Final Exercise Report
for the
Monticello Nuclear Power Plant

Licensee:	**Northern States Power**
Exercise Date:	**June 22, 1999**
Report Date:	**November 22, 1999**

Federal Emergency Management Agency
536 South Clark Street, 6th Floor
Chicago, Illinois 60605

Federal Emergency Management Agency
Region V
536 South Clark Street, 6th Floor
Chicago, IL 60605-1521

November 22, 1999

Mr. James Dyer
Regional Administrator, Region III
U. S. Nuclear Regulatory Commission
801 Warrenville Road
Lisle, Illinois 60532-4351

Dear Mr. Dyer:

Enclosed is a copy of the Final Exercise Report for the Biennial Radiological Emergency Preparedness (REP) Exercise conducted on June 21, 1999 for the Monticello Nuclear Power Plant. The November 8, 1999, letter from Mr. Charles Dixon adequately addressed the Schedule of Corrective Actions for issues that were identified for the State of Minnesota.

State and local organizations, except where noted in the report, demonstrated knowledge of their emergency response plans and satisfactorily implemented them. There were no Deficiencies identified. Two Areas Requiring Corrective Actions (ARCAs) were identified for the State of Minnesota. No ARCAs were identified for the risk Counties of Sherburne and Wright.

Based on the results of the June 22, 1999 exercise, the offsite radiological emergency response plans and preparedness for the State of Minnesota, Sherburne and Wright Counties, site-specific to the Monticello Nuclear Power Plant can be implemented. These plans are adequate to provide reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public in the event of a radiological emergency at the site.

Therefore, Title 44 CFR, Part 350, approval of the offsite radiological emergency response plans and preparedness for the State of Minnesota, site-specific to the Monticello Nuclear Power Plant, granted on May 16, 1985 remains in effect. Copies of the report were also sent to the Nuclear Regulatory Commission (NRC) National Office, NRC Region III, FEMA National Office and the State of Minnesota.

If there should be any questions, please do not hesitate to let me know or have a member of your staff contact Cleven Lloyd at (312) 408-5321.

Sincerely,

Dale W. Shipley
Regional Director

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I. EXECUTIVE SUMMARY

On June 22, 1999, an exercise was conducted in the plume exposure pathway emergency planning zone (EPZ) around the Monticello Nuclear Power Plant by the Federal Emergency Management Agency (FEMA), Region V. The purpose of the exercise was to access the level of State and local preparedness in responding to a radiological emergency. This exercise was held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans (RERP) and procedures.

The most recent exercise at this site was conducted on June 20, 1995. The qualifying emergency preparedness exercise was conducted on January 7, 1981.

FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise. In the State of Minnesota the risk counties of Sherburne and Wright participated along with the State government.

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

This report contains the final evaluation of the biennial exercise.

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. Two Areas Requiring Corrective Action (ARCA) were identified as a result of this exercise. Under Objective 8, Field Radiological Monitoring-Airborne Radioiodine and Particulate Activity Monitoring - Following completion of Airborne Radioiodine and Particulate Sample collection Field-1 did not transport the samples to a low background area for initial analysis, in accordance with the Minnesota RAD Team Standard Operating Procedures.

Also, under Objective 8, Field Team 1 incorrectly used the true beta value and applied it against the 100mR/hr-gamma exposure rate turn-back value and exited the area. Because the gamma value did not exceed the turn-back value, exiting the area was not required.

II. INTRODUCTION

On December 7, 1979, the President directed FEMA to assume the lead responsibility for all offsite 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 offsite emergency planning and in the review and evaluation of RERPs and procedures developed by State and local governments;

- Determining whether such plans and procedures can be implemented on the basis of 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 Commerce,
  - U.S. Nuclear Regulatory Commission,
  - U.S. Environmental Protection Agency,
  - U.S. Department of Energy,
  - U.S. Department of Health and Human Services,
  - U.S. Department of Transportation,
  - U.S. Department of Agriculture,
  - U.S. Department of the Interior, and
  - U.S. Food and Drug Administration.

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 Monticello Nuclear Power Plant to FEMA Region V by the State of Minnesota and involved local jurisdictions occurred on June 24, 1981. Formal approval of these RERPs was granted by FEMA on May 10, 1985, under 44 CFR 350.

A REP exercise was conducted on June 22, 1999 by 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 Monticello Nuclear Power Plant. The purpose of this exercise report is to present the exercise results and findings on the performance of the offsite response organizations (ORO) during a simulated radiological emergency.

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

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-REP-15, "Radiological Emergency Preparedness Exercise Evaluation Methodology," September 1991.

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, 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 objectives at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues only format. This section also contains: (1) descriptions of all ARCAs assessed during this exercise, recommended corrective actions, and the State and local governments' schedule of corrective actions for each identified exercise issue and (2) descriptions of unresolved ARCAs assessed during previous exercises and the status of the OROs' efforts to resolve them.

III. EXERCISE OVERVIEW

Contained in this section are data and basic information relevant to the June 22, 1999, exercise to test the offsite emergency response capabilities in the area surrounding the Monticello Nuclear Power Plant. This section of the exercise report includes a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities which were evaluated, and a tabular presentation of the time of the actual occurrence of key exercise events and activities.

A. Plume Emergency Planning Zone Description

The 10-mile Emergency Planning Zone (EPZ) for the Monticello Nuclear Power Plant consists of a circle with the station at the center of the point. The EPZ extends 10-miles outward in all directions from the station for the plume exposure pathway planning zone and 50 miles outward for the ingestion exposure planning zone. In the event of a serious accident, the plume exposure planning zone will be the area in which intensive efforts will be made to notify and protect residents and transient populations from exposure to radiation. The total population in the 10-mile EPZ is 41,950. This figure represents the population in the municipalities and unincorporated areas located in the EPZ.

The 50-mile EPZ for the Monticello Nuclear Power Plant has an estimated population of approximately 3,024,494 as of 1997. Approximately 90% reside in the Minneapolis-St. Paul metropolitan area. There are 19 counties in the 50-mile EPZ which are: Morrison, Mille Lacs, Issanti, Kanabec, Anoka, Chisago, Washington, Ramsey, Dakota, Scott, Sibley, Carver, McLeod, Hennepin, Wright, Meeker, Stearns, Sherburne, and Benton.

There are numerous lakes in the 10-mile EPZ which are used for recreational purposes. Parts of Lake Marie State Park, Sand Dunes State Forest and Game Refugee are within the 10-mile EPZ. The Mississippi River flows from the Northwest to Southwest through the 10-mile EPZ. The three major highways passing through the area are Interstate 94, U.S. 10, and U.S. 52.

B. Exercise Participants

The following agencies, organizations, and units of government participated in the Monticello Nuclear Power Plant exercise on June 22, 1999.

