

NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

TABLE OF CONTENTS RECORD OF REVISION REV 3

The following changes are included in this revision:

- .EPIP 1.1.1 Title change
- .EPIP 1.1.3 ACTIVATION & OPERATION OF EMERGENCY ORGANIZATION has been deleted and replaced by EPIP 1.1.3 PUBLIC INFORMATION
- .EPIP 1.1.4 N title
- .EPIP 1.1.5 Title change
- .EPIP 1.1.7 Title change
- .EPIP 1.1.8 NUCLEAR EMERGENCY COMMUNICATIONS has been deleted and replaced by EPIP 1.1.8 COMMUNICATIONS EQUIPMENT & INFORMATION
- .EPIP 1.1.16 New procedure
- .EPIP 1.1.17 New procedure
- .EPIP 1.2.2 Title change

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NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: _____ REV: 3
PREPARED BY: <i>Gay Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edward</i> Manager Nuclear Environmental Services	TITLE:  TABLE OF CONTENTS RECORD OF REVISION
APPROVED BY: <i>[Signature]</i> General Manager: Nuclear Plants	

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NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.1 EMERGENCY PLAN ORGANIZATION REV 2

The following changes are included in this revision:

.Total re-write.

.Responsibilities of the Corporate Response Organization have been moved to the location of the Staffing position i.e.

EPIP 1.1.5

- START-UP & OPERATION OF THE EOF

EPIP 1.1.7

- START-UP & OPERATION OF THE HQEC

.HQEC Coordinator position has been added.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.1 <span style="float: right;">REV: 2</span>
PREPARED BY: <i>Gary Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edward</i> Manager Nuclear Environmental Services	TITLE: 1.1.1 CORPORATE EMERGENCY RESPONSE ORGANIZATION
APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plants	

PURPOSE AND OBJECTIVES

The purpose of the "Corporate Emergency Response Organization" procedure is to specify the corporate emergency response organization including primary designees and alternates for emergency organization positions.

The organization chart attached to this procedure presents the structure of the corporate emergency response organization. In order to provide a sufficient number of alternates to fill the various positions, some corporate positions are listed in more than one emergency organization position. In the event that an individual is assigned to more than one emergency organization position, the positions that are required to implement the actions at the EOF shall take precedence over all other positions.

CONDITIONS AND PREREQUISITES

An "Alert", "Site Area Emergency" or "General Emergency" has been declared at either Monticello or Prairie Island.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibilities - Power Production Management
- B. In Charge
  - HQEC - Power Production Management
  - EOF - Emergency Manager

- C. Assistance
- HQEC - HQEC Coordinator
  - EOF - EOF Coordinator

## RESPONSIBILITIES

### I. HEADQUARTERS EMERGENCY CENTER HQEC)

#### A. POWER PRODUCTION MANAGEMENT

1. The Power Production Management position should be staffed by the Senior Vice President Power Supply. In his absence it is filled by corporate personnel who are specified on the Power Production Management Call List, TAB A, EPIP 1.1.2., "Notifications".
2. The responsibilities of the Power Production Management are specified in Tab A, EPIP 1.1.7, "Start-Up and Operation of HQEC".

#### B. HQEC TECHNICAL SUPPORT SUPERVISOR

1. The HQEC Technical Support Supervisor position should be staffed by the General Manager, Headquarters Nuclear Group. In his absence, Power Production Management will staff this position with available technical personnel listed on the Call List, TAB A, EPIP 1.1.2, "Notifications".
2. The responsibilities of the HQEC Technical Support Supervisor are specified in Tab C, EPIP 1.1.7, "Start-Up and Operation of HQEC".

#### C. COMMUNICATIONS MANAGEMENT

1. The Communications Management position should be staffed by the Director of Communications. In his absence it is filled in order of priority by one of the following:
  - a. Supervisor, Media Information
  - b. Supervisor, Corporate Information
  - c. Communications - Public Information Representatives
2. The responsibilities of the Communications Management are specified in Tab F, EPIP 1.1.7, "Start-Up and Operation of HQEC".

D. ERAD MANAGEMENT

1. The ERAD Management position should be staffed by the Manager, ERAD. In his absence the position is staffed by personnel assigned to the ERAD Call List Tab A, EPIP 1.1.2, "Notifications". If ERAD personnel are unavailable, Power Production Management may assume this role.
2. The responsibilities of the ERAD Manager are specified in Tab E, EPIP 1.1.7, "Start-Up and Operation of HQEC".

E. ADVISORY SUPPORT GROUP

1. The Advisory Support Group should be staffed by selected management personnel as requested by Power Production Management.
2. The responsibilities of the Advisory Support Group are specified in Tab D, EPIP 1.1.7, "Start-Up and Operation of HQEC".

F. HQEC COORDINATOR

1. The HQEC Coordinator is an assigned position. The individual assigned to this position may be from the Power Production Management call list, Section I.B., or from the Corporate Call List, Section III, of TAB A, EPIP 1.1.2, "Notifications."
2. The responsibilities of the HQEC Coordinator are specified in Tab B, EPIP 1.1.7, "Start-Up and Operation of HQEC".

II. EMERGENCY OPERATIONS FACILITY (EOF)A. EMERGENCY MANAGER

1. The Emergency Manager position should be staffed by the General Manager, Nuclear Plants. In his absence the position shall be staffed by use of the duty roster specified in the Call List, Tab A, EPIP 1.1.2, "Notifications".
2. The responsibilities of the Emergency Manager are specified in Tab A, EPIP 1.1.5, "Start-Up and Operation of EOF".

B. EOF COORDINATOR

1. The EOF Coordinator position should be staffed by available corporate personnel assigned to the Nuclear Technical Services Group or Production Training Group located at the respective plant sites. This position is filled by a duty roster maintained at the respective plant. EOF Coordinator designees assigned with an asterisk (\*) in Section II of the Call List, TAB A, EPIP 1.1.2, "Notifications", are to initially perform as Emergency Manager until a designated Emergency Manager arrives.



2. The responsibilities of the EOF Coordinator are specified in Tab C, EPIP 1.1.5, "Start-Up and Operation of EOF".

C. RADIATION PROTECTION SUPPORT SUPERVISOR

1. The Radiation Protection Support Supervisor should be staffed by the sister plant Superintendent, Radiation Protection or other qualified individuals as specified in the applicable plant Emergency Plan Implementing Procedures. Only personnel qualified in this manner may staff this position.
2. The responsibilities of the Radiation Protection Support Supervisor are specified in Tab B, EPIP 1.1.5, "Start-Up and Operation of EOF".

D. EOF TECHNICAL SUPPORT SUPERVISOR

1. The EOF Technical Support Supervisor position should be staffed by the General Superintendent, Nuclear Technical Services. In his absence it is staffed by available personnel on the Corporate Call List, TAB A, EPIP 1.1.2, "Notifications".
2. The responsibilities of the EOF Technical Support Supervisor are specified in Tab H, EPIP 1.1.5, "Start-Up and Operation of EOF".

E. COMMUNICATIONS COORDINATOR

1. The duties of the Communications Coordinator are the responsibility of the EOF Coordinator until he assigns an available individual to this position.
2. The responsibilities of the Communications Coordinator are specified in Tab D, EPIP 1.1.5, "Start-Up and Operation of EOF".

F. LOGISTICS COORDINATOR

1. The duties of the Logistics Coordinator are the responsibility of the EOF Coordinator until he assigns an available individual to this position.
2. The responsibilities of the Logistics Coordinator are specified in Tab E, EPIP 1.1.5, "Start-Up and Operation of EOF".



G. EOF SECURITY FORCE

1. The duties of the Security Force are the responsibility of the EOF Coordinator until a Corporate Security Department individual assumes this position.
2. The responsibilities of the Security Force are specified in Tab F, EPIP 1.1.5, "Start-Up and Operation of EOF".

H. RECORDS

1. The duties of the Records individual is the responsibility of the EOF Coordinator until he assigns an available individual to this position.
2. The responsibilities of the Records individual are specified in Tab G, EPIP 1.1.5, "Start-Up and Operation of EOF".

III. ADDITIONAL KEY POSITIONSA. EMERGENCY DIRECTOR

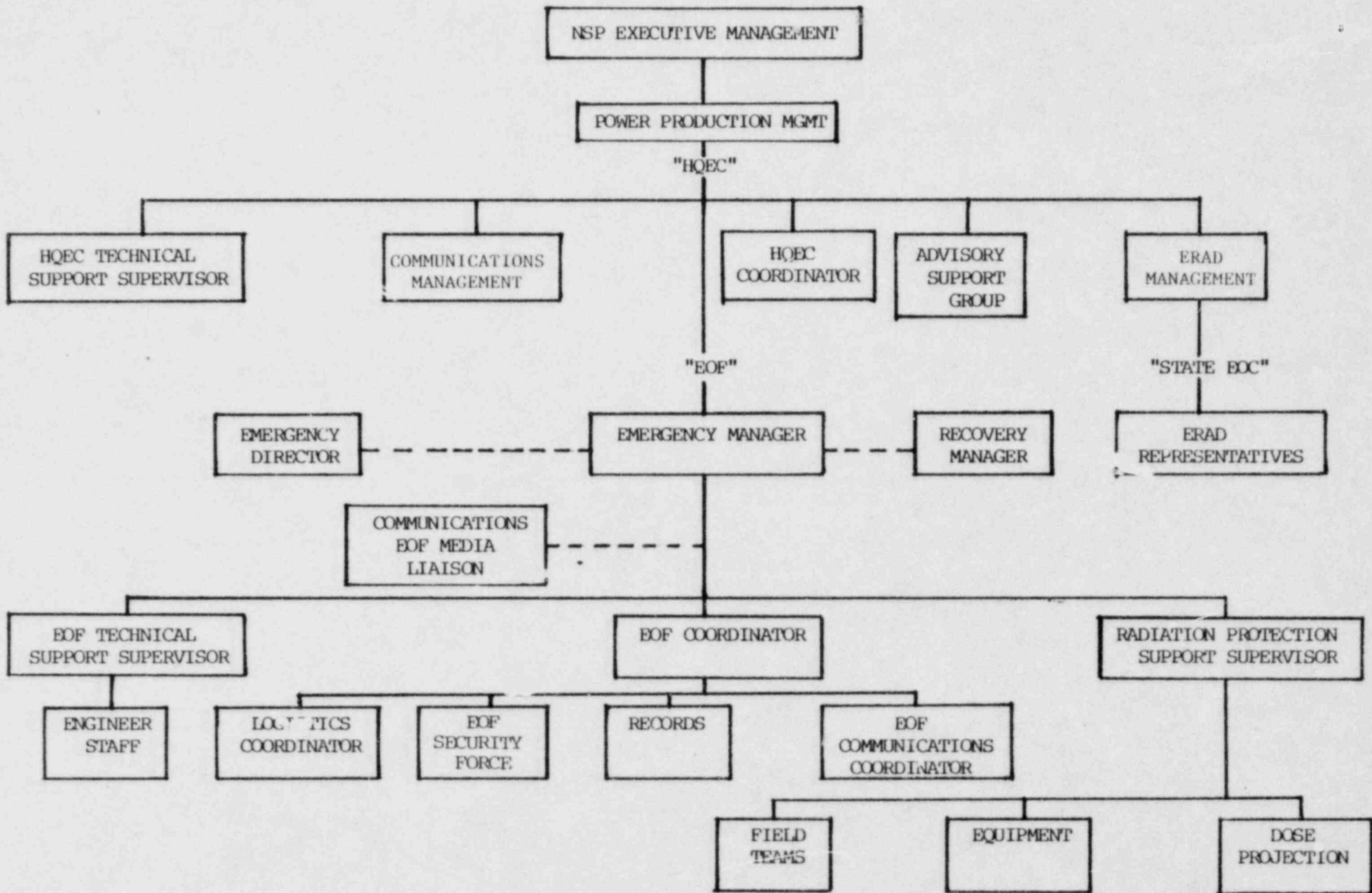
1. The Emergency Director position is staffed by the Plant Manager, or by a list of alternates designated in the respective plant Emergency Plan Implementing Procedures.
2. The responsibilities of the Emergency Director are delineated in the applicable plant's procedures.

B. RECOVERY MANAGER

1. The Recovery Manager position is staffed by corporate management personnel designated on the Call List, TAB A, of the "Notifications" procedure, EPIP 1.1.2.
2. The Recovery Manager is responsible for implementing the "Transition to Recovery Plan" procedure, EPIP 1.1.15, when directed by Power Production Management. He is available at the EOF during the emergency condition to provide assistance in planning and logistics support, as needed.

C. SYSTEM DISPATCHER

1. The System Dispatcher provides the initial interface between the plant and the corporate staff. When notified by the Emergency Director that an emergency condition requiring a corporate response exists, he shall be responsible for notifying applicable corporate personnel in accordance with EPIP 1.1.2, "Notifications".



NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.2 Notifications REV 2

The following changes are included in this revision:

- .The UNUSUAL EVENT CATAGORY is now included which requires calls to ERAD and Communications at the direction of the Emergency Manager.
- .Corrected phone numbers.
- .Section III revised to provide a list of personnel by department.
- .TABS B & C were changed to Figures 2 & 1 respectively.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.2                      REV: 2
PREPARED BY: <i>Gary Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>E. Edwards</i> Manager Nuclear Environmental Services	TITLE:  1.1.2 NOTIFICATIONS
APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plants	

PURPOSE AND OBJECTIVE

The purpose of this procedure is to specify the sequence of events required to notify personnel in the Corporate Emergency Response Organization in the event of a declaration of an "Unusual Event", "Alert", "Site Area Emergency", or "General Emergency" by either the Monticello or Prairie Island Emergency Director.

CONDITIONS AND PREREQUISITES

1. An emergency condition has been declared at either Monticello Nuclear Generating Plant or Prairie Island Nuclear Generating Plant.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibility - System Dispatcher
- B. In Charge - System Dispatcher
- C. Assistance - Emergency Manager  
- Emergency Director

RESPONSIBILITIES

A. SYSTEM DISPATCHER

1. When notified of an emergency by the Emergency Director, the System Dispatcher shall call the Emergency Manager using Tab A, "Call List" and begin documenting notifications using the "Nuclear Emergency Notification List for System Control Center", Figure 1.
2. Contact the Emergency Manager and inform him of the emergency condition. If the Emergency Manager cannot be contacted at the listed telephone number(s), activate the Emergency Manager's pager by telephoning the listed

pager number and state "Contact System Dispatcher Immediately." If the Emergency Manager is not immediately contacted, the System Dispatcher may call the mobile operator to attempt to locate the designated individual. If the Emergency Manager is contacted, proceed to Step 4.

3. If the first listed Emergency Manager can not be contacted within five (5) minutes, re-establish contact with the plant's Emergency Director to verify a need for a corporate emergency response. Once the Emergency Director has been contacted, proceed to Step 5.
4. Establish a three-way telephone connection between the System Dispatch Office, the affected plant's Emergency Director, and the Emergency Manager. Maintain the three-way connection until the Emergency Manager has verified the casualty and determined the extent of the response required, specifically the need for radiation protection support teams.
5. When the Emergency Director or Emergency Manager verifies the need for a corporate response, complete the notification message. The message blanks are provided in Figure 2. Request that the Emergency Manager or Emergency Director specify what groups shall be notified. Options for notifications are as follows:
  - a) Unusual Event - notify Communications and ERAD only.
  - b) Alert, Site Area Emergency, General Emergency - notify all organizations listed in Section I of TAB A as specified in steps 6 - 13.
6. Contact the Emergency Manager designees who have not previously been contacted.

If an Emergency Manager was not reached in Step 2, inform the first designee contacted that he is the first Emergency Manager designee notified, then read the message developed in Step 5.

When each of the remaining designees are notified, inform them that an Emergency Manager designee has already been contacted and who that Emergency Manager is, and then read the message developed in Step 5.

7. Attempt to contact any of the individuals who are listed as Power Production Management. They should be telephoned in the listed order until one of the designees is contacted. When a designee is contacted, read the message developed in Step 5. Inform the contacted individual that he is the first member of Power Production Management contacted.



8. Attempt to contact any of the individuals who are listed under Communications. They should be telephoned in listed order until one of the designees is contacted. If Communications personnel can not be contacted at the listed telephone numbers, activate the Pager Call System for Communications by telephoning the listed pager number and state, "Contact System Dispatcher Immediately". When a Communications Representative has been contacted, read the message developed in Step 5.
9. Contact the on-duty Shift Supervisor of the unaffected nuclear generating plant. When the Shift Supervisor is contacted, read the message developed in Step 5. In this manner, the "Sister plant" Emergency Response Team members will be notified of the activation of the Corporate Emergency Plan and the need for radiation protection support as determined in Step 4.
10. Attempt to contact any of the individuals who are designated as ERAD Liaison. They should be telephoned in the listed order until one of the designees is contacted. When an ERAD Liaison designee has been contacted, read the message developed in Step 5.
11. Attempt to contact any of the individuals who are designated Security Force personnel. They should be telephoned in the listed order until one of the designees is contacted. If Security Force personnel can not be contacted at the listed telephone numbers, activate the Pager Call System for Security Force by telephoning the listed pager number and leave the following message "Contact System Dispatcher Immediately". When a Security Force designee is contacted, read the message developed in Step 5.
12. As time permits, contact the remaining individuals who are listed as Power Production Management. When each remaining designee is contacted, read the message developed in Step 5.
13. When the "Notifications" procedure is completed, log the time of completion in the System Dispatcher's log. Retain copies of Figure 1, Nuclear Emergency Notification List for System Control Center, and Figure 2, Emergency Notification Message for NSP Response Organization, for future reports.

B. CORPORATE EMERGENCY RESPONSE PERSONNEL

1. EOF Coordinator designees will be notified by the plant notification procedure. When informed of an emergency condition, they should proceed to their respective EOF.
2. All other emergency response personnel will be notified by the System Dispatcher and call lists activated by System Dispatcher notifications. These individuals should proceed to their assigned facility.

TAB A

CALL LIST

The positions in Sections I and II of the call list are positions with designated personnel to fulfill the requirements. The personnel in Section III are the body of the Corporate Emergency Response Team.

If the emergency occurs during normal working hours, notify the response team at their respective office telephones. If the emergency occurs during non-working hours, notify the applicable personnel as specified in the procedure at the listed call number.

SECTION I

A. EMERGENCY MANAGER	Office	Telephone		
		Home	Pager	Mobile ***
1.	*Major Area: Minneapolis OR Buffalo			
2.	*Major Area: Minneapolis OR Plymouth			
3.	*Major Area: Minneapolis OR Red Wing			
4.	*Major Area: Minneapolis OR Pequot Lake			
5.	*Major Area: Forest Lake OR Taylors Falls			

B. <u>P.P. MANAGEMENT</u>	Office	Telephone	
		Home	Pager
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\* Major Area provided for use in attempting mobile telephone contact.

\*\* Individuals listed as Emergency Managers may also function as Power Production Management if not required to fulfill Emergency Manager duties.

\*\*\* To make a telephone call to a mobile station dial the operator and ask for a mobile operator.

C.	<u>COMMUNICATIONS</u>	<u>Telephone</u>			
		<u>Office</u>	<u>Home</u>	<u>Pager</u>	
		1.			
		2.			
		3.			
		4.			
5.					

D.	<u>SISTER PLANT RADIATION RESPONSE TEAM</u>	<u>Telephone</u>	
		1. Monticello Shift Supervisor	
		2. Prairie Island Shift Supervisor	

E.	<u>ERAD</u>	<u>Telephone</u>			
		<u>Office</u>	<u>Home</u>	<u>Pager</u>	
		1.			
		2.			
		3.			
		4.			
5.					

F.	<u>SECURITY</u>	<u>Telephone</u>			
		<u>Office</u>	<u>Home</u>	<u>Pager</u>	<u>Mobile</u>
		1.			
		2.			
		3.			
4.					

SECTION II (Called as part of plant notification)

A. EOF COORDINATOR	Telephone	
	Office	Home
<u>Prairie Island</u>		
*1.		
*2.		
*3.		
4.		
*5.		
6.		
*7.		
8.		
9.		
*10.		
11.		
12.		

B. EOF COORDINATOR	Telephone		
	Office	Home	Pager
<u>Monticello</u>			
*1.			
2.			
*3.			
4.			
*5.			
*6.			
7.			
8.			

\* EOF Coordinator Designees who are authorized to assume Emergency Manager responsibilities until the arrival of an Emergency Manager Designee.

SECTION III (Call as needed)OfficeHome

1. Fuel Supply
  - a. Admin. Fuel Supply Contracts
  - b. Mgr. Fuel Supply
2. Plant Engineering and Construction
  - a. Mech. Engr.
  - b. Engineer
  - c. Project. Supt.
  - d. Proj. Mgr. - Fossil
  - e. Asst. Electrical Eng.
  - f. Prairie Island Project Manager
  - g. Proj. Engr.
  - h. Monticello Project Manager
  - i. Electrical Engr.
  - j. Suprv. Eng. Nuc. Sect-Tech Serv
  - k. Proj. Engr.
  - l. Electrical Engr.
  - m. Proj. Eng.
  - n. Asst. Proj. Engr.
  - o. Const. Supt-Monticello
  - p. Mech. Engr.
  - q. Proj. Engr. Fossil Plants
  - r. Const. Supt.
  - s. Mech. Engr.
  - t. Sr. Mech. Engr.
  - u. Supr. Eng. Elect Sect.-Tech Serv
  - v. Proj. Engr.
  - w. P I Intake/Discharge Proj. Mgr.
3. Property Management
  - a. Supr. Bldg Operation
  - b. Mgr. Property Mgmt.
  - c. Supt-Bldg. Maint. & Operation
4. Corporate Strategy & Planning
  - a. Mgr. Corp. Strategy
5. Directors, Officers & Staff
  - a. Asst. to Sr VP-Power Supply



OfficeHome

## 6. Power Production - Nuclear Analysis

- a. Supt - Core Analysis
- b. Asst. Nuc. Analysis Engr.
- c. Asst. Nuc. Analysis Engr.
- d. Asst. Nuc. Analysis Engr.
- e. Asst. Nuc. Analysis Engr.

## 7. Power Production - Nuclear Support Services

- a. Admin. Rad. Env. Monitor
- b. Asst. Admin. Emerg. Preparedness
- c. Nuc Safety & Tech Serv. Engr. Sr.
- d. Nuc Safety & Tech Serv. Eng.

## 8. Nuclear Technical Services

- a. Sr. Production Engr.

## 9. Federal Public Affairs

- a. Mgr.-Spec Nuclear Programs

## 10. Power Production - Production Plant Maintenance

- a. General Supt.
- b. Supt-Maint Coordinator
- c. Supt-Electrical Plants
- d. Supt-Materials & Spec. Proc.
- e. Supt-Overhaul Serv.

## 11. Quality Assurance Department

- a. Q A Engr.
- b. Q A Spec. III
- c. Supt Supplier QA
- d. Q A Spec. Sr.
- e. Supt-Nuclear QA
- f. Q A Engr
- g. Q A Spec I
- h. Q A Engr.

SECTION III (Call as needed) (Continued)

Office

Home

12. Corporate Planning and Development

a. Asst. to the V. P.

13. Power Production Performance & Services

a. Gen. Supt. Prod. Perf.

b. Supt. ~ Env. Reg. Compl.

14. RECOVERY MANAGER

Office

Home

- a.
- b.
- c.
- d.

\* These names are listed in the "NSP Management & Technical Resources" Manual. These persons have had experience or training that could be beneficial in case of a nuclear emergency.

FIGURE 1

NUCLEAR EMERGENCY NOTIFICATION LIST FOR SYSTEM CONTROL CENTER

Individual Reached

Yes No Time

\_\_\_ \_\_\_ \_\_\_

1. Emergency Director (Most likely Shift Supervisor) will notify System Control Center.

\_\_\_ \_\_\_ \_\_\_

2. System Control Center notify Emergency Manager. Call first manager listed only. No answer - use pager or mobile phone number.

a. Tab A: Section I.A.1.

Establish three way call with Emergency Director to verify type of emergency.

Ask the Emergency Manager if any of the following should be notified:

- PP Management \_\_\_\_\_
- Communications \_\_\_\_\_
- Sister plant \_\_\_\_\_
- ERAD \_\_\_\_\_
- Security \_\_\_\_\_

After 5 minutes, with NO contact call Emergency Director (Most likely Shift Supervisor) back and verify need for corporate response.

Complete message blank, Tab B.

\_\_\_ \_\_\_ \_\_\_

3. Call remaining Emergency Manager designees. Read message. If no Emergency Manager reached in Step 2, inform the first designee that he is the Emergency Manager. Inform subsequent contacts that the Emergency Manager has been previously contacted and who that Emergency Manager is.

a. Tab A: Section I.A. 2-6

\_\_\_ \_\_\_ \_\_\_

4. Call out one individual in Power Production management. Telephone in order listed. Read message. Inform individual that he is the first person contacted.

a. Tab A: Section I.B.

