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

| DATE: 2009-08-18<br>SITE: Monticello Nuclear Generating Plant, MN<br><br>A: ARCA, D: Deficiency, M: Met, N: Not Demonstrated | | State RAD Team #2 | State RAD Command Van | State RAD Team #1 Ingestion Phase | State RAD Team #2 Ingestion Phase | State RAD Command Van Ingestion Phase | MDA Field Team | DNR Field Team | MDH Public Health Lab | State TACP (Sherburne County) | Sherburne County Initial Warning Point | Sherburne County EOC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emergency Operations Management | | | | | | | | | | | | |
| Mobilization | 1a1 | M | | | | | M | M | M | | M | M |
| Facilities | 1b1 | | | | | | | | | | | |
| Direction and Control | 1c1 | | | | | | | | | | | M |
| Communications Equipment | 1d1 | M | M | | | | M | M | M | M | M | M |
| Equip & Supplies to support operations | 1e1 | M | M | M | M | M | M | M | M | M | | |
| Protective Action Decision Making | | | | | | | | | | | | |
| Emergency Worker Exposure Control | 2a1 | | | | | | | | | | | M |
| Radiological Assessment and PARs | 2b1 | | M | | | | | | | | | |
| Decisions for the Plume Phase -PADs | 2b2 | | | | | | | | | | | M |
| PADs for protection of special populations | 2c1 | | | | | | | | | | | M |
| Rad Assessment and Decision making for the Ingestion Exposure Pathway | 2d1 | | | | | | | | | | | |
| Rad Assess/Decision making concerning Relocation, Reentry, and Return | 2e1 | | | | | | | | | | | |
| Protective Action Implementation | | | | | | | | | | | | |
| Implementation of emergency worker exposure control | 3a1 | M | M | M | M | M | M | M | M | M | | M |
| Implementation of KI decision | 3b1 | M | M | | | | | | | M | | M |
| Implementation of protective actions for special populations - EOCs | 3c1 | | | | | | | | | | | M |
| Implementation of protective actions for Schools | 3c2 | | | | | | | | | | | M |
| Implementation of traffic and access control | 3d1 | | | | | | | | | M | | M |
| Impediments to evacuation are identified and resolved | 3d2 | | | | | | | | | | | M |
| Implementation of ingestion pathway decisions - availability/use of info | 3e1 | | | | | | | | | | | |
| Materials for Ingestion Pathway PADs are available | 3e2 | | | | | | | | | | | |
| Implementation of relocation, re-entry, and return decisions | 3f1 | | | | | | | | | | | |
| Field Measurement and Analysis | | | | | | | | | | | | |
| Adequate Equipment for Plume Phase Field Measurements | 4a1 | M | | | | | | | | | | |
| Field Teams obtain sufficient information | 4a2 | | M | | | | | | | | | |
| Field Teams Manage Sample Collection Appropriately | 4a3 | M | | | | | | | | | | |
| Post plume phase field measurements and sampling | 4b1 | | | M | M | M | M | M | | | | |
| Laboratory operations | 4c1 | | | | | | | | M | | | |
| Emergency Notification and Public Info | | | | | | | | | | | | |
| Activation of the prompt alert and notification system | 5a1 | | | | | | | | | | | M |
| Activation of the prompt alert and notification system - Fast Breaker | 5a2 | | | | | | | | | | | |
| Activation of the prompt alert and notification system - Exception areas | 5a3 | | | | | | | | | | | |
| Emergency information and instructions for the public and the media | 5b1 | | | | | | | | | | | M |
| Support Operations/Facilities | | | | | | | | | | | | |
| 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 | | | | | | | | | | | |

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Table 2 - Summary of Exercise Evaluation (Continued. page 3/4)

| DATE: 2009-08-18<br>SITE: Monticello Nuclear Generating Plant, MN<br><br>A: ARCA, D: Deficiency, M: Met, N: Not Demonstrated | | Sherburne County TACP | Sherburne County PIO | EV-2 Big Lake | EM Worker Monit & Decon ZFD | EM Worker Veh Monit & Decon ZFD | Sherburne County EOC Ingestion Phase | Sherburne County PIO Ingestion Phase | Wright County Initial Warning Point | Wright County EOC | Wright County TACP | Wright County PIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emergency Operations Management | | | | | | | | | | | | |
| Mobilization | 1a1 | | | | | | | | M | M | | |
| Facilities | 1b1 | | | | | | | | | | | |
| Direction and Control | 1c1 | | | | | | | | | A | | |
| Communications Equipment | 1d1 | M | | M | M | M | | | M | M | M | |
| Equip & Supplies to support operations | 1e1 | M | | M | M | M | | | | M | M | |
| Protective Action Decision Making | | | | | | | | | | | | |
| Emergency Worker Exposure Control | 2a1 | | | | | | | | | M | | |
| Radiological Assessment and PARs | 2b1 | | | | | | | | | | | |
| Decisions for the Plume Phase -PADs | 2b2 | | | | | | | | | M | | |
| PADs for protection of special populations | 2c1 | | | | | | | | | M | | |
| Rad Assessment and Decision making for the Ingestion Exposure Pathway | 2d1 | | | | | | M | | | | | |
| Rad Assess/Decision making concerning Relocation, Reentry, and Return | 2e1 | | | | | | M | | | | | |
| Protective Action Implementation | | | | | | | | | | | | |
| Implementation of emergency worker exposure control | 3a1 | M | | | M | M | | | M | M | M | |
| Implementation of KI decision | 3b1 | M | | | | | | | M | M | M | |
| Implementation of protective actions for special populations - EOCs | 3c1 | | | | | | | | | M | | |
| Implementation of protective actions for Schools | 3c2 | | | M | | | | | | M | | |
| Implementation of traffic and access control | 3d1 | M | | | | | | | | M | M | |
| Impediments to evacuation are identified and resolved | 3d2 | | | | | | | | | M | | |
| Implementation of ingestion pathway decisions - availability/use of info | 3e1 | | | | | | M | | | | | |
| Materials for Ingestion Pathway PADs are available | 3e2 | | | | | | M | | | | | |
| Implementation of relocation, re-entry, and return decisions | 3f1 | | | | | | 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 | | | | | | | | | | | |
| Laboratory operations | 4c1 | | | | | | | | | | | |
| Emergency Notification and Public Info | | | | | | | | | | | | |
| Activation of the prompt alert and notification system | 5a1 | | | | | | | | | M | | |
| Activation of the prompt alert and notification system - Fast Breaker | 5a2 | | | | | | | | | | | |
| Activation of the prompt alert and notification system - Exception areas | 5a3 | | | | | | | | | | | |
| Emergency information and instructions for the public and the media | 5b1 | | M | | | | M | M | | M | | M |
| Support Operations/Facilities | | | | | | | | | | | | |
| Mon / decon of evacuees and emergency workers, and registration of evacuees | 6a1 | | | | M | | | | | | | |
| Mon / decon of emergency worker equipment | 6b1 | | | | | M | | | | | | |
| Temporary care of evacuees | 6c1 | | | | | | | | | | | |
| Transportation and treatment of contaminated injured individuals | 6d1 | | | | | | | | | | | |

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

| DATE: 2009-08-18<br>SITE: Monticello Nuclear Generating Plant, MN<br><br>A: ARCA, D: Deficiency, M: Met, N: Not Demonstrated | | Wright County EOC Ingestion Phase | Wright County PIO Ingestion Phase | EV-2 St. Michael - Albertville School | EV-2 Buffalo School District | Evacuee Decon Rogers HS | Evacuee Monit Rogers HS | Evacuee Regis Rogers HS | Evacuee Veh Decon Vision Trans | Evacuee Veh Monit Rogers HS | MS-1 Transportation NMMC | MS-1 Facility NMMC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emergency Operations Management | | | | | | | | | | | | |
| Mobilization | 1a1 | | | | | | | | | | | |
| Facilities | 1b1 | | | | | | | | | | | |
| Direction and Control | 1c1 | | | | | | | | | | | |
| Communications Equipment | 1d1 | | | M | M | M | | | M | M | M | M |
| Equip & Supplies to support operations | 1e1 | | | M | M | M | M | M | M | M | M | A |
| 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 | | | | | | | | | | |
| Rad Assess/Decision making concerning Relocation, Reentry, and Return | 2e1 | M | | | | | | | | | | |
| Protective Action Implementation | | | | | | | | | | | | |
| Implementation of emergency worker exposure control | 3a1 | | | | | M | M | M | M | M | N | M |
| Implementation of KI decision | 3b1 | | | | | | | | | | M | |
| Implementation of protective actions for special populations - EOCs | 3c1 | | | | | | | | | | | |
| Implementation of protective actions for Schools | 3c2 | | | M | M | | | | | | | |
| 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 | | | | | | | | | | |
| Materials for Ingestion Pathway PADs are available | 3e2 | M | | | | | | | | | | |
| Implementation of relocation, re-entry, and return decisions | 3f1 | 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 | | | | | | | | | | | |
| Laboratory operations | 4c1 | | | | | | | | | | | |
| Emergency Notification and Public Info | | | | | | | | | | | | |
| 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 | M | M | | | | | | | | | |
| Support Operations/Facilities | | | | | | | | | | | | |
| Mon / decon of evacuees and emergency workers, and registration of evacuees | 6a1 | | | | | M | M | M | M | M | | |
| Mon / decon of emergency worker equipment | 6b1 | | | | | | | | | | | |
| Temporary care of evacuees | 6c1 | | | | | | | | | | | |
| Transportation and treatment of contaminated injured individuals | 6d1 | | | | | | | | | | M | A |

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# 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 is a definition of the terms used in this subsection relative to objective demonstration status.

• Met - Listing of the demonstrated exercise objectives 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 objectives 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 Action - Listing of the demonstrated exercise criterion 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 objectives which were not demonstrated as scheduled during this exercise and the reason they were not demonstrated.

• Prior ARCAs - Resolved - Description of ARCAs assessed during previous exercises which were resolved in this exercise and the corrective actions demonstrated.

• Prior ARCAs - Unresolved - Description of ARCAs assessed during prior exercises, which were not resolved in this exercise. Included is the reason the ARCAs remain 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, which 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."

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

The identifying number for 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 - A 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 via a letter from the Regional Administrator. Therefore, standardized issue numbers are not assigned to Plan Issues.

• Exercise Issue Identification Number – A separate two (or three) digit indexing number assigned to each issue identified in the exercise.

## 4.2.1. Minnesota Jurisdictions

## 4.2.1.1. Minnesota State Initial Warning Point (Bureau of Criminal Apprehension)

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

## 4.2.1.2. Minnesota State Emergency Operations Center

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

## 4.2.1.3. Minnesota State Emergency Operations Center (Ingestion Phase)

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

## 4.2.1.4. Intermediate Phase Task Force (IPTF) - Minnesota State EOC

a. MET: 2.d.1, 2.e.1, 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

## 4.2.1.5. Minnesota State Planning and Assessment Center

a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2, 2.d.1, 2.e.1, 3.e.1, 3.e.2, 3.f.1, 4.a.2, 4.b.1, 4.c.1, 5.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. NOT DEMONSTRATED: None
e. PRIOR ISSUES - RESOLVED: None
f. PRIOR ISSUES - UNRESOLVED: None

## 4.2.1.6. Minnesota State PIO at Joint Information Center

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

## 4.2.1.7. Public Inquiry Hotline (MN State Emergency Operations Center)

a. MET: 1.d.1, 5.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None

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

## 4.2.1.8. State Regional Program Coordinator - Sherburne County

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

## 4.2.1.9. State Regional Program Coordinator - Wright County

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

## 4.2.1.10. State Patrol Helicopter - Sherburne County Recreationalists

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

# 4.2.1.11. State RAD Field Team #1 (Monticello)

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

b. AREAS REQUIRING CORRECTIVE ACTION: 4.a.3.

ISSUE NO.: 39-09-4a3-A-03

CRITERION: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams must move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. (NUREG-0654, I.8., 9., 11)

CONDITION: During the plume phase and the ingestion phase, there was a lack of contamination control. In the assembly and disassembly of the air monitoring sample head, no gloves were worn. This can lead to cross contamination between the particulate filter, the gaseous collection cartridge, and the environment around the vehicle, which had been in the plume as well. During the plume phase, the air monitoring collection head was disassembled and bagged with bare hands. During the ingestion phase, all the samples were collected without wearing gloves. Grass samples were held by the bare hands while being cut and put into the bag. The person collecting soil samples kneeled on the ground without using a plastic sheet or wearing gloves. At no time was State RAD Field Team #1 observed surveying themselves with the Canberra Model MCB-2 contamination survey meter.

POSSIBLE CAUSE: Lack of adequate training or understanding by Field Team members of the importance of wearing gloves to limit potential contamination.

REFERENCE: NUREG 0654 H.12, I.8, J.10,and J.11

EFFECT: Lack of proper contamination control in obtaining air samples as well as ingestion pathway samples can lead to invalid sample results and/or contamination of equipment.

CORRECTIVE ACTION DEMONSTRATED: Additional training has been provided to field team members as to the importance of contamination control and the importance of wearing the proper personal protective equipment. Also during subsequent training held annually this issue will be stressed as to its importance.

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

## 4.2.1.12. State RAD Field Team #2 (Monticello)

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

## 4.2.1.13. State RAD Team Command Van (Monticello)

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

## 4.2.1.14. State RAD Field Team #1 (Ingestion Phase) (Monticello)

a. MET: 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

## 4.2.1.15. State RAD Field Team #2 (Ingestion Phase) (Monticello)

a. MET: 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

## 4.2.1.16. State RAD Team Command Van (Ingestion Phase) (Monticello)

a. MET: 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

## 4.2.1.17. Minnesota Department of Agriculture Field Team

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

## 4.2.1.18. Minnesota Department of Natural Resources Field Team

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

## 4.2.1.19. Minnesota Department of Health State Public Health Laboratory

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

ISSUE NO.: 39-09-4c1-A-06

CRITERION: Laboratory is capable of performing required radiological analyses to support PADs

CONDITION: Results of laboratory isotopic analysis of samples counted in Marinelli beakers were not reliable, and there was no assurance in the quality and quantity of the isotopic concentrations.

POSSIBLE CAUSE: Bagged samples were simply placed in the Marinelli beaker without regard to placement around the detector well within the Marinelli for efficiency or configuration. Additionally, the bagged cubic container sitting on top of the detector well in the Marinelli is not consistent with the geometry of the calibration source.