STATE OF MINNESOTA

Minnesota Governor's Office
Department of Public Safety
Department of Health
Department of Human Services
Department of Agriculture
Department of Natural Resources
Minnesota State Highway Patrol

Department of Transportation
Department of Military Affairs

MINNESOTA RISK JURISDICTIONS

SHERBURNE COUNTY

County Commissioner
Emergency Services Director
County Sheriff
County Engineer
Radiological Defense Officer (RADEF)
Fire and Rescue Service
American Red Cross
County Health Services
Agriculture Extension Office
Minnesota National Guard
Emergency Operations Dispatch Center

WRIGHT COUNTY

County Civil Defense
County Operations Chief
County Commissioner
Sheriff's Department Communications Center
Sheriff's Department
Public Information Officer
Radiological Defense Officer
County Health Services
Buffalo Fire Department

SUPPORT JURISDICTIONS

City of Monticello

PRIVATE/VOLUNTEER ORGANIZATIONS

American Red Cross
Salvation Army

American Red Cross
Salvation Army

C. Exercise Timeline

Table 1, on the following page, presents the time at which key events and activities occurred during the Monticello Nuclear Power Plant exercise held on June 22, 1999. Also included are times that notifications were made to the participating jurisdictions/functional entities.

Table 1. Exercise Timeline

DATE AND SITE: October 5, 1999 Kewaunee Nuclear Power Plant

Emergency Classification Level or Event	Time Utility Declared	State of Wisconsin EOC	Kewaunee County EOC	Manitowoc County EOC	JPIC			
Unusual Event		N/A	N/A	N/A	N/A			
Alert		N/A	N/A	N/A	N/A			
Site Area Emergency	0756	0814	0810	0808	0900			
General Emergency	0955	0955	1013	1013	0957			
Radiation Release Started		1125	1210	1213	1125			
Radiation Release Terminated:								
Facility Declared Operational		0905	0911	0901	0930			
Declaration State of Emergency		1013			1030			
Exercise Terminated		1320	1302	1258	1310			
Early Precautionary Action Decision: Personnel preparedness Livestock Advisory		0922	0926	0924	0930			
1st Protective Action Recommendation: Evacuate 0-2 miles all sectors		1010	1013	1013	1013			
1st Siren Activation		1023	1023	1023	1023			
1st EAS/EBS Message		1025	1025	1025	1025			
2nd Protective Action Recommendation: KI to emergency workers & immobile population Evacuate 0-5 miles, sectors P, Q, R, A, and Lake Areas		1037	1037	1037	1055			
2nd Siren Activation		1045	1045	1044	1045			
2nd EAS/EBS Message		1045	1052	1049	1045			
KI Administration Decision: Emergency Workers		1037	1047	1044	1050			

LEGEND:

D - Decision Making Jurisdiction A - Activating Jurisdiction N/A - Not Applicable Blank - Not Reported

IV. 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 June 22, 1999, exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Monticello Nuclear Power Plant.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria contained in exercise objectives delineated in FEMA-REP-14, REP Exercise Manual, September 1991. Detailed information on the exercise objectives and the extent-of-play agreement used in this exercise is found in Appendix 3 of this report.

A. Summary Results of Exercise Evaluation

The matrix presented in Table 2, on the following pages, presents the status of all exercise objectives from FEMA-REP-14 which were scheduled for demonstration during this exercise at all participating jurisdictions and functional entities. Exercise objectives are listed by number and the demonstration status of those objectives is 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)

B. 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 objectives under which one or more ARCAs were 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 remains unresolved and recommended corrective actions to be demonstrated before or during the next biennial exercise.

The following are definitions of the two types of exercise issues 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."

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 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 Codes.

- **Exercise Year** - The last two digits of the year the exercise was conducted.

- **Objective Number** - A two-digit number corresponding to the objective numbers in FEMA-REP-14.

- **Issue Classification Identifier** - (D = Deficiency, A = ARCA). Only Deficiencies and ARCAs are included in exercise reports.

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

Table 2 Summary Results of Exercise Evaluation

JURISDICTION/FUNCTIONAL ENTITY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
STATE OF MINNESOTA																																	
State Emergency Operation Center	M	M	M	M	M		M		M	M	M	M	M	M			M																
Initial Warning Point	M																																
Traffic and Access Control				M	M									M			M																
Field Command Post	M	M	M	M	M									M																			
Radiological Field Monitoring Team #1	M			M	A	M		A						M																			
Field Radiological Monitoring Team #2	M			M	M	M		M						M																			
Joint Public Information Center	M	M		M							M	M	M																				
Reception Center - Monitoring, Decontamination and Registration					M													M															
Congregate Care																			M														
Emergency Alerting System										M	M																						
RISK JURISDICTIONS																																	
SHERBURNE COUNTY																																	
County Emergency Operations Center	M	M	M	M	M					M		M	M	M	M	M	M													M			
Initial Warning Point	M																																
Traffic and Access Control				M	M									M			M																
Back-up Route Alerting				M	M					M				M																			
Medical Services (MS-1) Drill-Transportation				M	M															M													
Medical Services (MS-1) Drill-Facility				M	M																M												
Sherburne County Media Center												M	M																				
Implementation of Protective Action-School	M		M	M	M									M		M																	
Emergency Workers, Equipment & Vehicles Monitoring and Decontamination	M	M	M	M	M																	M											
WRIGHT COUNTY																																	
Emergency Operations Center	M	M	M	M	M					M		M	M	M	M															M			
Initial Warning Point	M																																
Traffic and Access Control				M	M									M			M																
Back-up Route Alerting				M	M					M				M																			
Medical Services (MS-1) Drill-Transportation				M	M															M													
Medical Services (MS-1) Drill-Facility				M	M																M												
Wright County Media Center												M	M																				
Emergency Workers, Equipment & Vehicles Monitoring and Decontamination	M	M	M	M	M																	M											

LEGEND:

M = Met (No Deficiency or ARCA's assessed) A = ARCA(s) assessed or prior ARCAs not resolved D = Deficiency(ies) assessed

1. STATE OF MINNESOTA

1.1 State Emergency Operations Center

a. **MET:** Objectives 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 17, 18, and 19

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.2 Initial Warning Point

a. **MET:** Objective 1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1. 3 Traffic and Access Control

a. **MET:** Objectives 4, 5, 14, and 17

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs – UNRESOLVED:** NONE

1.4 Field Command Post

a. **MET:** Objectives 1, 2, 3, 4, 5, and 14

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.5 Radiological Field Monitoring Team #1

a. **MET:** Objectives 1,4, 6, and 14

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** Objectives 5 and 8

Issue No.: 39-99-08-A-01

Description: Contrary to the Minnesota Radiological Emergency Preparedness, Radiological Accident Deployment (RAD) Team Standard Operating Procedures, REP-1, Revision 10:5/99, page 12, following completion of airborne radioiodine and particulate sample collection, FMT-1 did not transport the samples to a low background area for initial analysis.

Recommended Corrective Action: Provide additional training in the proper procedures for air sample collection to include sample collection, exiting the plume, and proceeding to a low background area for field measurements. The principal of As Low As Reasonably Achievable (ALARA) should be emphasized. Field monitoring personnel should minimize their exposure to the radiation field during the execution of their monitoring and sampling mission. They should be trained to enter the plume, acquire the field measurements, collect samples, and exit the plume as quickly as possible. This includes relocating to a low background area for sample handling and field analysis.

Schedule of Corrective Actions: Objective 8 will be re-demonstrated at the next exercise, scheduled for the Prairie Island Nuclear Power Plant on September 13, 2000.