- \_\_\_ \_\_\_ \_\_\_ 5. Call one individual in Communications. Telephone in order listed. Read message.
- a. Tab A: Section I.C.
- \_\_\_ \_\_\_ \_\_\_ 6. Call Sister Nuclear Plant Shift Supervisor. Read message.
- a. Tab A: Section I.D.  
or  
b. Direct Line.
- \_\_\_ \_\_\_ \_\_\_ 7. Call one individual in ERAD. Telephone in order listed. Read message.
- a. Tab A: Section I.E.
- \_\_\_ \_\_\_ \_\_\_ 8. Call one individual in Security. Telephone in order listed. Read message.
- a. TAB A: Section I.F.
- \_\_\_ \_\_\_ \_\_\_ 9. Call remaining Power Production Management. Read message.
- a. Tab A: Section I.B.
- \_\_\_ \_\_\_ \_\_\_ 10. Log completion of "Notifications" procedure. Retain copies of completed Figure 1 and Figure 2.

FIGURE 2

EMERGENCY NOTIFICATION MESSAGE FOR NSP RESPONSE ORGANIZATION

"This is the NSP General Office Systems Dispatcher. The following is a notification of an emergency.

There has been an incident at the \_\_\_\_\_  
(Prairie Island) (Monticello)  
Nuclear Generating Plant.

The incident was declared an (a)

\_\_\_\_\_  
(Unusual Event) (Alert) (Site Area Emergency) (General Emergency)

at \_\_\_\_\_ on \_\_\_\_\_  
(time) (date)

Sister plant radiation protection support teams \_\_\_\_\_ requested.  
are/are not

Dispatcher Note: Complete this message as indicated  
for the proper emergency event  
classification.

Unusual Event  
Communications and ERAD Departments take appropriate actions."

Alert, Site Area Emergency, General Emergency  
All personnel assigned duties in the corporate emergency response organi-  
zation are to proceed to their assigned stations to activate the Corporate  
Emergency Response Plan."



NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.3 PUBLIC INFORMATION REV 2

The following changes are included in this revision:

.The original EPIP 1.1.3 ACTIVATION & OPERATION OF EMERGENCY ORGANIZATION has been deleted and pertinent information incorporated into other procedures. The tabs that provided a list of duties for personnel in the Emergency Response Organization have now been moved to either

- EPIP 1.1.5 START-UP & OPERATION OF EOF

or

- EPIP 1.1.7 START-UP & OPERATION OF HQEC

.The present EPIP 1.1.3 PUBLIC INFORMATION was formerly EPIP 1.1.8 NUCLEAR EMERGENCY COMMUNICATIONS. The change was necessary to resolve confusion with the term "communications" being used in a public information context as opposed to communication links and equipment such as telephones, radios, etc.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.3                      REV: 2
PREPARED BY: <i>Gary Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edwards</i> Manager Nuclear Environmental Services	TITLE:  1.1.3 PUBLIC INFORMATION
APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plants	

PURPOSE AND OBJECTIVES

The purpose of this procedure is to establish the method by which the Nuclear Emergency Communications Program will be implemented during an emergency at the Monticello or Prairie Island nuclear power plants.

CONDITIONS AND PREREQUISITES

An emergency has been declared at an NSP nuclear power plant.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibility - Director of Communications.
- B. In Charge - Supervisor-Media Services.

DISCUSSION

Annual dissemination of information to the public regarding how they will be notified and what their actions should be in an emergency is coordinated between NSP, state, and local organizations.

A program to acquaint news media with the emergency plans, information concerning radiation, and points of contact for release of public information in an emergency is conducted annually.

The above programs establish, in advance, information to be available in the home and the principal contacts for the news media.

RESPONSIBILITIESA. DIRECTOR OF COMMUNICATIONS

1. Ensure the implementation and operation of the Nuclear Emergency Communications Program. A chart depicting the Director of Communication's organization is shown in Figure 1.
2. Provide Communications Department support to Power Production Management at the HQEC.
3. Verify that all actions specified in the Nuclear Emergency Communications Program are promptly initiated.

B. FIRST COMMUNICATIONS REPRESENTATIVE CONTACTED

1. The first member of the Emergency Communications Organization contacted by the System Dispatcher shall:
  - a. Complete the specified instructions to activate the Nuclear Emergency Communications Program.
  - b. Contact the Director of Communications, Supervisor-Media Services and EOF Media Liaison, as applicable, and inform them of the emergency conditions.
  - c. Proceed to the Corporate General Office to complete responsibilities assigned in the Nuclear Emergency Communications Program, as applicable.

C. SUPERVISOR-MEDIA INFORMATION

1. When informed of an emergency condition requiring activation of the Corporate Emergency Response Team, Supervisor-Media Services shall:
  - a. If the first communications representative contacted, complete Section B of this procedure.
  - b. Complete the actions specified in the Nuclear Emergency Communications Program.
  - c. Direct the EOF-Media Liaison to proceed to the affected site's EOF.
  - d. Supervise the gathering of information and development of news releases.
  - e. Provide the drafted news releases to the Director of Communications for review by Power Production Management.

- f. Direct the dissemination of news releases and situation reports.
- g. Coordinate with Power Production Management to prepare the scenario for and the conduct of formal news conferences.
- h. Ensure that the Media Information Facility is ready to accommodate the media.
- i. Verify that the Rumor Control procedures specified in the Nuclear Emergency Communications Program are implemented.

D. EOF MEDIA LIAISON

1. When informed of an emergency condition requiring activation of the Corporate Emergency Response Organization, the EOF Media-Liaison shall:
  - a. If the first communications representative contacted, complete Section B of this procedure.
  - b. Complete assigned tasks in the Nuclear Emergency Communications Program.
  - c. When directed, proceed to the affected site's EOF.
  - d. Supervise the collection of information for news releases and press conferences at the EOF.
  - e. Prepare draft news releases and obtain the Emergency Manager's approval of the technical content of all proposed news releases.
  - f. Provide approved drafts to the Supervisor-Media Information.
  - g. Provide an interface with any media personnel who arrive at the EOF. Explain that all news releases are to be made at the Media Information Facility.
  - h. Provide information to the Emergency Manager and Supervisor-Media Information of any activities of media personnel in or around the EOF.

E. COMMUNICATIONS REPRESENTATIVES

1. When notified of an emergency condition requiring activation of the Corporate Emergency Response Organization, communications representatives shall:
  - a. If the first representative contacted, complete Section B of this procedure.
  - b. Complete assigned tasks in the Nuclear Emergency Communications Program.

EMERGENCY COMMUNICATIONS ORGANIZATION CHART

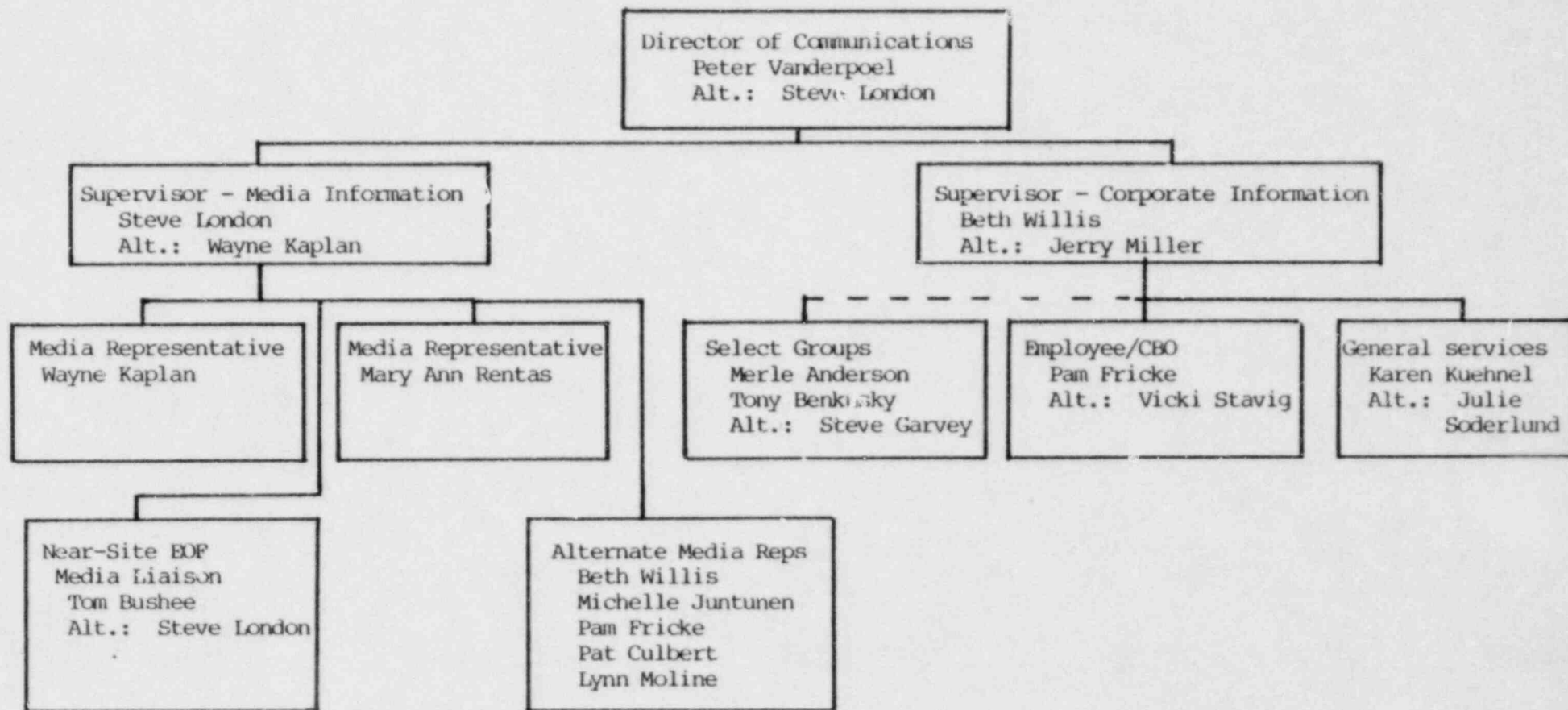


Figure 1

----- indicates information flow only  
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NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.4 EMERGENCY ORGANIZATION RECORDS & FORMS REV 2

The following changes are included in this revision:

- .Title change.
- .Total re-write.
- .Provides a list of records that should be maintained at each facility.
- .A cross reference listing of forms is provided.
- .A Survey Summary Log is deleted.
- .Includes a description of maps.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.4                      REV: 2
PREPARED BY: <i>Gary Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edward</i> Manager Nuclear Environmental Services	TITLE:  1.1.4 EMERGENCY ORGANIZATION RECORDS AND FORMS
APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plants	

PURPOSE AND OBJECTIVE

The purpose of this procedure is to list the records that are to be maintained and the forms to be used by the Emergency Response Organization.

CONDITIONS AND PREREQUISITES

An emergency condition has been declared by a Shift Supervisor or Emergency Director and the Corporate Emergency Organization has been activated.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibility - Power Production Management
- B. In Charge
  - HQEC - HQEC Coordinator
  - EOF - EOF Coordinator
  - SCC - System Dispatcher

DISCUSSION

- A. In order to record the events, actions and results that occur during an emergency, the Corporate Emergency Plan Implementing Procedures specify that various forms and records be maintained. The instructions for completing these forms are described in the procedures that implement the individual forms. This procedure contains a list of all of the official records and forms that are required by the various procedures and provides a cross reference to the applicable procedure.
- B. Records should be consolidated and filed to provide a permanent history of activities and events. These records may be used to assist management in decision making functions and to provide a reference for final reports.

- C. Some forms are provided to facilitate the transfer of information between groups or shifts. Information sheets provide a summary of important facts that are useful to the operation of the facilities but are not required to reconstruct events or obtain data for formal reports. An example of these sheets is the Logistics Coordinator Information Sheet which specifies telephone numbers, product requisitions and special contacts. These sheets should be used as necessary, to assist shift turnover or facilitate normal operation, but they are not mandatory for recordkeeping purposes.
- D. Record forms that are not specified by other procedures but are required to maintain a concise history of events are described in the TABS to this procedure.
- E. The following is a composite of all forms provided by the NSP Corporate Emergency Plan Implementing Procedures. These forms should be used as specified by the procedures.
1. Nuclear Emergency Notification List for System Control Center.
    - a) This form is found in Figure 1, EPIP 1.1.2, "Notifications". The form provides a checklist of the notifications for use by the System Dispatcher during an NSP Emergency Response Organization activation.
  2. Emergency Notification Message for NSP Response Organization.
    - a) This form is found in Figure 2, EPIP 1.1.2, "Notification"s. The form is to be completed by the System Dispatcher, as directed by the Emergency Manager or Emergency Director. This is the message to be transmitted to the Corporate Emergency Response Organization during activation.
  3. Narrative Log
    - a) This form is found in Figure 1, Tab A, EPIP 1.1.4, "Emergency Organization Records and Forms". The use of the Narrative Log is implemented at the EOF by EPIP 1.1.5, "Start-Up and Operation of EOF", and at the HQEC by EPIP 1.1.7, "Start-Up and Operation of HQEC". The Narrative Log is used to provide a chronological history of events and actions.
  4. Logistics Coordinator Information Sheet
    - a) This form is found in Figure 1, EPIP 1.1.6, "Emergency Organization Shift Turnover". The purpose of this sheet is to provide a means of tracking previous actions concerning requisitions of supplies and equipment. It will provide a status of all requisitions. This information would not normally be listed in any of the other logs or forms.

5. Emergency Sample Results Log
  - a) This form is found in Figure 1, EPIP 1.1.10, "Offsite Surveys". This form is used to provide a record of offsite survey results. The form is used by the survey teams and the EOF personnel assigned to plume mapping.
6. Emergency Classification Change
  - a) This form is found in Figure 1, EPIP 1.1.5, "Start-up and Operation of EOF". This form is used to provide information to non-NSP agencies when re-classifying an emergency condition.
7. Emergency Notification Follow-up Message
  - a) This form is found in Figure 2, EPIP 1.1.5 "Start-up and Operation of EOF". This form is used to update the information relayed to non-NSP agencies. It is also available to provide NSP personnel with current information concerning the status of radiological releases.
8. Offsite Protective Action Recommendation Checklist
  - a) This form is found in Figure 1, EPIP 1.1.11, "Accident Assessment." This form is used by the Radiation Protection Support Supervisor to advise the Emergency Manager of protective action which may be necessary based upon EPA Guidelines and the known or projected offsite conditions.
9. Whole Body Survey Form
  - a) This form is found in Figure 1, EPIP 1.1.16, "Offsite Personnel and Vehicle Monitoring and Decontamination". The form is used to record personnel monitoring results in the event that a site evacuation is ordered. The form will be completed for each contaminated individual monitored prior to their unrestricted release.
10. Vehicle Survey Form
  - a) This form is found in Figure 2, EPIP 1.1.16, "Offsite Personnel and Vehicle Monitoring and Decontamination." The form is used to record vehicle monitoring results in the event that a site evacuation is ordered. The form will be completed for each contaminated vehicle prior to its unrestricted release.
11. EOF Entry Log
  - a) This form is found in Figure 1, EPIP 1.1.17, "Personnel Monitoring at the EOF". This form is used by the EOF Area Guard to log personnel in and out of the EOF. It records the actual exposure received during each period at the EOF.

## 12. Individual Exposure Record

- a) This form is found in Figure 2, EPIP 1.1.17, "Personnel Monitoring at the EOF". This form is used by the Radiation Protection Support Supervisor or designee to record the accumulated exposure of personnel in the Emergency Response Organization.

F. Emergency Plan Drawings (Maps) are provided at each of the emergency response facilities. The following maps, as listed, are utilized by NSP, State, and local response organizations.

1. A 10-mile radius map which identifies sampling locations for NSP and state survey teams.
  - a) Prairie Island Area Radiological Sampling Points Utilized by the State of Minnesota, Wisconsin and NSP Survey Teams. E-EPD-5.1 (supplemented by a list of location descriptions)
  - B) Monticello Area Radiological Sampling Points Utilized by the State of Minnesota and NSP Survey Teams. E-EPD-4.1 (supplemented by a list of location descriptions)
2. A 10-mile radius map which identifies road block locations of various law enforcement agencies.
  - a) Prairie Island Area - Minnesota and Wisconsin Traffic Control Points E-EPD-5.2.
  - b) Monticello Area - Minnesota Traffic Control Points E-EPD-4.2.
3. A 10-mile radius map which provides population estimates within specific sectors and distances from the plant site.
  - a) Prairie Island Area - Minnesota and Wisconsin Population Distribution Map 1980 Census Estimate E-EPD-5.3.
  - b) Monticello Area - Minnesota Population Distribution Map 1980 Census Estimate E-EPD-4.3.
4. A 10-mile radius map which identifies locations for the NSP Radiation Environmental Monitoring Program (REMP) air sampling sites and the Thermoluminescent dosimeters (TLDs).
  - a) Prairie Island Area - Minnesota and Wisconsin NSP-REMP Air and TLD Sampling Points E-EPD-5.4.
  - b) Monticello Area - Minnesota NSP - REMP Air and TLD Sampling Points E-EPD-4.4.



5. A 10-mile radius map which identifies the locations of NRC Thermo-luminescent dosimeters (TLDs).
  - a) Prairie Island Area - Minnesota and Wisconsin Location of NRC - TLDs E-EPD-5.5.
  - b) Monticello Area - Minnesota Locations of NRC - TLDs E-EPD-4.5.

#### RESPONSIBILITIES

##### A. HQEC

1. The HQEC Coordinator is responsible to coordinate the documentation of activities at the HQEC.
2. The HQEC Coordinator shall ensure that the following records are maintained, as applicable.
  - a) Narrative Log
  - b) Tapes of meetings and conversations

##### B. EOF

1. The EOF Coordinator is responsible to coordinate the documentation of activities at the EOF.
2. The EOF Coordinator shall ensure that the following records are maintained, as applicable.
  - a) Narrative Log
  - b) Logistics Coordinator Information Sheets
  - c) Emergency Sample Results
  - d) Emergency Classification Change
  - e) Emergency Notification Followup Message
  - f) Offsite Protective Action Recommendation Checklist
  - g) Whole Body Survey Form
  - h) Vehicle Survey Form
  - i) EOF Entry Log
  - j) Individual Exposure Records
  - k) Tapes of meetings or conversations

##### C. SCC

1. The System Dispatcher is responsible to complete and maintain records at the SCC.
2. The Systems Dispatcher shall maintain the following records.
  - a) Nuclear Emergency Notification List for System Control Center.
  - b) Emergency Notification Message for NSP Response Organization.

TAB ANARRATIVE LOG

1. The Narrative Log is used to provide a running commentary of the events and activities during the emergency condition.
2. As a minimum, Narrative Logs shall be maintained at the following facilities:
  - a) HQEC
  - b) EOF
3. Within each facility it may be necessary to maintain more than one Narrative Log depending on the number of activities in progress. It is the individual group supervisor's responsibility to determine whether a narrative of his group's activities is warranted. When an individual group is maintaining a Narrative Log, the group supervisor shall inform the respective facility coordinator (EOF or HQEC) to ensure that the log is collected at routine intervals.
4. The Narrative Log, Figure 1, should be maintained as follows:
  - a) An entry for each significant event, conversation, decision or action shall be made.
  - b) The entries shall be made in chronological order.
  - c) Each entry shall include the time of the event and a brief summary of the event or action.
  - d) As each page is completed, it shall be sequentially numbered and filed in a loose-leaf binder.
  - e) In some cases, an entry may be made out of sequence. In these cases, an asterisk should precede the time and the words "late entry" used to start the summary.



NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.5 STARTUP & OPERATION OF THE EOF REV 2

The following changes are included in this revision:

- .Title change.
- .Responsibilities and duties of individuals staffing EOF positions are included as Tabs to this procedure.
- .The startup section is to prepare the facility for staffing.
- .Record duties have been added in TAB G.
- .Technical Support Supervisor duties have been added in TAB H.
- .Added two message forms as figures 1&2.





3. If airborne contamination is expected, take a portable air sample to determine airborne levels. If levels are above normal, inform the Radiation Protection Support Supervisor and the Emergency Manager.
4. Direct the Communications Coordinator to test all communications equipment. If the Communications Coordinator is not available, complete his assigned functions.
5. Unlock all the radiation protection supply cabinets. Provide all the area maps and charting materials to the radiation protection work area in the EOF.
6. Open all EOF supply cabinets and provide writing supplies, logs and other materials, as necessary, to the various groups.
7. Set up the EOF Command Center tape recorder and provide tapes to record any meetings in the Command Center.
8. Ensure that materials and manuals identified in the Nuclear Technical Services Operating Instruction, "Identification of EOF material located at Nuclear Technical Services Office", are moved to the EOF.
9. Report to the Emergency Manager when all immediate actions are complete.

#### RESPONSIBILITIES

The individual responsibilities of Corporate Personnel assigned to the EOF are specified in tabs attached to this procedure. The following tabs are included:

<u>Position</u>	<u>Tab</u>
● Emergency Manager duties	A
● Radiation Protection Support Supervisor duties	B
● EOF Coordinator duties	C
● Communications Coordinator duties	D
● Logistics Coordinator duties	E
● Security Force duties	F
● Records duties	G
● Technical Support Supervisor duties	H

TAB AEMERGENCY MANAGER DUTIES

1. Contact the plant Emergency Director and determine the extent of the emergency and the need for offsite radiation protection support. Determine the message to be relayed to the emergency response organization.
2. Provide the System Dispatcher with the information required to complete the "Emergency Notification Message for NSP Response Organization," Figure 2, EPIP 1.1.2, "Notifications". Direct the System Dispatcher to complete the "Notifications" procedure, EPIP 1.1.2.
3. Proceed to the affected plant's EOF and assume control of the offsite organization as follows:
  - a. Upon arrival at the EOF, review the status of the emergency organization at the EOF. This may be accomplished by a review of the EOF status boards. If the EOF startup has not been completed, direct the activities of the available personnel to complete the Startup Section of this procedure. Verify that the members of the Nuclear Technical Services Group and Production Training Group assigned to the affected plant have been notified of the emergency and directed to proceed to the EOF.
  - b. If the EOF is already functioning as the center for control of offsite activities, conduct the "Emergency Organization Shift Turnover", procedure EPIP 1.1.6, for the Emergency Manager position, then proceed to Step 6. If the Emergency Manager position has not been staffed, proceed to Step 3.c.
  - c. Contact the Emergency Director. Determine the extent of offsite operations presently in progress and any considered necessary but not yet initiated.
  - d. When familiar with the operations at the EOF and the offsite organization activities, and when the EOF is ready to assume full responsibility for offsite activities, inform the Emergency Director that the EOF is ready to assume control of the offsite organization.
  - e. When authorized by the Emergency Director, assume control of the EOF activities. Transfer of control of the offsite activities shall be formally documented in the "Narrative Log", Figure 1, EPIP 1.1.4, "Emergency Organization Records and Forms".
  - f. Verify that the Communications Coordinator informs offsite agencies of the transfer of control of offsite activities and communications to the EOF.

4. Assess the need for any offsite radiation protection monitoring. Consider the potential for any radioactive release and the probable time lag to initiate offsite monitoring. If there is a potential need for offsite monitoring and the offsite radiation support team was not activated in the initial corporate activation, contact the Sister Plant Shift Supervisor and direct him to activate the Offsite Radiation Protection Support Team in accordance with the individual plant's response procedure for an emergency at the sister plant.
5. Assign personnel, as available, to perform the following functions. (If the position is already filled, additional assignments are not required.)
  - a. EOF Coordinator
  - b. Radiation Protection Support Supervisor
  - c. Technical Support Supervisor
6. Direct the Radiation Protection Support Supervisor to obtain all applicable offsite survey information available at the TSC and to implement the "Offsite Survey" procedure, EPIP 1.1.10.
7. Provide direct interface with the NRC and Department of Energy, if necessary.
8. Direct the Communications Coordinator to establish communications with the state and local area EOCs (EPIP 1.1.8, "Communications Equipment and Information", provides guidelines for available means of communication). Ensure that these groups have been informed that all communications will be coordinated through the EOF Command Center.
9. Determine the necessity for any assistance from vendors, consultants or outside agencies. Direct the Logistics Coordinator to notify primary vendors in accordance with EPIP 1.1.14, "Vendor/Consultant/Outside Agency Interface". If additional assistance is necessary, direct the Logistics Coordinator to procure services in accordance with EPIP 1.1.9, "Emergency Processing of Purchase Orders" and EPIP 1.1.14, "Vendor/Consultant/Outside Agency Interface."
10. Based on the information gathered by the Radiation Protection Support Group (survey results and offsite dose estimates), provide recommendations to the Emergency Director, HQEC and State EOC as to the extent of offsite releases and the potential need for protective actions, as specified in EPIP 1.1.11, "Accident Assessment".
11. Instruct all support groups to report the status of all activities in progress at specified intervals.
  - a. Technical Support Group
  - b. EOF Coordinator
  - c. Radiation Protection Support Supervisor

12. Provide routine status reports to the HQEC, State, and the NRC. The following forms should be used:
  - Emergency Classification Change Figure 1, EPIP 1.1.5, "Start-up and Operation of EOF".
  - Emergency Notification Follow-up Message Figure 2, "Start-up and Operation of EOF".
  - Emergency Sample Results Log Figure 1, EPIP 1.1.10, "Offsite Surveys".
  - Offsite Protective Action Recommendation Checklist Figure 1, EPIP 1.1.10, "Accident Assessment".
13. Review all news releases prepared by the EOF Media Liaison.
14. Direct the EOF staff to provide engineering, radiation protection and general support services as requested by the Emergency Director.
15. Implement EPIP 1.1.12, "Implementation of Emergency Radiological Environmental Monitoring Program", in accordance with recommendations from the Radiation Protection Support Supervisor and guidelines provided in the procedure.
16. Through discussions with Power Production Management, the Emergency Director and the Recovery Manager determine if there will be a need for the Recovery Organization. This decision should consider the plant status and the estimated long term efforts required to return the plant to an operable condition as well as the effect of the emergency on the surrounding area and the necessary efforts to correct any damage. If a recovery effort is necessary, request that the Recovery Manager prepare the recovery organization. Provide input to the Recovery Manager, as necessary, to facilitate preparation of the Recovery Organization, in accordance with EPIP 1.1.15, "Transition to the Recovery Plan".
17. If notified by the Emergency Director that an evacuation of site personnel is required due to a radiological contaminating event, implement EPIP 1.1.16, "Offsite Personnel and Vehicle Monitoring and Decontamination".
18. When the emergency condition is over, the plant in a stable condition, all releases terminated and there is no potential for additional release, operation of the Emergency Organization may be concluded. The Emergency Manager shall contact Power Production Management and the Emergency Director and verify that all members agree that the emergency condition can be terminated. If all are in agreement, the Emergency Manager shall direct the Emergency Director to reclassify the emergency condition as applicable.
19. If transfer of activities to the Recovery Organization is necessary, direct the activities of the Emergency Response Organization to transfer responsibilities in accordance with the "Transition to the Recovery Plan" procedure, EPIP 1.1.15.
20. Upon completion of the "Transition to the Recovery Plan" procedure, direct the EOF Coordinator to verify that the EOF equipment is inventoried and the equipment lockers are returned to a standby status.