REFERENCE: NUREG-0654 C.3, J.11

EFFECT: Since there is no reproducible geometry and the sample geometry was not consistent with the calibration source, there can be no assurance in the quality and quantity of the analysis. In the configuration used, the concentration of the various isotopes would have been under estimated. This in turn would have underestimated the dose rates for determination of the Relocation Protective Action Guides and would have underestimated the concentrations for comparison to the Derived Intervention Levels for determining where food embargos should be placed.

CORRECTIVE ACTION DEMONSTRATED: On October 19, 2009, the Minnesota Department of Health, Public Health Laboratory successfully re-demonstrated the preparation and analysis of environmental samples in a reproducible geometry consistent with calibration standards. Procedures have been modified to prepare and analyze samples consistent with calibration standards. Three Laboratory technicians have been trained in the corrected procedure.

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

## 4.2.1.20. State Traffic and Access Control Point - Sherburne County

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

## 4.2.1.21. Evacuee Decontamination Rogers Reception Center

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

## 4.2.1.22. Evacuee Monitoring Rogers Reception Center

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

## 4.2.1.23. Evacuee Registration Rogers Reception Center

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

## 4.2.1.24. Evacuee Vehicle Decontamination Rogers Reception Center

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

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

## 4.2.1.25. Evacuee Vehicle Monitoring Rogers Reception Center

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

## 4.2.1.26. Medical Services (MS-1) Transportation North Memorial Medical Center

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

## 4.2.1.27. Medical Services (MS-1) Facility North Memorial Medical Center

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

ISSUE NO.: 39-09-1e1-A-04

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

CONDITION: The Landauer TLD cards did not have an exchange date

specified and the Emergency Management Director did not know when they were last changed or when the next exchange date was due. Also there was not any reference available to specify when to exchange the TLDs.

POSSIBLE CAUSE: There was no exchange date on the TLDs and there were no instructions or indications on when the TLDs needed to be exchanged.

REFERENCE: NUREG-654 H.7, 10: J.10.a, b, e: J.11; K.3.a

EFFECT: The dose assigned to an emergency work from reading one of the TLDs may not be accurate.

RECOMMENDATION: Contact Landauer to find out when they were last exchanged, exchange the TLDs when due, formalize the exchange process in procedures, and track exchange dates.

SCHEDULE OF CORRECTIVE ACTIONS: North Memorial Hospital will be updating procedures to ensure the proper thermoluminescent dosimeters have current exchange dates and instructions will be on hand at the hospital as to how to properly use and exchange the thermoluminescent dosimeters.

ISSUE NO.: 39-09-6d1-A-05

CRITERION: Facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG-0654, F.2., H.10., K.5.a.b., L.1., 4)

CONDITION: The Model 3 survey meters were checked for operability using a Cs-137 source attached to the case. They were only checked to see if they got a response – a response check. The instruments were not operability checked using a specified range of readings for a particular source.

POSSIBLE CAUSE: Procedures only call for a response check – not an operability check with a specified source with a specific range of readings.

REFERENCE: F.2: H.10: K.5.a, b: L.1; L.4.

EFFECT: An instrument range of readings from a response to a specified source is typically provided to ensure proper operation of the instrument. If the instrument reads above or below the range, the instrument is not responding properly and is considered inoperable. Without a specified range of reading there can be no assurance the instrument is operating properly.

RECOMMENDATION: All instruments should have a specified response range for a particular source to ensure proper operability of the instrument. Plans and procedures should be changed, and all personnel trained in the changes.

SCHEDULE OF CORRECTIVE ACTIONS: The Model 3 survey meters will have a range of reading sticker attached and training will be provided to the users of the Model 3 survey meters on how to properly do operational checks.

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. Sherburne County Initial Warning Point

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

## 4.2.2.2. Sherburne County Emergency Operations Center

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

## 4.2.2.3. Sherburne County Traffic and Access Control Point

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

## 4.2.2.4. Sherburne County Public Information Officer at the State JIC

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

## 4.2.2.5. EV-2 Big Lake School District

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

## 4.2.2.6. Emergency Worker Monitoring and Decontamination

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

## 4.2.2.7. Emergency Worker Vehicle Monitoring and Decontamination

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

## 4.2.2.8. Sherburne County Emergency Operations Center (Ingestion Phase)

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

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

## 4.2.2.9. Sherburne County Public Information Officer at the State JIC (Ingestion Phase)

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

## 4.2.2.10. Wright County Initial Warning Point

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

## 4.2.2.11. Wright County Emergency Operations Center

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

ISSUE NO.: 39-09-1c1-A-01

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

CONDITION: The decision by the Jail Captain at 1246 hours to evacuate the

jail population was not coordinated with the EOC, and the Nuclear Director/Operations Chief did not become aware of the action until about 1300 hours near the end of the exercise. Options for sheltering-in-place or evacuating were not considered, and the RADEF staff and Operations Chief were not consulted regarding appropriate actions.

POSSIBLE CAUSE: Key players, including the Operations Chief and RADEF staff, were not included in decision-making for evacuation of the jailed population.

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

EFFECT: EOC leadership was neither included in nor aware of protective actions being made regarding the jailed population.

RECOMMENDATION: The EOC staff should receive training and procedures should be improved relative to decision-making and operations involving protective actions.

SCHEDULE OF CORRECTIVE ACTIONS: Wright County has conducted additional training with its staff on the proper coordination and decision-making process on how to implement protective actions for the County Jail, which included a possible evacuation decision. This will be a point of emphasis during subsequent years of training within the county.

ISSUE NO.: 39-09-1e1-A-02

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

CONDITION: During the operations check of dosimetry equipment, the Radiological Officer (RO) incorrectly zeroed the 0-200mR Model 622 Direct-Reading Dosimeters (DRDs) manufactured by Arrow-Tech INC. The DRDs were zeroed at the top of the scale vice the bottom of the scale; specifically 200mR.

POSSIBLE CAUSE: The RO's lack of attention to detail resulted in the

equipment being zeroed incorrectly.

REFERENCE: NUREG-0654, H.7, 10; J.10 A, B, E; J.11; K.3.Q.

EFFECT: Radiation levels may not have been properly indicated, possibly resulting in contamination to emergency workers without their knowledge.

CORRECTIVE ACTION DEMONSTRATED: The controller was immediately notified of the inadequacy and play was stopped to conduct re-training to the RO from the controller. Upon completion of the retraining the RO was re-evaluated. He successfully demonstrated to the evaluator how to zero the DRDs.

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

## 4.2.2.12. Wright County Traffic and Access Control Point

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

## 4.2.2.13. Wright County Public Information Officer at the State JIC

a. MET: 5.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. NOT DEMONSTRATED: None

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

## 4.2.2.14. Wright County Emergency Operations Center (Ingestion Phase)

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

## 4.2.2.15. Wright County Public Information Officer at the State JIC (Ingestion Phase)

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

## 4.2.2.16. EV-2 St. Michael - Albertville School District

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

# 4.2.2.17. EV-2 Buffalo School District

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

# APPENDIX 1

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AMS | Aerial Measuring System |
| ARC | American Red Cross |
| ARES | Amateur Radio Emergency Services |
| CAD | Computer Aided Dispatch |
| CCC | Congregate Care Center |
| CDD | Civil Defense Director |
| CDE | Committed Dose Equivalent |
| CR | County Road |
| DCO | Dosimetry Control Officer |
| DOC | Department Operations Center |
| DRD | Direct Reading Dosimeter |
| EAS | Emergency Alert System |
| ECL | Emergency Classification Level |
| ED | Emergency Department |
| EMD | Emergency Management Director |
| EMT | Emergency Medical Technicians |
| EOC | Emergency Operations Center |
| EOF | Emergency Operations Facility |
| EPA | Environmental Protection Agency |
| EPZ | Emergency Planning Zone |
| ERDS | Emergency Radiological Data System |
| EW | Emergency Worker |
| FAA | Federal Aviation Administration |
| FEMA | Federal Emergency Management Agency |
| GE | General Emergency |
| GIS | Global Information System |
| HS | Human Services |
| HSD | Human Services Department |
| HSIP | Homeland Security Information Program |
| HSO | Human Services Officer |
| IPTF | Intermediate Phase Task Force |
| IPZ | Ingestion Planning Zone |
| ISD | Independent School District |
| IWP | Initial Warning Point |
| JIC | Joint Information Center |
| MDC | Mobile Data Computers |
| MENRF | Monticello Emergency Notification Report Form |
| MNGP | Monticello Nuclear Generating Plant |
| MRCC | Medical Resources Control Center |
| MRF | Minnesota Road Facility |
| MSP | Minnesota State Patrol |
| NARAC | National Atmospheric Release Advisory Center |
| NARS | Nuclear Accident Reporting System |

| | |
|---|---|
| ND | Nuclear Director |
| NMMC | North Memorial Medical Center |
| NPR | National Public Radio |
| NRC | Nuclear Regulatory Commission |
| OC | Operations Chief |
| OSD | Optically Stimulated Dosimeter |
| OSL | Optically Stimulated Luminescence |
| PAC | Planning Assessment Center |
| PAD | Protective Action Decision |
| PAG | Protective Action Guide |
| PAR | Protective Action Recommendations |
| PC | Planning Chief |
| PHLD | Public Health Laboratory Division |
| PIO | Public Information Officer |
| RAC | Regional Assistance Committee |
| RACES | Radio Amateur Civil Emergency Services |
| RAD | Radiological Accident Deployment |
| RDO | Radiation Defense Officer |
| REA | Radiation Emergency Area |
| REP | Radiological Emergency Preparedness |
| RMCC | Resource Medical Control Center |
| RO | Radiological Officer |
| RPT | Radiation Protection Technologists |
| RRC | Rogers Reception Center |
| RTC | Rad Team Captain |
| SAE | Site Area Emergency |
| SC | Sherburne County |
| SCEOC | Sherburne County Emergency Operations Center |
| SEOC | State Emergency Operations Center |
| SIM | Site Incident Manager |
| SNB | Special News Bulletins |
| SOG | Standard Operating Guidelines |
| SOP | Standard Operating Procedure |
| TACP | Traffic Access Control Points |
| TCP | Traffic Control Points |
| TEDE | Total Effective Dose Equivalent |
| TLD | Thermo Luminescent Dosimeter |
| TSC | Technical Support Center |
| VHF | Very High Frequency |
| WC | Wright County |
| WCND | Wright County Nuclear Director |

# APPENDIX 2

# EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the Monticello Nuclear Generating Plant Radiological Emergency Preparedness (REP) Full Participation Plume and Ingestion Exposure Pathway Exercise on August 18 and 19, 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
U. S. DOT U. S. Department of Transportation

TITLE NAME ORGANIZATION

Radiological Assistance Committee, Chairman William E. King DHS/FEMA
Exercise Director Gary Naskrent DHS/FEMA
Site Specialist David Ortman DHS/FEMA

| LOCATION | EVALUATOR | AGENCY |
|---|---|---|
| Minnesota State Initial Warning Point (Bureau of Criminal Apprehension) | Nick Lowe | ICF |
| Minnesota State Emergency Operations Center | Wes Ryals<br>Debra Schneck<br>Louis Sosler | ICF<br>ICF<br>ICF |
| Minnesota State Emergency Operations Center (Ingestion Phase) | Debra Schneck<br>Louis Sosler | ICF<br>ICF |
| Intermediate Phase Task Force (IPTF) - Minnesota State EOC | Nick Lowe | ICF |
| Minnesota State Planning and Assessment Center | Stephen Chambers<br>David Stuenkel | ICF<br>ICF |
| Minnesota State PIO at Joint Information Center | Michael Meshenberg | ICF |
| Public Inquiry Hotline (MN State Emergency Operations Center) | George R MacDonald | ICF |
| State Regional Program Coordinator - Sherburne County | *Clinton Crackel | DHS/FEMA |
| State Regional Program Coordinator - Wright County | *Delwyn Kinsley | DHS/FEMA |
| State Patrol Helicopter - Sherburne County Recreationalists | Todd Sniffin | ICF |
| State RAD Field Team #1 (Monticello) | Bernis Hannah | ICF |
| State RAD Field Team #2 (Monticello) | Thomas Essig | ICF |
| State RAD Team Command Van (Monticello) | Richard Watts | ICF |
| State RAD Field Team #1 (Ingestion Phase) (Monticello) | Bernis Hannah | ICF |
| State RAD Field Team #2 (Ingestion Phase) (Monticello) | Thomas Essig | ICF |
| State RAD Team Command Van (Ingestion Phase) (Monticello) | Richard Watts | ICF |
| Minnesota Department of Agriculture Field Team | John Zeidler | ICF |
| Minnesota Department of Natural Resources Field Team | Paul Cormier | ICF |
| Minnesota Department of Health State Public Health Laboratory | Richard Grundstrom | ICF |
| State Traffic and Access Control Point - Sherburne County | Kara Scott | DHS/FEMA |
| Evacuee Decontamination Rogers Reception Center | Wes Ryals | ICF |
| Evacuee Monitoring Rogers Reception Center | Deborah Fulk | DHS/FEMA |
| Evacuee Registration Rogers Reception Center | Carl Bebrich | DHS/FEMA |
| Evacuee Vehicle Decontamination Rogers Reception Center | Donald Greene | ICF |
| Evacuee Vehicle Monitoring Rogers Reception Center | James King | DHS/FEMA |
| Medical Services (MS-1) Transportation North Memorial Medical Center | Clark Duffy | ICF |
| Medical Services (MS-1) Facility North Memorial Medical Center | Richard Grundstrom | ICF |
| Sherburne County Initial Warning Point | Kara Scott | DHS/FEMA |
| Sherburne County Emergency Operations Center | Deborah Fulk<br>Donald Greene<br>Jeffry McSpaden | DHS/FEMA<br>ICF<br>U.S. DOT |
| Sherburne County Traffic and Access Control Point | Clayton Spangenberg | ICF |
| Sherburne County Public Information Officer at the State JIC | George R MacDonald | ICF |
| EV-2 Big Lake School District | Clark Duffy | ICF |
| Emergency Worker Monitoring and Decontamination | Jeffry McSpaden | U.S. DOT |
| Emergency Worker Vehicle Monitoring and Decontamination | Clayton Spangenberg | ICF |
| Sherburne County Emergency Operations Center (Ingestion Phase) | Paul Cormier<br>John Zeidler | ICF<br>ICF |
| Sherburne County Public Information Officer at the State JIC (Ingestion Phase) | George R MacDonald | ICF |
| Wright County Initial Warning Point | Bridget Ahlgrim | DHS/FEMA |
| Wright County Emergency Operations Center | Carl Bebrich<br>Edward Golinski<br>David Ortman | DHS/FEMA<br>DHS/FEMA<br>DHS/FEMA |

| | | |
|---|---|---|
| Wright County Traffic and Access Control Point | James King | DHS/FEMA |
| Wright County Public Information Officer at the State JIC | George R MacDonald | ICF |
| Wright County Emergency Operations Center (Ingestion Phase) | Bridget Ahlgrim<br>Tracey Green | DHS/FEMA<br>ICF |
| Wright County Public Information Officer at the State JIC (Ingestion Phase) | George R MacDonald | ICF |
| EV-2 St. Michael - Albertville School District | Edward Golinski | DHS/FEMA |
| EV-2 Buffalo School District | Edward Golinski | DHS/FEMA |
| * Team Leader | | |

# APPENDIX 3

# EXERCISE CRITERIA AND EXTENT-OF-PLAY AGREEMENT

This appendix lists the exercise criteria, which were scheduled for demonstration in the Monticello Nuclear Generating Plant Radiological Emergency Preparedness (REP) Full Participation Plume and Ingestion Exposure Pathway Exercise on August 18 and 19, 2009, and the off-site extent-of-play agreement approved by FEMA Region V on August 5, 2009.