Issue No.: 39-99-05-A-02

Description: The radiological field team incorrectly used the true beta value and applied it against the 100mR/hr-gamma exposure rate turn-back value and subsequently exited the area. Because the gamma value did not exceed the turn back value, exiting the area was not required. (NUREG 0654, N.l.a., REP-14, page D.5-5-16).

Recommended Corrective Action: Provide additional training in the proper procedures for exiting the plume using correct turnback value.

Schedule of Corrective Actions: Objective 5 will be re-demonstrated at the next exercise, scheduled for the Prairie Island Nuclear Power Plant on September 13, 2000.

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.6 Radiological Field Monitoring Team #2

a. **MET:** Objectives 1, 4, 5, 6, 8, and 14

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.7 Joint Public Information Center

a. **MET:** Objectives 1, 2, 4, 11, 12, and 13

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.8 Reception Center, Monitoring and Decontamination

a. **MET:** Objectives 5 and 18

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs – UNRESOLVED**: NONE

1.9 Congregate Care

a. **MET:** Objective 19

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.10 Emergency Alerting System

b. **MET:** Objectives 10 and 11

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2. RISK JURISDICTIONS

2.1 SHERBURNE COUNTY

2.1.1 County Emergency Operations Center

a. **MET:** Objectives 1, 2, 3, 4, 5, 10, 12, 13, 14, 15, 16, and 30

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** Objective 3

Issue No.: 39-95-03-A-03

Description: The Emergency Operations Center staff was not briefed on the Emergency Classification Status.

Corrective Action Demonstrated: Decisions affecting Sherburne County was discussed with the Sheriff, County Commissioner, Emergency Operations Center staff the State of Minnesota, and Wright County. Emergency Classification Levels ,and Protective Action Decisions were part of five staff briefings conducted.

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.2 Initial Warning Point

a. **MET:** Objective 1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** Objective 1

Issue No.: 39-95-01-A-02

Description: The Sherburne County Director provided the dispatcher/communications officer the key Emergency Operations Center Personnel Roster. The roster did not list the officials of Becker and Big Lake, Minnesota. Both new city officials declined to participate in this Monticello REP Exercise because of a lack of training and being new to the job. This information was provided to the dispatcher/communications officer. (NUREG-0654 N.1.a)

Corrective Action Demonstrated: The dispatcher/communications officer utilized an accurate EOC roster for Big Lake. Personnel from Becker are no longer mobilized.

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.3 Traffic and Access Control

a. **MET:** Objectives 4, 5, 14, and 17

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.4 Backup Route Alerting

a. **MET:** Objectives 4, 5, 10, and 14

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - UNRESOLVED:** NONE

f. **PRIOR ARCAs - RESOLVED:** Objective 14

Issue No.: 39-95-14-A-04

Description: The two route Alerting Sheriffs Deputies that were pre-staged with potassium iodide (via substitutes) were never instructed to simulate the taking of KI. (NUREG 0654 J.10.e.,f.)

Corrective Action Demonstrated: The radiological officer (RO) received telephone instructions for emergency workers (EWs) to ingest KI at 1107 hours. The EOC coordinator immediately announced the decision for all emergency workers in the Emergency Planning Zone (EPZ) to ingest KI and requested that the Emergency Operations Center (EOC) staff pass the information to Emergency Workers in the field.

2.1.5 Medical Services (MS-1) Drill-Transportation

a. **MET:** Objectives 4, 5, and 20

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.6 Medical Services (MS-1) Drill-Facility

a. **MET:** Objectives 4, 5, and 21

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.7 Sherburne County Media Center

a. **MET:** Objectives 12 and 13

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.8 Implementation of Protective Actions - Schools

a. **MET:** Objectives 1, 3, 4, 5, 14, and 16

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.9 Emergency Worker Vehicle Monitoring and Decontamination-Center

a. **MET:** Objectives 1, 2, 3, 4, 5, and 22

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2 WRIGHT COUNTY

2.2.1 County Emergency Operations Center

a. **MET:** Objectives 1, 2, 3, 4, 5, 10, 12, 13, 14, 15, and 30

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.2 Initial Warning Point

a. **MET:** Objective 1

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.3 Traffic and Access Control

a. **MET:** Objectives 4, 5, 14, and 17

b. **DEFICIENCY:** NONE

a. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.4 Backup Route Alerting

a. **MET:** Objectives 4, 5, 10, and 14

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs – UNRESOLVED:** NONE

2.2.5 Medical Services (MS-1) Drill-Transportation

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs – UNRESOLVED:** NONE

2.2.5 Medical Services (MS-1) Drill-Transportation

a. **MET:** Objectives 4, 5, and 20

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** Objectives 5 and 20

Issue No.: 39-98-05-A-01

Description: No dosimetry was issued to the emergency medical technician (EMT) beyond the plant perimeter. The EMT was unable to continuously monitor radiation exposure.

Corrective Action Demonstration: EMT staff was provided a 0-200mR direct reading dosimeter (DRD) and a thermoluminescent (TLD) film badge. The initial reading was recorded. The staff read the DRDs at 30-minute intervals.

Issue No.: 39-98-05-A-03

Description: Periodic dosimeter readings were not taken and recorded by any of the radiological staff. The hospital dosimeter charger was not operational and the direct reading dosimeter could not be zeroed.

Corrective Action Demonstrated: The staff of the RDA was provided with DRDs, which were read periodically. The hospital staff recorded the initial and the final readings. An operating dosimeter charger was available in the REA.

Issue No.: 39-98-20-A-02

Description: The Emergency Medical Technicians wrapped the victim in a bed sheet with the victim's lower legs and feet exposed allowing the compress that had been placed over the laceration to become contaminated. (NUREG 0654, H.10., K.3.a.)

Corrective Action Demonstrated: In order to prevent the spread of contamination, the paramedics cocoon the victim and the protective gloves, which had been used to examine him, inside a clean sheet that had been placed on a stretcher.

f. **PRIOR ARCAs – UNRESOLVED:** NONE

2.2.6 Medical Services (MS-1) Drill-Facility

a. **MET:** Objectives 4, 5, and 21

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** Objective 21

Issue No.: 39-98-21-A-04

Description: Cross-contamination occurred between samples from the patient because the Radiation Protection Specialist did not change gloves after handling contaminated swipes from the patient.

There were miscommunications between medical and radiological personnel concerning who have responsibility for collecting and monitoring samples. Two available survey instrument probes were not covered to prevent cross contamination, but contact occurred between both probes and potentially contaminated surfaces. In addition, the shower room extendible shower did not properly contain materials that would control contamination.

Corrective Action Demonstration: All team members, including RPS, changed protective gloves after handling potentially contaminated items.