TAB BRADIATION PROTECTION SUPPORT SUPERVISOR DUTIES

1. When notified of the need to activate the offsite radiation protection support team, the sister plant Superintendent, Radiation Protection shall verify that the sister plant support team has been notified in accordance with the applicable plant procedure. He shall assume the responsibilities of the Radiation Protection Support Supervisor upon arrival at the EOF.
2. Upon arrival at EOF the Radiation Protection Support Supervisor shall contact the onsite Radiological Emergency Coordinator at the TSC and determine the extent of the radiological surveys that have been completed, offsite dose estimates, and any exclusion areas that have been established.
3. When familiar with the offsite survey activities in progress, assume responsibility for the control and coordination of offsite survey teams.
4. Dispatch survey teams to conduct surveys in accordance with the "Offsite Survey" procedure, EPIP 1.1.10.
5. Contact the State EOC and establish an interface with the State Health official in charge of the State field teams and the State accident assessment operations. The "Auto-ring Hotline" provides a direct connection between the EOF and the State EOC and is available for this purpose (see EPIP 1.1.8, "Communications Equipment and Information"). Obtain any available data that the State has determined concerning offsite doses or field survey results. Use this data to provide additional information for the development of the plume map in accordance with EPIP 1.1.11, "Accident Assessment".

The following forms should be used to transfer information to the State EOC.

- Emergency Classification Change Figure 1, EPIP 1.1.5, "Start-up and Operation of EOF".
  - Emergency Notification Follow-up Message Figure 2, "Start-up and Operation of EOF".
  - Emergency Sample Results Log Figure 1, EPIP 1.1.10, "Offsite Surveys".
  - Offsite Protective Action Recommendation Checklist Figure 1, EPIP 1.1.10, "Accident Assessment".
6. Direct the monitoring of the EOF atmosphere and provide routine updates to the EOF Coordinator or Emergency Manager concerning the habitability of the EOF.

B-1



7. Ensure that dosimetry for EOF personnel is being issued, collected and recorded in accordance with EPIP 1.1.17, "Personnel Monitoring at the EOF".
8. When radiation protection field teams forward survey results, log the data on an Emergency Sample Results Form, Figure 1 of EPIP 1.1.10 and supervise the development of the plume map in accordance with EPIP 1.1.11, "Accident Assessment".
9. At specified intervals prepare status reports of operations in progress for the Emergency Manager. The report should cover the extent of surveys conducted, dose estimates based on surveys, any recommendations for evacuation of personnel in plume path, average hourly dose to radiation protection personnel, additional personnel required and any significant problems of a radiation protection nature.
10. Based on information obtained from offsite surveys, provide recommendations to the Emergency Manager concerning the necessity for protective actions. EPIP 1.1.11, "Accident Assessment", provides guidance for protective actions.
11. Provide recommended evacuation routes for plant personnel in the event that a site evacuation is required. If evacuated plant personnel require monitoring or decontamination, implement EPIP 1.1.16, "Offsite Personnel and Vehicle Monitoring and Decontamination."
12. Provide recommendations to the Emergency Manager as to the need to implement the "Emergency Radiological Environmental Monitoring Plan", EPIP 1.1.12. If the Emergency Radiological Environmental Monitoring Plan is implemented, provide dosimetry for the assigned personnel and inform them of any radiological problems in the areas in which they will be working.
13. Upon termination of the emergency condition, direct the survey teams to return all equipment items to the trailer and radiological equipment lockers. Conduct an inventory of the emergency trailer contents and requisition any equipment necessary to return equipment to a standby status.

B-2

TAB CEOF COORDINATOR DUTIES

1. Complete the Startup Section of this procedure.
2. If you are listed, in EPIP 1.1.2 TAB A Section II, as authorized to assume Emergency Manager responsibilities until the arrival of an Emergency Manager Designee, review TAB A EPIP 1.1.5 Emergency Manager Duties.
3. Assign personnel as necessary to the following positions. (If any position is not delegated to another individual, the EOF Coordinator shall assume those duties.)
  - a. Communications Coordinator
  - b. Records
  - c. Security Guards
  - d. Logistics Coordinator
4. Assign Security Force personnel to guard the access to the EOF Command Center and the access to the EOF. If security force personnel have not arrived at the EOF, assign available personnel to act as guards until the designated force has arrived. A Corporate Security Department individual, on arrival, may assume responsibility for supervision of contract guards. Specify the areas to which access should be controlled. Provide the guard at the EOF entrance with a copy of the "Personnel Monitoring at the EOF", procedure, EPIP 1.1.17. Direct the guard to issue and collect personal dosimetry in accordance with the procedure and to record the pertinent data on the EOF Entry Log EPIP 1.1.17, Figure 1. A security force checklist is provided in Tab F of this procedure.
5. Update or assign the updating of the EOF status boards for personnel, plant status and radiation protection activities.
6. Verify that the EOF Communications Coordinator duties, Tab D, have been completed.
7. Complete, or if delegated, direct the activities of the individual assigned responsibility for maintaining EOF records. Verify that the "Emergency Organization Records and Forms" procedure, EPIP 1.1.4, has been implemented.
8. Direct the activities of the Logistics Coordinator to arrange food and lodging, as necessary, for the EOF staff. The Logistics Coordinator's duties are listed in TAB E of this procedure.
9. Determine a shift rotation that will allow staffing of the EOF on a 24 hour basis.

C-1

10. Verify that a Media Liaison is available at the EOF to interface with any media personnel who arrive at the EOF. If no one is available, request HQEC to supply a Communications Department representative as soon as possible.
11. Verify the habitability of the EOF by having an EOF air sample taken and analyzed at frequent intervals.
12. Provide equipment, personnel, and general support, as directed by the Emergency Manager, through interfaces with the Logistics Coordinator, Communications Coordinator and the Security Force.
13. Prepare regular status reports for the Emergency Manager concerning the status of manning the EOF and any problems concerning the EOF operation or logistics.
14. Upon termination of the emergency condition, supervise the inventory of equipment, and transition of the EOF to a standby status.

C-2

TAB DCOMMUNICATIONS COORDINATOR DUTIES

1. Establish communication with the following organizations on the "Auto-ring Hot lines". Inform these response centers that the EOF Command Center is manned and coordinating offsite activities.
  - a. TSC
  - b. HQEC
  - c. NRC (ENS)
  - d. NRC (HPN)
  - e. STATE EOC
  - f. LOCAL EOC
2. Establish communications with the NRC Regional Office using available phone circuits (312-932-2500). Inform this center that the EOF Command Center is manned and coordinating offsite corporate activities.
3. Inform the EOF Coordinator when all direct lines of communication have been established.
4. Test the backup communication radio system by establishing communications with the TSC. This system is also used to direct mobile field survey teams, as needed. If any radio equipment malfunctions, contact the following:

Monticello

Granite City Electronics (612) 252-1887 - 24 hr service

Prairie Island

Folsom Electronics (507) 334-5586 - 24 hr service

If unable to reach the applicable repair service, contact the NSP Telecommunications Supervisor at the General Office.

5. Distribute copies of the Communication Equipment and Information Procedure, EPIP 1.1.8, to each office.
6. Provide portable radios to the EOF Coordinator for use by the EOF Security Guards.
7. Verify that the phone lines are operable in the rooms provided for NRC, state and local officials, and corporate emergency response personnel. If any communications equipment problems occur contact the telephone company representative at the number listed in the Communications Equipment and Information Procedure EPIP 1.1.8.
8. Report to the EOF Coordinator when all communication actions are complete and log this completion in the EOF Narrative Log.



TAB ELOGISTICS COORDINATOR DUTIES

1. Provide office support supplies to facilitate recordkeeping.
  - a. Pens/Pencils/Markers
  - b. Writing paper/Note pads
  - c. Reproduction paper
  - d. Photographic supplies
  - e. Recording tapes
2. Provide special forms and charts as necessary to support EOF operation.
  - a. Narrative Log (Figure 1, EPIP 1.1.4)
  - b. Emergency Sample Results Form (Figure 1, EPIP 1.1.10)
  - c. Area maps
  - d. EOF Entry Log (Figure 1, EPIP 1.1.17)
  - e. Individual Exposure Record (Figure 2, EPIP 1.1.17)
3. Provide additional office supplies as necessary. If additional supplies are required, make arrangements to obtain equipment from corporate offices or requisition necessary supplies in accordance with the "Emergency Processing of Purchase Orders," EPIP 1.1.9.
4. As required, arrange for mobile food/beverage delivery or with commissary vendors to supply prepared food for the number of personnel assigned to the EOF.
5. If directed by the Emergency Manager, verify that the plant's NSSS primary vendor and architect engineer have been notified in accordance with EPIP 1.1.14, "Vendor/Consultant/Outside Agency-Interface". If additional assistance is required, request or procure services as directed in accordance with EPIP 1.1.9, "Emergency Processing of Purchase Orders".
6. If long term arrangements are necessary and a substantial number of additional personnel will be assigned to the site, make arrangements for the needed equipment to be supplied to the EOF, as requested.



TAB FEOF SECURITY FORCE DUTIES

Note: Supervision of contract guards will be performed by the EOF coordinator or on arrival, a Corporate Security Department individual.

1. Security Force members (or available personnel) assigned to the following areas:
  - a. EOF Entrance (Area Guard)
  - b. EOF Command Center Entrance
2. Two-way radio supplied to each guard and the EOF Coordinator.
3. Copy of the EOF Security Force Duties supplied to each guard.
4. Access list supplied to the Command Center Guard. The access list should consist of the "Notifications" call list, EPIP 1.1.2, Tab A, Sections I and II. Additional individuals requiring Command Center access may be added as necessary, by the EOF Coordinator.
5. Access list supplied to the EOF area guard. The list should consist of the "Notifications" call list, EPIP 1.1.2 Tab A, Section I, II and III. Additional individuals requiring access to the EOF may be added as necessary by the EOF Coordinator.
6. Copy of EPIP 1.1.17, "Personnel Monitoring at the EOF" and Entry Log Forms supplied to the Area Guard.
7. Security guards directed as follows:
  - a. Only individuals on the access list should be admitted to the area.
  - b. NSP personnel should have an employee identification.
  - c. Non-NSP employees, such as state or local officials, NRC representatives, or vendors, will be added to the access list as necessary by the EOF Coordinator.
  - d. Maintain running total of individuals in the EOF area.
  - e. Limit the total number of people in the EOF Command Center to ten.
  - f. Complete Entry Log for each individual entering the EOF in accordance with EPIP 1.1.17, "Personnel Monitoring at the EOF".

TAB G

RECORDS DUTIES

1. Implement EPIP 1.1.4, "Emergency Organization Records and Forms" at the EOF.
2. Distribute and collect records and forms.
3. Inform EOF personnel as to the nature and number of records to be maintained.

TAB HEOF TECHNICAL SUPPORT SUPERVISOR DUTIES

1. Provide necessary manuals, publications & prints to assist in analysis of plant conditions. (Must be moved to EOF according to Nuclear Technical Services Section Operating Instructions.)
2. Provide technical analysis as requested by the Emergency Manager.
3. Provide an interface with vendor and NRC technical analysts who are located at the EOF.
4. Provide information to the HQEC Technical Support Group.
5. Supervise the efforts of the technical support staff at the EOF.

FIGURE 1

EMERGENCY CLASSIFICATION CHANGE

Verify that the organization/person called is correct prior to relaying emergency information.

THIS IS \_\_\_\_\_, \_\_\_\_\_ AT THE  
(Name) (Title)  
\_\_\_\_\_ NUCLEAR GENERATING PLANT.  
(Plant)

WE HAVE RE-CLASSIFIED THE EVENT AS  Escalated  
 De-Escalated

TO a(N)  Event May Be Terminated  
 Unusual Event  
 Alert  
 Site Area Emergency  
 General Emergency

at \_\_\_\_\_ hours  
(time)

Give a brief description of the emergency:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PLEASE RELAY THIS INFORMATION TO YOUR EMERGENCY ORGANIZATION PERSONNEL.

Emergency Director/Manager Approval \_\_\_\_\_  
(Name/Date)

Emergency Communicator \_\_\_\_\_  
(Name/Date)

FIGURE 2

EMERGENCY NOTIFICATION FOLLOWUP MESSAGE\*

Date \_\_\_\_\_

Time \_\_\_\_\_ AM/PM

1. Location of incident: \_\_\_\_\_  
(Monticello - Prairie Island)

2. Date/time of incident: \_\_\_\_\_

3. Class of emergency: \_\_\_\_\_

4. Type of actual or projected release: ( ) airborne  
( ) waterborne  
( ) surface spill

Estimated duration: \_\_\_\_\_ hours

5. Estimated quantity of radioactive material released  
or being released: \_\_\_\_\_ curies

Height of release: ( ) ground level  
(for airborne only) ( ) 100 meters (stack) (Monticello only)  
( ) 42.5 meters (Rx Bldg Vent) (Monticello only)  
( ) 60 meters (Rx Bldg Vent) (Prairie Island only)

6. Chemical and physical form of released material: \_\_\_\_\_

Relative quantity: \_\_\_\_\_ % Noble Gases \_\_\_\_\_ uCi/cc  
\_\_\_\_\_ % Iodines \_\_\_\_\_ uCi/cc  
\_\_\_\_\_ % Particulates \_\_\_\_\_ uCi/cc

7. Meteorological Conditions: Wind Velocity \_\_\_\_\_ mph  
Wind Direction (from): \_\_\_\_\_ degrees Temperature \_\_\_\_\_ °C  
Atmospheric Stability Class \_\_\_\_\_ Form of precipitation \_\_\_\_\_

8. Actual or projected dose rates at site boundary: W.B. \_\_\_\_\_ mrem/hr  
Thyroid \_\_\_\_\_ mrem/hr  
Projected integrated dose at site boundary: W.B. \_\_\_\_\_ mrem  
Thyroid \_\_\_\_\_ mrem

\*Complete as much of the form as information availability and time allows.  
All blanks need not be completed.



FIGURE 2

	<u>Whole Body</u>		<u>Thyroid</u>		<u>Sectors Affected</u>
9. Projected dose rates:	2 miles	_____	mrem/hr	_____	mrem/hr
	5 miles	_____	mrem/hr	_____	mrem/hr
	10 miles	_____	mrem/hr	_____	mrem/hr
Projected integrated dose at:	2 miles	_____	mrem	_____	mrem
	5 miles	_____	mrem	_____	mrem
	10 miles	_____	mrem	_____	mrem

10. Estimate of any surface radioactive contamination: \_\_\_\_\_ dpm/100 cm<sup>2</sup>

11. Emergency response actions underway: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. For liquid release to the River, estimate release volume, release activity and estimated time for concentration to reach public water:

\_\_\_\_\_

13. Recommended emergency actions, including protective actions:

\_\_\_\_\_  
\_\_\_\_\_

14. Request for any needed support by offsite organizations:

\_\_\_\_\_  
\_\_\_\_\_

15. Prognosis for worsening or termination of event based on plant information:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Emergency Director/Manager  
(or Designee)

NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.6 EMERGENCY ORGANIZATION SHIFT TURNOVER REV 2

The following changes are included in this revision:

- .TAB A which contained communications information such as telephone numbers, etc. has been moved from this procedure to EPIP 1.1.8, COMMUNICATIONS EQUIPMENT & INFORMATION.
- .TAB B is now Figure 1.
- . Includes shift turnover procedure for use by HQEC positions.

NUCLEAR SUPPORT SERVICES DEPT  
NORTHERN STATES POWER COMPANY

CORPORATE NUCLEAR EMERGENCY PLAN  
IMPLEMENTING PROCEDURE

NUMBER: EPDP 1.1.6

REV: 2

PREPARED BY: *Gay Hudson*  
Asst. Adm. Emergency Preparedness

EFFECTIVE DATE: October 6, 1981

REVIEWED BY: *Edward*  
Manager Nuclear Environmental Services

TITLE:  
1.1.6 EMERGENCY ORGANIZATION  
SHIFT TURNOVER

APPROVED BY: *[Signature]*  
General Manager Nuclear Plants

PURPOSE AND OBJECTIVES

The purpose of this procedure is to provide an orderly transfer of activities at the HQEC and EOF for the primary positions in each shift.

CONDITIONS AND PREREQUISITES

An emergency condition has been declared and the HQEC and EOF have been activated.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibility - EOF - Emergency Manager  
                                      - HQEC - Power Production Management
- B. In Charge - EOF - Emergency Manager  
                                      - HQEC - Power Production Management
- C. Assistance - EOF - EOF Coordinator  
                                      - HQEC - HQEC Coordinator

RESPONSIBILITIES

I. EOF SHIFT TURNOVER

A. EMERGENCY MANAGER

1. Upon arrival at the EOF, the relieving Emergency Manager shall conduct the following familiarization procedures:
  - a. Review the plant status through discussions with the individual functioning in the Emergency Manager position. Read the Narrative Log for the preceding twenty-four hour period and review the EOF status boards.

- b. Review the status of the offsite radiation protection support teams and any survey operations that are in progress.
  - c. Discuss with the EOF Coordinator the status of the EOF organization.
  - d. Discuss the activities of the EOF engineering staff with the Technical Support Supervisor.
  - e. Establish communications with the Emergency Director. Determine what additional assistance is required by the site.
  - f. Contact the Media Liaison and determine what activities the Communications Department has in progress and what input will be required from the Emergency Manager.
2. When familiar with the status at the EOF and operations in progress, assume the Emergency Manager position.
  3. Inform the Emergency Director and the Power Production Management of the change of the Emergency Managers. Document the turnover in the Narrative Log.
  4. Direct that the EOF status board be updated to reflect the change of Emergency Managers.

B. EOF COORDINATOR

1. Upon designation by the Emergency Manager or arrival at the EOF, the relieving EOF Coordinator shall conduct the following familiarization procedures:
  - a. Review the EOF status through discussions with the acting EOF Coordinator. The EOF Coordinator should review the Narrative Log for the preceding twenty-four hour period, and the EOF status boards.
  - b. Discuss the EOF status with the Emergency Manager.
2. When all reviews are complete, assume the responsibilities of the EOF Coordinator. Report assumption of duties to the Emergency Manager.
3. Update the EOF status board to reflect the change of EOF Coordinators.

C. RADIATION PROTECTION SUPPORT SUPERVISOR

1. Upon designation by the Emergency Manager or arrival at the EOF, the relieving Radiation Protection Support Supervisor shall conduct the following familiarization procedures:
  - a. Review the status of Radiation Protection Support Team efforts through discussions with the acting Radiation Protection Support Supervisor.
  - b. Review the previous twenty-four hour history of the radiation survey results. Specific note should be made of any areas of high radiation or any contaminated areas.
  - c. Discuss radiation protection activities with the Emergency Manager.
2. When all reviews are complete, assume the responsibilities of the Radiation Protection Support Supervisor. Report assumption of duties to the Emergency Manager.
3. Inform the EOF Coordinator of the change of Radiation Protection Support Supervisors and verify that the EOF status board is updated to reflect the change.

D. COMMUNICATIONS COORDINATOR

1. Upon designation by the EOF Coordinator or arrival at the EOF, the relieving Communications Coordinator shall conduct the following familiarization procedures.
  - a. Review the status of communications through discussions with the acting Communications Coordinator. The Communications Coordinator being relieved may wish to refer to EPIP 1.1.8 "Communications Equipment and Information", during this discussion.
  - b. Discuss communications activities with the EOF Coordinator.
2. When all reviews are complete, assume the responsibilities of the Communications Coordinator. Report assumption of duties to the EOF Coordinator.
3. Verify that the EOF status board is updated to reflect the change of EOF Communications Coordinators.



E. LOGISTICS COORDINATOR

1. Upon designation by the EOF Coordinator or arrival at the EOF, the relieving Logistics Coordinator shall conduct the following familiarization procedures:
  - a. Review the status of supply activities through discussions with the acting Logistics Coordinator. The Logistics Coordinator being relieved may wish to refer to the "Logistics Coordinator Information Sheet", (Figure 1), during this discussion.
  - b. Discuss the status of supply problems with the EOF Coordinator.
2. When all reviews are complete, assume the responsibilities of the Logistics Coordinator. Report assumption of duties to the EOF Coordinator.
3. Verify that the EOF status board is updated to reflect the change of Logistics Coordinators.

F. TECHNICAL SUPPORT SUPERVISOR

1. Upon designation by the Emergency Manager or arrival at the EOF, the relieving Technical Support Supervisor shall conduct the following familiarization procedures:
  - a. Review the status of engineering support activities through discussions with the acting Technical Support Supervisor.
  - b. Discuss the status of any engineering problems with the Emergency Manager.
2. When all reviews are complete, assume the responsibilities of the Technical Support Supervisor. Report assumption of duties to the Emergency Manager.
3. Inform the EOF Coordinator of the change of Technical Support Supervisors and verify that the EOF status board is updated to reflect the change.

II. HQEC SHIFT TURNOVERA. POWER PRODUCTION MANAGEMENT

Upon arrival at the HQEC, the relieving Power Production Management shall conduct the following familiarization procedures:

- a. Review the plant status and emergency response activities with the individual functioning in the Power Production Management position.
- b. Review the Narrative Log and status boards.
2. When familiar with the status at the HQEC and operations in progress, assume the Power Production Management position.
3. Inform the EOF and TSC of the change in Power Production Management and document the turnover in the HQEC Narrative Log.
4. Direct that the HQEC status board be updated to reflect the change of Power Production Management.

B. HQEC COORDINATOR

1. Upon arrival at the HQEC, the relieving HQEC Coordinator shall conduct the following familiarization procedures:
  - a. Review the HQEC status and operation through discussions with the acting HQEC Coordinator.
  - b. Review the Narrative Log.
2. When all reviews are complete, assume the responsibilities of the HQEC Coordinator.

C. HQEC TECHNICAL SUPPORT SUPERVISOR

1. Upon arrival at the HQEC, the relieving HQEC Technical Support Supervisor shall conduct the following familiarization procedures:
  - a. Review the plant status and engineering analyses being performed with the acting Technical Support Supervisor.
  - b. Review the Narrative Log.
  - c. Contact the EOF Technical Support Supervisor and review the status of engineering operations at the EOF.
2. When all reviews are complete, assume the responsibilities of the HQEC Technical Support Supervisor.

D. ERAD MANAGEMENT

1. Upon arrival at the HQEC or work station, review the status of ERAD activities with the acting ERAD Management.
2. When familiar with ERAD departmental activities, assume the responsibilities of ERAD Management and inform the HQEC of the change in management.

E. COMMUNICATIONS MANAGEMENT

1. Upon arrival at the HQEC or work station, review the status of Communications Department activities with the acting Communications Management.
2. When familiar with Communications departmental activities, assume the responsibilities of Communications Management and inform the HQEC of the change in management.