The exercise criteria, contained in the FEMA "Radiological Emergency Preparedness Exercise Evaluation Methodology; Notice," as published in the Federal Register Notice/Vol 67, dated April 25, 2002, represent a functional translation of the planning standards and evaluation criteria of NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980.

Because the exercise criteria are intended for use at all nuclear power plant sites, and because of variations among offsite plans and procedures, an extent-of-play agreement is prepared by the State and approved by DHS/FEMA to provide evaluators with guidance on expected actual demonstration of the criteria.

**Exercise Criteria**
Listed below are the specific radiological emergency preparedness criteria scheduled for demonstration during this exercise.

EVALUATION AREA 1 - EMERGENCY OPERATIONS MANAGEMENT

SUB-ELEMENT 1.a - Mobilization

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

SUB-ELEMENT 1.c – Direction and Control

Criterion 1.c.1 – Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible.

SUB-ELEMENT 1.d – Communications Equipment

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

SUB-ELEMENT 1.e – Equipment and Supplies to Support Operations

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

EVALUATION AREA 2 - PROTECTIVE ACTION DECISION-MAKING

SUB-ELEMENT 2.a - Emergency Worker Exposure Control

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

SUB-ELEMENT 2.b – Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

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

SUB-ELEMENT 2.b – Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

Criterion 2.b.2 - A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PAD) for the general public (including the recommendation for the use of KI, if ORO policy).

SUB-ELEMENT 2.c – Protective Action Decisions for the Protection of Special Populations

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

SUB-ELEMENT 2.d – Radiological Assessment and Decision-Making for the Ingestion Exposure Pathway

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

SUB-ELEMENT 2.e – Radiological Assessment and Decision-Making Concerning Relocation, Re-entry and Return

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

EVALUATION AREA 3 - PROTECTIVE ACTION IMPLEMENTATION

SUB-ELEMENT 3.a – Implementation of Emergency Worker Exposure Control

Criterion 3.a.1 - 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.

SUB-ELEMENT 3.b – Implementation of KI Decision

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

SUB-ELEMENT 3.c. – Implementation of Protective Actions for Special Populations

Criterion 3.c.1 – Protective action decisions are implemented for special populations other than schools within areas subject to protective actions.

SUB-ELEMENT 3.c. – Implementation of Protective Actions for Special Populations

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

SUB-ELEMENT 3.d. – Implementation of Traffic and Access Control

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

SUB-ELEMENT 3.d. – Implementation of Traffic and Access Control

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

SUB-ELEMENT 3.e – Implementation of Ingestion Pathway Decisions

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

SUB-ELEMENT 3.e – Implementation of Ingestion Pathway Decisions

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

SUB-ELEMENT 3.f – Implementation of Relocation, Re-entry, and Return Decisions

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

EVALUATION AREA 4 – FIELD MEASUREMENT AND ANALYSIS

SUB-ELEMENT 4.a – Plume Phase Field Measurement and Analysis

Criterion 4a.1 – The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates.

SUB-ELEMENT 4.a – Plume Phase Field Measurement and Analysis

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

SUB-ELEMENT 4.a – Plume Phase Field Measurement and Analysis

Criterion 4a.3 – Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media.

Sub-element 4.b – Post Plume Phase Field Measurements and Sampling

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

Sub-element 4.c - Laboratory Operations

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

EVALUATION AREA 5 – EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

SUB-ELEMENT 5.a – Activation of the Prompt Alert and Notification System

Criterion 5.a.1 – Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP Guidance.

SUB-ELEMENT 5.b. – Emergency Information and Instructions for the Public and the Media

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

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

SUB-ELEMENT 6.a – Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees

Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-9654, J.10.h.; K.5.b.)

SUB-ELEMENT 6.b – Monitoring and Decontamination of Emergency Worker Equipment

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

SUB-ELEMENT 6.c – Temporary Care of Evacuees

Criterion 6.c.1 - Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. [Found in MASS CARE – Preparedness Operations, ARC 3031]  Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities.

SUB-ELEMENT 6.d – Transportation and Treatment of Contaminated Injured Individuals

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

# Monticello Nuclear Generating Plant Intermediate/Ingestion Phase Exercise
# Extent of Play Agreement

The main exercise will take place on August 18 and 19, 2009. The exercise week will involve out-of-sequence demonstrations including Emergency Worker Decontamination, MS-1, EV-2 on August 17, a full scale Plume Phase on August 18, and the Intermediate/Ingestion Phase and Reception Center Demonstrations on August 19. The State of Minnesota, Sherburne County, and Wright County are the off-site response organizations (ORO's).

Criteria that can be re-demonstrated immediately for credit, at the decision of the evaluator, include the following: 3.a.1, 3.d.1, 3.d.2, 4.a.3, 4.b.1, 6.a.1, 6.b.1, 6.c.1 and 6.d.1. Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairperson of the Regional Assistance Committee, include the following: 2.a.1, 2.b.1, 2.b.2, 5.a.1 and 5.b.1. Minnesota prefers to re-demonstrate whenever possible.

### Overview of Exercise Schedule and Sites

| **Monday August 17th** | | |
|---|---|---|
| **MS-1 Evaluations** | | |
| West Metro North Memorial Ambulance | 6:30 AM | North Memorial Hospital<br>3300 Oakdale Ave N<br>Robbinsdale, MN 55422 |
| North Memorial Hospital | 7:00 AM | North Memorial Hospital<br>3300 Oakdale Ave N<br>Robbinsdale, MN 55422 |
| MDH State Public Health Lab | 9:00 AM | 601 Robert Street North<br>St. Paul, MN 55101<br><br>**Report to:**<br>Freeman Bldg<br>625 Robert Street North<br>St. Paul, MN 55101 |
| Pre-Exercise Briefing Entrance Meeting | 2:00 PM | Best Western Chelsea Inn & Suites<br>89 Chelsea Rd<br>Monticello, MN 55362 |
| **EV-2 Evaluations** | | |
| Buffalo – Wright County | 10:00 AM | District Office<br>214 N.E. 1st Ave<br>Buffalo, MN 55313 |
| St. Michael-Albertville – Wright County | 12:30 PM | District Office – West side of High School<br>11343 50th St. NE<br>Albertville, MN 55301 |

| **Monday August 17th** | | |
|---|---|---|
| Big Lake – Sherburne County | 3:00 PM | Big Lake High School<br>501 Minnesota Ave<br>Big Lake, MN 55309 |
| Emergency Worker Monitoring & Decontamination - Sherburne County | 7:00 PM | Zimmerman Fire Department<br>13028 Fremont Ave<br>Zimmerman, MN 55398 |

| **Tuesday August 18th** | | |
|---|---|---|
| **Full scale Plume Phase Exercise** | | |
| State Duty Officer | - | Bureau of Criminal Apprehension<br>1430 Maryland Ave E<br>St Paul, MN 55106 |
| Hennepin County Sheriff's Dispatch Center | - | 9401 83rd Ave. North<br>Brooklyn Park MN 55443 |
| State EOC & PAC | - | Town Square<br>444 Cedar St Suite 223<br>St. Paul MN 55101 |
| JIC | - | Town Square<br>444 Cedar St Suite 223<br>St. Paul MN 55101 |
| Wright County EOC | - | Wright County Gov't Center<br>10 2nd St NW<br>Buffalo, MN 55313 |
| Sherburne County EOC | - | Sherburne County Gov't Center<br>13880 Highway 10<br>Elk River, MN 55330 |
| Wright County Dispatch Center and Jail | - | Wright County Dispatch and Jail<br>3800 Braddock Av NE<br>Buffalo MN 55313 |
| Minnesota State Patrol Helicopter Notification Demonstration (Out of Sequence) | 8:00 AM | Sherburne County Gov't Center<br>13880 Highway 10<br>Elk River, MN 55330 |
| State Field Teams & Command Van | 8:00 AM | Maple Grove Fire Station<br>13450 Maple Knoll Way N<br>Osseo, MN 55369 |
| MDA Field Team | 2:00 PM | MnROAD Facility<br>9011 77th Street NE<br>Monticello, MN 55362 |
| MN DNR Field Team | 2:00 PM | MnROAD Facility<br>9011 77th Street NE<br>Monticello, MN 55362 |

| Tuesday August 18th | | |
|---|---|---|
| Dan Provo Dairy Farm<br>(MDA Field Team Demonstration) | - | 8047 85th Street NE<br>Monticello, MN 55362 |

| Wednesday August 19th | | |
|---|---|---|
| **Intermediate/Ingestion Phase Exercise** | | |
| Planning and Assessment Center (PAC)<br>State EOC & IPTF | 7:30 AM<br>8:00 AM | Town Square<br>414 Cedar St Suite 223<br>St. Paul MN 55101 |
| Wright County EOC<br><br><br><br>Sherburne County EOC | 8:00 AM<br><br><br><br>8:00 AM | Wright County Gov't Center<br>10 2nd St NW<br>Buffalo, MN 55313<br><br>Sherburne County Gov't Center<br>13880 Highway 10<br>Elk River, MN 55330 |
| Rogers Reception Center | 7:00 PM | Rogers High School<br>21000 141st Ave N<br>Rogers, MN 55374 |
| Evacuee Vehicle Monitoring | 7:00 PM | Rogers High School<br>21000 141st Ave N<br>Rogers, MN 55374 |
| Evacuee Vehicle Decontamination | 7:00 PM | Vision Transportation Company facility<br>14620 James Road<br>Rogers, Minnesota 55374 |

| Friday August 21st | | |
|---|---|---|
| FEMA players debriefing | 9:00 AM | Wright County Gov't Center<br>10 2nd St NW<br>Buffalo, MN 55313 |
| FEMA media out briefing | 10:00 AM | Wright County Gov't Center<br>10 2nd St NW<br>Buffalo, MN 55313 |

**Exercise Activity & Scheduling Notes**

- Media Briefings will only be conducted on day 1 and will be simulated on day 2
- The hotline will be demonstrated on day 1 and simulated on day 2
- The Ingestion Counties will be at a table in the SEOC for day 2 of the exercise
- SEOC Security will be demonstrated on day 1 and simulated on day 2
- SEOC Communications and EAS activities will be demonstrated on day 1 and simulated on day 2
- The BCA Call Center will only be participating on day 1
- The Critical Infrastructure Coordinator and the Homeland Security Intel Coordinator will only be participating on day 1
- All of the field team sampling will be conducted on day 1
- Initial and follow-up notifications to the ingestion counties not participating in the exercise will be simulated. There will be two ingestion counties located in the SEOC on day two of the exercise.
- The call to Target to stop KI distribution at the ALERT ECL will be simulated.
- The initial notification to FRMAC at the ALERT ECL and subsequent updates will be simulated.
- The Event Status and Logistic Worksheet Conference call between FRMAC and the IPTF will be a meeting with a FRMAC representative in the SEOC; the call itself will be simulated.
- The Governor's Office is not directly participating in the exercise and the faxing and e-mailing of emergency executive orders to the Governor and the Secretary of State will be simulated.

The following Agency will be participating in only day 1 and will be simulated for day 2 activities:

- Emergency Medical Services Regulatory Board

**PREVIOUS EXERCISE FINDINGS AND PLANNING ISSUES**

The State of Minnesota has one outstanding Area Requiring Corrective Action from the July 2008 Prairie Island exercise (50-08-5b1-A-01) in which the state did not convey timely information to some callers telephoning into the hotline. The state will be enhancing its training to the hotline operators and will be connecting a speaker system into the hotline room to enable the operators to hear the SEOC briefings. This will be re-demonstrated during the Prairie Island Exercise in 2010.

## EVALUATION AREA 1 – EMERGENCY OPERATIONS MANAGEMENT

SUB-ELEMENT 1.a - Mobilization

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

**State of Minnesota**

Minnesota State Emergency Operations Center (SEOC)

The Plume Phase Exercise will take place on August 18. The SEOC will be activated at an ALERT Emergency Classification Level (ECL). The Minnesota Duty Officer (MDO) at the BCA Communications Center will take the initial call and make notifications by telephone and pagers. Verification of the call is via a fax from the nuclear generating plant which is received before proceeding with the call down. If the FAX is not received, the Minnesota Duty Officer would use the phone numbers on the power plant process sheet to call the power plant in order to verify the call.

The BCA Communications Center (Duty Officer) at the Bureau of Criminal Apprehension 1430 Maryland Avenue East St. Paul, MN 55106 will take the initial call on August 18, 2009 from the Monticello Nuclear Generating Plant. The BCA Communications Center will then demonstrate the call-out of staff and transfer of communications from the call center to SEOC in a timely manner.

The SEOC is located at 444 Cedar Street, Suite 223, St. Paul, MN. The State Regional Program Coordinators (RPCs) will act as liaisons to the counties and will be pre-positioned in the area of the Wright and Sherburne County EOCs due to long travel time. The RPCs will wait an appropriate amount of time before interacting with other county responders.