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2. 2.7 Wright County Media Center

a. **MET:** Objectives 12 and 13

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.8 Emergency Worker Monitoring and Decontamination-Center

a. **MET:** Objectives 5 and 22

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED:** NONE

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

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

A&N	Alert and Notification
ANL	Argonne National Laboratory
ARCA	Area Requiring Corrective Action
CFR	Code of Federal Regulations
CPM	Count Per Minute
DRD	Direct Reading Dosimeter
EAS	Emergency Alerting System
EBS	Emergency Broadcast System
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPZ	Emergency Planning Zone
EV-2	FEMA Guidance Memorandum EV-2, *Protective Actions for School Children,* November 13, 1986
FEMA	Federal Emergency Management Agency
FTC	Field Team Center
JPIC	Joint Public Information Center
KI	Potassium Iodide
KLT	K.L. Travis and Associates, Inc.
mR/hr	milliRoentgen per hour
NRC	U.S. Nuclear Regulatory Commission
NUREG-0654	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*
ORO	Offsite Response Organization
PAD	Protective Action Decision
PAR	Protective Action Recommendation
R	Roentgen
RAC	Regional Assistance Committee

REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RRT	Radiological Response Team
TL	Team Leader
TLD	Thermoluminescent Dosimeter

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the Monticello Nuclear Power Plant exercise on June 22, 1999. Evaluator Team Leaders are indicated by the letters "(TL)" after their names. The organization which each evaluator represents is indicated by the following abbreviations:

FEMA - Federal Emergency Management Agency
ANL - Argonne National Laboratory
SSI - SSI Services, Inc.
TL - Team Leader

Regional Assistance Committee	Woodie J. Curtis
Exercise Director	Danny B. Bement

EVALUATION SITE	EVALUATOR	ORGANIZATION
STATE OF MINNESOTA		
State Emergency Operations Center	Terri Conners-Murphy (TL)	FEMA
Initial Warning Point	Ron Graham	USDA
Planning and Assessment Center	Randy Lowden	SSI Inc.
Alert and Notification	Bill Small	ANL
Emergency Alert System	Bill Small	ANL
Reception Center, Monitoring & Decon.	Harry Harrison	ANL
Congregate Care	Bruce Pfaff	FEMA
Traffic and Access Control	Les Poch	ANL
Radiation Field Teams		EPA
	Daryl Thome'	ANL
Joint Public Information Center	Bill Lueders	ANL
Facilities	Bill Serrano	ANL
SHERBURNE COUNTY		
County Emergency Operations Center	John Rablee (TL)	FEMA
	Roy Smith	ANL
Initial Warning Point	John Rablee	FEMA
Traffic and Access Control	Les Poch	ANL
Route Alerting	Robert Holden	ANL
Joint Public Information Center	Arvidas Teotia	ANL
Protective Actions - Schools	Kevin Flynn	ANL
Emergency Worker Monitoring/ Decontamination	Les Poch	ANL

WRIGHT COUNTY

County Emergency Operations Center	Cleven Lloyd	FEMA
	Joe Austin	ANL
Initial Warning Point	Bob Rospenda	ANL
Traffic and Access Control	Sue Ann Curtis	ANL
Route Alerting	Bob Rospenda	ANL
Joint Public Information Center	Bill Lueders	ANL
Medical Service - Transportation	Sue Ann Curtis	ANL
	Clinton Crackel	FEMA
Medical Services - Facility	Sue Ann Curtis	ANL
	Clinton Crackel	
Emergency Worker Monitoring/	Sue Ann Curtis	ANL
Decontamination	Clinton Crackel	FEMA

APPENDIX 3

This appendix lists the exercise objectives, which were scheduled for demonstration in the Monticello Nuclear Power Plant exercise on June 22, 1999 and the extent-of-play agreement approved by FEMA Region V on May 12, 1999.

The exercise objectives, contained in FEMA-REP-15, "Radiological Emergency Preparedness Exercise Evaluation Methodology," September 1991, represent a functional translation of the planning standards and evaluation criteria of NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980.

Because the exercise objectives 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 FEMA to provide evaluators with guidance on expected actual demonstration of the objectives.

The following are specific REP objectives and the extent-of-play agreement scheduled for demonstration during this exercise.

STATE OF MINNESOTA

EXERCISE OBJECTIVES AND EXTENT-OF-PLAY AGREEMENT

OBJECTIVE #1

Demonstrate the capability to alert and fully mobilize personnel for both emergency facilities and field operations. Demonstrate the capability to activate and staff emergency facilities for emergency operations.

State EOC
The state of Minnesota Emergency Operating Center (EOC) will be activated at an ALERT classification. The Minnesota Duty Officer (MDO) will take the initial call and make notifications by telephone. The state EOC is located at 444 Cedar Street, Suite 223, St. Paul.

Radiological Accident Deployment (RAD) Teams
RAD teams (emergency phase field monitoring and sampling teams) will be mobilized at the ALERT classification. Notification will occur through the Minnesota Duty Officer to the Hennepin County Sheriff's Dispatch Center, who will in turn page team members. RAD Team personnel will be pre-positioned at 0830 at the Maple Grove Fire Station #2, 13450 Maple Knoll Way, Maple Grove, MN. The Maple Grove Fire command van will serve as a field command post and will relocate as determined by the scenario.

Joint Public Information Center (JPIC)
The JPIC will be activated at the ALERT classification. Once activated, it will be maintained until the termination of the exercise. The work area for the JPIC is located in the State EOC, and the media briefing room is in the Public Safety Media Room, 444 Cedar Street.

The adequacy of the state EOC and JPIC and field team communications van will be demonstrated through the use of appropriate maps, status boards, and other displays.

OBJECTIVE #3

Demonstrate the capability to direct and control emergency operations.

Decisions and emergency activities will be coordinated by the state EOC State Incident Manager (SIM) in association with the Sherburne and Wright County Operations Chiefs. RAD team members will receive their direction from the RAD Team Captain (located in the communications van).

OBJECTIVE #4

Demonstrate the capability to communicate with all appropriate emergency personnel at facilities and in the field.

The state EOC primary communication links are dedicated telephone lines to the Monticello Nuclear Power Plant Technical Support Center (TSC), Emergency Operations Facility (EOF), and the Sherburne and Wright County EOCs. Additional commercial telephone lines are available to EOC staff. Facsimile machines will demonstrate hard copy capability. RAD Team activities will be directed by radio with commercial, cellular and satellite telephone communications as a backup, if necessary

OBJECTIVE #5

Demonstrate the capability to continuously monitor and control radiation exposure to emergency workers.

All emergency workers have a dose limit of 3 rem—no special missions will be demonstrated during this exercise. The turn back value for RAD field teams is 100 mR/hr. Evacuee monitoring personnel at the Reception Center will use group dosimetry in those areas where workers are in close proximity to each other (Stations 4,5,6,8). Pocket dosimeters and TLDs will be worn by all emergency workers to monitor and control exposure as follows:

Emergency Worker	Dosimeter Range			Pick-up Location
RAD Team Members	0-200 mR	0-20 R	TLD	Fire Station*
Military Affairs (alert and notification)		0-20 R	TLD	St. Paul Airport
Reception Center Staff	0-200 mR group dosimetry		TLD	Osseo Junior High School
State Patrol		0-20 R	TLD	Sherburne Co. EOC

* Plymouth RAD team supplies are stored at Plymouth Fire Station #1, and Maple Grove supplies are stored at Maple Grove Fire Station #2.

OBJECTIVE #6

Demonstrate the appropriate use of equipment and procedures for determining field radiation measurements.