FIGURE 1

LOGISTICS COORDINATOR INFORMATION SHEET

A. EOF SUPPORT ACTIVITIES

1. Food

a. Arrangement Complete:

- 1) Name \_\_\_\_\_
  - a) Phone \_\_\_\_\_
  - b) Arrangements \_\_\_\_\_
- 2) Name \_\_\_\_\_
  - a) Phone \_\_\_\_\_
  - b) Arrangements \_\_\_\_\_
- 3) Name \_\_\_\_\_
  - a) Phone \_\_\_\_\_
  - b) Arrangements \_\_\_\_\_

b. Arrangements Required:

- 1)
- 2)
- 3)
- 4)
- 5)

2. Lodging

a. Arrangements Completed:

- 1) Name \_\_\_\_\_
  - a) Phone \_\_\_\_\_
  - b) Arrangement \_\_\_\_\_
- 2) Name \_\_\_\_\_
  - a) Phone \_\_\_\_\_
  - b) Arrangement \_\_\_\_\_

b. Arrangements Required:

3. EOF Supplies

a. Equipment Status:

- 1)
- 2)
- 3)
- 4)

b. General Supply Status:

- 1)
- 2)
- 3)
- 4)

B. PURCHASE ORDERS

1. Item

- a. Requisition
- b. Expeditor
- c. Status

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2. Item

- a. Requisition
- b. Expeditor
- c. Status

---



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3. Item

- a. Requisition
- b. Expeditor
- c. Status

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C. PROBLEMS/COMMENTS



NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPAP 1.1.7 START-UP & OPERATION OF HQEC REV 2

The following changes are included in this revision:

- .Title change.
- .Total re-write.
- .Start-up section is to prepare the facility for staffing.
- .Responsibilities and duties of individuals staffing HQEC positions are included as tabs to this procedure.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.7                      REV: 2
PREPARED BY: <i>Gary Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edward</i> Manager Nuclear Environmental Services	TITLE: 1.1.7    START-UP AND OPERATION OF HQEC
APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plants	

PURPOSE AND OBJECTIVE

The purpose of the "Start-up and Operation of HQEC" procedure is to activate the HQEC and specify the functions of corporate personnel staffing it.

CONDITIONS AND PREREQUISITES

An "Alert", "Site Area Emergency" or "General Emergency" condition has been declared by either the Prairie Island or Monticello Emergency Director and the emergency response organization has been activated.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibility - Power Production Management
- B. In Charge - Power Production Management
- C. Assistance - HQEC Coordinator  
                           - HQEC Technical Support Group

START-UP SECTION

1. Request that all individuals not part of the Corporate Emergency Response Organization vacate the HQEC (Conference Rooms 8A & 8B).
2. Remove the dial telephones from the HQEC Emergency cart. Plug the telephones into the telephone jacks with corresponding numbers. These jacks are located on the wall in conference room 8A. Check each telephone for operability. Place telephones on the table in the 8A section of the HQEC. (See Figure 1)

3. Remove the red "Auto-ring Hotline" telephone from the cart. Plug the telephone into the jack labeled "Hotline" for the affected plant. The "Hotline" jacks are located on the wall in the corner of the 8B conference room. Place the "Hotline" telephone on the table in the 8B section of the HQEC. (See Figure 1)
4. Remove the "Low Band Paging" radio telephone and encoder from the cart. Plug the radio telephone into the jack labeled "Low Band Paging". This jack is located on the wall in the corner of the 8B conference room. Plug the electrical cords into an appropriate 120 V AC outlet. Place the radio telephone and encoder on the table in the 8B section of the HQEC.
5. Remove area maps for the affected site from the cart and attach them to the bulletin boards on the wall of the HQEC. Place the acetate overlays over the maps and secure them in place with tape or thumbtacks.
6. Clean the status boards located on the wall of the HQEC. Place chalk and erasers at each location.
7. Place writing materials on each table in the HQEC. Distribute copies of EPIP 1.1.8, "Communications Equipment and Information", to each table and place one copy under each telephone.
8. Conduct an inventory of the HQEC Emergency Cart. Obtain replacement items to correct any deficiencies.
9. Close the folding partitions as shown in Figure 1. Leave the last panel open to form a doorway between 8A and 8B.
10. Establish and maintain the Narrative Log as specified in the "Emergency Organization Records and Forms" procedure, EPIP 1.1.4.
11. Maintain the HQEC status boards.
12. Coordinate HQEC communications. A list of applicable telephone numbers is provided in EPIP 1.1.8, "Communications Equipment and Information".
13. Verify that the Superintendent of Building Operation and Maintenance provides security guards for the following areas in accordance with the Building Security Plan:
  - a) HQEC area
  - b) General Office First Floor Elevator Area
  - c) Media Information Facility
14. Inform Power Production Management when the above steps are complete.

RESPONSIBILITIES

The individual responsibilities of corporate personnel assigned to the HQEC Response Organization are specified in tabs to this procedure. The following tabs are included:

<u>Position</u>	<u>Tab</u>
● Power Production Management Duties	A
● HQEC Coordinator Duties	B
● Technical Support Duties	C
● Advisory Support Duties	D
● Environmental & Regulatory Activities Management Duties	E
● Communications Department Management Duties (Public Information)	F

Note:

With the exception of Power Production Management and the HQEC Coordinator, the above groups will perform their respective functions at their normal work locations. They will have access to the HQEC when necessary to obtain information. They will also be available to assist HQEC operation as required by Power Production Management.

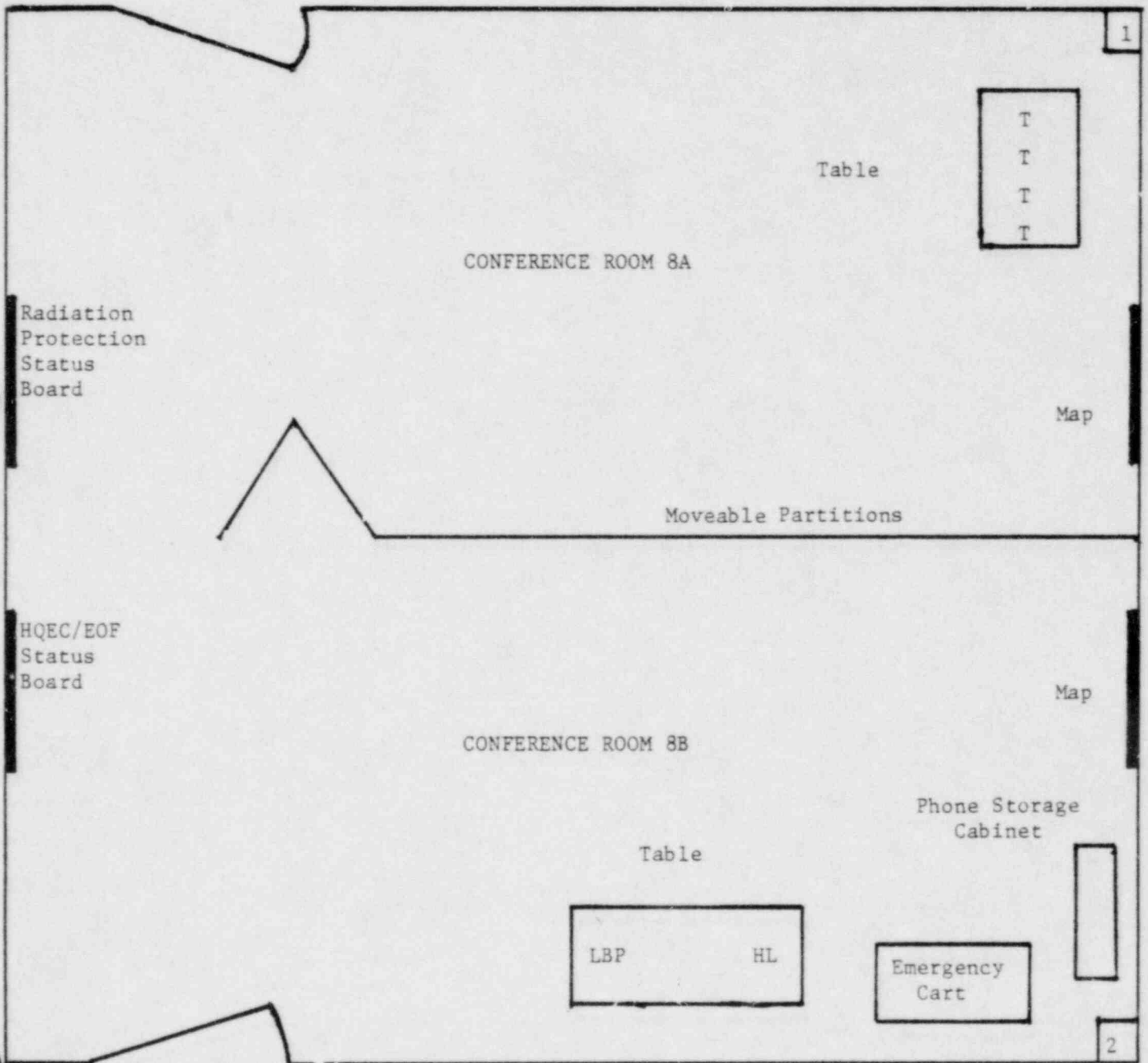
FIGURE 1

HEADQUARTERS EMERGENCY CENTER SETUP

CONFERENCE ROOM 8A/B

KEY

- T - Dial Telephone
- LBP - Low-band Paging
- Radio Telephone
- HL - Auto-ring Hotline
- 1 - Dial Telephone Jacks
- 2 - Hotline & Low-band Paging Jacks





TAB APower Production Management Duties

1. Proceed to the HQEC and assume control of HQEC operations. The first Power Production Management designee arriving at the HQEC shall assume the Power Production Management position until a more senior designee on the Call List, Section I, Tab A, EPIP 1.1.2, "Notifications", arrives.
2. Assign an individual to function as the HQEC Coordinator. This position should be assigned to one of the first individuals arriving at the HQEC. The assigned individual should be familiar with the emergency planning effort, location of equipment, procedures, and methods of communication.
3. Contact the Emergency Manager to determine the emergency status and any immediate needs for resources (EPIP 1.1.8, "Communications Equipment and Information" provides information concerning available communication links.)
4. If additional assistance is required at the HQEC or the EOF, direct the HQEC Coordinator to contact additional corporate personnel listed in Section III of Tab A, EPIP 1.1.2, "Notifications".
5. Designate personnel for the HQEC Technical Support Group for the purpose of interfacing with NSP Executive Management, State and local officials and vendor representatives, as necessary.
6. Assist the Communications Department in determining plant status and the appropriate releases to be dispatched in accordance with the "Public Information" procedure, EPIP 1.1.3.
7. Provide final approval of all news releases and scenarios for press conferences.
8. Provide assistance to the EOF as requested by the Emergency Manager.
9. Coordinate the operation of the EOF with HQEC, Communications Department, and ERAD.
10. If necessary, provide direction for the HQEC Technical Support Group concerning the engineering analysis required by Power Production Management.

11. Direct ERAD to provide personnel to interface with State & local agencies.
12. Determine the information to be transmitted to INPO. Direct the activities of the HQEC Technical Support Group to establish an interface with INPO's Emergency Response Center and to request assistance or provide information as necessary.
13. Determine the need for assistance from other utilities and the scope of any information to be placed in the "NOTEPAD" system.
14. Assign the HQEC Technical Support Group members to directly interface with the Logistics Coordinator at the EOF. Direct these members to coordinate and facilitate the processing of all material or service requests from the EOF in accordance with EPIP 1.1.9, "Emergency Processing of Purchase Orders".
15. Provide the contact with American Nuclear Insurers (ANI) to obtain needed services or funds.
16. When the plant status indicates that the emergency condition has evolved into a long term planning condition, contact the Emergency Director and the Emergency Manager (see EPIP 1.1.8, "Communications Equipment and Information", for communications information) to determine the need for activation of the Recovery Organization. If necessary, direct the Recovery Manager to prepare the Recovery Organization to assume control of operations.
17. When the emergency condition is over, the plant is in a stable condition, all releases terminated, and there is no potential for additional release, operation of the emergency organization may be concluded. Through discussion with the Emergency Manager and Emergency Director, assist in determining that the emergency condition can be terminated. When all are in agreement, direct the activities of the corporate staff at the HQEC to complete operations and to return the HQEC facilities to a standby status.

TAB BHQEC COORDINATOR DUTIES

1. Complete the Startup Section of this procedure.
2. Implement EPIP 1.1.4, "Emergency Organization Records and Forms", at the HQEC.
3. Distribute & collect records & forms at the HQEC.
4. Inform HQEC personnel as to the nature & number of records to be maintained.
5. Maintain the status board information current.
6. Conduct routine housekeeping functions in the HQEC.
7. Handle routine communications for Power Production Management.
8. Provide as needed, information concerning emergency preparedness.
9. As required, arrange for food and beverage delivery.
10. Provide for additional office supplies or administrative services, as necessary.

TAB C

HQEC Technical Support Supervisor Duties

1. Provide necessary manuals, publications, and prints to assist in analysis of plant conditions.
2. Provide technical support personnel to assist in engineering analysis as directed by Power Production Management.
3. Provide technical liaison between the EOF Technical Support Group and the HQEC personnel.
4. Oversee the efforts of vendor engineering groups retained by Power Production Management to assist the emergency response effort.
5. Provide general information to other utilities via INPO or the "NOTEPAD" information system.

TAB D

Advisory Support Duties

1. Provide a pool of knowledgeable personnel to support the HQEC operations.
2. Provide assistance as directed by Power Production Management.



TAB E

ERAD Management Duties

1. Provide NSP liaison to the State & local government agencies.
2. Provide timely information to Power Production Management of all the actions that are taken or planned by the State and local government agencies.

TAB FCommunications Department  
Management Duties (Public Information)

1. Implement EPIP 1.1.3 "Public Information"
2. Provide a staff of Communications Representatives to prepare news releases, conduct press conferences and direct the overall public information program.
3. Supply Communications Representatives to the EOF, Media Information Facility and other appropriate locations to interface with media personnel. If the State Department of Emergency Services will be conducting news briefs at the State Capitol Building, supply personnel to represent NSP on technical issues.

NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.8 COMMUNICATIONS EQUIPMENT & INFORMATION REV 0

The following changes are included in this revision:

- .This is a new procedure.
- .The prior EPIP 1.1.8, NUCLEAR EMERGENCY COMMUNICATIONS is now EPIP 1.1.3 PUBLIC INFORMATION.
- .This procedure provides a listing of telephone numbers at response facilities and describes the available communication links.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.8                      REV: 0
PREPARED BY: <i>Gary Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edward</i> Manager Nuclear Environmental Services	TITLE: 1.1.8 COMMUNICATIONS EQUIPMENT AND INFORMATION
APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plants	

PURPOSE AND OBJECTIVE

The purpose of the Communications Equipment and Information Procedure is to provide a quick, easy and complete reference of the telephone numbers that are applicable to the Corporate Emergency Response Organization facilities. The procedure also provides reference diagrams which indicate the available lines of communication.

CONDITIONS AND PREREQUISITES

An emergency condition has been declared and the Corporate Emergency Plan Response Organization has been activated.

NOTE: THIS PROCEDURE IS TO BE UTILIZED ONLY AFTER THE "NOTIFICATIONS" PROCEDURE, EPIP 1.1.2, HAS BEEN COMPLETED.

PROCEDURE

The information sheets are arranged in the following manner.

<u>Pages</u>	<u>Name</u>
2-4 TAB A,	Monticello Communications Information
5-7 TAB B,	Prairie Island Communications Information
8-15 TAB C,	Normal, Primary and Secondary Communication Links

## TAB A

MONTICELLO COMMUNICATIONS INFORMATION SHEET 1

## I. EOF COMMUNICATIONS

## A. Auto-Ring "Hot Lines" (Command Center)

1. EOF - TSC
2. EOF - State EOC
3. EOF - HQEC/System Operations
4. EOF - Monticello EOC/TSC (3-Way)

## B. EOF Command Center Direct Dial Lines

- 1.
- 2.
- 3.

## C. EOF Office Telephone Lines

1. Radiation Protection Support Supervisor
  - a.
  - b. EOF to TSC (temp)
2. Records/Communication Coordinator/Media Liaison
  - a.
  - b.
3. State & Local Government
  - a.
4. Nuclear Regulatory Commission
  - a.
  - b.
  - c. EOF - NRC Operations Center (ENS)
  - d. EOF - NRC (HPN)
5. Emergency/Recovery Manager
  - a.
6. EOF Coordinator
  - a.
7. Logistics Coordinator
  - a.



MONTICELLO COMMUNICATIONS INFORMATION SHEET 2

## II. OFFSITE EMERGENCY RESPONSE FACILITIES DIRECT DIAL LINES

1. NRC Operations Center (Washington)
  - a.
2. NRC Regional Office (Region III)
  - a.
3. NRC Health Physics Network
  - a. NRC Operations Center
    1. Rotary - Dial 22
    2. Pushbutton - Depress \*22
  - b. Region III
    1. Rotary -Dial 23
    2. Pushbutton - Depress \*23
4. Minnesota Division of Emergency Services (DES)
  - a.
  - b.
5. Wright County Sheriff
  - a.
  - b.
  - c.
6. Wright County EOC
  - a.
7. Sherburne County Sheriff
  - a.
8. Sherburne County EOC
  - a.
9. State Highway Patrol
  - a. St. Cloud
  - b. Golden Valley
  - c. St. Paul
10. Monticello Civil Defense
  - a.
  - b.
11. Monticello - Big Lake Community Hospital
  - a.
12. Monticello - Ambulance Service
  - a.

MONTICELLO COMMUNICATIONS INFORMATION SHEET 3

13. Monticello Fire Department
  - a.
  
14. Northern States Power Telephone Lines
  - a. Corporate General Office
  - b. Northwest Division
  - c. Prairie Island Nuclear Generating Plant
  - d. System Control Center
  - e. Monticello Nuclear Generating Plant
  
15. HQEC Extensions
  - a.
  - b.
  - c.
  - d.
  
16. Radio Communications
  - a. Backup Radio Communications
    1. EOF
    2. Monticello (city)
    3. Plant
      - a) TSC
      - b) Control Room
    4. Wright County
      - a) Sheriff
      - b) EOC
    5. Sherburne County
      - a) Sheriff
      - b) EOC
  - b. Walkie-Talkies at EOF
    1. Security Force Guards
    2. EOF Coordinator
  - c. Portable Radios (Handie-Talkie)
    1. Plant
    2. EOF
    3. Survey Teams
  
17. Telephones Out-of-Order
  - a. Location/Number
    - 1)
    - 2)
  - b. Telephone Number for Emergency Telephone Service
    - 1)
  
18. Radios Out-of-Order
  - a. Granite City Electronics

## TAB B

PRAIRIE ISLAND COMMUNICATIONS INFORMATION SHEET 1

## I. EOF COMMUNICATIONS

## A. Auto - Ring "Hot Lines" (Command Center)

1. EOF - TSC
2. EOF - State EOC
3. EOF - HQEC/System Operation
4. EOF - Red Wing EOC

## B. EOF Command Center Direct Dial Lines

- 1.
- 2.
- 3.

## C. EOF Office Telephone Lines

1. Radiation Support Supervisor
  - a.
2. Records/Communication Coordinator/Logistics Coordinator
  - a.
3. State and Local Government
  - a.
4. Nuclear Regulatory Commission
  - a.
  - b. EOF - NRC Operations Center (ENS)
  - c. EOF - NRC (HPN)
5. Emergency/Recovery Manager
  - a.
  - b.
6. EOF Coordinator
  - a.
7. Offsite Survey Teams
  - a.
  - b.
8. EOF Media Liaison
  - a.

PRAIRIE ISLAND COMMUNICATIONS INFORMATION SHEET 2

## II. OFFSITE EMERGENCY RESPONSE FACILITIES DIRECT DIAL LINES

1. NRC Operations Center (Washington)
  - a.
2. NRC Regional Office
  - a.
3. NRC Health Physics Network
  - a. NRC Operations Center
    1. Rotary - Dial 22
    2. Pushbutton - Depress \*22
  - b. Region III
    1. Rotary - Dial 23
    2. Pushbutton - Depress \*23
4. Minnesota Division of Emergency Services (DES)
  - a.
  - b.
5. Wisconsin Division of Emergency Government
  - a.
6. Goodhue County Sheriff
  - a.
7. Goodhue County EOC
  - a.
  - b.
  - c.
8. Dakota County Sheriff
  - a.
  - b.
9. Dakota County EOC
  - a.
  - b.
  - c.
10. Red Wing Police Department
  - a.
11. Red Wing Fire Department
  - a.
12. Pierce County Sheriff
  - a.
13. Pierce County EOC
  - a.
  - b.
  - c.

PRAIRIE ISLAND COMMUNICATIONS INFORMATION SHEET 3

14. St. Johns Hospital - Red Wing
  - a.
15. Ambulance Service - Red Wing
  - a.
16. State Highway Patrol
  - a. Rochester
  - b. St. Paul
17. Northern States Power Telephone Lines
  - a. Corporate General Office
  - b. Division Office
  - c. Prairie Island Nuclear Generating Plant
  - d. System Control Center
  - e. Monticello Nuclear Generating Plant
18. HQEC Extensions
  - a.
  - b.
  - c.
  - d.
19. Radio Communications
  - a. Backup Radio Communications
    1. EDF
    2. Goodhue County
      - a) Sheriff
      - b) EOC
    3. Plant
      - a) TSC
      - b) Control Room
    4. Pierce County
      - a) Sheriff
      - b) EOC
    5. Dakota County
      - a) Sheriff
      - b) EOC
  - b. Walkie-Talkies at EDF
    1. Security Force Guards
    2. EDF Coordinator
  - c. Portable Radios (Handie Talkie)
    1. Plant
    2. EDF
    3. Survey Teams
20. Telephones Out-of-Order
  - a. Location/Number
    - 1)
    - 2)
  - b. Telephone Number for Emergency Telephone Service
21. Radios Out-of-Order
  - a. Folsom Electronics



TAB C

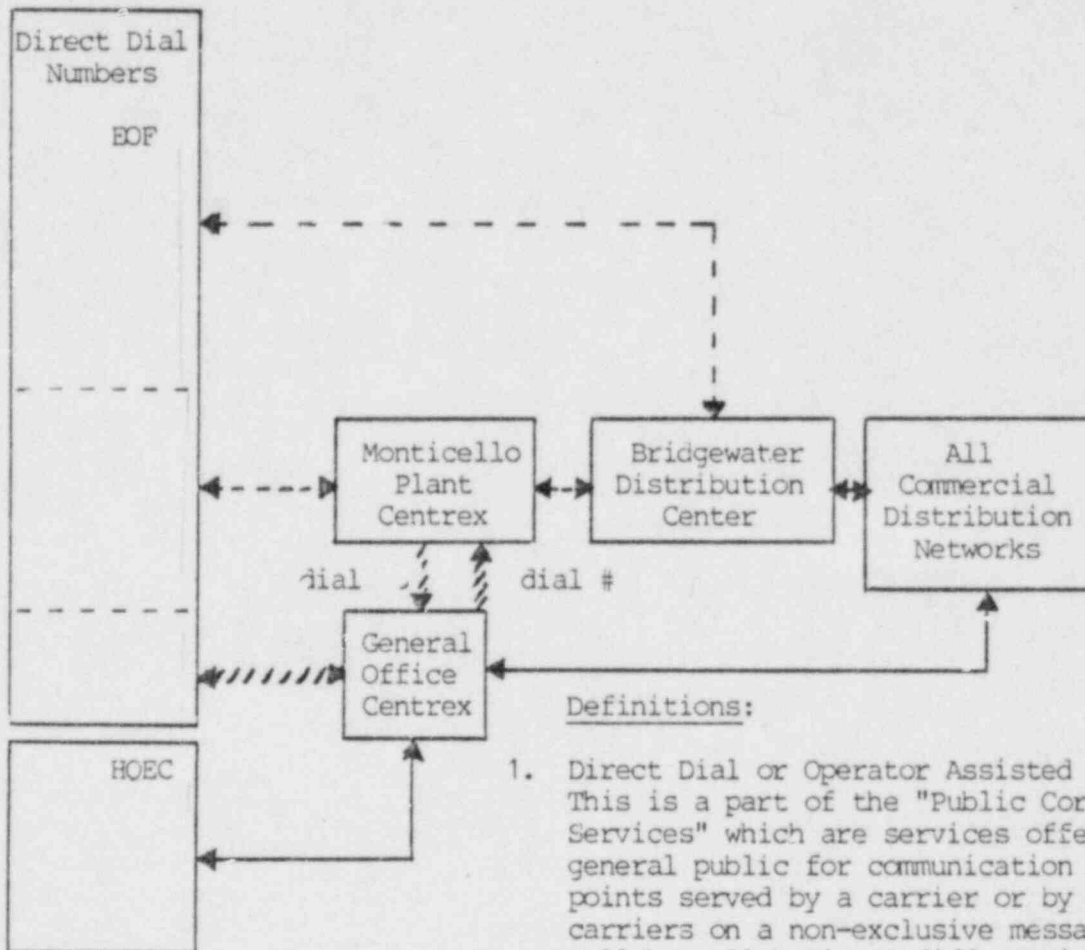
MONTICELLO

DIRECT DIAL COMMUNICATIONS

(Normal Communications Link)

KEY

- 1.      Bell System Lines
- 2.      Bridgewater Lines
- 3. 777 NSP Microwave



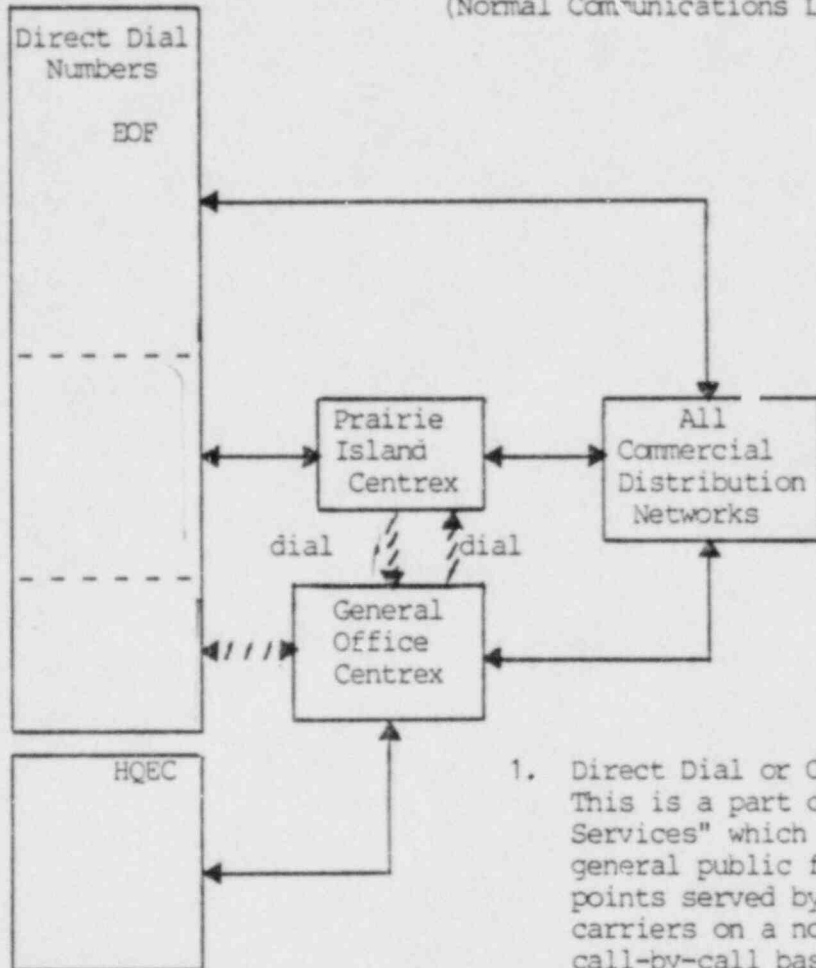
Definitions:

1. Direct Dial or Operator Assisted Telephone Service  
This is a part of the "Public Correspondence Services" which are services offered to the general public for communication between all points served by a carrier or by interconnecting carriers on a non-exclusive message-by-message or call-by-call basis as differentiated from leased private line service.
2. Private Branch Exchange (PBX) (Centrex)  
A small telephone system installed on a subscribers premise to provide inter-office dial telephone service for the organization it serves. Each telephone on the system is called a PBX service station, the system is called a Centrex System. There are on-premise and off-premise stations. An on-premise station can talk to any other on-premise station using only the facilities provided for that particular PBX. An off-premise station is at some location generally requiring use of and routing of facilities provided by one or more common carriers. This arrangement is used where an organization has a remote location with high usage voice communication requirement with other stations within the system.