The Intermediate/Ingestion Phase (criteria related to ingestion, relocation, restricted zones, reentry and return) will be demonstrated on August 19 in the SEOC. The exercise will be a combination of demonstration and tabletop activities. The Planning and Assessment Center (PAC) staff will be pre-positioned at 7:30 AM on Wednesday, August 19. The Intermediate Phase Taskforce (IPTF) and the remainder of the state responders will report for the exercise at 8:00 AM. State Regional Program Coordinators (RPCs) will act as liaisons to the counties and will be positioned in the Sherburne and Wright County EOCs.

<u>Radiological Accident Deployment (RAD) Field Teams</u>

The Plume Phase Exercise will take place on August 18. Notification will occur through the Minnesota Duty Officer to the Hennepin County Sheriff's Dispatch Center at 9401 83rd Ave. North, Brooklyn Park, who will in turn page team members. The State RAD Field Teams will be pre-positioned at the Maple Grove Fire Station #2 13450 Maple Knoll Way N Osseo, MN 55369 at approximately 8:00 AM. The Command Van will serve as a mobile field command post and will deploy from Maple Grove Fire Station #2 to a staging area as dictated by the scenario. Once the General Emergency ECL is declared, the command van will relocate as determined by the plume phase scenario. The Command Van will then relay field measurements taken by the field teams to the PAC in the SEOC. Two RAD Field Teams will take samples and a phantom team will be simulated by a controller in the Command Van for command and control evaluation.

After the plume phase demonstration has been completed, the State RAD Teams will regroup at the MnROAD Facility (9011 77th Street NE Monticello, MN 55362) to conduct their intermediate/ingestion phase sample collection and processing.

The Department of Agriculture and the Department of Natural Resources field teams will be pre-positioned at the MnROAD Facility at 2:00 PM on Tuesday August 18th to conduct their intermediate/ingestion phase sample collection and processing.

Joint Information Center (JIC)
The JIC will be activated at the Alert Emergency Classification Level (ECL). Once activated, it will be maintained until the termination of the exercise on Day 2; however the media briefings will only be demonstrated during the plume phase on day one of the exercise. The work area for the JIC is located in the SEOC. The JIC's media briefing room is located in the lobby of the Department of Public Safety's office in Town Square (Suites 125-155, 444 Cedar Street, St. Paul,). Both Sherburne and Wright County PIOs will be pre-positioned near the SEOC. They will not engage before they are notified and will wait the appropriate length of time before beginning play.

Sufficient 24-hour staffing capability of key personal will be presented at the exercise entrance meeting on August 17.

**Sherburne County**
The initial call will be received in the Sheriff's dispatch office of the Sherburne County Law Enforcement Center. The Sherburne County Law Enforcement Center and the County EOC are located at 13880 Highway 10, Elk River, MN.

Initial calls to activate EOC staff will begin in the dispatch office. Sherburne County will fully activate their EOC and a PIO will be pre-positioned near the SEOC for the plume phase (Day 1) and in the SEOC during Intermediate/Ingestion Phase (Day 2) of the exercise.

Sufficient 24-hour staffing capability of key personnel will be presented at the exercise entrance meeting on August 17.

Sherburne County Emergency Preparedness Coordinator (Operations Chief) will be present in the County EOC for the Intermediate/Ingestion phase Exercise on August 19 at 8:00 AM. Sherburne County will demonstrate with only key EOC positions staffed. Recommendations from the State Operations Chief will be communicated and coordinated with the County Operations Chief through the telephone.

**Wright County**
The initial call will be received in the Sheriff's dispatch office of the Wright County Dispatch Center located at 3800 Braddock Av NE, Buffalo MN 55313.

Initial calls to activate EOC staff will then begin in the dispatch center. Wright County will fully activate their EOC. A Wright County PIO will be pre-positioned near the SEOC for the plume phase (Day 1) and in the SEOC during Intermediate/Ingestion Phase (Day 2) of the exercise.

Sufficient 24-hour staffing capability of key personnel will be presented at the exercise entrance meeting on August 17.

The Wright County Nuclear Director will be present in their County EOC for the Ingestion Exercise on August 19 at 8:00 AM. Wright County will demonstrate with only key EOC positions staffed. Recommendations from the State Operations Chief will be communicated and coordinated with the County Operations Chief through the telephone.

SUB-ELEMENT 1.b - Facilities

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

**State of Minnesota, Sherburne County, Wright County**
This criterion has been previously evaluated and is therefore not selected for evaluation in this exercise.

SUB-ELEMENT 1.c - Direction and Control

**Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible.**

**State of Minnesota**
The SEOC State Incident Manager (SIM), the Sherburne County Emergency Preparedness Coordinator and the Wright County Nuclear Director (county operations chiefs) will coordinate decisions and emergency activities.

RAD Field Teams will receive their direction from the RAD Team Captain (located in the Command Van).

**Sherburne County**
The Sherburne County Emergency Preparedness Coordinator (county operations chief) will provide direction and control including coordinating emergency activities. Activities will be coordinated with the state, Wright County EOC, and field staff as necessary.

**Wright County**
The Wright County Nuclear Director (county operations chief) will coordinate decisions and emergency activities. Activities will be coordinated with the state, Sherburne County EOC, and field staff as necessary.

SUB-ELEMENT 1.d - Communications Equipment

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

**State of Minnesota**
The state will demonstrate the primary means of communication between the counties, the field monitoring teams and Monticello Nuclear Generating Plant. The state will also demonstrate one additional (either secondary, tertiary or alternative) means of communication.

| Line of Communication | Primary | Secondary | Tertiary | Alternative |
|---|---|---|---|---|
| SEOC to County EOC | | | | |
| Sherburne | Dedicated Private Branch Exchange number (PBX) | Commercial telephone/FAX machine | Public Safety Radio VHF/800 MHz ARMER system | Satellite telephone |
| Wright | Dedicated Private Branch Exchange number (PBX) | Commercial telephone/FAX machine | Public Safety Radio VHF/800 MHz ARMER system | Satellite telephone |
| SEOC to Ingestion Counties | Commercial telephone/FAX machine | Public Safety Radio VHF/800 MHz ARMER system | Satellite telephone | |
| SEOC to Monticello and Prairie Island Nuclear Generating Plants | Auto-Ring (dedicated) Hotline: SEOC to Technical Support Center (TSC) and EOF | Commercial telephone/FAX machine | 800 MHz NSPM | |
| SEOC to Federal Response Organizations (FEMA, NRC, DOE, and Corps of Engineers) | Commercial telephone/FAX machine | Satellite telephone | National Warning System (NAWAS) | Amateur Radio |
| SEOC to Field Monitoring Teams | Commercial telephone/ Cell phone | Public Safety Radio VHF/800 MHz ARMER system | Satellite telephone | Amateur Radio |
| Minnesota SEOC to Wisconsin SEOC | Commercial telephone/FAX machine | National Warning System (NAWAS) | Satellite telephone | Amateur Radio |
| SEOC to Fixed Medical Support Facility (primary and backup hospitals) | Commercial telephone/FAX Machine | Satellite Phone | Public Safety Radio VHF/800 MHz ARMER system | |

| Line of Communication | Primary | Secondary | Tertiary | Alternative |
|---|---|---|---|---|
| SEOC to Mobile Medical Support | Commercial telephone to primary/backup hospital | Public Safety Radio VHF/800 MHz ARMER system | Amateur Radio | |

On August 18, 2009 the State of Minnesota will demonstrate the primary means of communication between the risk counties of Sherburne and Wright and the Monticello Nuclear Generating Plant. The BCA Communications Center will also demonstrate successful operation of one of the backup communication systems.

| Line of Communication | Primary | Secondary | Tertiary | Alternative |
|---|---|---|---|---|
| MDO to Risk County EOC/Dispatcher | Commercial telephone/FAX Machine | Public Safety Radio VHF/800 MHz ARMER system | Satellite Phone | |
| MDO to Monticello Nuclear Generating Plants | Dedicated telephone line | Commercial telephone/FAX Machine | 800 MHz NSPM | Cell Phones |
| MDO to Prairie Island Nuclear Generating Plants | Dedicated telephone line | Commercial telephone/FAX Machine | 800 MHz NSPM | Cell Phones |
| MDO to SEOC | Commercial telephone/FAX Machine | Public Safety Radio VHF/800 MHz ARMER system | National Warning System (NAWAS) | Satellite Phone |

**Sherburne County**

The Sherburne County EOC's primary communication link is a Commercial phone line to the Monticello Nuclear Generating Plant verification is through fax or callback to the plant. A Dedicated Private Branch Exchange circuit is the primary communications link between the County EOC and the State Emergency Operations Center (SEOC).

The secondary communications method is a privately owned utility frequency radio to the Monticello Nuclear Generating Plant and a Commercial telephone/FAX line to the SEOC.

The tertiary communication method with the Monticello Nuclear Generating Plant is a public dispatch number on commercial telephone/FAX machine and a Public Safety Radio VHF/800 MHz ARMER system with the SEOC. Sherburne County EOC staff will demonstrate functionality of the primary and one of their back up methods of communication.

| Line of Communication | Primary | Secondary | Tertiary | Alternative |
|---|---|---|---|---|
| MNGP to Sherburne County EOC/Dispatcher | Commercial phone line specific to MNGP with verification call back to plant or verification by fax | 800 MHz Utility Frequency radio | Public dispatch number on Commercial telephone/FAX machine-verification call back to plant | |

**Wright County**

The Wright County EOC's primary communication link is a Commercial phone line to the Monticello Nuclear Generating Plant verification is through fax or callback to the plant. A Dedicated Private Branch Exchange circuit is the primary communications link between the County EOC and the State Emergency Operations Center (SEOC).

The secondary communications method is a privately owned utility frequency radio to the Monticello Nuclear Generating Plant and a Commercial telephone/FAX line to the SEOC.

The tertiary communication method with the Monticello Nuclear Generating Plant is a public dispatch number on commercial telephone/FAX machine and a Public Safety Radio VHF/800 MHz ARMER system with the SEOC. Wright County EOC staff will demonstrate functionality of the primary and one of their back up methods of communication.

| Line of Communication | Primary | Secondary | Tertiary | Alternative |
|---|---|---|---|---|
| MNGP to Wright County EOC/Dispatcher | Commercial phone line specific to MNGP with verification call back to plant or verification by fax | 800 MHz Utility Frequency radio | Public dispatch number on Commercial telephone/FAX machine-verification call back to plant | |

SUB-ELEMENT 1.e - Equipment and Supplies to Support Operations

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

**State of Minnesota**

Equipment, Maps and Displays:

The state will demonstrate the use of equipment, maps, and displays at the SEOC, JIC, and Command Van as necessary to support emergency operations.

Dosimetry:

Emergency workers will use pocket dosimeters and TLDs and control exposure as follows:

| Emergency Worker | Dosimeter Range | | | Pick-up Location |
|---|---|---|---|---|
| RAD Field Team | 0-200 mR | 0-20 R | TLD | Maple Grove Fire Station #2 and/or Plymouth Fire Station #1 |
| DNR Field Team | 0-200 mR | | TLD | Command Van |
| MDA Field Team | 0-200 mR | | TLD | MDA DOC |
| Sheriff Patrol Helicopter crew (Alert and notification) | | 0-20 R | TLD | Sherburne County EOC, weather permitting |
| Ambulance crew (Do not take KI) | 0-200mR | | TLD | Reception Center |
| Reception Center Staff (Do not take KI) | 0-200 mR | | TLD | Reception Center |

Potassium Iodide (KI):
Packets of KI are a part of the state field team response kits. Field team members, the helicopter crew (weather permitting) and State Highway Patrol (at traffic control points) will simulate taking KI when directed. The shelf life of Minnesota's current supply of KI is approved until April 2012.

Per the State of Minnesota Emergency Operations Plan, emergency workers located at the reception center do not take KI.

Equipment Maintenance:
All routine equipment checks and maintenance is reported in the Annual Letter of Certification. Calibration of radiological detection equipment will be reviewed on August 17 by FEMA. All radiation monitoring equipment will be operationally checked prior to use.

Traffic Control Points
Traffic control equipment is permanently located at the designated Trunk Highway Traffic Control Points (TCP) in the area surrounding the Monticello Nuclear Generating Plant. The equipment is to be used to close access into the 10 mile Emergency Planning Zone (EPZ) in conjunction with State Patrol staffing. The equipment is deployed at the request of the SEOC and coordinated with the county. The Minnesota Department of Transportation personnel will set up the barricades and has additional daily use equipment deployed throughout the districts to supplement as needed.

The barricades are deployed as follows:

| Truck Station | Location | # of Barricades |
|---|---|---|
| Maintenance Area 3B HQ/St. Cloud Sub-Area | 3725 12th Street North St. Cloud, MN 56303 | 12 |
| Buffalo Truck Station/Lake Sub-Area | 1137 Highway 25 SE Buffalo MN 55313 | 4 |
| Monticello Truck Station/Lake Sub-Area | 112 Chelsea Road Monticello, MN 55362 | 8 |
| Elk River Truck Station/Elk River Sub-Area | 18938 Dodge Ave NW Elk River, MN 55330 | 19 |

**Sherburne County**

Equipment, Maps and Displays:

Sherburne County will demonstrate the use of equipment, maps, and displays at the Sherburne County EOC as necessary to support emergency operations.

Dosimetry:

All county emergency workers will wear pocket dosimeters and TLDs to monitor and control exposure as follows:

| Emergency Worker | Dosimeter Range | | | Pick-up Location |
|---|---|---|---|---|
| Emergency Workers (Traffic Control Points, etc.) | | 0-20 R | TLD | Sherburne Co. EOC |
| Responders at the Emergency Worker Decontamination Facility | 0-200 mR | | TLD | Zimmerman Fire Station |

Potassium Iodide (KI):

KI for emergency workers is stored at the Sherburne County EOC in the Emergency Preparedness Coordinators office/EOC. The shelf life of Minnesota's current supply of KI has been approved until April 2012.

Equipment maintenance:

All routine equipment checks and maintenance have been reported in the Annual Letter of Certification. Calibration of radiological detection equipment will be reviewed on August 17 by FEMA. All radiation monitoring equipment will be operationally checked prior to use.

**Wright County**

Equipment, Maps and Displays:

Wright County will demonstrate the use of equipment, maps, and displays at the Wright County EOC as necessary to support emergency operations. All County

decontamination equipment is stored at the Rockford Fire Department, except the survey meters and dosimetry that are stored in the Wright County EOC.