Two RAD teams will demonstrate this objective, and data from two "phantom" teams will be provided to the RAD team captain and the PAC through controller messages. One team will be chosen to demonstrate the donning and removal of protective clothing on the day of the exercise, however the only protective clothing worn in the field will be surgical gloves. Eberline e-120 (0-50,000 CPM) survey meters and Eberline RO-2A (0-50 R/hr) survey meters will be used for determining field radiation measurements. A list of the equipment and current calibration records will be provided to the evaluator during the pre-exercise briefing.

OBJECTIVE #7

Demonstrate the capability to develop dose projections and protective action recommendations regarding evacuation and sheltering.

The accident assessment team in the Planning and Assessment Center (PAC) will demonstrate this objective. Dose modeling will be performed using RASCAL, and backup capability will be a battery operated laptop computer. The first protective action recommendation (PAR) will be made at a GENERAL EMERGENCY classification, and will be predetermined (evacuation of 2 miles 360° and out to five miles, three sectors downwind) as per the Minnesota EOC Standard Operating Procedures. Subsequent PARs will occur as driven by the scenario.

OBJECTIVE #8

Demonstrate the appropriate use of equipment and procedures for the measurement of airborne radioiodine concentrations as low as 10-7 (.0000001) micro-curie per cubic centimeter in the presence of noble gases and obtain samples of particulate activity in the airborne plume.

This objective will be demonstrated by the RAD teams in the field using RADECO air samplers to obtain a ten minute, ten cubic foot sample. RAD team members will conduct gross particulate and iodine field analysis using Eberline e-120 survey meters (0-50,000 CPM) in accordance with their standard operating procedures. Purging the sampler head is not a part of RAD team procedures.

OBJECTIVE #9

Demonstrate the capability to make timely and appropriate protective action decisions.

This objective will be demonstrated by the accident assessment team in the PAC. The Planning Chief will make protective action recommendations (PARs) based on available data and information. The first PAR will be pre-determined, and subsequent PARs will be scenario driven. If while comparing projected dose rates to protective action guidelines (PAGs) the Planning Chief determines that KI administration is not necessary, Objective 14 will be implemented through a controller message. The controller message will be provided to the Planning Chief by the PAC controller.

OBJECTIVE #10

Demonstrate the capability to promptly alert and notify the public within the 10 mile emergency planning zone (EPZ) and disseminate instructional messages to the public on the basis of decisions by appropriate state or local officials.

The development and dissemination of an Emergency Alert System (EAS) message will be demonstrated in the state EOC. EAS is activated only when there is a protective action for people. The State EAS Plan states that the code for a nuclear power plant incident is monitored by all relay stations and is set to automatically transmit the message from the State EOC. The initial EAS message occurs as determined by the State Incident Manager in coordination with the Sherburne County and Wright County Operations Chiefs following the approval of a PAR. An "EAS Writer" (located in the state EOC) will directly broadcast an EAS message using an encoder/decoder which is automatically monitored by encoders/decoders by relay stations. EAS messages will contain basic information regarding the event and areas affected. Additional information will be disseminated through the JPIC using special news broadcasts and news releases.

The sounding of the sirens, a county responsibility, will be by way of a conference call with the Sherburne and Wright County Operations Chiefs. A National Guard helicopter equipped with a public address system will warn recreational areas (weather permitting). No civilian will be allowed to fly on the National Guard Helicopter. Evaluation should be based on discussions with the representatives of the National Guard in the Sherburne County EOC and with the flight crew. The helicopter will be based out of the Sherburne County Law Enforcement Center grounds. Sirens, weather radios and the broadcast of messages will be simulated.

OBJECTIVE #11

Demonstrate the capability to coordinate the formulation and dissemination of accurate information to the public.

All EAS messages are the responsibility of EOC Operations staff. The state of Minnesota uses pre-scripted EAS messages. Special news broadcasts will be pre-scripted as often as possible and coordinated with all applicable agencies. Public not affected by the PAR will be told to remain tuned to their EAS station for further information. These special broadcasts will be announced in the JPIC media briefing room.

OBJECTIVE #12

Demonstrate the capability to coordinate the development and dissemination of clear, accurate, and timely information to the news media.

This objective will be demonstrated in the JPIC work area and media briefing room. All Minnesota public information will be coordinated by the Lead PIO. The JPIC management committee will coordinate all information released to the media. Hard copy will be shared with county EOCs.

OBJECTIVE #13

Demonstrate the capability to establish and operate rumor control in a coordinated and timely manner.

This objective will be demonstrated in the EOC and driven by controller messages. Two rumor control staff will answer phones at an average of six calls per hour per person until the termination of the exercise. Televisions and VCRs (used to monitor and tape media broadcasts) are in the rumor control and PIO work areas.

OBJECTIVE #14

Demonstrate the capability and resources to implement KI protective actions for emergency workers, institutionalized individuals and, if the state plan specifies, the general public.

When the decision to administer KI is made (or a controller message is injected) the Planning Chief will recommend to the State Incident Manager that field operations staff take KI (simulated). KI for RAD team members is included in sampling kits. State Patrol receive their kits at county EOCs per procedure. Minnesota does not provide KI to members of the general public. State emergency workers that will simulate KI administration are:

Military Affairs personnel (helicopter crew-alerting the public, if in the air)
RAD Team members (field monitoring and sampling)

OBJECTIVES #15 & #16 are not applicable to the state of Minnesota.

OBJECTIVE #17

Demonstrate the organizational capability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.

A Minnesota State Patrol Officer at one traffic access control point will demonstrate this objective. At a Site Area Emergency classification, the officer will be directed to report to the Sherburne County EOC to obtain dosimetry and instructions, and will rendezvous with an evaluator at a control point selected at the time of the exercise. Coordination of resources will be demonstrated in the EOCs. Control of rail, water and air traffic will be coordinated in the state EOC.

OBJECTIVE #18

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

Evacuee monitoring will be demonstrated at the Osseo Junior High at 7:00 P.M. on Tuesday June 22, 1999. The facility Director of Operations is a Safety Officer from the Minnesota Department of Human Services (DHS). The initial monitoring evacuee monitoring station uses portal monitors (DHS owns 4). A check source is used to ensure that the instruments respond. Based on the planning standard for reception center staffing, it has been determined that 3 portal monitors are required at this facility (2 will be demonstrated). Hand held survey instruments are used by monitoring staff in the decontamination areas. Hand held instruments are calibrated annually. Hennepin County fire fighters will conduct monitoring, and staff from the DHS will serve as recorders. Twelve volunteer mock evacuees will go through the reception center monitoring and registration process. At least one male and one female "evacuee" will require **decontamination. Controllers will provide** contamination levels and monitoring and decontamination results. A medical emergency will be driven by controller messages and responded to by North Ambulance personnel. Two vehicles will be monitored - at least one will require decontamination. Air intake filter monitoring is not a part of Minnesota procedures. A copy of reception center station procedures will be available upon request.

OBJECTIVE #19

Demonstrate the adequacy of facilities, equipment, supplies, personnel, and procedures for congregate care of evacuees.