PRAIRIE ISLAND  
DIRECT DIAL COMMUNICATIONS

(Normal Communications Link)

- KEY
1.      Bell System Lines
  2. //// NSP Microwave

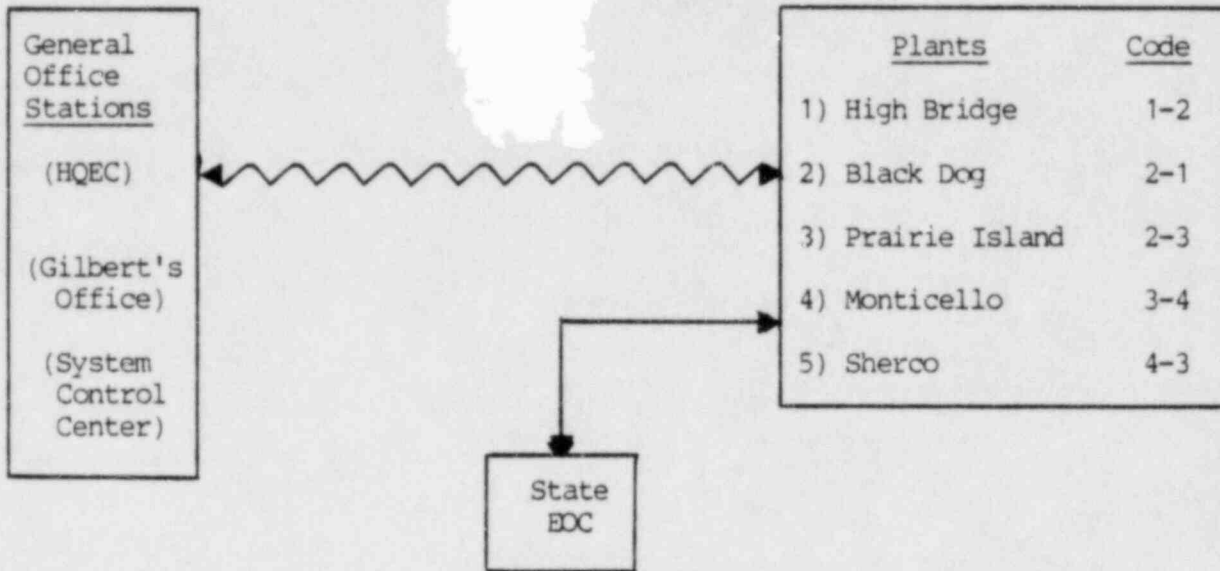




1. Direct Dial or Operator Assisted Telephone Service  
This is a part of the "Public Correspondence Services" which are services offered to the general public for communication between all points served by a carrier or by interconnecting carriers on a non-exclusive message-by-message or call-by-call basis as differentiated from leased private line service.

2. Private Branch Exchange (PBX)(Centrex)

A small telephone system installed on a subscribers premise to provide inter-office dial telephone service for the organization it serves. Each telephone on the system is called a PBX service station, the system is called a Centrex System. There are on-premise and off-premise stations. An on-premise station can talk to any other on-premise station using only the facilities provided for that particular PBX. An off-premise station is at some location generally requiring use of and routing of facilities provided by one or more common carriers. This arrangement is used where an organization has a remote location with high usage voice communication requirement with other stations within the system.

LOW BAND PAGING SYSTEM  
(Secondary Communications Link)



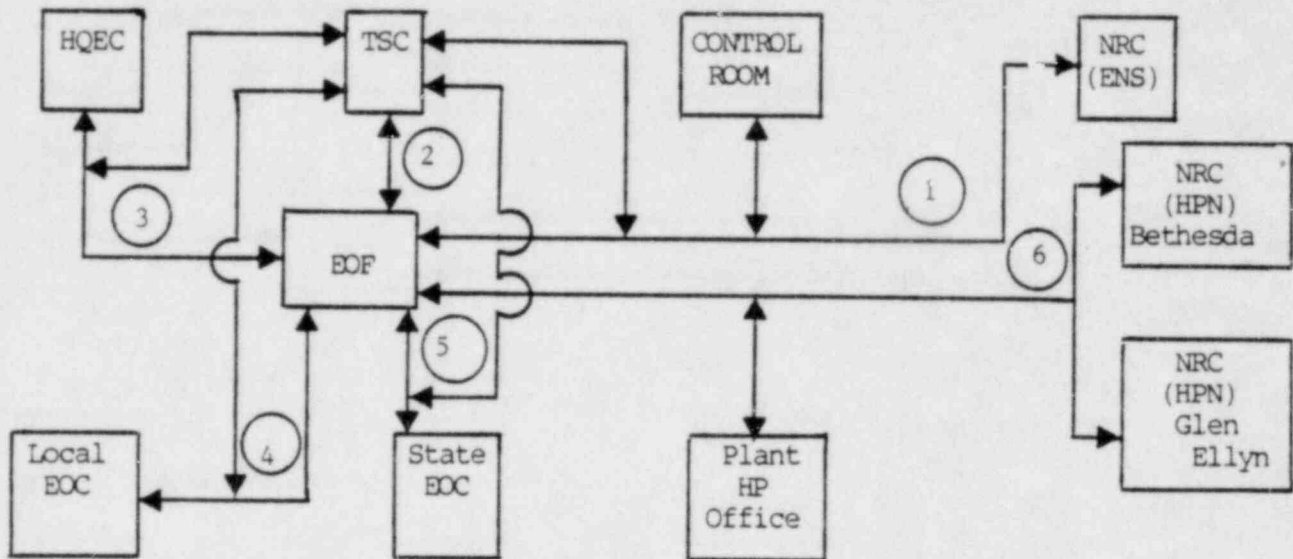
KEY:  
 Radio   
 Bell System 

Definition:

Low Band Paging System  
 An FCC licensed 2-way radio system utilizing point-to-point systems interconnecting two or more locations.

1. The System Control Center can activate Receivers at all plant stations.
2. The Plants can activate the Receiver at the System Control Center and the HQEC (when connected).
3. The State can activate the Prairie Island and Monticello Receivers.
4. Each station can monitor each channel.
5. The HQEC can activate receivers at all the plant stations.

MONTICELLO AUTO RING HOTLINE NETWORK  
(Primary Communications Link)



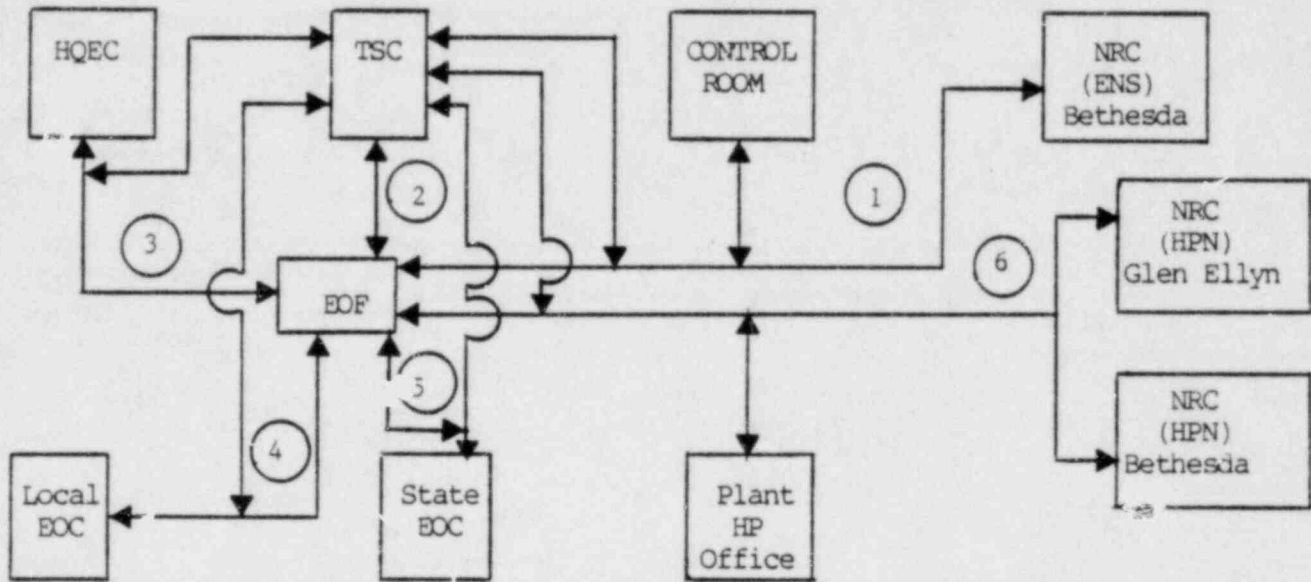
<u>Number</u>	<u>Name</u>	<u>Stations</u>
1.	Emergency Notification System (ENS)	(4 station line between the EOF, TSC, Control Room and NRC Bethesda NRC. Each station can activate circuit)
2.	EOF - TSC	(2 station line between the EOF and TSC. Either station can activate the circuit.)
3.	EOF - HQEC - TSC	(3 station line between the EOF, TSC and HQEC) (Each station can activate circuit).
4.	EOF - Local EOC - TSC	(3 station line between the EOF, TSC and local EOC.) (Each station can activate the circuit.)
5.	EOF - State EOC - TSC	(3 station line between the EOF, State EOC and TSC.) (Each station can activate the circuit).
6.	Health Physics Network (HPN) (Multiple station line between the EOF, Plant HP office, NRC Bethesda, NRC Glen Ellyn, and other utilities. Each station can activate circuit)	

Definitions:

Auto-Ring Hotlines (leased private lines)

The interconnection of two or more telephones, which automatically ring the circuit when the telephone is removed from its cradle. This service can be provided intra-facility, intra-city or inter-city. This is a full-period circuit which is available 24 hours a day with no limit to its use.

PRAIRIE ISLAND HOTLINE NETWORK  
(Primary Communications Link)



Number	Name	Station
1	Emergency Notification System (ENS)	(4 station line between the EOF, TSC, Control Room and NRC Bethesda IRC. Each station can activate circuit)
2.	EOF - TSC	(2 station line between the EOF and TSC) (Either station can activate the circuit)
3.	EOF - HQEC - TSC	(3 station line between the EOF, HQEC and TSC) (Each station can activate the circuit)
4.	EOF - Local EOC - TSC	(3 station line between the EOF, Local EOC and TSC) (Each station can activate the circuit)
5.	EOF - State EOC - TSC	(3 station line between the EOF, State EOC and TSC) (Each station can activate the circuit)
6.	Health Physics Network (HPN)	(Multiple station line between the EOF, TSC, Plant HP office, NRC Bethesda, NRC Glen Ellyn, and other utilities. Any station can activate circuit)

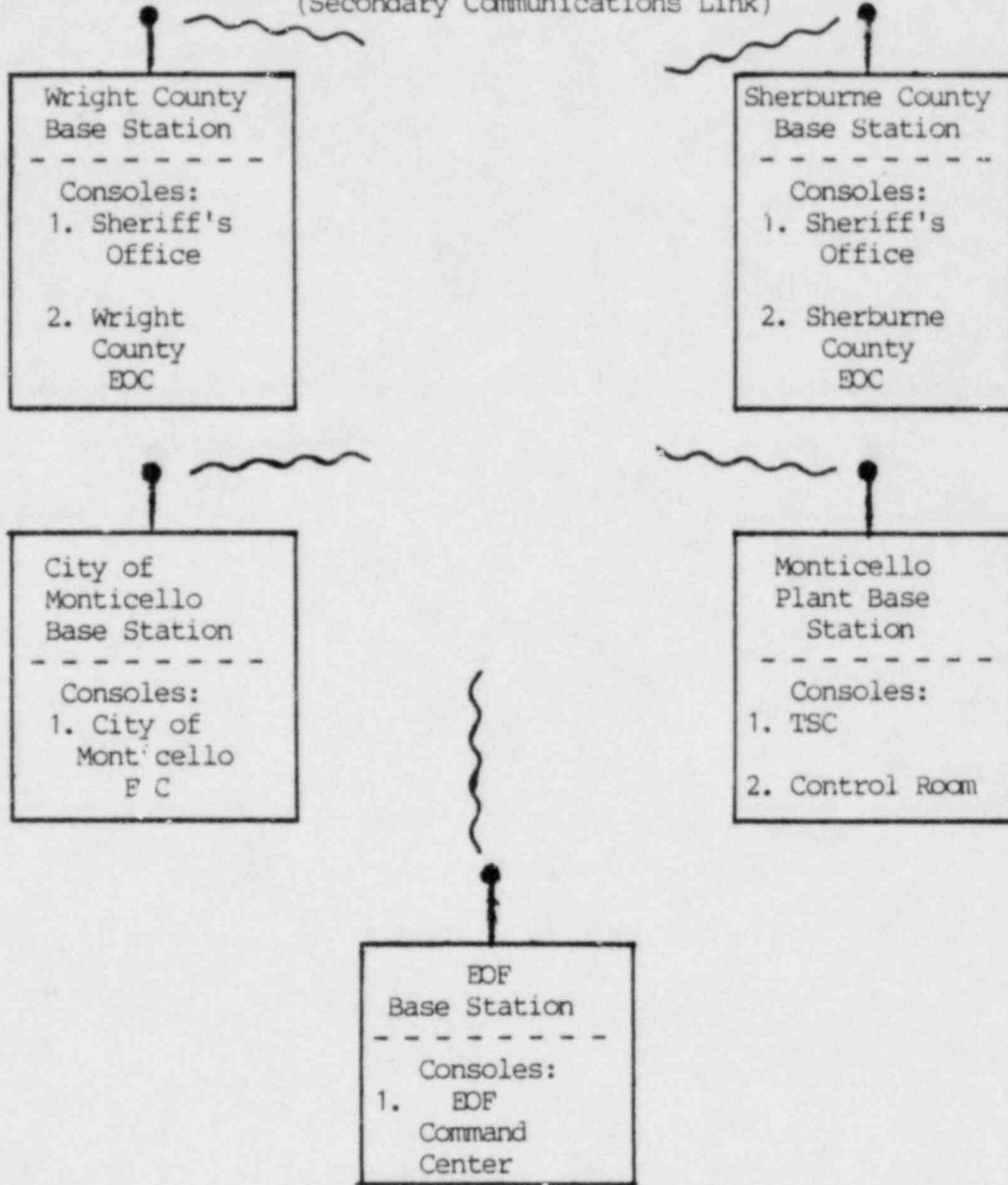
Definitions:

Auto-Ring Hotlines (leased private lines)

The interconnection of two or more telephones, which automatically ring the circuit when the telephone is removed from its cradle. This service can be provided intra-facility, intra-city or inter-city. This is a full-period circuit which is available 24 hours a day with no limit to its use.

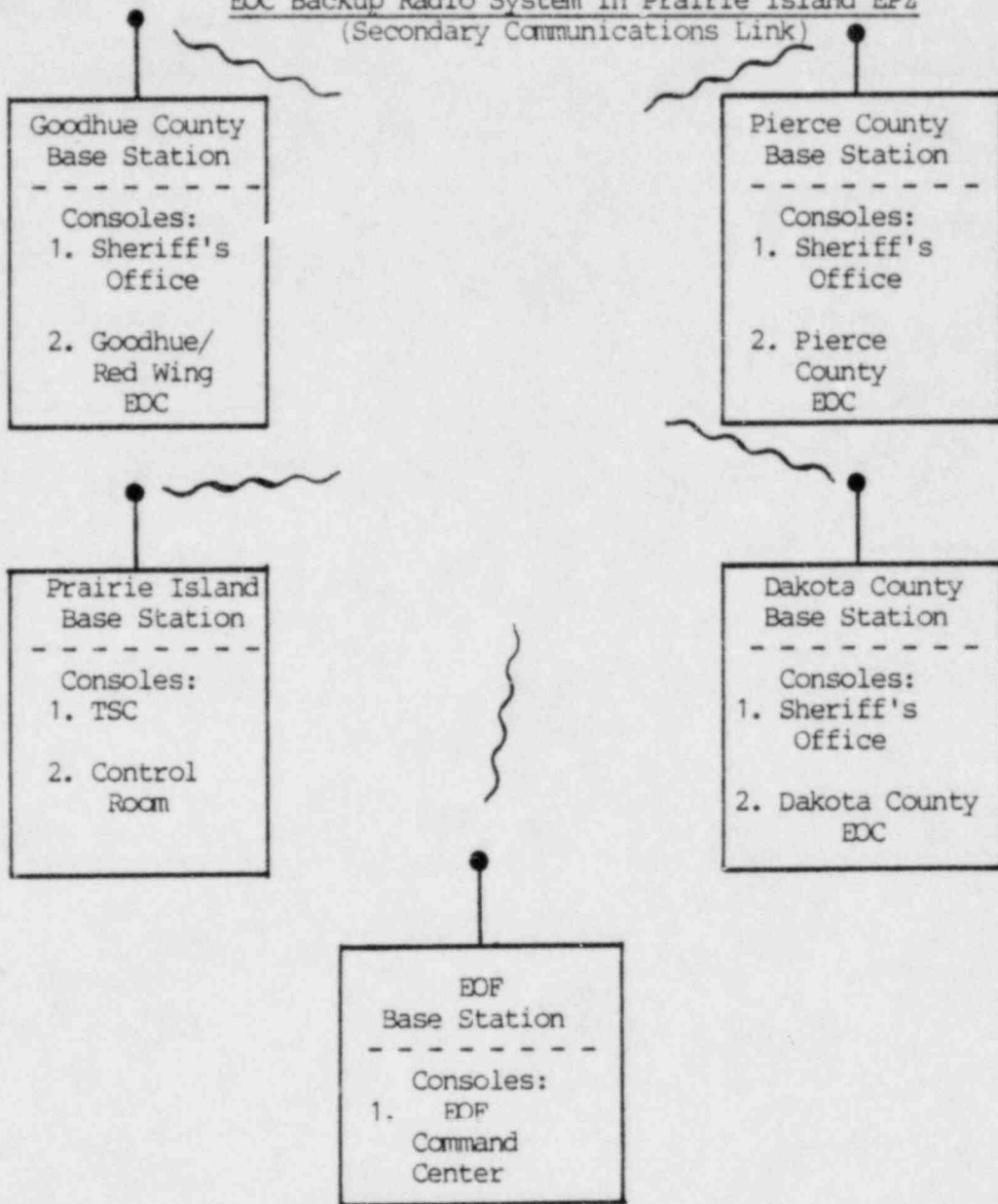


EOC Backup Radio System in Monticello EPZ  
(Secondary Communications Link)



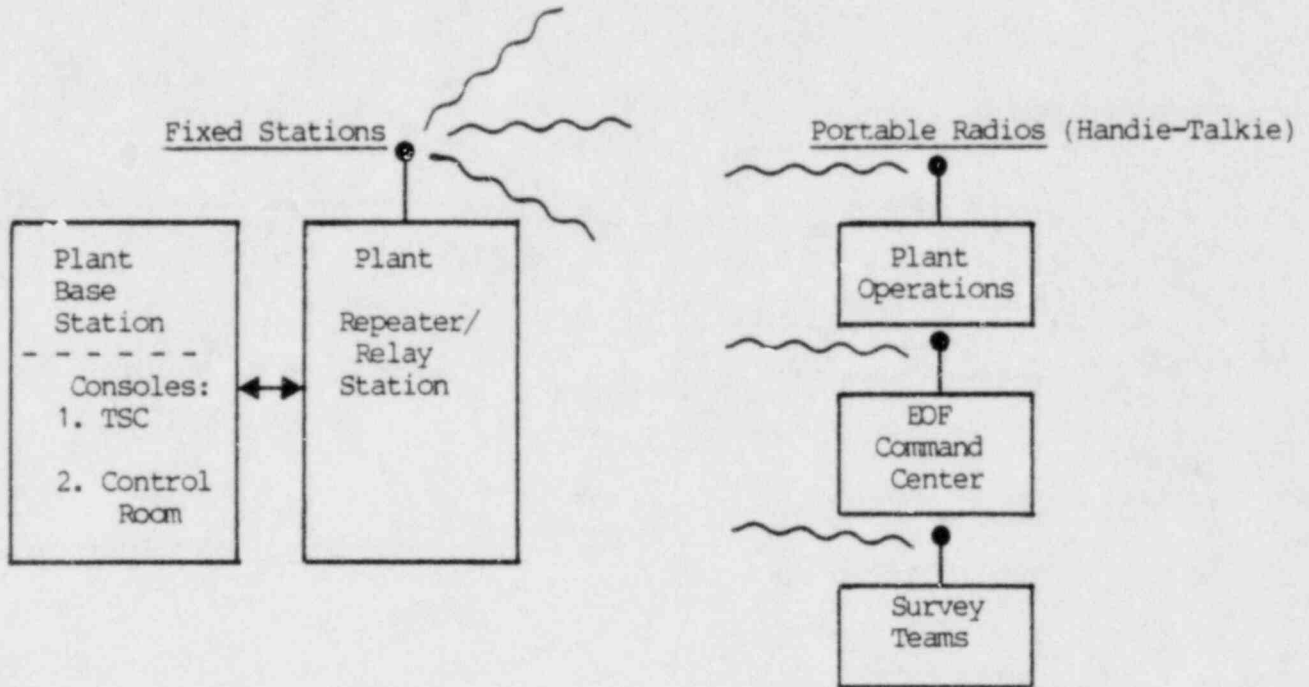
1. All consoles are hard wired to their respective base station.
2. Each base station can talk to all other base stations. The base station must be operating. There is no automatic activation.
3. Digital Voice Protection is provided for each base station.

EOC Backup Radio System in Prairie Island EPZ  
(Secondary Communications Link)



1. All consoles are hard wired to their respective base station.
2. Each base station can talk to all other base stations. The base station must be operating. There is no automatic activation.
3. Digital Voice Protection is provided for each base station.

Monticello and Prairie Island Portable Communications  
(Primary Communication Link)



1. Each portable unit can talk to all other units and the base station.
2. The repeater/relay station receives the transmission and amplifies and retransmits the signal to all other stations.
3. No voice protection is provided.

NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.9 EMERGENCY PROCESSING OF PURCHASE ORDERS REV 2

The following changes are included in this revision:

.Minor revision to reflect the current listing  
of applicable AWIs.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.9                      REV: 2
PREPARED BY: <i>Gary Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edward</i> Manager Nuclear Environmental Services	TITLE: 1.1.9 EMERGENCY PROCESSING OF PURCHASE ORDERS
APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plants	

PURPOSE AND OBJECTIVE

The purpose of this procedure is to specify the responsibilities of the individuals who are asked to provide logistics support and procure equipment and services and to specify the manner to implement the administrative work instructions.