Dosimetry:
Wright County Emergency Workers will use pocket dosimeters and TLDs and control exposure as follows:

| Emergency Worker | Dosimeter Range | | | Pick-up Location |
|---|---|---|---|---|
| Emergency Workers (Route Alerting, Traffic Control Points, etc.) | | 0-20 R | TLD | Wright Co. EOC |

Potassium Iodide (KI):
KI for emergency workers is stored at the County EOC. The shelf life of Minnesota's current supply of KI has been approved until April 2012.

Equipment Maintenance:
All routine equipment checks and maintenance is reported in the Annual Letter of Certification. Calibration of radiological detection equipment will be reviewed on August 17 by FEMA. All radiation monitoring equipment will be operationally checked prior to use.

## EVALUATION AREA 2 - PROTECTIVE ACTION DECISION-MAKING

SUB-ELEMENT 2.a – Emergency Worker Exposure Control

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

**State of Minnesota**

All emergency workers have a dose limit of 3 rem with a turn back limit of 1 R as read on a DRD. The withdraw limit for State RAD Teams is 100 mR/hr. The Planning Chief may authorize radiation exposure to emergency workers in excess of the administrative limit in accordance with standard operating guidelines. If not demonstrated as part of the scenario, this can be demonstrated via interview.

When the decision to administer KI to emergency workers in the Emergency Planning Zone (EPZ) is made (or controller data is injected), the Planning Chief will recommend to the State Incident Manager (SIM) and the Operation Chief that field operations staff take KI (simulated). KI for State RAD Team members is included in sampling kits. State Patrol personnel receive their kits at county EOCs per procedure. State emergency workers that will simulate KI administration are:

- State Patrol Helicopter crew, weather permitting (helicopter crew-alerting the public, if in the air)
- State RAD Team members (field monitoring and sampling)
- State Highway Patrol (traffic control points)

***Note:*** *at a General Emergency, all emergency workers are advised to take potassium iodide (KI).*

**Sherburne County, Wright County**
The Sherburne and Wright County Radiological Officers will instruct county emergency workers to take KI after the recommendation is made by the SEOC (Planning and Assessment Center).

All emergency workers have a dose limit of 3 Rem. The County Radiological Officer, after authorization from the Planning Chief in the SEOC, can allow radiation exposures of county emergency workers in excess of the administrative limit. If a dose extension is not demonstrated through the scenario, the County Radiological Officer will discuss with the evaluator their knowledge of the dose extension procedures/guidelines.

SUB-ELEMENT 2.b – Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

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

**State of Minnesota**
The Planning Chief will evaluate the Monticello Nuclear Generating Plant information and complete independent dose projections based on the information and simulated field-monitoring data provided by the RAD Field Team Captain, via telephone from the Command Van. The Planning Chief will make an evaluation of the data and recommend a PAR. Once there is concurrence between the Operations Chief at the SEOC and the county Operations Chiefs, the SIM will approve the PAR and give it to the Governor or Governor's Authorized Representative for signing and approval.

**Sherburne County, Wright County**
The counties will not demonstrate this criterion.

**Criterion 2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy).**

**State of Minnesota**

The Governor or Governor's Authorized Representative (GAR) will demonstrate the ability to make appropriate protective action decisions based on a recommendation from the State Incident Manager and the Planning Chief. Decision-making for incidents at the Monticello Nuclear Generating Plant is the responsibility of the Governor or GAR as outlined in state statute.

KI is pre-distributed on a voluntary basis to members of the general public living in the Monticello Nuclear Generating Plant 10-mile EPZ. A standing order from the Minnesota Department of Health authorizes the secondary protective action of taking KI when directed to evacuate or shelter-in-place in the affected areas at the General Emergency ECL. KI is not distributed post incident and is not available at reception centers. The call to Target at the ALERT ECL to stop KI distribution will be simulated.

**Sherburne County, Wright County**
Sherburne and Wright counties participate in the protective action decision process in accordance with the state's PAR process. This includes concurrence and coordination between the SEOC and Sherburne and Wright counties.

***Note:*** *Minnesota is not a home rule state.*

SUB-ELEMENT 2.c – Protective Action Decision Consideration for the Protection of Special Populations

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

**State of Minnesota**
It is the responsibility of the counties to make protective actions for special populations; the state of Minnesota is responsible for establishing facilities and providing resources to be made available for the special population groups. Resources that are available can be discussed with the evaluator

**Sherburne County, Wright County**
Staff at the Sherburne County and Wright County EOCs will demonstrate this criterion according to their guidelines. Counties are responsible for initiating the notification for evacuation, and identifying needed transportation for special population groups. Resources that are available will be discussed with the evaluator.

SUB-ELEMENT 2.d – Radiological Assessment and Decision-Making for the Ingestion Exposure Pathway

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

**State of Minnesota**
At a Site Area ECL, the Minnesota Department of Agriculture will issue a preventative action recommendation of a livestock advisory to shelter livestock and place them on stored feed and water within the 10-mile EPZ. Food protection outside of the EPZ during the plume phase is based on dose projection per standard operating guidelines. The term "preventative" action recommendation is the same as the term "precautionary" that the federal government uses. The Minnesota Emergency Operations Plan reflects the term "preventative."

The Planning Chief and Technical Advisors will assess projected or simulated ingestion sampling data provided by controller injects, and from simulated radiological assessment maps and data provided by federal agencies (i.e. NARAC, FRMAC and AMS data). When maps are injected, a FRMAC representative in the SEOC will brief the maps. If a FRMAC representative is not present, the maps will be briefed by a technical advisor in the Planning and Assessment Center.

In consultation with all relevant state and federal agencies, the State Incident Manager will make recommendations for minimizing the radiological consequences of the accident in the ingestion pathway.

Once agreed upon, the recommendations will be communicated to the ORO's and an advisory will be formulated through the JIC, no media briefings will be demonstrated during the Intermediate/Ingestion Phase of the exercise on day 2.

**Sherburne County**
Sherburne County Emergency Preparedness Coordinator will be present in their County EOC for the Intermediate/Ingestion Phase Exercise on August 19 at 8:00 AM. Sherburne County will demonstrate with only key EOC positions staffed. Recommendations from the State Operations Chief will be communicated and coordinated with the County Operations Chief through the telephone. The County Radiological Officer will be in communication with the PAC Field Team Coordinator. A Sherburne County PIO will be pre-positioned in the JIC during Intermediate/Ingestion Phase (Day 2) of the exercise.

**Wright County**
The Wright County Nuclear Director will be present in their County EOC for the Intermediate/Ingestion Phase Exercise on August 19 at 8:00 AM. Wright County will demonstrate with only key EOC positions staffed. Recommendations from the State Operations Chief will be communicated and coordinated with the County Operations Chief through the telephone. The County Radiological Officer will be in communication with the PAC Field Team Coordinator. A Wright County PIO will be pre-positioned in the JIC during Intermediate/Ingestion Phase (Day 2) of the exercise.

**Ingestion Counties**
There will be at least two ingestion counties participating at the state in the Intermediate/Ingestion Phase Exercise. The ingestion counties will coordinate any necessary protective action decisions with the State Operations Chief if required by the scenario. The coordination and communications of the state with the ingestion counties will be evaluated, but the ingestion counties will not be evaluated.

SUB-ELEMENT 2.e – Radiological Assessment and Decision-Making Concerning Relocation, Re-entry, and Return

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

**State of Minnesota**
A PAR will be coordinated for relocation, restricted zones, re-entry, and return through the Intermediate Phase Task Force and with the appropriate county Operations Chief before the SIM submits the recommendation to the GAR for approval. Information from the plant, sampling teams, and other relevant data will be used in making this recommendation.

**Sherburne County**
The Sherburne County Emergency Preparedness Coordinator (County Operations Chief) will be present in their County EOC for the Intermediate/Ingestion Phase Exercise on August 19 at 8:00 AM. Sherburne County will demonstrate with only key EOC positions staffed. Recommendations from the State Operations Chief will be communicated and coordinated with the County Operations Chief through the telephone. The County Radiological Officer will be in communication with the PAC Field Team Coordinator. The County Operations Chief will receive recommendations from the SEOC as to what action is appropriate for food protection, relocation, restricted zones, re-entry, and return. A PAR will be coordinated for relocation, restricted zones, re-entry, and return with the county Operations Chief before the SIM submits the recommendation to the GAR for approval.

**Wright County**
The Wright County Nuclear Director (County Operations Chief) will be present in their county EOC for the Intermediate/Ingestion Phase Exercise on August 19 at 8:00 AM. Wright County will demonstrate with only key EOC positions staffed. Recommendations from the State Operations Chief will be communicated and coordinated with the County Operations Chief through the telephone. The County Radiological Officer will be in communication with the PAC Field Team Coordinator. The County Operations Chief will receive recommendations from the SEOC as to what action is appropriate for food protection, relocation,

restricted zones, re-entry, and return. A PAR will be coordinated for relocation, restricted zones, re-entry, and return with the county Operations Chief before the SIM submits the recommendation to the GAR for approval.

**Ingestion Counties**
There will be at least two ingestion counties participating at the state in the Intermediate/Ingestion Phase Exercise. The ingestion counties will coordinate the protective action decisions with the State Operations Chief. The coordination and communications of the state with the ingestion counties will be evaluated, but the ingestion counties will not be evaluated. The County Emergency Manager will receive recommendations from the State Operations Chief as to what action is appropriate for food protection, relocation, restricted zones, re-entry, and return. A PAR will be coordinated for relocation, restricted zones, re-entry, and return if necessary as required by the scenario with the appropriate ingestion county Emergency Manager before the SIM submits the recommendation to the GAR for approval.

## EVALUATION AREA 3 - PROTECTIVE ACTION IMPLEMENTATION

SUB-ELEMENT 3.a – Implementation of Emergency Worker Exposure Control

**Criterion 3.a.1: The OROs issues appropriate dosimetry and procedures, and manages radiological exposure to emergency workers in accordance with the plan and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart.**

**State of Minnesota**
All emergency workers that are issued dosimetry will demonstrate appropriate use of that dosimetry and record keeping in accordance with their established procedures/guidelines. The Emergency workers will demonstrate their knowledge of the turn-back dose rate and administrative limits as dictated by the scenario or by interview.

**Sherburne County**
All emergency workers that are issued dosimetry will demonstrate appropriate use of that dosimetry and record keeping in accordance with their established procedures/guidelines.

As driven by the scenario, field personnel (i.e. Sheriff's deputies, County Public Works staff), will be called into the EOC (all will be simulated except 1 deputy) to pick up dosimetry, receive a briefing and their emergency assignment.

**Wright County**
All emergency workers that are issued dosimetry will demonstrate appropriate use of that dosimetry and record keeping in accordance with their established

procedures/guidelines.

As driven by the scenario, field personnel (i.e. Sheriff's deputies, County Public Works staff), will be called into the EOC (all will be simulated except 1 deputy) to pick up dosimetry, receive a briefing and their emergency assignment.

Workers at the Wright County Dispatch Center will be notified by the Wright County RADEF officer and issued dosimetry at the General Emergency ECL if and only if the 10S Sub-Area is affected during a General Emergency ECL.

SUB-ELEMENT 3.b – Implementation of KI Decision

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

**State of Minnesota**
All emergency workers that are directed to take KI will demonstrate the availability of KI, appropriate instructions, and record keeping in accordance with their procedures/guidelines.

**Sherburne and Wright County**
All emergency workers that are directed to take KI will demonstrate the availability of KI, appropriate instructions, and record keeping in accordance with their procedures/guidelines. KI administration instructions to county emergency workers disseminate from the Sherburne County and Wright County EOCs. The evaluator will discuss KI administration with the deputy sheriff of Wright County while demonstrating traffic control and the deputy sheriff of Sherburne County while demonstrating traffic control. Workers at the Wright County Dispatch Center will be notified by the Wright County RADEF officer and issued KI at the General Emergency ECL if and only if the 10S Sub-Area is affected during a General Emergency ECL. KI ingestion will be simulated.

SUB-ELEMENT 3.c – Implementation of Protective Actions for Special Populations

**Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions.**

**State of Minnesota**
This is a county responsibility and will not be demonstrated by the state.

**Sherburne County**
Sherburne County will demonstrate this criterion by an interview process with EOC staff. It is the intent of Sherburne County to evacuate all special populations at the General Emergency ECL. All special population calls will be

simulated and contacts logged. Sherburne County's one transportation provider (Elk River Fire) will be contacted.

**Wright County**
Wright County will demonstrate this criterion by an interview process with EOC staff. It is the intent of Wright County to shelter-in-place inmates and personnel at the Wright County Jail and evacuate all other special populations at the General Emergency ECL. All special population calls will be simulated and contacts logged. One of each type of transportation provider will be contacted. The three types of transportation providers are (ambulance, handi-cap lift van provider, contracted bus service).

The Wright County Dispatch Center located at 3800 Braddock Av NE, Buffalo MN 55313 intends to shelter in place at a General Emergency and will evacuate if advised by the county EOC.

The Wright County Jail located at 3800 Braddock Av NE, Buffalo MN 55313 intends to shelter in place at a General Emergency and will evacuate if advised by the county EOC.

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

**State of Minnesota**
Evacuation
Evacuation of schools is a pre-determined protective action for all schools in the EPZ and is initiated at a Site Area Emergency ECL. This action is a county and school district responsibility and will not be demonstrated by the state during the exercise. Information about reporting back the status of school evacuation may be observed at the SEOC.

**Sherburne County**
Evacuation
Evacuation will be simulated. Notifications to the schools by the county EOC will begin at the Alert ECL.

EV-2
**The Big Lake School District EV-2** is scheduled for Monday August 17th from 3:00 pm to 5:00 pm at Big Lake High School, 501 Minnesota Ave, Big Lake, MN 55309.Big Lake's agreement is with Princeton School District. Evaluation will be through interview of the necessary school and transportation officials that should include but not limited to: the superintendent, one principal, one teacher, one nurse, one transportation provider, one bus driver and host school superintendent/or principal.

Preschools and daycares are notified by county human services agencies at the

Alert ECL and are treated as the general population at the General Emergency ECL.

**Wright County**

Evacuation

Evacuation will be simulated. Notifications to the schools by the county EOC will begin at the Alert ECL.

EV-2

Buffalo and St. Michael-Albertville School Districts will demonstrate this based on their plans and procedures:

**The Buffalo School District EV-2** is scheduled for Monday August 17th from 10:00 am to 12:00 at their District office located at 214 N.E. 1st Ave., Buffalo, MN 55313. Buffalo's agreement is with Rockford School District. The evaluation will be through an interview of the necessary school and transportation officials which should include but is not limited to: the superintendent, one principal, one teacher, one nurse, one transportation provider, one bus driver and host school superintendent or principal.