Congregate care will be demonstrated on Tuesday June 22 during the reception center exercise. An American Red Cross shelter manager and nurse will meet the evaluator at the reception center at Osseo Junior High. They will then go to the selected mass shelter location and conduct a walk through of the facility. They will provide lists of supplies, equipment, personnel and logistical information for review. The shelter agreement will be available for review.

OBJECTIVES #20 THROUGH #22 are not applicable to the state of Minnesota.

OBJECTIVES #23

Demonstrate the capability to identify the need for external assistance and to request such assistance from Federal or other support organizations.

This objective has been met within this six-year cycle and will not be evaluated during this exercise.

OBJECTIVE #24 through #29 have been met in this six-year cycle and will not be demonstrated during this exercise.

OBJECTIVE #30 has been met within this six-year cycle and will not be demonstrated during this exercise.

OBJECTIVE #31 is a county objective and not applicable to the state of Minnesota.

OBJECTIVES #32 AND #33 have been met within this six year cycle and will not be demonstrated during this exercise.

SHERBURNE COUNTY

EXERCISE OBJECTIVES AND EXTENT-OF-PLAY AGREEMENT

OBJECTIVE #1

Demonstrate the capability to alert and fully mobilize personnel for both emergency facilities and field operations. Demonstrate the capability to activate and staff emergency facilities for emergency operations.

The initial call will be received in the dispatch office of the Sherburne County Law Enforcement Center located at 13880 Hwy. 10, Elk River. Initial calls to activate EOC staff will begin in the dispatch office. Mobilization will then continue through a telephone tree of designated emergency response personnel. The Sherburne County EOC is located at 13880 Hwy. 10, Elk River. PIO Liaisons will be pre-positioned at the State EOC.

OBJECTIVE #2

Demonstrate the adequacy of facilities, equipment, displays, and other materials to support emergency operations.

The adequacy of the Sherburne County EOC will be demonstrated through the use of appropriate maps, status boards and other displays.

OBJECTIVE #3

Demonstrate the capability to direct and control emergency operations.

The Sherburne County Operations Chief will coordinate decisions and emergency activities. Activities will be coordinated with the state and Wright County EOCs and field staff as necessary.

OBJECTIVE #4

Demonstrate the capability to communicate with all appropriate emergency personnel at facilities and in the field.

The county EOC's primary communication links are dedicated telephone lines to the state EOC and Wright County. Additional commercial telephone lines are available to EOC staff. Facsimile machines will demonstrate hard copy capability. MNSEF radio will provide back-up communications, if needed.

OBJECTIVE #5

Demonstrate the capability to continuously monitor and control radiation exposure to emergency workers.

As driven by the scenario, field personnel, i.e. Sheriff's deputies, County Highway workers, will be called in to the EOC (all will be simulated except 1 deputy) to pick up dosimetry, KI and to receive briefing and emergency assignment. County workers will wear pocket dosimeters and TLDs as follows:

Emergency Worker	Dosimeter Range			Pick-up Location
Field Staff (route alerting, etc.)		0-20 R	TLD	Sherburne Co. EOC
Decontamination Staff*	0-200mR		TLD	Zimmerman F.D.
Ambulance crew*	0-200mR		TLD	Reception Center

OBJECTIVE #10

Demonstrate the capability to promptly alert and notify the public within the 10 mile emergency planning zone (EPZ), and disseminate instructional messages to the public on the basis of decisions by appropriate state or local officials.

All EAS messages are developed and disseminated by the State. The coordination of alert and notification implementation will be demonstrated in the Sherburne County EOC (siren activation will be simulated). Sirens are sounded once following each evacuation PAR.

As determined by the scenario, a deputy will be called in to the county EOC, receive a short briefing and get dosimetry. He/she will pick up an evaluator in the EOC at that time and will demonstrate route alerting in exception areas, designated as such due to low population density.

OBJECTIVE #11

Demonstrate the capability to coordinate the formulation and dissemination of accurate information to the public.

The State of Minnesota is responsible for the dissemination of all EAS messages and special news broadcasts. This objective is not applicable to Sherburne County.

OBJECTIVE #12

Demonstrate the capability to coordinate the development and dissemination of clear, accurate, and timely information to the news media.

The Sherburne County Public Information Liaison, located in the state EOC in accordance with JPIC activities, will demonstrate the coordination of county public information. One (1) local briefing will take place in the Sherburne County Boardroom in the County Government Center.

Hard copies of news releases will be shared via fax.

OBJECTIVE #13

Demonstrate the capability to establish and operate rumor control in a coordinated and timely manner.

Rumor control is conducted in the state EOC. If rumors affect Sherburne County, the information will be coordinated between its representative in the JPIC work area at the state EOC and the PIO in the county EOC.

OBJECTIVE #14

Demonstrate the capability and resources to implement KI protective actions for emergency workers, institutionalized individuals and, if the state plan specifies, the general public.

This objective will be coordinated through the state planning and assessment staff. The decision to instruct emergency workers to take KI will be made by the State Incident Manager (as recommended by the Planning Chief), who will then make the recommendation to the Sherburne County Operations Chief. KI administration instructions to county emergency workers disseminate from the Sherburne County EOC. Upon notification, the deputy sheriff demonstrating route alerting will simulate KI administration.

OBJECTIVE #15

Demonstrate the capability and resources necessary to implement appropriate protective actions for special populations.

This objective will be procedurally demonstrated in the Sherburne County EOC by Social Services staff.

Resources will be discussed with the evaluator.

OBJECTIVE #16

Demonstrate the capability and resources necessary to implement protective actions for school children within the plume pathway emergency planning zone (EPZ).

This objective will be demonstrated in a small tabletop discussion at Big Lake School district office at 10:00 a.m. Wednesday, June 23. School is not in session; however, EOC and school district officials will discuss all applicable activities for this situation. The tabletop will include the school superintendent (or designee), the principal and a representative of the bus company.

OBJECTIVE #17

Demonstrate the organizational capability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.

This objective will be demonstrated in conjunction with Objective 10. The deputy who is demonstrating route alerting will also demonstrate this objective. Following the demonstration of the route, the deputy will proceed to a conveniently located, pre-determined roadblock. No barricade will actually be placed on the roadside. The Sherburne County Highway department will not be available for interview. An evaluator will conduct a procedural interview.

OBJECTIVES #18 AND #19 are state objectives and not applicable to Sherburne County.

OBJECTIVE #20

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

North Ambulance will demonstrate this objective at the reception center at 7:00 p.m., June 22, at Osseo Junior High, 10223 93rd Avenue North, Osseo. A controller will provide the ambulance crew with a simulated contaminated injured evacuee. The ambulance crew will assess the contamination situation and medical condition. They will then prepare the patient for transport to North Memorial Medical Center. They will load the patient into the ambulance and suspend play until 10:00 the next morning at the hospital. This demonstration satisfies this objective for both Wright and Sherburne Counties.

OBJECTIVE #21

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

North Memorial Medical Center (3300 Oakdale Avenue North, Robbinsdale) will demonstrate this objective at 10:00 a.m. on Wednesday, June 23 (it will be a continuation of the MS-1 scenario started at the reception center the night before). A contaminated injured evacuee will arrive at the emergency room (simulated). Upon notification of arrival of patient, hospital personnel will prepare emergency room area for arrival of contaminated patient, including appropriate contamination control measures. Radiological monitoring will be conducted by plant Radiation Protection Specialist. 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. This demonstration satisfies this objective for both Wright and Sherburne Counties.