CONDITIONS AND PREREQUISITES

An emergency condition has been declared by the Emergency Director.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibility - Power Production Management
- B. In Charge - Logistics Coordinator
- C. Assistance - Technical Support Group

RESPONSIBILITIES

A. Logistics Coordinator

1. When directed by the Emergency Manager or EOP Coordinator, the Logistics Coordinator shall initiate and expedite the procurement process to obtain any needed goods and services.



2. The Logistics Coordinator shall follow the procurement process set forth in the Administrative Control Directive Number 3ACD, 6.1, "Uniform Nuclear Plant Procurement Process" and in the following Administrative Work instructions:
    - a. 3AWI 6.1.1 - Normal & Prompt Procurement Process for Items
    - b. 3AWI 6.1.2 - Procurement Process Emergency or Confirming
    - c. 3AWI 6.1.3 - Off-The-Shelf Procurement
    - d. 3AWI 6.1.4 - Procurement Process for Services
    - e. 3AWI 6.1.5 - Receipt Process for Items
    - f. 3AWI 6.1.6 - Receipt Process for Services
  3. The Logistics Coordinator is responsible for completing the actions designated in the respective Administrative Work Instructions for the "Requester" or assigning that function to members of the HQEC staff.
  4. The Logistics Coordinator should establish contacts with HQEC Technical Support Group members to facilitate the processing of all purchase orders.
  5. Maintain a list of all arrangements for services that are obtained or are being negotiated. The Logistics Coordinator Information Sheet in the "Emergency Organization Shift Turnover" Procedure, EPIP 1.1.6, is provided to facilitate the turnover of this information.
  6. Inform the EOF Coordinator of the status of all vital purchase requests.
- B. Technical Support Group Members
1. When directed by Power Production Management to provide the HQEC interface with the EOF Logistics Coordinator, the assigned Technical Support Group members shall be responsible for the processing of purchase orders in accordance with the Administrative Control Directives and Administrative Work Instructions specified in Step A.2 of this procedure.

2. When assigned to process a purchase request for the EOF Logistics Coordinator, the HQEC staff members are to serve as an interface between Power Production and the Purchasing Department. The following guidance is to assist in that interface:
  - a. Establish the interface between the EOF and HQEC.
  - b. Determine the applicable materials, engineering prints, and QA levels.
  - c. Determine applicable sources to supply the equipment or service requested.
  - d. Ensure that the purchase order is prepared.
  - e. Obtain purchase order approval by Power Production Management.
  - f. Obtain reviews and approvals of the request by the applicable QA Supervisors and purchasing department members.
  - g. Assist in making arrangements for production and shipment with the vendor, as applicable.
  - h. Assist in coordinating delivery and transportation schedules.
  - i. Provide feedback concerning the projected deliveries or other information concerning the assigned purchase order to the Logistics Coordinator and Power Production Management.

NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.10 OFFSITE SURVEYS REV 2

The following changes are included in this revision:

.Total re-write.

.Includes a standardized NSP procedure for  
conducting offsite surveys.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.10                      REV:2
PREPARED BY: <i>Gary Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edward</i> Manager Nuclear Environmental Services	TITLE: 1.1.10 OFFSITE SURVEYS
APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plants	

PURPOSE AND OBJECTIVES

The purpose of this procedure is to specify the method of staffing the offsite survey teams for the Corporate Emergency Response Organization, the means by which monitoring equipment and supplies will be obtained, and the methods to be employed by the offsite survey teams, and the Radiation Protection Support Supervisor to monitor and record field survey data.

CONDITIONS AND PREREQUISITES

- A. The Emergency Manager has requested an offsite survey, or offsite surveys are in progress by plant personnel.
- B. An airborne or liquid release has occurred is occurring, or may occur.
- C. A survey of offsite areas is requested.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibility - Emergency Manager
- B. In Charge - Radiation Protection Support Supervisor

DISCUSSION

Offsite surveys during an emergency are normally performed by sister plant radiation protection technicians when the corporate organization is fully activated. Until that time, these functions are performed by survey teams from the affected plant. The EOF is staffed with personnel who are generally familiar with nuclear facilities and radiation protection practices. These personnel are available to assist the Radiation Protection Support Group as directed by the Emergency Manager.

The extent and degree of radiological monitoring following a release of radioactive material will depend on the nature, the physical or chemical form, and the radioisotopic composition of the release. The affected plant's personnel will provide information to the Radiation Protection Support Supervisor concerning the extent of airborne and/or liquid releases. This information will determine the areas to be monitored and the protective actions required for monitoring teams.

The Radiation Protection Emergency Support Trailer can be used at either site and provides for offsite analysis of radioactive samples. This trailer is normally staffed by Prairie Island technicians who are familiar with its equipment and operation.

#### RESPONSIBILITIES

##### A. Radiation Protection Support Supervisor

1. When notified by his plant's shift supervisor that it is necessary to activate the offsite radiation protection support team, the Radiation Protection Support Supervisor, who is the sister plant Superintendent Radiation Protection or designee, shall be responsible for the organization and equipping of the survey teams prior to departure to the affected plant's EOF.
2. Provide a briefing and dispatch survey teams to perform appropriate radiological surveys in the general path of the projected or actual plume to confirm dose protection results. Determine the necessary radiation protection for survey teams.
3. Direct the survey teams to the affected areas along the actual or projected plume path. Direct each team to perform surveys in accordance with the guidelines of this procedure, to record the necessary data, and transmit the results to the EOF using the portable radios. Each team should initially be directed to perform an air sample survey and/or a stationary dose rate survey at each selected location. When additional information concerning the type of release is available, the type of monitoring may be modified as circumstances dictate.
4. Determine the need for river sampling following a liquid release. Offsite monitoring in response to a release of radioactive material to the Mississippi River will depend on the nature and extent of the release, whether or not the release has been stopped, and the release path.
5. Upon termination of the emergency condition, direct the survey teams to return all equipment to the trailer and radiological equipment lockers. Direct that an inventory be taken of the Mobile Emergency Support trailer contents and requisition any equipment necessary to return the trailer to a standby status.



B. Survey Team Members

1. Obtain appropriate monitoring equipment from the survey team kits at their storage locations. Obtain and re-zero dosimeters.
2. Perform operability checks on monitoring and sampling equipment before leaving the EOF area.
  - a. Calibration date
  - b. Response check
  - c. Re-zero
3. Obtain a portable radio and operationally check the radio before leaving the EOF to start the survey. Keep the radio operational at all times while performing surveys in order to maintain communications with the EOF.
  - a. Since radio communications can be intercepted by commercially available scanners, all communications must be brief and factual and free of exclamatory or alarming expressions.
  - b. Carefully word data transmissions to minimize possible confusion. In particular, avoid abbreviations such as "mREM" which could be confused with "REM". Use the complete word or unit ("milliREM").
4. If so directed or if airborne activity or contamination is suspected, obtain protective clothing and equipment at the EOF and take appropriate protective actions.
5. At each designated survey point perform surveys in accordance with applicable procedures as directed by the Radiation Protection Support Supervisor.
6. The survey team should accurately document all survey data on a Emergency Sample Results Log, Figure 1. Enter the date, time, name of surveyor, and instrument serial number, and model for each survey entry.
7. Identify survey locations using predesignated survey location numbers, as shown on the applicable Radiological Sampling Points map. Map coordinates and/or locations should also be identified as per the mobile sampling locations list.
8. Frequently check personal dosimeters and request relief if cumulative exposure approaches administrative control levels as specified in EPIP 1.1.17 " Personnel Monitoring at the EOF".

PROCEDUREA. Organization and Equipping of Offsite Survey Teams

1. Prior to departing to the affected plant, an offsite survey team consisting of a minimum of three radiation protection specialists and one individual qualified to perform Radiation Protection Support Supervisor duties shall be assembled by the sister plant Superintendent Radiation Protection or his designee.
2. The members shall be organized into two, two-person survey teams, with each team having at least one Radiation Protection Specialist assigned. The second member of each survey team will be assigned by the EOF Coordinator and may be any NSP employee. It is not essential that the second member be qualified as a radiation protection technician. The remaining technicians may be assigned to survey teams, or to the accident assessment team in the EOF as directed by the Radiation Protection Support Supervisor.
3. Each survey team shall obtain the equipment listed in Tab A. This equipment shall be specifically designated for offsite surveys and will be used by offsite monitoring teams for the duration of the emergency.
4. Obtain necessary transportation vehicles. These vehicles must be available for the offsite survey teams after arrival at the affected plant's EOF. It is undesirable that these vehicles be personal automobiles. Every effort should be made to obtain NSP trucks or automobiles. Additionally, the Prairie Island Support Team, shall obtain one vehicle capable of towing the Radiation Protection Emergency Support Trailer.
5. Obtain the Radiation Protection Emergency Support Trailer as follows:
  - a. For emergencies at Monticello, members of the Prairie Island Support Team shall proceed to the NSP Red Wing Service Center or the Prairie Island plant to obtain a vehicle to transport the trailer. Collect the trailer prior to proceeding to the Monticello EOF.
  - b. For emergencies at Prairie Island, the Monticello Support Team shall proceed to the Prairie Island EOF. The Emergency Support Trailer will remain near the plant site to facilitate sample counting.
6. Equipment Operation
  - a. Survey instruments shall be operated in accordance with standard procedures for each instrument type. General guidelines for all survey instruments shall be as follows:
    - 1) Calibrated within specified interval

- 2) Response checked satisfactorily
- 3) Meter zeroed

b. Since Minnesota has severe winter conditions which can seriously affect instrument readings, the following guidelines have been developed to eliminate most cold weather instrument problems:

- 1) Allow the instrument to completely warm up. This should take about 2 minutes. Do this indoors or in a car.
- 2) If outside temperature is greater than 32°F (0°C), instrument use is unlimited.
- 3) If the outside temperature is between 32°F (0°C) and 0°F (-18°C), any instrument should be used for no more than 5 minutes.
- 4) If the outside temperature is between 0°F (-18°C) and -20°F (-28°C), any instrument should be used for no more than 2 minutes.
- 5) If the outside temperature is below -20°F (-28°C), no instrument should be used unless special batteries (alkaline or Ni-Cd) are in the instruments and this would increase the temperature range to -40°F (-40°C). The instrument should only be used for very short times (less than 30 seconds).

B. Types of Samples

1. At each sample point the following samples may be made:
  - a. Air Sample - gaseous, particulate and radioiodine
  - b. Stationary Dose Rate Survey
2. Special samples to be taken as directed by Radiation Protection Support Supervisor.
  - a. Liquid samples
3. Additional samples to be collected by EREMP teams when directed by the Emergency Manager are collected in accordance with EPIP 1.1.12, "Implementation of the Emergency Radiological Environmental Monitoring Program."
  - a. Air particulates & Radioiodine
  - b. TLD
  - c. Milk
  - d. Well water

- e. Drinking water
- f. Mississippi River water
- g. Cultivated crops
- h. Natural vegetation
- i. Top soil
- j. Macroinvertebrates or periphyton
- k. Fish samples
- l. Aquatic vegetation
- m. Bottom sediment - River
- n. Shoreline sediment

### C. Sampling Procedures

#### 1. Air Sample

##### a. Equipment required

- 1) Battery powered or generator powered air sampler
- 2) Fiberglass particulate filter
- 3) Silver zeolite
- 4) RM-14 or equivalent
- 5) 2" GM pancake probe
- 6) Watch or clock
- 7) Plastic bags
- 8) Sample labels
- 9) Pen and/or pencil
- 10) Sample Logs (Figure 1)
- 11) Stainless Steel gas sampler

##### b. Particulate and Radioiodine Procedure

- 1) Install the particulate filter and silver zeolite absorber into the air sampler cartridge/filter holder.
- 2) Start the air sampler. Record the start time and sample location/or survey point as applicable on Emergency Sample Results Log (Figure 1). Record the flow rate through the sampler.
- 3) When the desired sample time has elapsed, record sample volume and stop the air sampler. The sample should be a standard 25 cubic foot sample, ( $7.07 \times 10^5$  cc or approximately 10 minutes). Record the stop time.
- 4) Carefully remove the particulate filter and silver zeolite absorber. Analyze in accordance with Step f. below, then place samples in separate plastic sample bags.



5) Place a sample label on the sample and ensure that all information is completed.

- a) Sample time and date
- b) Location of sampler
- c) Volume of sample

6) Make gross activity estimates in the field by the following methods:

- a) Particulate Activity - count the particulate filter using an RM-14 (or equivalent) with a 2" GM pancake probe. Estimate the gross particulate activity using the following formula:

$$\text{Activity (uCi/cc)} = \frac{(\text{Background Corrected Count Rate})(4.5 \times 10^{-7} \text{ uCi/dpm})}{(\text{Probe Efficiency})(\text{Sample Volume; cc's})(\text{cf})}$$

NOTE: Probe efficiency=0.1 for RM-14  
with a 2" GM pancake probe

cf = Correction factor for sample size is .3 for 4 inch paper counted with a 2 inch probe.

- b) Iodine Activity - count the silver zeolite absorber using an RM-14 or equivalent. Calculate sample activity using the following formula:

$$\text{Iodine Activity (uCi/cc)} = \frac{(\text{uCi's on absorber})}{(\text{Sample Volume in cc's})}$$

Where uCi's on absorber = activity on absorber determined from Figure 2 using the corrected count rate.

Note: If background exceeds 1000 CPM, notify the Radiation Protection Support Supervisor and proceed to an area of lower background (less than 1000 CPM) for counting, if so instructed.

#### c. Gaseous Activity Procedure

- 1) Remove the stainless steel gas chamber, suction bulb and filter assembly from the survey kit.
- 2) Install a clean filter in the filter assembly.
- 3) Connect filter assembly such that air passes through the filter to the gas chamber, then to the suction bulb.
- 4) Open the stop cocks on the gas chamber.
- 5) Squeeze the suction bulb ten (10) times to obtain a representative sample.



- 6) Shut the stop cocks on the gas chamber.
- 7) Using an RM-14 or equivalent and a 2 inch GM pancake probe obtain a count rate of the chamber volume by placing the probe over the mylar window. Log the result as "gross CPM".
- 8) Obtain a second chamber labeled "Background". Do not open the stop cocks of the background chamber. Determine a background count rate by placing the 2 inch GM pancake probe over the mylar window. Log the result as "Background CPM".
- 9) Determine the "Net CPM" by subtracting the "Background CPM" from the "Gross CPM".
- 10) Apply the net count rate to the curve in Figure 4 to determine the concentration, uCi/cc, of Xe<sup>133</sup> equivalent. Log this result on Figure 1 as uCi/cc.

d. Recording

- 1) Record the air sample results on the Emergency Sample Results Log, (Figure 1) and report the results to the Radiation Protection Support Supervisor using the portable radio.
- 2) As directed by the Radiation Protection Support Supervisor save the sample for future analysis. The central collection point for offsite samples is the EOF or support trailer as directed by the Radiation Protection Support Supervisor.

2. Stationary Survey

a. Equipment required

- 1) Radiation Survey Instrument (RO-2, or equivalent, with Beta Correction Factor)
- 2) Sample Results Log (Figure 1)
- 3) Pen and/or pencil

b. Procedure

- 1) Before arrival at the designated survey point:
  - a) Energize the instrument, observing proper precautions for cold weather. Note: All instruments should be response checked prior to entry in the field
  - b) Allow the instrument to stabilize (approximately 30 seconds), then zero the meter.
- 2) Upon arrival at one of the designated survey points, perform a beta and gamma survey of the area as follows:

- a) Hold the instrument at approximately 1 meter (3 feet) from ground level and scan around the area for maximum meter deflection
  - b) Open the probe window for beta gamma reading
  - c) Record the "window open" reading (Figure 1)
  - d) Close the probe window
  - e) Record the "window closed" reading (Figure 1)
  - f) Determine the corrected beta reading
- 3) Record the readings and calculate the beta and gamma dose (Figure 1)
  - 4) Report the results to the Radiation Protection Support Supervisor as follows:
    - a) Location: \_\_\_\_\_
    - b) \_\_\_\_\_ millirem/hr gamma
    - c) \_\_\_\_\_ millirem/hr True Beta

### 3. Liquid samples

#### a. Equipment required

- 1) one liter sample bottles
- 2) river sampling apparatus
- 3) labels
- 4) pen
- 5) plastic bags
- 6) survey instrument
- 7) tape

#### b. Procedure

- 1) Cast poly bottle into the water to be sampled
- 2) Allow bottle to fill completely then withdraw
- 3) Label and bag the sample bottle, seal and label bag
- 4) Make a gross estimate of the bottle activity as follows:
  - a) Use a RM-14, or equivalent with a 2" GM pancake probe to measure activity
  - b) Place probe on the bottle side as shown in Figure 3
  - c) Determine the gross activity using the graph shown in Figure 3
  - d) Save the sample for further analysis

- e) Report results to the Radiation Protection Support Supervisor at the EOF by portable radio
  - f) Record the results on the Emergency Sample Results Log (Figure 1)
- 5) The central collection point for offsite samples is the support trailer or EOF as specified by the Radiation Protection Support Supervisor.
- c. Monticello locations
- 1) Initial surveys of liquid releases will be taken by plant personnel at the plant discharge canal, and the Monticello Bridge. The offsite survey teams will relieve the plant team taking continuous samples at the Monticello Bridge. Required sample frequency will be specified by the Radiation Protection Support Supervisor.
  - 2) Additional liquid surveys may be requested by the State or the Emergency Manager. Locations for these surveys shall be specified at that time. Specific downstream locations for further surveys are:
    - a) Elk River Bridge
    - b) Anoka Bridge
    - c) Minneapolis & Saint Paul drinking water intakes
- d. Prairie Island locations
- 1) Initial samples of liquid release will be taken by plant personnel at the Eisenhower Bridge, the plant discharge canal, and Lock and Dam #3. The offsite survey teams will relieve plant teams taking continuous samples at the Eisenhower Bridge and Lock and Dam #3. Required sample frequency will be specified by the Radiation Protection Support Supervisor.
  - 2) Additional liquid samples may be requested by the State or the Emergency Manager. Locations of additional surveys will be specified at that time.

Figure 1  
EMERGENCY SAMPLE RESULTS LOG

DATE \_\_\_\_\_

TIME	Survey Point	SAMPLE RESULTS						DOSE RATE RESULTS - mREM/hr		Instrument			
		Sample Flow Rate	Sample Volume (cc)	Gross CPM	BKGD CPM	Net CPM	uCi/cc	Sample Type*	WINDOW Open Beta-Gamma	WINDOW Closed Gamma	TRUE BETA (See back for formula)	Model	Serial Number
Start	Stop												

1. Formulas listed on back  
2. Remarks: \_\_\_\_\_

\*Sample type includes: Particulate, Gaseous, Radioiodine, Liquid, Area Dose Rate

TECHNICIAN SIGNATURE \_\_\_\_\_

Figure 1  
(reverse side)

Formulas:

1. Gross Counts Per Minute - Background Counts Per Minute = Net Counts Per Minute  

$$\text{CPM}(\text{gross}) - \text{CPM}(\text{bkgd}) = \text{C.M}(\text{net})$$
2. Cubic feet x  $2.83 \times 10^4$  = cubic centimeters  

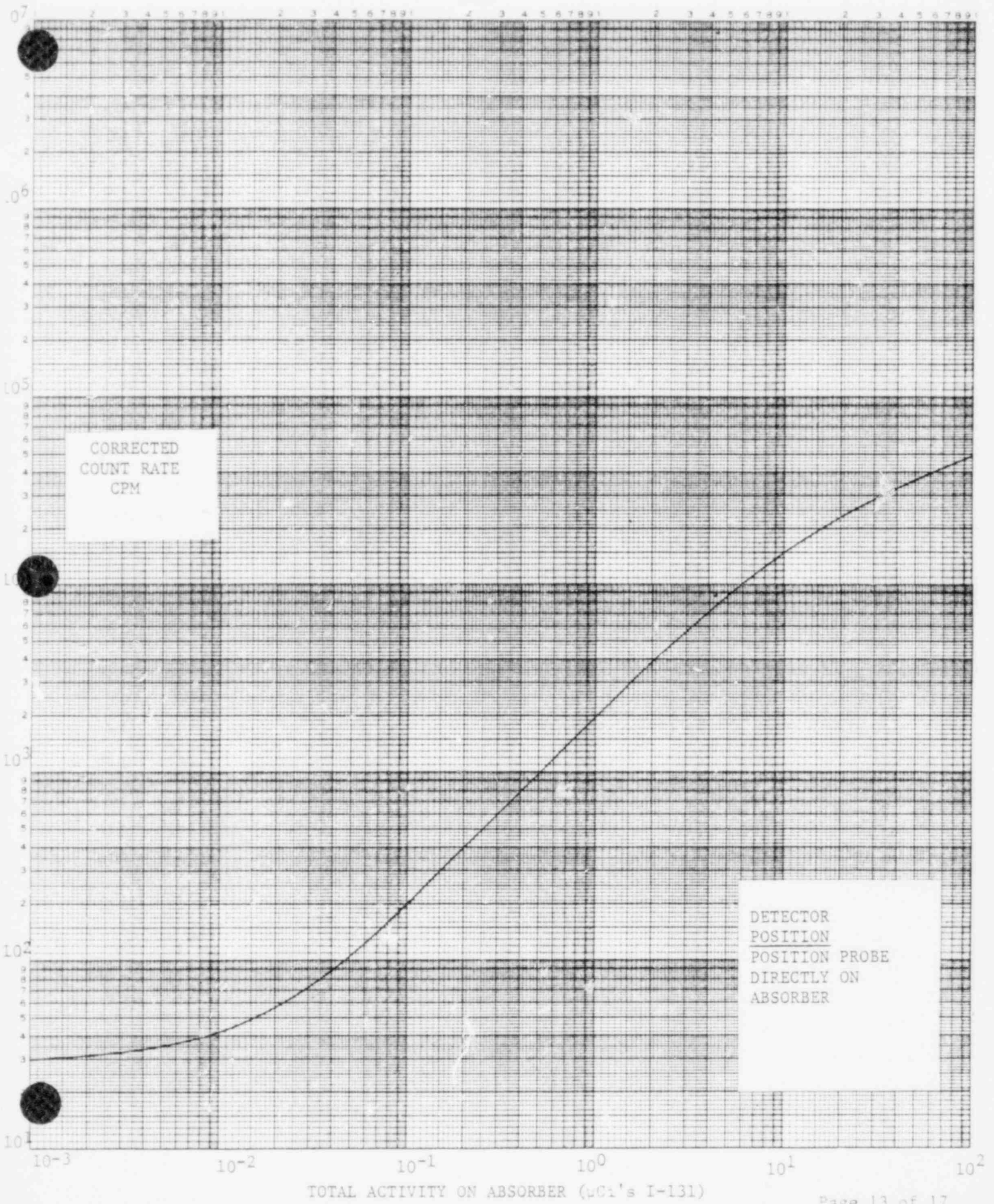
$$\text{Ft}^3 \times 2.83\text{E}4 = \text{cc}$$
3. 
$$\text{uCi/cc} = \frac{\text{CPM}(\text{net})(4.5\text{E}-7 \text{ uCi/dpm})}{(\text{instrument efficiency})(\text{sample volume cfm Total} \times 2.83 \times 10^4)(\text{CF})}$$
  
 (particulate) (see note 2 and 4)
4. TRUE BETA = (WINDOW OPEN READING - WINDOW CLOSED READING) X Beta  
 Correction Factor - (see Note 1)

NOTES:

1. Assume 5.0 if correction factor is unknown
2. Instrument efficiency depends on probes. If using 2" GM pancake probe, ASSUME 10% (0.10) efficiency; if using GM tube probe, ASSUME 2% (0.02) efficiency.
3. List factors affecting reading; height of probe, reading inside vehicle, etc.
4. CF (Correction factor for air samples) = 0.3 for a 4 inch paper filter size counted with a 2 inch GM pancake probe