**The St. Michael - Albertville School District EV-2** is scheduled for Monday August 17th from 12:30 pm to 3:30 pm at their District Office which is located at 11343 50th St. NE, Albertville, MN 55301. St. Michael-Albertville's plan is to evacuate the elementary school located within the EPZ to their middle school located outside of the EPZ. Evaluation will be through an interview of the necessary school and transportation officials that should include but not limited to: the superintendent, one principal, one teacher, one nurse, one transportation provider, one bus driver and host school superintendent/or principal.

**Note:** a new High School located at 5800 Jamison Ave, St. Michael, MN 55376 will be opening in September. According to plans and procedures this school evacuates to the St. Michael Middle School East located at 4862 Naber Ave NE, St. Michael, MN 55367. This school will also be evaluated on August 17th from 12:30 pm to 3:30 pm at the District Office located at 11343 50th St. NE, Albertville, MN 55301.

Preschools and daycares are notified by county human services agencies at the Alert ECL and are treated as the general population at the General Emergency ECL.

SUB-ELEMENT 3.d – Implementation of Traffic and Access Control

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

**State of Minnesota**

According to procedures the SEOC will notify air, rail, and waterway transportation at the Site Area Emergency ECL.

During the plume phase MNDOT and Minnesota State Patrol from the state EOC will assist with identification of traffic and access control points necessary to implement recommended protective actions.

The Minnesota Department of Transportation will demonstrate the dropping off of a barricade to a conveniently located, pre-determined roadblock location in Sherburne County. The State Highway Patrol will demonstrate traffic control at the roadblock as coordinated through the SEOC and according to procedures. An evaluator will ride to the roadblock location with Minnesota Department of Transportation workers and conduct a procedural interview with both the Minnesota Department of Transportation workers and with the Minnesota State Patrol.

**Sherburne County**
The Sherburne County EOC staff will select, establish, and coordinate staffing of traffic and access control points consistent with the protective action decisions for evacuation areas. This criterion will be demonstrated by simulation and staff interview.

A deputy and public works employee will simulate proceeding to a conveniently located, pre-determined roadblock location. No barricade will actually be placed on the roadside. An evaluator will conduct a procedural interview outside of the EOC in the parking lot.

**Wright County**
The Wright County EOC staff will select, establish, and coordinate staffing of traffic and access control points consistent with the protective action decisions for evacuation areas. This criterion will be demonstrated by simulation and staff interview.

A deputy and public works employee will simulate proceeding to a conveniently located, pre-determined roadblock location. No barricade will actually be placed on the roadside. An evaluator will conduct a procedural interview outside of the EOC in the parking lot.

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

**State of Minnesota**
The State is responsible for state highways and waterways within the EPZ used for route evacuations and for manning traffic control points on these state highways and waterways. The state will demonstrate the necessary actions to remove impediments to evacuation or reroute traffic on state highways or waterways. A controller inject will be used to simulate a traffic impediment on

one of the evacuation routes. Actual deployment of assets will be simulated, but all actual or simulated contacts made should be logged.

**Sherburne County, Wright County**
A controller message(s) will be used to create a simulated evacuation impediment. Each county will demonstrate appropriate corrective actions. Actual deployment of assets will be simulated, but all actual or simulated contacts made should be logged.

SUB-ELEMENT 3.e – Implementation of Ingestion Pathway Decisions

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

**State of Minnesota**
There will be a facilitator for the Intermediate/Ingestion Phase discussion.

The Planning Chief and the technical advisors will demonstrate the capability to determine dose by controller data based on simulated laboratory analysis of ingestion samples. The Planning Chief and Technical Advisors will consult with the Intermediate Phase Task Force (IPTF) to demonstrate the capability to implement protective actions for the ingestion exposure pathway. Current lists of farmers, food producers, distributors, and surface water within the IPZ will be used in making recommendations.

Simulated field team sampling data and the Department of Energy flyover data, if available, will be used in developing protective action recommendations.

**Note:** the IPTF is made up of representatives of the Minnesota Department of Agriculture, Minnesota Department of Health, Minnesota Department of Natural Resources and Minnesota Homeland Security and Emergency Management. Other agency representatives may be present if necessary based on the scenario.

**Sherburne County**
Sherburne County Emergency Preparedness Coordinator (County Operations Chief) will be present in their County EOC for the Intermediate/Ingestion Phase Exercise on August 19 at 8:00 AM. Sherburne County will demonstrate with only key EOC positions staffed. The County Radiological Officer will be in communication with the PAC Technical Advisor. The County Operations Chief will receive recommendations from the SEOC as to what action is appropriate for food protection, relocation, restricted zones, re-entry, and return. A PAR will be coordinated for relocation, restricted zones, re-entry, and return with the county

Operations Chief before the SIM submits the recommendation to the GAR for approval

**Wright County**
Wright County Nuclear Director (County Operations Chief) will be present in their County EOC for the Intermediate/Ingestion Phase Exercise on August 19 at 8:00 AM. Wright County will demonstrate with only key EOC positions staffed. The County Radiological Officer will be in communication with the PAC Technical Advisor. The County Operations Chief will receive recommendations from the SEOC as to what action is appropriate for food protection, relocation, restricted zones, re-entry, and return. A PAR will be coordinated for relocation, restricted zones, re-entry, and return with the appropriate county Operations Chief before the SIM submits the recommendation to the GAR for approval.

**Ingestion Counties**
There will be at least two ingestion counties participating at the state in the Intermediate/Ingestion Phase exercise. The ingestion counties will coordinate the protective action decisions with the State Operations Chief. The coordination and communications of the state with the ingestion counties will be evaluated, but the ingestion counties will not be evaluated. The County Emergency Manager will receive recommendations from the State Operations Chief as to what action is appropriate for food protection, relocation, restricted zones, re-entry, and return. A PAR will be coordinated for relocation, restricted zones, re-entry, and return if necessary as required by the scenario with the appropriate ingestion county Emergency Manager before the SIM submits the recommendation to the GAR for approval.

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

**State of Minnesota**
The Planning Chief and technical advisors will consult with the Intermediate Phase Taskforce to demonstrate the capability to implement protective action for the ingestion exposure pathway. Current lists of farmers, food producers, distributors, and water supplies within the IPZ will be used in making recommendations.

The state will demonstrate, through discussion, the capability to make ingestion information available to farmers, food processors and food distributors. The distribution of the agricultural brochure will be simulated.

**Sherburne County**
Sherburne County Emergency Preparedness Coordinator (County Operations Chief) will be present in their County EOC for the Intermediate/Ingestion Phase Exercise on August 19 at 8:00 AM. Sherburne County will demonstrate with only

key EOC positions staffed. County agencies will discuss the capability to coordinate with the state in implementing protective actions for the ingestion exposure pathway and in distributing ingestion information to farmers, food processors and food distributors.

**Wright County**
Wright County Nuclear Director (County Operations Chief) will be present in their County EOC for the Intermediate/Ingestion Phase Exercise on August 19 at 8:00 AM. Wright County will demonstrate with only key EOC positions staffed County agencies will discuss the capability to coordinate with the state in implementing protective actions for the ingestion exposure pathway and in distributing ingestion information to farmers, food processors and food distributors.

**Ingestion Counties**
There will be at least two ingestion counties participating at the state in the Intermediate/Ingestion Phase exercise. The ingestion counties will coordinate the protective action decisions with the State Operations Chief if necessary as required by the scenario. The coordination and communications of the state with the ingestion counties will be evaluated, but the ingestions counties will not be evaluated. County agencies will discuss the capability to coordinate with the state in implementing protective actions for the ingestion exposure pathway and in distributing ingestion information to farmers, food processors and food distributors.

SUB-ELEMENT 3.f – Implementation of Relocation, Re-entry, and Return Decisions

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

**State of Minnesota**
The State SIM and Intermediate Phase taskforce will formulate recommended protective actions related to relocation, re-entry, and return of public after radiological assessment by the Planning and Assessment Center. These recommendations will be communicated and coordinated between the State Operations Chief and County Operations Chief through the telephone. Upon agreement of the PAR for relocation, restricted zones, re-entry, and return of public with the appropriate county Operations Chief, the SIM will submit the recommendation to the GAR for approval. 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 area and for relocation, re-entry, and return of the public. These actions will be coordinated with county agencies.

**Sherburne County**
The County Operations Chief will receive recommendations from the SEOC as to what action is appropriate for food protection relocation, restricted zones, re-

entry, and return. A PAR will be coordinated with the State Operations Chief for relocation, restricted zones, re-entry, and return for emergency workers, and the public. If the exercise scenario does not implement relocation activities within the county, the evaluator will conduct an interview with the county Operations Chief to demonstrate relocation or reentry decision making.

**Wright County**
The County Operations Chief will receive recommendations from the SEOC as to what action is appropriate for food protection, relocation, restricted zones, reentry and return. A PAR will be coordinated with the State Operations Chief for relocation, restricted zones, reentry and return for emergency workers and the public. If the exercise scenario does not implement relocation activities within the county, the evaluator will conduct an interview with the county Operations Chief to demonstrate relocation or re-entry decision making.

**Ingestion Counties**
There will be at least two ingestion counties participating at the state in the Intermediate/Ingestion Phase exercise. The ingestion counties will coordinate the protective action decisions with the State Operations Chief if necessary as required by the scenario. The coordination and communications of the state with the ingestion counties will be evaluated, but the ingestion counties will not be evaluated. The County Emergency Manager will receive recommendations from the State Operations Chief as to what action is appropriate for food protection, relocation, restricted zones, reentry and return. A PAR will be coordinated with the appropriate ingestion county Emergency Manager for relocation, restricted zones, reentry and return for emergency workers and the public.

## EVALUATION AREA 4 - FIELD MEASUREMENT AND ANALYSIS

SUB-ELEMENT 4.a – Plume Phase Field Measurement and Analyses

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

**State of Minnesota**
Two state RAD Teams, equipped with the necessary supplies and instrumentation, will demonstrate this criterion. The Ludlum 2241 Response Kit and/or Canberra MCB-2 contamination meter are used for determining field measurements. The Ludlum 2241 with 44-2 probe is used for measuring surface contamination (counts per minute). The Ludlum 2241 with 44-6 Beta-Gamma probe is used for measuring both beta and gamma exposure rates (mR/hr) and surface contamination (counts per minute). The MCB2 contamination detector can measure surface contamination (kilocounts per minute). These will be operationally checked prior to deployment from the Maple Grove Fire Station

13450 Maple Knoll Way N, Osseo, MN 55369. Evaluators should meet the Field Team at 0700 on the day of the exercise at this location.

Airborne sampling will be demonstrated by the State RAD Teams in the field using RADECO air samplers to obtain at least a ten minute or approximately ten cubic foot air sample. The air samplers will be operationally checked, by procedure/guideline, prior to deployment from the Maple Grove Fire Station 13450 Maple Knoll Way N, Osseo, MN 55369.

State RAD Team members will conduct gross particulate and iodine field analysis using the MCB-2 (auto-ranging) and/or Ludlum 2241 Response Kits in accordance with their standard operating procedures/guidelines.

Equipment maintenance:
All routine equipment checks and maintenance will be documented in a current PR-1 report, which will be provided at the entrance meeting.

**Sherburne County, Wright County**
This is a state function and will not be demonstrated by the counties.

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

**State of Minnesota**
The State RAD Team Captain, operating from the command van will manage the activities of the two State RAD Teams including giving the teams a pre-deployment briefing. The State RAD Teams will perform field measurements to characterize the plume in accordance with their procedures/guidelines. The command van controller will provide data from one phantom team.

**Sherburne County, Wright County**
This is a state function and will not be demonstrated by the counties.

**Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media.**

**State of Minnesota**
The State RAD Teams will demonstrate this criterion and perform ambient radiation measurements in accordance with their procedure/guideline. Airborne sampling will be demonstrated by the State RAD Teams in the field using air samplers to obtain at least a representative air sample. The State RAD Team members will conduct gross particulate and iodine field analysis. Purging the sampler head is not a part of State RAD Team's procedures/guidelines.

Field measurement data will be communicated to the command van and then relayed to the PAC. Plume phase samples will be packaged for transport by the State RAD Teams. Chain of custody will be documented on sample custody forms. Samples will be picked up by a sample runner and taken to the Command Van.

**Sherburne County, Wright County**
This is a state function and will not be demonstrated by the counties.

SUB-ELEMENT 4.b – Post Plume Phase Field Measurements and Sampling

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

**State of Minnesota**
Minnesota will utilize monitoring and sampling personnel from the State RAD Field Team, the Minnesota Department of Agriculture (MDA) and the Minnesota Department of Natural Resources (DNR) for post-plume sampling. One team from each of those agencies will demonstrate to meet this criterion.

Intermediate/Ingestion Phase Radiological Field Teams will consist of two State RAD teams (Plymouth and Maple Grove Firefighter groups), Department of Agriculture field team and Department of Natural Resources field team. Three teams will be demonstrating sampling activities and the fourth team will be used as a courier of samples. Activities for each group are described below.

<u>State Radiological Field Team</u>
The Intermediate/Ingestion Phase RAD Field Team activities will be demonstrated August 18 at approximately 2:00 PM. Two RAD Field Teams and the Command Van will participate in the post plume sampling demonstration. They will be pre-positioned at the MnROAD Research Facility, 9011 77$^{th}$ Street N.E., Monticello MN and deployment by the Command Van to various sample locations will be simulated. One team will take vegetation and ground samples. The other team will act as a courier and will demonstrate chain-of-custody transfer and simulate delivery to the Minnesota Department of Health's Public Health Laboratory.

<u>Minnesota Department of Natural Resources (DNR) Field Team</u>
The Intermediate/Ingestion Phase DNR Field Team activity will be demonstrated on August 18 at approximately 2:00 PM. One DNR Field Team will participate in ingestion monitoring and sampling. They will be pre-positioned at the MnROAD Research Facility and deployment by the Command Van to various sample locations will be simulated. The evaluator may interview the team about the

steps it took to mobilize prior to meeting the Command Van. The field teams will provide their own samples for the exercise and collection of fish and pheasant will be simulated at the MnROAD facility where the samples will be processed according to their guidelines and procedures.