OBJECTIVE #22

Demonstrate the adequacy of procedures for the monitoring and decontamination of emergency workers, equipment, and vehicles.

> This objective will be demonstrated at 7:00 p.m. on Tuesday, June 22, at the Zimmerman Fire Department. At least two RAD team members (with one emergency vehicle and field samples) will be processed through the center. A controller will provide contamination levels. Eberline e-120 survey meters (00 50,000 cpm) will be used, and an instrument check will be used as a single point calibration check. Monitoring the air intake filter of vehicles is not part of decon procedures in Minnesota.

OBJECTIVES #23 THROUGH #26 are state objective and not applicable to Sherburne County.

OBJECTIVE #27 This is a plume exercise and Sherburne County will not demonstrate this objective.

OBJECTIVE #28 is a state objective and not applicable to Sherburne County.

OBJECTIVE #29 has successfully been demonstrated during this 6 year cycle. Although county personnel will participate in re-entry discussions during the table top, they will not be evaluated.

OBJECTIVE #30

Demonstrate the capability to maintain staffing on a continuous, 24-hour basis through an actual shift change.

> This objective will be demonstrated by a shift change of key staff (as identified in the county plan) in the Sherburne County EOC.

OBJECTIVES #31 THROUGH #33 have all been successfully demonstrated during the six and cycle and will not be demonstrated during this exercise.

WRIGHT COUNTY

EXERCISE OBJECTIVES AND EXTENT-OF-PLAY AGREEMENT

OBJECTIVE #1

Demonstrate the capability to alert and fully mobilize personnel for both emergency facilities and field operations. Demonstrate the capability to activate and staff emergency facilities for emergency operations.

The initial call will be received in the dispatch office of the Wright Sheriff's Department. The call to partially activate EOC staff will be made at the Alert from the sheriff's department. The Wright County Sheriff's office is located at 10 NW 2nd Street in Buffalo. The PIO Liaison will be pre-positioned at the State EOC.

OBJECTIVE #2

Demonstrate the adequacy of facilities, equipment, displays, and other materials to support emergency operations.

The adequacy of the Wright County EOC will be demonstrated through the use of appropriate maps, status boards and other displays.

OBJECTIVE #3

Demonstrate the capability to direct and control emergency operations.

The Wright County Operations Chief will coordinate decisions and emergency activities. Activities will be coordinated with the state and Sherburne County EOC and field staff, as necessary.

OBJECTIVE #4

Demonstrate the capability to communicate with all appropriate emergency personnel at facilities and in the field.

The Wright County EOC primary communication links are dedicated telephone lines to the state EOC. Additional commercial telephone lines are also available to EOC staff. Facsimile machines will demonstrate hard copy capability. MNSEF radio will be used as back up, only if needed.

OBJECTIVE #5

Demonstrate the capability to continuously monitor and control radiation exposure to emergency workers.

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

Emergency Worker	Dosimeter Range			Pick-up Location
EW Decon staff*	0-200 mR		TLD	Buffalo Fire Dept.
Field Staff (route alerting, etc.)		0-20 R	TLD	Wright Co. EOC
Ambulance Crew*	0-200mR		TLD	Reception Center

All emergency workers have a dose limit of 3 rem. No special missions will be demonstrated during this exercise. Dosimetry records are on file in the Wright County Emergency Management Office and available for review, if requested. *Decon staff and Ambulance crew do not take KI.

OBJECTIVES #6 THROUGH #9 are state objectives and not applicable to Wright County.

All EAS messages are the responsibility of the State EOC. The coordination of alert and notification implementation will be demonstrated in the Wright County EOC (siren activation will be simulated). Sirens are sounded once following each evacuation PAR.

As determined by the scenario, a deputy will be called in to the county EOC, receive a short briefing and get dosimetry. He/she will pick up an evaluator in the EOC at that time and will demonstrate route alerting in exception areas, designated as such due to low population density.

OBJECTIVE #11

Demonstrate the capability to coordinate the formulation and dissemination of accurate information to the public.

The State of Minnesota is responsible for the dissemination of all EAS messages and special news broadcasts. This objective is not applicable to Wright County.

OBJECTIVE #12

Demonstrate the capability to coordinate the development and dissemination of clear, accurate, and timely information to the news media.

The coordination of county public information will be demonstrated by the Wright County Public Information Liaison, who is located in the state EOC. The PIO located in the Wright County EOC will demonstrate one local briefing in the county boardroom as driven by the scenario.

OBJECTIVE #13

Demonstrate the capability to establish and operate rumor control in a coordinated and timely manner.

Rumor control is conducted in the state EOC. If rumors affect Wright County, the information will be coordinated between its representative in the JPIC work area at the state EOC and the PIO in the county EOC.

OBJECTIVE #14

Demonstrate the capability and resources to implement KI protective actions for emergency workers, institutionalized individuals and, if the state plan specifies, the general public.

This objective will be coordinated through the state planning and assessment staff. The decision to instruct emergency workers to take KI will be made by the State Incident Manager (as recommended by the Planning Chief), who will then make the recommendation to the Wright County Operations Chief. KI administration instructions to county emergency workers disseminate from the Wright County EOC. Upon notification, the deputy sheriff demonstrating route alerting will simulate KI administration.

OBJECTIVE #15

Demonstrate the capability and resources necessary to implement appropriate protective actions for special populations.

This objective will be procedurally demonstrated in the county EOC by Human Services staff. Resources will be discussed with the evaluator. Some information maintained by the county is covered by the Privacy Act and will be shared with but not released to federal evaluators.

OBJECTIVE #16

Demonstrate the capability and resources necessary to implement protective actions for school children within the plume pathway emergency planning zone (EPZ).

This objective is not selected for demonstration during this exercise.

OBJECTIVE #17

Demonstrate the organizational capability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.

This objective will be demonstrated in conjunction with Objective 10. The deputy sheriff demonstrating route alerting will demonstrate this objective. Following the demonstration of the route, the deputy will proceed to a pre-determined roadblock. No barricade will actually be placed on the road. An evaluator will conduct a procedural interview.

OBJECTIVES #18 AND #19 are state objective and not applicable to Wright County.

OBJECTIVE #20

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

North Ambulance will demonstrate this objective at the reception center at 7:00 p.m., June 22, at Osseo Junior High, 10223 93rd Avenue North, Osseo. A controller will provide the ambulance crew with a simulated contaminated injured evacuee. The ambulance crew will assess the contamination situation and medical condition. They will then prepare the patient for transport to North Memorial Medical Center. They will load the patient into the ambulance and suspend play until 10:00 the next morning at the hospital. This demonstration satisfies this objective for both Wright and Sherburne Counties.

OBJECTIVE #21

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

North Memorial Medical Center, (3300 Oakdale Avenue North, Robbinsdale) will demonstrate this objective at 10:00 a.m. on Wednesday, June 23 (it will be a continuation of the MS-1 scenario started at the reception center the night before). A contaminated injured evacuee will arrive at the emergency room (simulated). Upon notification of arrival of patient, hospital personnel will prepare emergency room area for arrival of contaminated patient, including appropriate contamination control measures. Radiological monitoring will be conducted by plant Radiation Protection Specialist. 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. This demonstration satisfies this objective for both Wright and Sherburne Counties.