FIGURE 2  
GROSS IODINE CURVE USING RM-14 WITH 2" GM  
PANCAKE PROBE WITH SILVER ZEOLITE ABSORBER



DETECTOR  
POSITION  
PROBE  
DIRECTLY ON  
ABSORBER

FIGURE 3

GROSS LIQUID ACTIVITY CURVE  
USING RM-14 WITH HP-210 PROBE

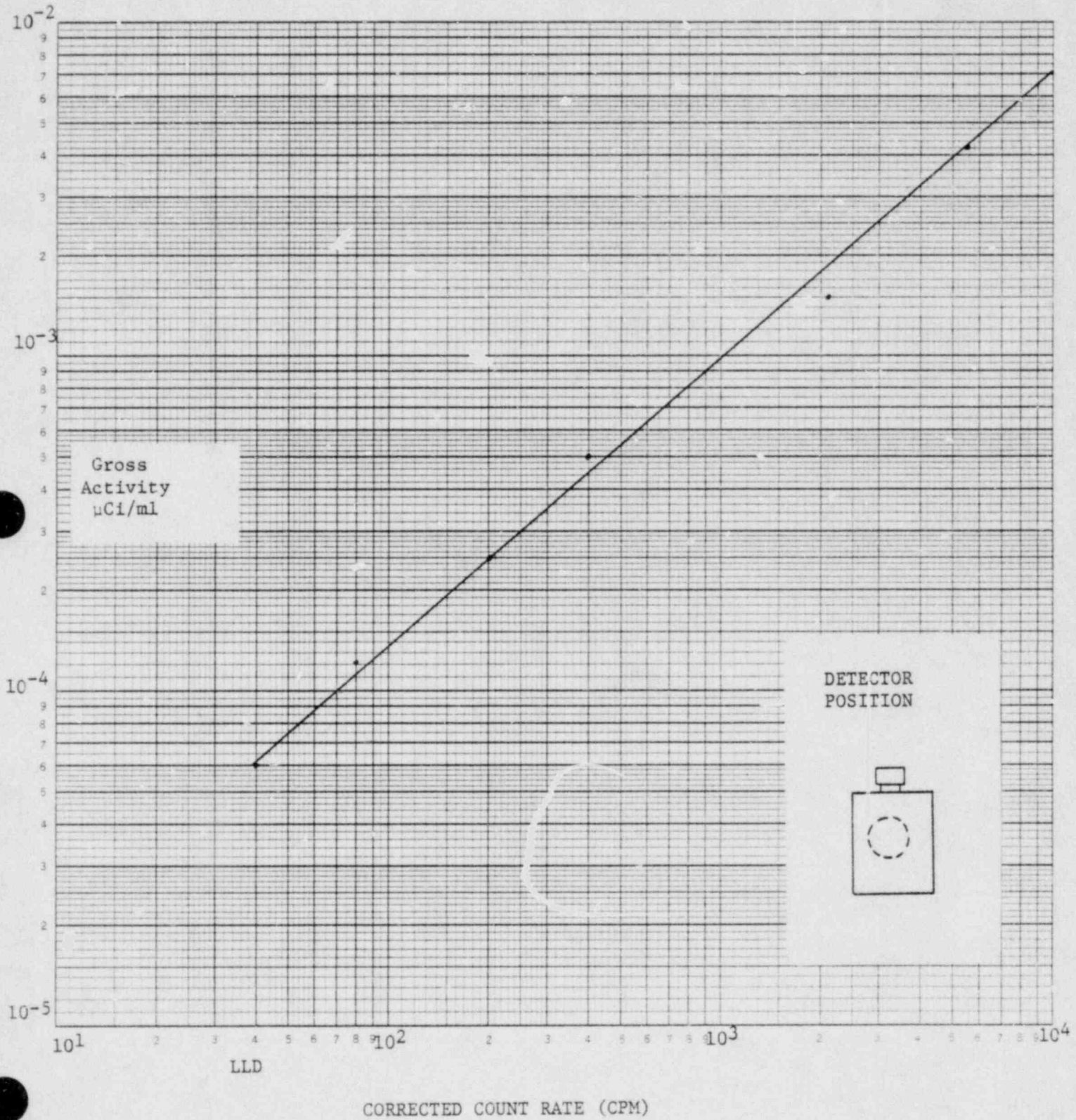
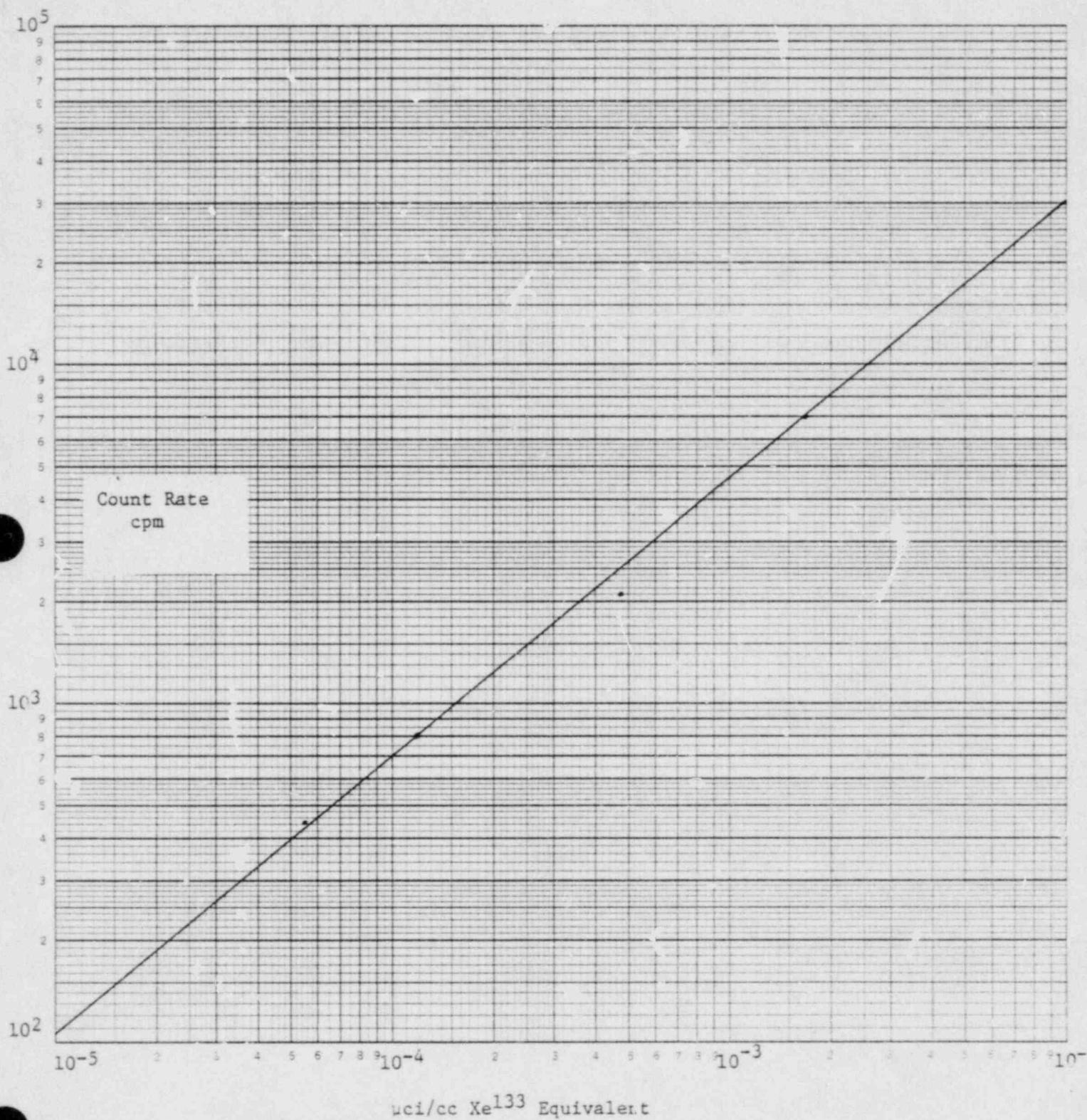


FIGURE 4

GAS CHAMBER CALIBRATION CURVE

(100 cc S.S.)





TAB AOFFSITE SURVEY TEAM EQUIPMENT PACKAGE

1. Each offsite survey team shall be equipped with a kit of the following:

QUANTITY	REQUIRED ITEM
1	Dose rate instrument RO-2 or equivalent
1	Count rate instrument RM-14 or equivalent
1	2" GM pancake probes
1	Battery powered air sampler
2	Personnel self-reading dosimeters (low range)
2	Personnel self-reading dosimeters (high range)
2	TLDs (if individuals have a normally assigned TLD they should wear those assigned)
1 (package)	Plastic Sample Bags (approx. 100)
1 (box)	Garbage bags (approx. 10)
1 (package)	Paper towels or handiwipes
2 (roll)	Masking tape
20	Silver zeolite cartridges
2	Gas Sample Chambers
1	Filter assembly (gas sampler)
1	Suction bulb (gas sampler)
1 (package)	Filter paper (gas sampler)
10	One liter poly bottles
1	Box air sampler filter papers
1 (package)	Survey sample labels (approx. 30)
1	Portable radio
1	Flashlight
4	D-Cell batteries
1	Compass
1	Clipboard
2	Pens
1	Pad of paper (8 1/2" x 11" minimum size)
1	Road map of State of Minnesota
1	Road map of State of Wisconsin
1	Umbrella
1	Watch or clock
1	Procedures binder (see # 2 next page)
2 (pair)	Foul weather (rain) gear
1	Line (approx. 100 feet)
1	Weighted poly bottle holder

TAB A (continued)OFFSITE SURVEY TEAM EQUIPMENT PACKAGE

## 2. The Procedures Binder shall contain:

1 package of the following maps:

- a) Prairie Island Radiological Sampling Points Map (E-EPD-5.1) and related list of location descriptions
  - b) Monticello Radiological Sampling Points Map (E-EPD-4.1) and related list of location descriptions
- 1 Copy of EPIP 1.1.10, "Offsite Surveys"
  - 10 Emergency Sample Results Forms EPIP 1.1.10 Figure 1
  - 1 Copy of EPIP 1.1.8, "Communications Equipment and Information".



Northern States Power Company  
Nuclear Support Services Department

Summary of Change

EPIP 1.1.11 Accident Assessment

The following changes are included in his revision:

- Deleted Message Notification Forms
- Clarified Protective Action Guidelines to conform to site and EPA guidance
- Prepared Protective Action Checklist with sixteen sector map
- Added discussion section for clarification of responsibilities and duties, and assumption of these responsibilities and duties.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.11                      REV: 2
PREPARED BY: <i>Gary Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edward</i> Manager Nuclear Environmental Service	TITLE: 1.1.11 ACCIDENT ASSESSMENT
APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plant	
<p><u>Purpose and Objective</u></p> <p>The purpose of this procedure is to specify the techniques and methods for data collection and analysis to assess the offsite consequences of an emergency condition. This procedure also provides recommendation guidelines for protective actions based on these assessments.</p> <p><u>Conditions and Prerequisites</u></p> <p>An emergency condition has been declared involving the potential for or an actual release of radioactive material from an NSP nuclear plant.</p> <p><u>Organization and Responsibilities</u></p> <p>A. Overall Responsibility - Emergency Manager</p> <p>B. In Charge - Radiation Protection Support Supervisor</p> <p><u>Discussion</u></p> <p>Accident assessment is required to ensure that the consequences of any radiological release are evaluated and that recommendations for protective actions are formulated and provided to appropriate state officials. This assessment is a continuous process throughout the duration of an emergency and should be continued as directed by the Emergency Manager.</p> <p>The responsibility for accident assessment is initially assigned to the TSC. The Radiological Emergency Coordinator will make evaluations based on actual plant data, and calculated or measured doses. He will formulate protective action recommendations for the Emergency Director. The Emergency Director will inform the state officials of the recommendations.</p>	

After the EOF is activated, the Emergency Manager is responsible for all communication with state and local officials. Therefore, all recommendations for protective actions shall be made to the Emergency Manager. In the initial stages of EOF activation, the Emergency Manager may have assumed the responsibilities for the offsite response prior to the Radiation Protection Support Group's arrival. In this instance, the TSC will continue to provide accident assessment and protective action recommendations. These will be made to the Emergency Manager, who will make appropriate recommendations to the state officials.

The decision to transfer accident assessment responsibilities from the TSC to the EOF is made by the Emergency Manager. This decision will be based on the type of emergency, the EOF equipment status and the staffing of the Radiation Protection Support Group. When the Emergency Manager has determined that the EOF has the capability to perform accident assessment and formulate protective action recommendations, he will inform the TSC. He will then direct the Radiation Protection Support Supervisor to assume these responsibilities. The transfer of responsibilities shall be closely coordinated with the Radiological Emergency Coordinator. In general, the Radiation Protection Support Supervisor will supply the TSC with information concerning the results of offsite surveys. The Radiological Emergency Coordinator, located at the TSC, will supply the EOF with actual release rates, meteorological data, results of projected offsite doses, and any applicable survey data obtained by plant survey teams. Each organization (offsite and onsite) should compare actual measured doses with projected doses to verify that no undetected releases have occurred and that assumptions made in projections were valid.

The Radiation Protection Support Supervisor will use the projected dose rates and actual survey results to formulate protective actions. He will inform the Emergency Manager of his recommendations. The Emergency Manager will make the necessary recommendations to state and local officials.

The Radiation Protection Support Supervisor will provide current information concerning offsite activities to the Radiological Emergency Coordinator, at the TSC. This information is provided for inclusion in the sites projected dose rate computer program and to ensure that the plant is aware of the extent of the offsite releases. Updated dose projections based on this information shall be passed to the EOF to upgrade previous protective action recommendations. This technique for review, reconsideration, and evaluation of recommendations for protective actions should continue until the response phase of the emergency is complete.

### Responsibilities

#### A. Emergency Manager

1. Direct the Radiation Protection Support Supervisor to assume accident assessment responsibilities. This should be implemented when the Radiation Protection Support Group is fully staffed and transfer of responsibilities will enhance the overall emergency response.

B. Radiation Protection Support Supervisor

1. Obtain offsite dose projection data from the affected plant TSC.
2. Obtain and analyze the result of offsite monitoring efforts and compare these results with calculated dose projections.
3. Obtain and analyze the results of the Emergency Radiological Environmental Monitoring Program (EREMP) as appropriate.
4. Obtain information from the affected plant TSC regarding the magnitude and nature of potential radioactive releases and analyze the potential offsite consequences.
5. Provide the TSC with offsite survey results.
6. Provide the Emergency Manager with offsite dose and dose rate information and recommendations for offsite protective actions.
7. Prepare Emergency Notification Follow-up Message as found in Figure 2, of EPIP 1.1.5, "Start-up and Operation of EOF". Provide completed form to the Emergency Manager and transmit information to the State EOC.

C. Radiological Emergency Coordinator and TSC Personnel

1. Provide protective action recommendations to the Emergency Manager until Radiation Protection Support Supervisor position is staffed. Use Figure 1 for Protective Action Recommendations.
2. Provide the Radiation Protection Support Supervisor with necessary information concerning projected doses, projected actual release rates, meteorological data and results of onsite survey teams.

ProcedureRadiation Protection Support SupervisorA. Analysis of Dose Projections for Actual Airborne Releases

1. Obtain the following information from the TSC.
  - a. Release rates and type of release (ground or elevated).
  - b. Meteorological data (wind speed and wind direction).
  - c. Survey results from plant survey teams, as applicable.
  - d. Projected offsite dose calculations.



2. Record dose projection on area map referenced in EPIP 1.1.4 (use red marker).
  - a. This will normally be in the form of 16 sector dose data out to 10 miles.
  - b. Determine the highest integrated dose region and highest dose rate region.
3. Determine applicable radiation protection requirements for NSP personnel in affected offsite areas.
4. Dispatch survey teams to affected offsite regions with due regard to radiation protection requirements.
  - a. Teams should be deployed to populated areas where the highest dose rates are projected.
  - b. Direct the offsite monitoring to be performed in accordance with Corporate EPIP 1.1.10, "Offsite Surveys".
5. When survey data is available, plot the data on the area maps referenced in EPIP 1.1.4. Offsite survey results should be plotted (in blue marker) logging beta-gamma survey results in millirem/hr followed by air sample results in uCi/cc.
6. Provide offsite monitoring results to the TSC for comparison with computer based estimates.
7. Perform a comparison of radiological data as follows:
  - a. Compare offsite monitoring results for consistency. Re-monitor areas of concern, as required.
  - b. Compare offsite monitoring results with dose calculation projections. Re-monitor areas of concern, as required.
  - c. Dose calculation techniques should represent an upper bound to potential offsite dose and dose rates. Field survey results more accurately indicate integrated dose and dose rate in the environs.
8. Contact the Radiological Emergency Coordinator. Verify that the TSC calculations and assessment of offsite dose rates are consistent with those at the EOF. Any disagreements shall be brought to the attention of the Emergency Manager.
9. Determine any protective action recommendations that are prudent. These recommendations should be made using the guidance provided in Tab A and plotted on Figure 1.



10. Provide the Emergency Manager with the current integrated dose and dose rate information data for populated areas and other areas of major concern. A summary report should be prepared at periodic intervals as time and information permit. The summary report should consist of the following:
  - a. Plot of integrated dose and dose rate information on area maps referenced in EPIP 1.1.4 (date, time, color code).
  - b. Summary of meteorological conditions, past changes in conditions and potential changes germane to radioactive material transport.
  - c. Areas of highest integrated dose and dose rate.
  - d. Population areas of greatest concern.
  - e. Summary of monitoring and dose calculation efforts to date.
  - f. Planned monitoring and dose calculations in progress.
11. Complete the Emergency Notification Follow-up Message for reporting of the event. Use Figure 2, EPIP 1.1.5, "Start-up and Operation of EOF". Provide completed form to the Emergency Manager.

B. Analysis of Dose Projection for Potential Airborne Releases

1. If the potential exists for a significant release of radioactive material from the plant, perform an analysis of potential offsite consequences as follows:
  - a. Request the TSC to determine the approximate releasable curie content of the containment.
  - b. Request the TSC to determine the most probable release path i.e. ground release, stack release or building ventilation release.
  - c. Request the TSC to determine dose projection calculations based on release of this material under present and various meteorological conditions using the affected plant procedure for offsite dose calculations; Prairie Island Nuclear Generating Plant procedure F3-13, "Offsite Dose Calculations," or Monticello Nuclear Generating Plant procedure, A.2-406, "Offsite Dose Projection".
  - d. Using the data developed by the TSC assess the probability of a total rapid release vs a continuous slow release for an extended period of time. Perform dose calculations for most likely release mode and worst case mode.
  - e. Using the data developed by the TSC determine the population areas in risk.

2. Contact the Radiological Emergency Coordinator. Verify that the TSC calculations and assessment of offsite dose rates are in general agreement with those at the EOF. Any disagreements shall be brought to the attention of the Emergency Manager.
3. Determine any protective action recommendations that are prudent. These recommendations should be made using the guidance in TAB A, and plotted on Figure 1, and forwarded to the Emergency Manager.
4. Provide the Emergency Manager with current assessment information. A summary report should be prepared at periodic intervals as other duties and information permit. The summary report should include the following:
  - a. Plot of most probable and worst case integrated dose on an area map.
  - b. Meteorological basis for the plot and potential for improvement or degradation of meteorological conditions.
  - c. Sectors of highest potential dose and population centers of concern.
  - d. Efforts underway to better determine the magnitude of the potential release.
5. Complete the Emergency Notification Follow-up Message using Figure 2, EPIP 1.1.5, "Start-up and Operation of EOF". Provide the completed form to the Emergency Manager.

C. Assessment of Liquid Releases

1. Obtain offsite monitoring data in accordance with Corporate EPIP 1.1.10, "Offsite Surveys".
2. Develop a followup report to the Emergency Manager which includes the following:
  - a. Results of offsite monitoring.
  - b. Release status and potential for resumption or termination.
  - c. Dilution considerations and projected concentration of radioactive material at the nearest public water intake structure.
3. If the release is at Monticello, contact the TSC and obtain the expected arrival time of the radioactive material at the Minneapolis and St. Paul water intake structures.

#### D. Preparation of Protective Action Recommendations

Using the analysis data, projected doses and dose rates, and actual field monitoring reports, select appropriate protective actions as follows:

1. No protective actions for members of the general public should be recommended for incidents involving radioactive releases which are projected to result in doses less than 1 REM whole body and/or 5 REM thyroid (child).

#### 2. Sheltering

Sheltering is a minimum protective action and evacuation should be considered for incidents involving radioactivity releases which are projected to result in doses greater than 1 REM whole body and/or 5 REM thyroid (child).

Sheltering is a protective action which involves members of the general public taking cover in a building that can be made relatively air tight. Generally, any building suitable for winter habitation, with windows and doors closed and ventilation turned off, would provide reasonably good protection for about two hours; but would be ineffective after that period due to natural ventilation of the structure. Sheltering is an appropriate protective action for the following:

- a. Severe incidents in which an evacuation cannot be implemented because of the rapid passage of the plume ("puff" release).
- b. When an evacuation is indicated, but local constraints, such as inclement weather, road condition, etc., dictate that directing the public to seek shelter is a more feasible and effective protective measure than evacuation.
- c. As a precautionary measure, while a determination of the need to evacuate is made.

#### 3. Evacuation

Evacuation of the general public within affected areas should be recommended for incidents involving radioactivity releases which are projected to result in doses greater than 5 REM whole body and/or 25 REM thyroid (child).

Timely evacuation of members of the population is the most effective protective action. There are, however, disadvantages and constraints that may make evacuation inappropriate. Evacuation is an appropriate protective action for the following:

- a. Situations where the lead time between declaration of the emergency and population relocation is compatible with plume movement.

- b. Situations which do not provide for advance warning, but for which substantial reductions in population dose can be made by avoiding exposure to residual radioactivity (plume fallout) in wake of sudden severe incidents.
4. Within the 10 Mile Emergency Planning Zone
  - a. In order to provide the Emergency Manager with recommendations for offsite protective actions within the 10 mile EPZ this determination should be made in accordance with the general guidance provided in Tab A and the Corporate Nuclear Emergency Plan, Appendix C.
5. Within the 50 Mile Emergency Planning Zone
  - a. On a timely basis considering the needs of the emergency effort and the personnel resources available, the extent of radiological contamination within the 50 mile emergency planning zone should be assessed. This can be accomplished by activation of the "Emergency Radiological Environmental Monitoring Program", EPIP 1.1.12 or by examination of environmental monitoring data from the State. This may not be part of the initial Protective Action Effort.
  - b. As information becomes available, determinations concerning the need for offsite protective actions within the 50 mile EPZ should be made. These determinations should be made in accordance with the environmental guidance of the State Protective Action Guides provided in the Corporate Emergency Plan, Appendix C, and the State of Minnesota Radiological Emergency Response Plan.



TAB A

EPA GUIDELINES FOR RECOMMENDED PROTECTIVE ACTIONS  
(WHOLE BODY AND THYROID DOSE FROM EXPOSURE TO A GASEOUS PLUME)

<u>Projected Dose (Rem) to The Population</u>	<u>Recommendation Actions</u>	<u>Comments</u>
Whole Body < 1 Thyroid < 5	No planned protective actions. Issue an advisory to seek shelter and await further instructions. Monitor environmental radiation levels.	Previously recommended protective actions may be reconsidered or terminated.
Whole Body 1 to < 5 Thyroid 5 to < 25	Seek shelter as a minimum. Consider evacuation. Evacuate unless constraints make it impractical. Monitor environmental radiation levels. Control access.	If constraints exists, special consideration should be given for evacua- tion of children and pregnant women.
Whole Body 5 and above Thyroid 25 and above	Conduct mandatory evacuation. Monitor environmental radiation levels and adjust area for mandatory evacuation based on these levels. Control access.	Seeking shelter would be an alternative if evacuation were not immediately possible.
<u>Projected Dose (Rem) To Emergency Workers</u>		
Whole Body 25 Thyroid 125	Control exposure of emergency team members to these levels except for lifesaving missions. (Appropriate controls include time limitations, respirators and thyroid prophylaxis.)	Although respirators and thyroid prophyl- axis should be used where effective to control dose to emer- gency workers, Thyroid
Whole Body 75	Control exposure of emergency team members performing a lifesaving mission to this level. (Control of time exposure will be most effective.)	dose should not be the limiting factor for <u>lifesaving</u> missions.



TAB A

GUIDELINES FOR PROTECTION AGAINST INGESTION OF CONTAMINATION+

I. Ground Contamination

A. Action Levels

1. Projected whole body dose above the ground 1 Rem.
2. Ground Contamination levels 200 uCi/m<sup>2</sup> at t = 1 hr post-accident.
3. Exposure rate 12 mRem/hr at 1 meter above ground at t = 1 hr post-accident.

B. Recommended Protective Actions

1. Evacuation of affected areas.
2. Restriction of entry of contaminated offsite areas until radiation level has decreased to State approved levels.

II. Food and Water Contamination

A. Action Levels

Nuclide	Concentration in Milk or Water		Total Intake via all Food & Water Pathways		Pasture Grass (Fresh Weight)	
	5 rem WB or bone: (5 rem Thyroid)	15 Rem WB or bone: (15 Rem Thyroid)	Preventive (uCi)	Emergency (uCi)	Preventive (uCi/kg)	Emergency (uCi/kg)
I-131 (Thyroid)	0.12	0.12	0.09	0.9	0.27	2.7
Cs-137 (Whole Body)	0.34	3.4	7	70	3.5	35
Sr-90 (Bone)	0.007	0.0008	0.02	0.2	0.7	7
Sr-89 (Bone)	0.13	1.3	2.6	26	13	130

B. Recommended Protective Actions

Preventive

1. Removal of lactating dairy cows from contaminated pasture and substitution of uncontaminated stored feed.
2. Substitute source of uncontaminated water.
3. Withhold contaminated milk from market to allow radioactive decay.
4. Divert fluid milk to production of dry whole milk, butter, etc.

Emergency

- Isolate food and water from its introduction into commerce after considering:
- a. availability of other possible actions;
  - b. importance of particular food in nutrition;
  - c. time and effort to take action;
  - d. availability of other foods.

\* If other nuclides are present, Reg. Guide 1.109 should be used to calculate the dose to the critical organ(s). Infants are the critical segment of the population.