Minnesota Department of Agriculture (MDA) Field Team

The Intermediate/Ingestion Phase MDA Field Team activity will be demonstrated on August 18 at approximately 2:00 PM. One MDA Field Team will participate in ingestion monitoring and sampling. They will be pre-positioned at the MnROAD Research Facility at 2:00 PM and deployed by the Command Van to the Dan Provo Dairy Farm for sample collection and processing. The Dairy farm is located at 8047 85th Street NE - Monticello, MN 55362 (approximately 5 minutes from MnROAD). The evaluator may interview the team about the steps it took to mobilize prior to meeting the command van.

**Note:** There will be no sampling demonstrations on day 2 of the exercise.

**Sherburne County, Wright County**

This is a state function and will not be demonstrated by the counties.

SUB-ELEMENT 4.c – Laboratory Operations

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

**State of Minnesota**

The Public Health Laboratory will demonstrate this criterion out of sequence on Monday, August 17 at 9:00 am. The laboratory is located at 601 Robert St, St. Paul. Prior to evaluation of sample handling procedures, the shift lead worker will perform a dry-run with the response team as per the Public Health Lab (PHL) response plan. Simulated samples (at least one plume phase sample and one Intermediate Phase sample) will be delivered to the laboratory. At least one plume phase sample and one Intermediate Phase sample will be analyzed. Simulated results will be reported to and verified by the SEOC PAC on August 18 and 19 during the plume and Intermediate Phases.

Evaluators and controllers must first sign in and pick up a badge at the Freeman Building located at 625 Robert Street North, St. Paul MN 55101 before entering the MDH Lab building.

**Sherburne County, Wright County**

This is a state function and will not be demonstrated by the counties.

## EVALUATION AREA 5 – EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

SUB-ELEMENT AREA 5.a – Activation of the Prompt Alert and Notification System

**Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP guidance.**

**State of Minnesota**

The development and dissemination of an Emergency Alert System (EAS) message will be demonstrated in the SEOC. The EAS is activated only when there is a protective action (i.e., evacuation or sheltering) for people. The State EAS Plan states that the code for a nuclear generating plant incident is monitored by all relay stations and is set to automatically transmit the message from the State EOC. The initial EAS message is determined by the Planning Chief in coordination and concurrence with Wright County and Sherburne County following the approval of a PAR by the State Incident Manager or the Governor or Governor's Authorized Representative (GAR). The first PAR is pre-approved and does not require the Governor's approval, only the State Incident Manager's (SIM's) approval. All subsequent PARs require the Governor's or GAR's approval.

An EAS Writer (located in the SEOC) will directly broadcast by radio transmission an EAS message using an encoder/decoder, which is automatically monitored by encoders/decoders by major relay stations. In addition, the EAS Writer has the capability to send a message directly over NOAA weather alert radios utilizing a link to the National Weather Service headquarters in Chanhassen, Minnesota. EAS messages will contain basic information regarding the event. Additional information will be disseminated through the JIC using special news broadcasts and media releases.

As part of the PAR approval process, after approval by the SIM and concurrence from Sherburne and Wright Counties via a conference call, the counties will then activate sirens. The actual time of the siren and EAS activation are determined by the SIM and coordinated with Sherburne and Wright Counties.

Weather permitting, a State Patrol helicopter, equipped with a public address system, will warn recreational area individuals and/or groups. The State Patrol helicopter will do this as an out of sequence event at approximately 8:00 AM on the morning of Tuesday August 18th and will operate from the Sherburne County Law Enforcement Center located at 13880 Highway 10, Elk River, MN. The helicopter decontamination process will be demonstrated by interview with the helicopter crew.

Activation of sirens, EAS, weather radios and the broadcast of media messages will be simulated.

**Sherburne County**
All EAS messages are developed and disseminated by the SEOC. After PAR concurrence via a conference call with the other county and the state, sirens are sounded once following each evacuation or sheltering PAR. Wright County has the lead for siren activation coordination with Sherburne County. The coordination of alert and notification implementation will be demonstrated in the Sherburne County EOC (siren activation will be simulated). Special populations are notified using Alertcast.

**Wright County**
All EAS messages are developed and disseminated by the SEOC. After PAR concurrence via a conference call with the other county and the state, sirens are sounded once following each evacuation or sheltering PAR. Wright County has the lead for siren activation coordination with Sherburne County. The coordination of alert and notification implementation will be demonstrated in the Wright County Dispatch Center (siren activation will be simulated). Special populations are notified using Tone Alert Radios. Citywatch may also be used, but it will not be evaluated.

**5.a.2: [RESERVED]**

**Criterion 5.a.3: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system.**

**State of Minnesota**
This criterion is the responsibility of the counties and will not be demonstrated by the state.

**Sherburne County**
Sherburne County has 100% siren coverage and is not demonstrating route alerting, unless a siren is inoperable due to a controller inject.

During the General Emergency, the MNGP monitors informer units in the TSC to pick up when the counties activate their sirens. When the county activates the sirens, the MNGP will poll them and call the county (either the RADEF Officer when the EOC is activated or the County Dispatch when the EOC is not activated) and inform them of the status of siren activation. If the EOC is activated, the RADEF Officer will notify the law enforcement in the EOC of the inoperable sirens. The law enforcement staff in the EOC will dispatch deputies to run routes for inoperable sirens.

If the EOC is not activated, the dispatch will dispatch deputies to run backup route(s) for the inoperable siren(s) to notify the public in that area where the siren was inoperable.

**Note:** During the exercise there will not be any actual siren activation.

**Wright County**
Sherburne County has 100% siren coverage and is not demonstrating route alerting, unless a siren is inoperable due to a controller inject.

During the General Emergency, the MNGP monitors informer units in the TSC to pick up when the counties activate their sirens. When the county activates the sirens, the MNGP will poll them and call the county (either the RADEF Officer when the EOC is activated or the County Dispatch when the EOC is not activated) and inform them of the status of siren activation. If the EOC is activated, the RADEF Officer will notify the law enforcement in the EOC of the inoperable sirens. The law enforcement staff in the EOC will dispatch deputies to run routes for inoperable sirens.

If the EOC is not activated, the dispatch will dispatch deputies to run backup route(s) for the inoperable siren(s) to notify the public in that area where the siren was inoperable.

**Note:** During the exercise there will not be any actual siren activation.

<u>Backup alert and notification:</u>
This criterion will not be demonstrated.

SUB-ELEMENT 5.b – Emergency Information and Instructions for the Public and the Media

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

**State of Minnesota**
After the SIM has approval of the PAD from the GAR, pre-scripted EAS messages communicating emergency information and instructions is released to the public. The State of Minnesota uses pre-scripted EAS messages. Initiating release of pre-scripted EAS messages is the responsibility of SEOC Planning Chief. Special news bulletins will be pre-scripted and modified as needed and coordinated with all applicable agencies. The public will be told to remain tuned to their radio and television stations for further information. Special news broadcasts will be announced in the JIC media briefing room.

The Lead PIO and other organizational PIOs will work together in the JIC work area (located in the SEOC). They will determine what information is released to

the general public. Media briefings will be demonstrated in the media briefing room during the plume phase only – no media briefings will occur on day two of the exercise.

PIOs will simulate distributing news releases and advisories via e-mail and log the distribution, recording what they would have actually sent out. A list of the media organizations will be provided to the evaluator. The Lead PIO will coordinate all information released to the media.

An Information Hotline (public inquiry) will be operated from the SEOC during the plume phase of the exercise on day one. A controller using pre-scripted controller messages will make incoming calls. Information Hotline staff will answer phones and communicate any rumor trends to the Operations Chief or Asst. Operations Chief for action. Televisions and VCRs (used to monitor and tape media broadcasts) are located in the Information Hotline and PIO work areas. For the exercise the televisions will be turned on, VCRs will not be utilized. The Information Hotline will not be set up on day two of the exercise for the Intermediate/Ingestion phase.

**Sherburne County**
Emergency information released to the public and the news media are the responsibility of the SEOC and the JIC. The Sherburne County Public Information Liaison, located in the SEOC, in accordance with JIC activities, will demonstrate the coordination of county public information. The Sherburne County PIO state liaison will be pre-positioned near the SEOC and will wait an appropriate amount of time before beginning play. The County PIO will be at the SEOC JIC on the plume phase (Day 1) and Intermediate/Ingestion Phase (Day 2) of the exercise.

Sherburne County will not be demonstrating any local briefings.

**Wright County**
Emergency information released to the public and the news media are responsibility of the SEOC and the JIC. The Wright County Public Information Liaison, located in the SEOC, in accordance with JIC activities, will demonstrate the coordination of Wright county public information. The Wright County PIO state liaison will be pre-positioned in the SEOC and will wait an appropriate amount of time before interacting with other responders. The County PIO will be at the SEOC JIC on the plume phase (Day 1) and Intermediate/Ingestion Phase (Day 2) of the exercise.

Wright County will not be demonstrating any local briefings

## EVALUATION AREA 6 – SUPPORT OPERATION/FACILITIES

SUB-ELEMENT 6.a – Monitoring and Decontamination of Evacuees and Emergency Workers

and Registration of Evacuees

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

**State of Minnesota**
Evacuee monitoring will be demonstrated on August 19, 2009 at 7:00 pm at the Rogers High School 21000 141st Ave N Rogers, MN 55374

The facility Director of Operations is a Safety Officer from the Minnesota Department of Human Services (DHS). The evacuee monitoring stations use both vehicle and personnel portal monitors and will monitor at least 6 evacuees to demonstrate the 20% EPZ population monitoring capability in a 12-hour period. Hand held survey instruments (Ludlum Model 3s) are used by monitoring staff in the decontamination areas. A check source is used to ensure that the instruments respond. Hand held instruments are calibrated annually. Reception Center volunteer staff will conduct monitoring and serve as recorders. Volunteer mock evacuees will go through the reception center monitoring, decontamination and registration process. At least one male "evacuee" will require decontamination. The decontamination process will be demonstrated by interview with reception center staff. Contamination levels, monitoring and decontamination results will be provided by controllers.

All evacuees who pass through the Reception Center will be processed through the registration station.

Ambulance personnel will be set up onsite to respond to potentially contaminated and injured evacuees, but this portion will not be evaluated. Evaluation of the ambulance response (MS-1) will occur on Monday August 17th at 6:30 AM at North Memorial Medical Center (NMMC) 3300 Oakdale Ave N Robbinsdale, MN 55422.

Household pet decontamination and monitoring will be set up, but will not be evaluated as a part of this exercise.

<u>Vehicle Monitoring and Decontamination</u>
Two evacuee vehicles will be monitored with at least one requiring decontamination. The vehicle decontamination process will be demonstrated at 7:00 PM Wednesday August 19th at the Vision Transportation Company facility located at 14620 James Road, Rogers, Minnesota. The facility is less than a mile west of Rogers High School. Reception Center drivers will take vehicles to and from the decontamination facility. The vehicles are decontaminated and returned to the clean vehicle lot as time and resources permit. Unmonitored vehicles are directed to an unmonitored holding lot at the Reception Center.

A copy of reception center station procedures will be available upon request.

**Wright County**
Wright County will not be demonstrating this criterion.

**Sherburne County**
Emergency Worker Monitoring and Decontamination will be demonstrated at 7:00 PM Monday August 17th at the Zimmerman Emergency Worker Decontamination Center located at the Zimmerman Fire Department 13028 Fremont Ave Zimmerman, MN 55398.

Two emergency workers will go through the Emergency Worker monitoring, decontamination and registration process. At least one emergency worker will be required to undergo decontamination. The decontamination process will be demonstrated by interview with Emergency Worker Decontamination Center staff.

Controllers will provide contamination levels and monitoring and decontamination results.

SUB-ELEMENT6.b – Monitoring and Decontamination of Emergency Worker Equipment

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

**State of Minnesota**
This is a county responsibility and will not be demonstrated by the state.

**Sherburne County**
Monitoring and decontamination of emergency worker equipment and vehicles will be demonstrated at the Zimmerman Emergency Worker Decontamination Center located at 13028 Fremont Ave Zimmerman, MN 55398 at 7:00 PM August 17th. At least two emergency worker vehicles will be monitored, with at least one vehicle requiring decontamination. The vehicle decontamination process will be demonstrated by an interview with the Zimmerman Emergency Worker Decontamination Center staff.

Hand held survey instruments (Ludlum Model 3s) will be used by Zimmerman Emergency Worker Decontamination Center staff to monitor emergency workers. A check source is used to ensure that the instruments respond. Hand held instruments are calibrated annually.

Controllers will provide contamination and monitoring levels along with decontamination results.

**Wright County**
Wright County is not scheduled to demonstrate this capability.

SUB-ELEMENT 6.c – Temporary Care of Evacuees

**Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. (Found in MASS CARE – Preparedness Operations, ARC 3031) Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities.**

**State of Minnesota**
This criterion is not selected for this exercise because the site is managed by the American Red Cross.

**Sherburne County, Wright County**
This is a state function and will not be demonstrated by the counties.

SUB-ELEMENT 6.d – Transportation and Treatment of Contaminated Injured Individuals

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

**State of Minnesota**
MS-1 Transportation (Ambulance)
North Memorial Ambulance - Metro will demonstrate this criterion on Monday August 17th at 6:30 AM at North Memorial Medical Center (NMMC) 3300 Oakdale Ave N Robbinsdale, MN 55422. A controller will provide the ambulance crew with a simulated contaminated injured evacuee. The ambulance crew will assess the person's medical condition and will wrap the patient up but will not monitor them. They will then prepare the patient for transport to NMMC in Robbinsdale, MN. Communications between North Memorial Ambulance and NMMC will be demonstrated at this time. Ambulance contamination monitoring will be demonstrated at NMMC in Robbinsdale.

MS- 1 (Facilities)
North Memorial Medical Center (NMMC), located at 3300 Oakdale Avenue North Robbinsdale, MN will demonstrate this criterion on 7:00 AM on Monday August 17th. The transportation aspect of this demonstration will be performed at the same location. A contaminated injured evacuee will arrive at the emergency room by ambulance. Upon notification by the ambulance, hospital personnel will prepare the emergency room area for arrival of a contaminated patient, including appropriate contamination control measures. Hospital radiation specialists will conduct radiological monitoring. Appropriate equipment and supplies will be

available. The setting of priorities between medical treatment and contamination controls will be demonstrated. If determined as necessary, samples will be collected and decontamination procedures will be demonstrated.