OBJECTIVE #22

Demonstrate the adequacy of procedures for the monitoring and decontamination of emergency workers, equipment, and vehicles.

This objective will be demonstrated at 7:00 p.m. on Monday June 21. The demonstration will be at the Buffalo Fire Department. At least two RAD team members (with one emergency vehicle and field samples) will be processed through the center. A controller will provide contamination levels for emergency workers. Eberline e-120 survey meters (0-50,000 CPM) will be used, and an instrument check source is attached to each survey meter. Monitoring the air intake filter of vehicles is not part of decon procedures in Minnesota.

OBJECTIVES #23 THROUGH #26 are state objectives and not applicable to Wright County.

OBJECTIVE #27 is not selected for demonstration during this exercise.

OBJECTIVE #28 is a state objective and not applicable to Wright County.

OBJECTIVE #29 is not selected for demonstration during this exercise.

OBJECTIVE #30

Demonstrate the capability to maintain staffing on a continuous, 24 hour basis through an actual shift change.

> This objective will be demonstrated by a shift change of key staff (as identified in the county plan) in the Wright County EOC.

OBJECTIVES #31 THROUGH #33 have all been successfully demonstrated during this six year cycle and will not be demonstrated during this exercise.

APPENDIX 4

EXERCISE SCENARIO

This appendix contains a summary of the simulated sequence of events that was used as the basis for invoking emergency response actions by OROs in the Monticello Nuclear Power Plant exercise on June 22, 199.

This exercise scenario was submitted by the State of Minnesota and approved by FEMA Region V on June 10, 1999.

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

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STATE OF MINNESOTA

MONTICELLO NUCLEAR GENERATING PLANT EXERCISE ON-SITE TIMCLINE

-0700 *INITLAL CONDITIONS*

#1 I Standby Liquid Control (SBLQ pump is out-of-service due to a seized bearing (LCO). Work is scheduled to commence this morning.

The midnight operating crew completed Residual Heat Removal Service Water RHRSW SurveillancelestO255-05-1.A-l. #12ResidualHeatRcmovalServiceWater(RHRSW) motor was making abnormal noises during the test resulting in it being tagged out-of-service for investigation of a noisy motor bearing (LCO).

System engineering and maintenance are performing troubleshooting activities in the steam chase due to water hammer concerns on the HPCI injection line. HWC is out of service for this work.

The midnight operations crew found breaker LCB-027 (located in cubicle 52-309, LC-103/104 [BUS TIE BREAKER) to be in the discharged state.

It was removed from service and brought to the breaker maintenance room for repairs. A Work O has been initiated.

I&C is performing calibration of the non-operating recombiner train instrumentation.

The reactor has been at full power for 12'months.

The electrical distribution system is in condition 5 due to a loss of Prairie Island Unit I and a unscheduled maintenance outage at King.

Winds are from 335' at 2 mph. Temperature is in the low 70's with noon time temperatures expected to be in the low 80's.

-0745 Maintenance has commenced disassembly of #1 I Standby Liquid Control pump to support replacement of the bearing.

The Site Administration Building operator receives an outside call indicating that a bomb has been placed within the protected area of the site.

-0800 Security determines the bomb threat to be credible. Guideline 17 (Security Compromise) of A.2- I 01 requires a *NOTIFICA TION OF UNUSUAL E VENT (AVE)* be declared if security determines the threat to be credible and the Shift Manager determines that the threat,,vould have an adverse impact on the safe operation or shutdown capability of the plant. Thus the Shift Manager may not declare an NUE. If he does not, no adverse situation will occur to derail the scenario and no contingency message will be given to force him to declare an NUE.

-0830 Security discovers a suspicious looking package (assumed bomb) on the north side of warehouse #2. Guideline 17 (Security Compromise) of A.2-1 01 requires an *ALERT* be declared for a bomb device discovered within the plant-protected area and outside or any vital area.

-0840 #1 I Control Rod Drive Pump trips on over-current as reported by the Turbine Side Operator. If a Reactor Side Operator is sent to investigate, the motor appears to be okay.

-0930 Sixty minutes after the ALERT declaration, the Technical Support Center (TSC), Operational Support Center (OSC), Access Control and the Emergency Operations Facility (EOF) should be manned and operating.

-0930 Drywell unidentified leakage increases.

-0935 Drywell pressure exceeds 2 psig initiating an automatic SCRAM. However, the reactor will experience an Anticipated Transient Without SCRAM (ATWS).

Furthermore, an individual inadvertently bumped the 186-6 relay on Bus 16 resulting in a bus lock-out. Alarms 8-C-18 No. 16 4160V Bus Lockout and 8-C-19 No. 14 4160 Bus to No. 16 Bus Breaker Trip are received.

When an electrician eventually meggars Bus 16, it appears to be faulted. (Unbeknownst to the electrician, the apparent Bus 16 fault is due to a faulty meggar instrument and not a problem with the Bus.) #1 I Standby Gas Treatment System (SBGT) starts and shortly thereafter trips.

Lockout of bus 16 results in a lo ss of power to # 1 2 Stand By Liquid Control P ump - With both Stand By Liquid Control Pumps now inoperable and the Shift Manager's or Emergency Director's opinion that a transient is in progress a *SITE AREA EMERGENCY* should be declared IAW Guideline 12 of A.2-1 0 1.

To avoid having the crew Emergency Depressurize, the drywell temperature will be maintained less than 28 I'F and containment pressure will be maintained less than 12 psig.

Once declared, the Lead Emergency Communicator should begin notification to applicable on-site and off-site agencies of the declaration of a Site Area Emergency.

-1020 The control room receives a second bomb threat. The caller indicates this bomb is not a toy like the first one was and has been strategically placed in the reactor building.

-1035 A major explosion occurs in the steam chase. Damage is extensive and includes rupture of B Main Steam Line, the blowout panels, and the HPCI and RCIC steam lines. B inboard MSIV fails to close resulting in the turbine and reactor buildings becoming engulfed in steam. (Urimonitored radiological release begins.) The operations crew should perform an emergency depressurization shortly here after due to high area temperatures in the reactor building.

The Emergency Director (ED) should declare a *GENERAL EMERGENCY IAW* Guideline 28 (General Emergency) of A.2-101, barriers and notify the Emergency Manager (EM) of the classification changed. Once declared, the Emergency Communicator (EC) should begin notification to applicable onsite and off-site agencies. (The RPSS/REC should make the initial PAR at this point.)

-1145 Bus lockout faulty manager cause reported by student intern.

-1148 Wind shift occurs to 290' at 2 mph. **(This should drive issuance of the 2nd PAR.)**

-1200 Bus 16 lockout faulty meggar equipment discovered.

-1210 Potassium Iodide issuance.

-1230 Operations will be allowed to establish a full SCRAM. Bus#16mayberetumedto service (at this point the electrician may be told his manager is faulty). The off-site radio local release ends shortly here after.

DEC 9 1999

-1300 Exercise Terminated