**Sherburne County, Wright County**
This is a state function and will not be demonstrated by the counties.

# APPENDIX 4

# EXERCISE SCENARIO

This appendix contains a summary of the simulated sequence of events -- Exercise Scenario -- which was used as the basis for invoking emergency response actions by Offsite Response Organizations in the Monticello Nuclear Generating Plant Radiological Emergency Preparedness (REP) Full Participation Plume and Ingestion Exposure Pathway Exercise on August 18 and 19, 2009.

This exercise scenario was submitted by the State of Minnesota and Excel Energy and approved by FEMA Region V on August 11, 2009.

During the exercise, controllers from the State of Minnesota provided “inject messages,” containing system/device/process response/result information based on scenario events and/or relevant data to those persons or locations who request the data and would normally receive the information in an actual event. These inject messages were the method used for responding to actions taken by OROs without leading the demonstration.

# Monticello Nuclear Generating Plant
# Plume Phase/Ingestion Pathway Exercise – August 18 & 19

# OFF SITE TIME LINE

The following is the August 18th, 2009 Monticello Nuclear Generating Plant Plume and Intermediate/Ingestion pathway exercise timeline for the State of Minnesota, Wright and Sherburne Counties. All time intervals are approximate.

| **Time Interval** | **Comments** |
|---|---|
| ~0740 | *INITIAL CONDITIONS*<br>The unit is in cold shutdown for a refueling outage. A manual scram was inserted at 11:00 on August 16, 2009 to support the outage. Reactor vessel disassembly is in progress with the following activities completed:<br>• Reactor head cavity and dryer separator storage canal shield plugs are removed.<br>• The drywell head is unbolted and removed.<br>• The reactor vessel head insulation is removed.<br>• The reactor vessel head is unbolted and removed<br>• The steam dryer is transferred to the dryer-separator storage pool.<br>• The steam separator is unbolted from the core shroud.<br>The estimated time to boiling prior to the start of reactor cavity flood-up is **5.5 hours**. When flood-up is complete and the fuel pool gates have been removed the estimated time to boiling will increase to 34 hours. |
| Weather | The current temperature is 72 degrees with afternoon temperatures forecasted to be in the mid to high 70's with high humidity. There is a 70% chance of afternoon rain showers developing. Currently there is a weather front which has stalled approximately 10-15 miles to the South of the plant with very little movement expected over the next 8-10 hours. Areas on the other side of this front are experiencing intermittent periods of light to moderated rainfall. Winds are calm from the North West ($315^0$) at 2-4 mph. |
| ~0825 | An Operational Basis earthquake occurs as indicated by annunciators 6-C-13 and 6-C-8. |
| ~0840 | The Shift Manager should obtain confirmation of the earthquake and declare an **ALERT IAW EAL HA1.1** Seismic event GREATER THAN Operating Basis Earthquake (OBE) as indicated by Annunciator OPERATIONAL BASIS EARTHQUAKE (6-C-13) received. The Shift Emergency Communicator should be notified and directed to begin appropriate notifications to the State, Counties, MNGP Emergency Response Organization, and the NRC. |

**~0855 Notifications to the State and Counties of the ALERT ECL should be complete (EAL HA1.1)**

1. Call list notifications take place.

2. Emergency Operating Center (EOC) activation (State of Minnesota, Wright and Sherburne Counties) occurs.

   - EOC security system initiated
   - Maps, displays set up, messages forms, logs, etc. distributed
   - Communication links established and maintained throughout the exercise
   - Assembled EOC personnel briefed, with additional briefings held periodically throughout the exercise

   Note: The BCA Duty Officer participation is complete when notifications are completed and they are informed by the Planning and Assessment Center that they have taken over communication with the plant.

3. Radiological Accident Deployment (RAD) teams and Team Captain respond to Maple Grove fire station. From there, they will be dispatched to affected areas. Maple Grove Communications Van mobilized. **(MESSAGE 1.01)**

4. Department of Natural Resources Emergency Coordinating Center (ECC) activated (simulated).

5. Local and state first responders are put on standby.

6. Joint Information Center (JIC) is activated.
   - Public Information Officers (PIOs) notified
   - JIC displays and media information kits arranged.
   - JIC Security and Moderator report to media briefing room
   - Initial JIC Management Team meeting
   - Initial news briefing conducted by HSEM Director
   - Preparation and issue of Public Information Bulletins and news releases will continue until the termination of the exercise.

7. Planning Chief requests additional radiological assets from the 55thCST through Military Affairs. DOE radiological assets are requested through FRMAC. RAP Teams notified of Alerts

8. The Planning and Assessment Center initiates dose assessment **(MESSAGE 1.02)**

~0900 The rigging for the steam separator fails allowing the steam separator to fall into the reactor cavity and rupture fuel assemblies.

~0905 Slight leak develops and RPV level is slowly lowering.

~0945 Conditions present for a ***SITE AREA EMERGENCY***.

~1000 The Emergency Director should re-classify the event as a SITE AREA EMERGENCY (SAE CS2.1).

**~1015 Notifications should be completed to the State and Counties for a SITE AREA EMERGENCY ECL classification change**

1. EOC and field staff are notified of the classification upgrade.
   - State EOC, JIC
   - Wright and Sherburne County EOCs
   - RAD Teams (Maple Grove, Plymouth, DNR and Agriculture) (simulated)
   - Decontamination Centers (simulated)
   - Reception Centers are activated (simulated)

4. Congregate Care Center is activated (simulated)

5. Schools are evacuated to sister schools (simulated).

6. MDA and DNR field sampling teams put on standby (simulated).

7. Governor advised of incident status. "State of Emergency" recommended by State Incident Manager.

8. "State of Emergency" declared by Governor.

9. Dairy animals placed on covered water and stored feed.

~1020 Minor aftershock occurs

**~1030 Interrupt communications between the PAC and the Field Team Command Van (MESSAGE 1.03).**

~1040 Communications restored based on redemonstration of an alternate system
**Note: Lead Controller will determine when communications are restored.**

**~1040 Traffic impediments (MESSAGE 1.04 & 1.05).**

~1050 The following Area Rad Monitors alarms are received in the Control Room:

A-2 1027 Rx Bldg North reading of 3400 mR/hr
A-5 1001 Rx Bldg Fuel Pool Rm reading >1000 mR/hr (Offscale high)
A-7 985 Rx Bldg Chem sample area reading >1000 mR/hr (Offscale high)

Conditions present for a ***GENERAL EMERGENCY***. A release of radiological material to the environment above normal has begun.

~1105 The Emergency Director should re-classify the event as a ***GENERAL EMERGENCY*** IAW EAL CG1.1

**Initial PAR** – wind is from 321° at 4.2 mph, Stability Class B. Affected sectors are F, G & H out to 5 miles, subareas 2, 5E & 5S.

**~1120 Notification completed to the state and counties for GENERAL EMERGENCY ECL (EAL CG1.1)**.

1. EOC and field staff are notified of the classification upgrade.
    - State EOC, JIC
    - Wright and Sherburne County EOCs
    - RAD Teams
    - Decontamination Centers

2. Minnesota's default protective action recommendation (PAR) is to evacuate the 2-mile sub-area and the 5-mile sub-area(s) in the downwind sectors. Sub Areas – 2, 5E & 5S will be recommended by the Planning Chief to the State Incident Manager.

3. When PADs are approved, the Public Alert and Notification Systems (PANS) will be implemented. The EAS system will be activated and sirens sounded (simulated).

4. As PADs are recommended, necessary traffic control points are activated for evacuee traffic flow and to restrict incoming traffic.

5. RAD teams are in the field monitoring radiation levels and reporting to planning and assessment staff in State EOC. (simulated)

6. All emergency response organizations are fully activated.

7. Radiological response support requested from FEMA

~1150 MIDAS projects 4-Day CDE Dose (Thyroid) to exceed 5000 mrem 5-miles downwind. Once identified by MIDAS, the Radiation Protection Support

Supervisor in the EOF should initiate a PAR change to include the applicable 10-mile sub-areas and communicate the change to the State EOC.

**~1205** **Follow-up PAR** should have been developed by the plant – wind is from 321° at 4.2 mph, Stability Class B. Affected sectors are F, G & H out to 10 miles, subareas 2, 5E, 5S, 10SE & 10S.

**~1220** **The off-site notifications of the second PAR to the State and Counties of the PAR change should have been completed. (MESSAGE 1.06)**

1. EOC and field staff are notified.

2. Second PAR is recommended by Planning Chief to State Incident Manager. PAR approval process begins

**3.** When PAD is approved, the Public Alert and Notification Systems (PANS) will be implemented. The EAS system will be activated and sirens sounded (simulated). **(MESSAGE 1.07, 1.08)**

~1300 The Field Teams terminate play and meet up at the MnRoad Facility (9011 77th Street NE Monticello MN 55362) to demonstrate intermediate/ingestion sampling. Communications to the PAC Field Team Coordinator by the Field Team Command Van will be simulated by the PAC controller. **(MESSAGE 1.09)**

~1315 Plant is stable. The plant terminates the day 1 exercise.

**~1330** **Plume phase portion of the exercise Terminated when the State and Utility have determined that all objectives have been sufficiently demonstrated.**

**Begin Intermediate/Ingestion Phase**

**~1340 FRMAC Evacuation Contour maps and Shapefiles given to the PAC/Ag/DNR/Health/SEOC/Wright and Sherburne Counties by controller inject. (MESSAGE 1.10)**

~1345 The release of radioactive material is now under control and is reduced from ***1.5E8 uCi/sec*** to ***2.0E1 uCi/sec*** monitored at the 100m stack via Standby Gas Treatment. **(MESSAGE 1.11)**

~1400 Rain develops in and around Monticello extending south beyond Wright County and just into Hennepin County. **(MESSAGE 1.12)**

~1430 Initial Intermediate Phase Task Force (IPTF) meeting

~1500 Conference call with FRMAC

~1600 The Planning and Assessment Center (PAC) and the Intermediate Phase Task Force (IPTF) should have developed a sample plan.

~1700 Day 1 exercise complete

~1915 Radiological release via Standby Gas Treatment is currently 0 uCi/sec. and will continue to be zero.

## Day Two – Intermediate/Ingestion Phase

*Background* — *Field teams have been sampling throughout the night (simulated) using the sampling plan developed the previous day. Samples have been sent to the MDH Lab (simulated) and results are coming in.*

*Plant is stable. Release has been terminated (as of 1915 hours on August 18th, 2009). There is little to no chance for future degradation of plant conditions.* **(MESSAGE 2.01 – Initial PAC Briefing)**

**~0730** **FRMAC Relocation PAG Contour Map and B200 Flyover Map provided to the PAC by controller inject (MESSAGE 2.02).**

**~0730** **Day 2 Field Team sampling data provided to the PAC (MESSAGE 2.03)**

~0745 PAC deploys field teams to verify Relocation area (Simulated)

~0800 The rest of the state agencies including the IPTF arrive in the SEOC. Sherburne and Wright County EOCs activated.

~0801 SEOC and County EOC Controller Brief to resume day 2 of the exercise **(MESSAGE 2.04)**

**After the briefing, the FRMAC Relocation PAG Contour Map, the B200 Flyover Map and shapefiles are injected into the SEOC as well as the Wright and Sherburne County EOCs and explained by FRMAC (MESSAGE 2.05)**

**~0805** **Field Team 3 foot exposure reading data provided to PAC (MESSAGE 2.06)**

**~0930** **Initial Re-entry Inject (MESSAGE 2.07)**
**2.07 – Farmer needs to milk cows outside the deposition area**

**~1000** **Relocation PAG implemented**

**TIME JUMP – DAY 3**
**DATE: THURSDAY, AUGUST 20**

**~1015** **15 Minute Break**

**~1030** **SEOC and County EOC Controller Briefing on DAY 3 Time Jump (MESSAGE 2.08)**

~1040 The PAC receives Day 3 of scenario ingestion sample analysis from the MDH Public Health labs. **(MESSAGE 2.09)**

~1045 Full FRMAC maps and shapefiles are provided by controller inject **(MESSAGE 2.10)**

- I-131 Contour Map
- Cs-137 Contour Map

~1100 Restricted Zone identified and restrictions put in place

2.11 – Citizen in Monticello asks when/if they can ever go home again

2.12 – Citizen living north east of Big Lake asks will they ever go home again

~1130 Embargo/Food Control Injects (to County EOCs from local)

2.13 – Coborn's Grocery Store in Big Lake
2.14 – Restaurant in Big Lake
2.15 – Cub Foods in Monticello
2.16 – Dairy Farmer in Wright County
2.17 – Dairy Farmer in Wright County
2.18 – Farmer in Big Lake needs to harvest wheat

~1145 Embargo/Food Control Injects (to Dept. of Ag from Ag Headquarters)

2.19 – Coborn's Grocery Store in Big Lake
2.20 – Restaurant in Big Lake
2.21 – Cub Foods in Monticello
2.22 – Dairy Farmer in Wright County
2.23 – Dairy Farmer in Wright County
2.24 – Farmer in Big Lake needs to harvest wheat

~1215 Reentry Injects

2.25 – Power fluctuations in an electrical substation
2.26 – Pipeline valve needs to be repaired
2.27 – Monticello Resident needs to pick up dogs
2.28 – Kadler Farm in Otsego needs to feed its horses

~1245 DNR Injects

2.29 – Fishing Tournament on Pelican Lake

~1300 Ingestion County Injects

2.30 – Berry Farm in Hennepin County
2.31 – Farmer in Corcoran (Hennepin County)
2.32 – Citizens in Ramsey County want to know if they can eat the food from their gardens
2.33 – Apple Farm in Shoreview (Ramsey County)

~1330 Return Injects

2.34 – Elk River Citizen wants back home
2.35 – The Becker School District wants to reopen schools
2.36 – Monticello citizen wants to return home

**TIME JUMP – DAY 7**
**DATE: MONDAY, AUGUST 24**

| | |
|---|---|
| **~1345** | **15 Minute Break** |
| **~1400** | **Controller Briefing on Time Jump (MESSAGE 2.37)** |
| ~1405 | The PAC receives Day 7 of scenario ingestion sample analysis and Strontium Data from the MDH Public Health labs. **(MESSAGE 2.38)** |
| ~1415 | Recovery, Decontamination and Remediation<br>2.39 – AJAX Trucking Company needs to make shipments through I-94<br>2.40 – General Mills needs to send a grain shipment using the BNSF rail through Sherburne County<br>2.41 – The Monticello School District wants to reopen schools. |
| ~1500 | News Release and Simulated Press Briefing on Recovery Measures |
| **~1530** | **Exercise Termination** |

**** Day two time points are approximate and may be modified based on exercise play.***