+ References: U.S. Food and Drug Administration, Federal Register, Vol. <.>

TAB A

RECOMMENDED PROTECTIVE ACTIONS

ACCIDENT PHASE	EXPOSURE PATHWAY	EXAMPLES OF ACTIONS TO BE RECOMMENDED
EMERGENCY PHASE 1 (0.5 to 24 hours)*	Inhalation of gases, radio-iodine, or particulate	Evacuation, shelter, access control, respiratory protection, prophylaxis (thyroid protection).
	Direct whole body exposure	Evacuation, shelter, access control
	Ingestion of milk	Take cows off pasture, prevent cows from drinking surface water, discard contaminated milk, or divert to stored products, such as cheese.
INTERMEDIATE PHASE 2  (24 hours* to 30 days)	Ingestion of fruits and	Wash all produce, or impound produce, delay harvest until approve substitute uncontaminated produce.
	Ingestion of water	Cut off contaminated supplies, substitute from other sources, filter, demineralize.
LONG TERM PHASE 3  (Over 30 days)*	Whole body exposure and inhalation	Relocation, decontamination, access control.
	Ingestion of food and water contaminated from the soil either by resuspension or uptake through roots.	Decontamination, condemnation, or destruction of food; deep plowing, condemnation, or alternate use of land.
	Whole body exposure from deposition material or inhalation of resuspended material	Relocation, access control, decontamination, fixing of contamination, deep plowing.

- 1 Emergency Phase - Time period of major release and subsequent plume exposure.
  - 2 Intermediate Phase - Time period of moderate continuous release with plume exposure and contamination of environment.
  - 3 Long Term Phase - Recovery period.
- \* "Typical" Post-Accident time periods.

TAB AREPRESENTATIVE SHIELDING FACTORS FROM GAMMA CLOUD SOURCE

<u>Structure or Location</u>	<u>Shielding Factor (a)</u>	<u>Representative Range</u>
Outside	1.0	—
Vehicles	1.0	—
Wood-Frame House (b) (No Basement)	0.9	—
Basement of Wood House	0.6	0.1 to 0.7 (c)
Masonry House (No Basement)	0.6	0.4 to 0.7 (c)
Basement of Masonry House	0.4	0.1 to 0.5 (c)
Large Office or Industrial Building	0.2	0.1 to 0.3 (c, d)

- (a) The ratio of the dose received inside the structure to the dose that would be received outside the structure.
- (b) A wood frame house with brick or stone veneer is approximately equivalent to a masonry house for shielding purposes.
- (c) This range is mainly due to different wall materials and different geometries.
- (d) The shielding factor depends on where the personnel are located within the building (e.g., the basement or an inside room).

SELECTED SHIELDING FACTORS FOR AIRBORNE RADIONUCLIDES

Wood house, no basement	0.9
Wood house, basement	0.6
Brick house, no basement	0.6
Brick house, basement	0.4
Large Office or Industrial Building	0.2
Outside	1.0

\* Taken from SAND 77-1725 (Unlimited Release)

TAB A

REPRESENTATIVE SHIELDING FACTORS FOR SURFACE DEPOSITED RADIONUCLIDES

STRUCTURE OR LOCATION	REPRESENTATIVE SHIELDING FACTOR <sup>(a)</sup>	REPRESENTATIVE RANGE
1 m above an infinite smooth surface	1.00	—
1 m above ordinary ground	0.70	0.47 - 0.85
1 m above center of 50-ft roadways, 50% decontaminated	0.55	0.4 - 0.6
Cars on 50-ft road;		
Road fully contaminated	0.5	0.4 - 0.7
Road 50% decontaminated	0.5	0.4 - 0.6
Road fully decontaminated	0.25	0.2 - 0.5
Trains	0.40	0.3 - 0.5
One and two-story wood-frame house (no basement)	0.4	0.2 - 0.5
One and two-story block and brick house (no basement)	0.2 (b)	0.04 - 0.40
House basement, one or two walls fully exposed:	0.1 (b)	0.03 - 0.15
One story, less than 2 ft. of basement, walls exposed	0.5 (b)	0.03 - 0.07
Two stories, less than 2 ft of basement, walls exposed	0.03 (b)	0.02 - 0.05
Three- or four-story structures, 5000 to 10,000 ft <sup>2</sup> per floor;		
First and second floors:	0.05 (b)	0.01 - 0.08
Basement	0.01 (b)	0.001 - 0.07
Multistory structures, 10,000 ft - per floor:		
Upper floors	0.01 (b)	0.001 - 0.02
Basement	0.005 (b)	0.001 - 0.015

(a) The ratio of dose received inside the structure to the dose that would be received outside the structure.

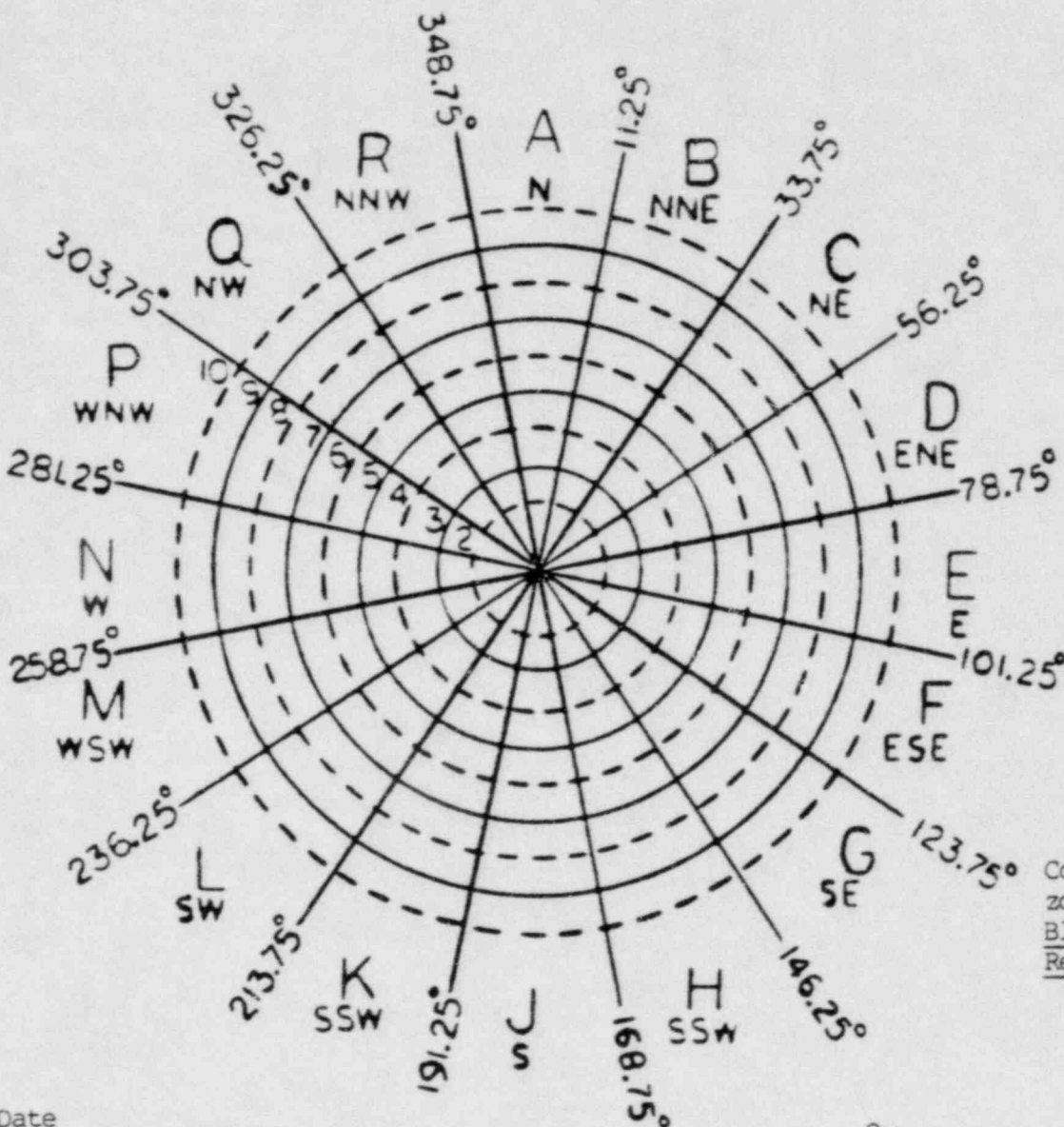
(b) Away from doors and windows.

\* Taken from SAND 77-1725 (Unlimited Release)



FIGURE 1

PROTECTIVE ACTION RECOMMENDATION CHECKLIST



Color in affected zones as follows:  
Blue for sheltering  
Red for evacuation

Date \_\_\_\_\_

Time \_\_\_\_\_

Wind direction/speed \_\_\_\_\_ From \_\_\_\_\_ At \_\_\_\_\_ (mph)

PROTECTIVE ACTION:

SHELTER

Sector(s) \_\_\_\_\_ Mile(s) \_\_\_\_\_

This form may be used in conjunction with an Emergency Notification Followup Message

EVACUATION

Sector(s) \_\_\_\_\_ Mile(s) \_\_\_\_\_

CONTAMINATION CONTROL (food, water, milk)

Sector(s) \_\_\_\_\_ Mile(s) \_\_\_\_\_

Prepared by: \_\_\_\_\_

Approved by: \_\_\_\_\_  
 Emergency Manager/Emergency Director



NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.12 IMPLEMENTATION OF THE EMERGENCY RADIOLOGICAL  
ENVIRONMENTAL MONITORING PROGRAM (EREMP) REV 2

The following changes are included in this revision:

- .Total re-write.
- .Provides guidance for requesting special samples.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.12                      REV: 2
PREPARED BY: <i>Gay Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edward</i> Manager Nuclear Environmental Services	TITLE: 1.1.12 IMPLEMENTATION OF THE EMERGENCY RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM (EREMP)
APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plants	

PURPOSE AND OBJECTIVE

The purpose of this procedure is to establish a procedure to provide for special offsite environmental samples in the event that a plant emergency develops that may affect the environs of the Emergency Planning Zones.

CONDITIONS AND PREREQUISITES

An emergency condition requiring offsite response has been declared at either the Monticello or Prairie Island Nuclear Generating Plants.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall responsibility - Emergency Manager
- B. In Charge - Administrator REMP

RESPONSIBILITIES

- A. Emergency Manager

The Emergency Manager will notify the Administrator - REMP that special environmental sampling is needed. Special samples may be taken at any time during an accident to provide additional information as to the extent of radioactive release to the environment.

The REMP Program provides for various environmental samples at recognized intervals and locations. The following is a list of the types of samples and the normal sample frequency:

- |                                      |  |
|--------------------------------------|--|
| 1. Air Particulate and Radioiodine   | - continuous sample/filters changed weekly |
| 2. TLD                               | - Quarterly                                |
| 3. Milk (Cow)                        | - Monthly                                  |
| 4. Milk (Goat)                       | - Semi-annual                              |
| 5. Well Water                        | - Quarterly                                |
| 6. Drinking Water                    | - Weekly                                   |
| 7. Mississippi River Water           | - Weekly                                   |
| 8. Cultivated Crops                  | - Annually                                 |
| 9. Natural Vegetation                | - Semi-annual                              |
| 10. Top Soil                         | - Every Three Years                        |
| 11. Macroinvertebrates or Periphyton | - Semi-annual                              |
| 12. Fish                             | - Semi-annual                              |
| 13. Aquatic Vegetation               | - Semi-annual                              |
| 14. Bottom Sediment (River)          | - Semi-annual                              |
| 15. Shoreline Sediment               | - Semi-annual                              |
| 16. Small Animals                    | - Semi-annual                              |

The following guidelines are provided to aid the Emergency Manager in determining the extent of additional environmental monitoring required to document any release or determine additional protective actions.

Two sets of TLD's containing 3 chips each are placed at each location in the area of the plant site. One set (Regular) is exchanged and read out quarterly. The second set (Emergency) is read out when requested by the Emergency Manager. If the "Emergency" set is not read out during the regular exposure period, they are exchanged at the same time as the "regular" set. A map (E-EPD-4) is available to show the locations.

- 1) For Alert and Site Area Emergency Conditions the Emergency set of TLD dosimeters should be exchanged for each location upon termination of the emergency condition.
- 2) For a General Emergency condition the Emergency set of TLD dosimeters may be exchanged during the emergency conditions, but should not be exchanged during any known release period. Considerations for exchanging the dosimeters should include:
  - a) Taking parallel actions with the state and NRC as deemed necessary.
  - b) Providing interim data concerning the long term effects of the casualty on the environment.

- c) Providing additional data concerning the extent of the release plume.
  - d) The Regular set of dosimeters should not be exchanged, except at the normal ninety-one day exchange date.
- 3) The Administrator REMP has developed a set of procedures for implementing REMP sampling during an emergency. These procedures, "Special Sampling Procedures for use with the Emergency Plan - REMP," provide guidance for collecting, identifying and shipping environmental samples to the contract radiological laboratory for analysis.
- 4) For airborne releases, samples 1, 2, 3, 8, and 9, as listed on Page 2, could provide representative data on immediate environmental effects. For liquid effluent releases, samples 7, 12, 14 and 15, also listed on Page 2, could provide data on immediate effects.

B. Administrator - REMP

1. Contact the contract laboratory (Hazleton Environmental Services) and request new sets of dosimeters be immediately forwarded to NSP. He shall inform the laboratory that special samples, which require processing, will be forwarded.
2. Contact the EOF Radiation Protection Support Supervisor to determine if any special precautions are necessary when the samples are collected. He shall request personal dosimetry be supplied to the personnel who will be collecting the samples.
3. Notify the Manager - Environmental Science (ERAD) or if unavailable the Environmental Aid Senior at the affected plant and request that special samples be collected. Specify any special precautions to be observed during sample collection. Direct personnel responsible for sample collection to obtain dosimeters at the EOF.
4. Specify that sampling procedures for collecting, identifying, and shipping environmental samples to the contract laboratory for analyses will be implemented in accordance with the Emergency Radiological Environmental Monitoring Program (EREMP).
5. Inform the Emergency Manager of the results of the Emergency Radiological Environmental Monitoring Plan.

NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.13 EVACUATION OF THE EOF REV 2

The following changes are included in this revision:

.Corrected minor typographical errors.



NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.13                      REV: 2
PREPARED BY: <i>Gary Hudson</i>	EFFECTIVE DATE: October 6, 1981
Asst. Adm. Emergency Preparedness REVIEWED BY: <i>Edward</i>	TITLE:  1.1.13    EVACUATION OF THE EOF
Manager Nuclear Environmental Services APPROVED BY: <i>[Signature]</i>	

General Manager Nuclear Plants

PURPOSE AND OBJECTIVE

The purpose of this procedure is to specify the actions to be taken by the Corporate Emergency Response Team in the event that the EOF must be evacuated to the HQEC. This procedure will specify action levels that are to be used as guidelines by the Emergency Manager to determine the extent and necessity of EOF Evacuation.

CONDITIONS AND PREREQUISITES

Conditions requiring an evacuation of the EOF may vary significantly based on the extent of operations in progress, the severity of the radiation levels, the estimated time that the radiation levels will be significant, and the integrated dose to personnel.

In general, non-essential personnel, those not directly involved in the activities of the offsite organization, should be evacuated first from any areas that could be considered radiation or contamination areas. These personnel would include, media personnel, vendors, consultants, food service personnel and public employees of the state and local agencies.

The need to evacuate emergency response team personnel should be determined based on the following considerations.

- 1) The integrated dose that these personnel would receive if they remained in a radiation area.
- 2) The calculated total dose that would be accumulated over the period of EOF operation.
- 3) The potential loss of the ability to utilize key technical personnel due to radiation exposure limits.

- 4) The effectiveness of the emergency organization operating in a condition of reduced mobility or communication due to protective clothing and equipment.
- 5) The potential exposure received during evacuation compared to the potential exposure received by not evacuating.

EPA Guidelines for Recommended Protective Action to limit total exposure : personnel are:

Projected Dose (Rem) to The Population	Recommendation Actions	Comments
Whole Body < 1 or Thyroid < 5	No planned protective actions. Issue an advisory to seek shelter and await further instructions. Monitor environmental radiation levels.	Previously recommended protective actions may be reconsidered or terminated.
Whole Body 1 to < 5 or Thyroid 5 to < 25	Seek shelter as a minimum. Consider evacuation. Evacuate unless constraints make it impractical. Monitor environmental radiation levels. Control access.	If constraints exist, special consideration should be given for evacuation of children and pregnant women.
Whole Body 5 and above or Thyroid 25 and above	Conduct mandatory evacuation. Monitor environmental radiation levels and adjust area for mandatory evacuation based on these levels. Control access.	Seeking shelter would be an alternative if evacuation were not immediately possible.
<hr/>		
Projected Dose to Emergency Workers		
Whole Body 25 Thyroid 125	Control exposure of emergency team members to these levels except for lifesaving missions. (Appropriate controls include time limitations, respirators and thyroid prophylaxis.)	Although respirators and thyroid prophylaxis should be used where effective to control dose to emergency workers, Thyroid dose should not be the limiting factor for <u>lifesaving missions.</u>
Whole Body 75	Control exposure of emergency team members performing a lifesaving mission to this level. (Control of time exposure will be most effective.)	

Additional guidelines considering the effects of contamination and excessive exposure on the effectiveness of the continued operation of the Offsite Emergency Organization are:

- 1) Contamination greater than 5000 dpm; consider use of protective clothing. Generally surface contamination itself should not be a major consideration requiring evacuation unless the restrictions on personnel movements to limit the spread of contamination becomes procedurally limiting.
- 2) Airborne levels greater than 1 MPC; consider use of respiratory protection. Operation may continue as long as effective respiratory protection exists. Prolonged exposure to excessive airborne levels without protection that would lead to a whole body exposure of 3000 mrem in one quarter should be avoided.
- 3) Radiation levels greater than 100 mr/hr; consider evacuation if the levels will be sustained for a significant period of time. Generally, operational limits are flexible considering the "stay time" in the radiation area. An integrated dose in excess of 3000 mrem in one quarter should be avoided. Consideration to the "burn out" of key individuals should be used to determine the advisability of long term operation of the EOF in any area greater than 5 mr/hr. The time to reach quarterly limits at various radiation levels is:

<u>Radiation level</u>	<u>Number of 12 hr. shifts</u>
5 mr/hr	50
10 mr/hr	25
25 mr/hr	10
50 mr/hr	5
100 mr/hr	2.5

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibility - Emergency Manager
- B. In Charge -
  - HQEC - Power Production Management
  - EOF - Emergency Manager
  - TSC - Emergency Director
- C. Assistance -
  - EOF - EOF Coordinator
  - Radiation Protection Support Supervisor

RESPONSIBILITIES

## A. Emergency Manager

1. Direct the EOF Coordinator to provide routine status of the EOF atmosphere.
2. If radiation levels exceed 5 mr/hr, surface levels exceed 1000 dpm or airborne levels exceed 1 MPC, the Emergency Manager shall direct the EOF Coordinator and Radiation Protection Support Supervisor to evacuate all non-essential personnel from the area. These personnel would include media personnel, vendors, NRC advisors, and any other personnel not part of the NSP emergency response team.
3. If radiation, airborne or surface contamination reach levels which seriously reduce the effectiveness of the emergency organization or continued operation could cause excessive exposure to emergency personnel, direct the EOF Coordinator to prepare to evacuate the EOF.
4. Inform Power Production Management and the Emergency Director of the need to evacuate. Request that the HQEC staff prepare to assume offsite organization operational responsibilities.
5. Direct the Radiation Protection Support Supervisor to determine the evacuation route that would most limit exposure and provide the simplest means of monitoring personnel evacuating the area.
6. Contact Power Production Management and turnover operations of the EOF to the HQEC staff in accordance with EPIP 1.1.6, "Emergency Organization Shift Turnover".
7. When the activities of the EOF have been turned over to the HQEC, inform the NRC, TSC, and state and local governments of the change.
8. Supervise the evacuation of personnel from the EOF.

## B. EOF Coordinator

1. When informed of the decision to evacuate the EOF, supervise the assembly of materials and equipment to be removed from the area. These materials should include:
  - a. Records
  - b. Maps and survey logs
  - c. Radiation monitoring equipment
  - d. Decontamination equipment.
  - e. Transceiver and two-way radio.



2. Direct the Logistics Coordinator to arrange for transportation of personnel and equipment.

C. Radiation Protection Support Supervisor

1. Inform the Emergency Manager when the EOF exposure levels are above guideline levels.
2. Determine possible evacuation paths that would limit the exposure to personnel.
3. Supervise the assembly of monitoring teams to coordinate the monitoring and decontamination of personnel, as necessary, during the evacuation.

D. Power Production Management

1. When informed of the need to evacuate the EOF area, direct the assembly of a parallel organization that can function as an interim offsite operational organization during the evacuation.
2. Supervise the assumption of duties of the operational organization.
3. Direct the activities of the corporate organization following the evacuation of the EOF until an Emergency Manager designee arrives at the HQEC to assume the Emergency Manager position.



NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.14 VENDOR CONSULTANT/OUTSIDE AGENCY INTERFACE REV 2

The following changes are included in this revision:

.Provides a corrected listing of telephone numbers.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.14                      REV: 2
PREPARED BY: <i>Gary Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edward</i> Manager Nuclear Environmental Services	TITLE:  1.1.14 VENDOR/CONSULTANT/OUTSIDE AGENCY INTERFACE
APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plants	

PURPOSE AND OBJECTIVES

The purpose of this procedure is to provide instructions for the notification of primary vendors and other service organizations that an emergency condition exists, and provide instructions concerning the method to establish interfaces with non-NSP organizations.

CONDITIONS AND PREREQUISITES

An Emergency condition has been declared at either the Monticello or Prairie Island Nuclear Generating Plant and the EOF has been activated.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibility - Emergency Manager
- B. In Charge - Emergency Manager
- C. Assistance - EOF Coordinator  
- Logistics Coordinator

RESPONSIBILITIES

A. EMERGENCY MANAGER

- 1) If the NSSS vendor has not already been notified by the plant, direct the Logistics Coordinator to notify the NSSS vendor of the emergency condition.
- 2) If site assistance is required, direct the EOF Coordinator/Logistics Coordinator to request that the vendor send a site response team to the applicable EOF.
- 3) Determine the need for assistance from vendors and contractors. Direct the Logistics Coordinator to procure necessary services.

B. EOF COORDINATOR

1. Assist the Emergency Manager in obtaining vendor services.
2. Function in the capacity of the Logistics Coordinator if that position has not been delegated to another employee.

C. LOGISTICS COORDINATOR

1. Notify the NSSS vendor and architect engineer of the applicable plant of the emergency condition. Notification procedures are provided in Tab A of this procedure.
2. Provide information to the applicable vendor response center as to necessary equipment or assistance that is desired from the vendor.
3. If instructed by the Emergency Manager, request that the vendor site response team proceed to the EOF.
4. If vendor assistance will be required for more than three days, initiate procedures to procure long-term services in accordance with the "Emergency Processing of Purchase Orders" procedure, EPIP 1.1.9.

TAB A

PRIMARY VENDOR/AE CONTACT NUMBERS

To inform the primary vendors and architect engineers of an emergency condition or to request emergency assistance, the Logistics Coordinator or an alternate should contact the individuals listed below and explain the situation or emergency request. The vendor contact person will control the contacting of applicable organizations within his company to supply whatever assistance is required. In addition to these vendor numbers, INPO has access to many supplier and contracting firm emergency contact telephone numbers and can provide additional technical assistance as requested.

A. PRAIRIE ISLAND

1. NSSS - Westinghouse Electric Corporation

Telephone one individual in order listed OFFICE/HOME/HHL

a. Field Service Managers

- 1)
- 2)

b. Service Response Managers

- 1)
- 2)
- 3)

c. Emergency Response Director

- 1)

d. Emergency Response Deputy Director

- 1)

2. AE - Fluor Power Services

FPS switchboard number is

Name

Office

Home

-----

B. MONTICELLO

1. NSSS - General Electric Corporation

a. Manager, Product Service

NOTE: General Electric's number is that of an answering service assigned to monitor calls for emergency purposes. The NSP representative contacting this number shall request that the on-call Product Service Manager be notified of the call and provide the answering service with a call-back number. The applicable product service manager will then return the call to determine NSP needs.

2. AE - Bechtel Power Corporation

a.

b.

c.

C. INPO

1. INPO Emergency Response Center:



NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

EPIP 1.1.15 TRANSITION TO THE RECOVERY PLAN REV 2

The following changes are included in this revision:

.Correction of typographical errors.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.15                      REV: 2
PREPARED BY: <i>Gary Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edward</i> Manager Nuclear Environmental Services  APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plants	TITLE: 1.1.15    TRANSITION TO THE RECOVERY PLAN

PURPOSE AND OBJECTIVE

The purpose of the "Transition to the Recovery Plan" procedure is to: 1) specify the conditions which warrant termination of the Emergency Plan response and implementation of the Recovery Plan; 2) specify the action required to terminate the emergency response, and 3) specify the steps necessary to transfer control of the operations in progress to the Recovery Manager.

CONDITIONS AND PREREQUISITES

The Recovery Plan will be activated by Power Production Management when it is evident that long term planning and project management will be required to return the plant to a pre-accident condition. The recovery organization would be responsible for the overall effort concerning the special operations that may be required to restore the plant. These would include; planning, budgeting, contracts, project management, operation of facilities other than the plant, logistics, engineering, governmental interfaces, and communications.

Conditions which would indicate the need for activation of the Recovery Plan may cover a wide range of problem areas. In general, the following types of conditions should guide Power Production Management in the decision to activate the plan:

1. Significant physical damage to the plant
2. Long term radioactive waste management problems at the plant
3. Large scale planning efforts required to coordinate the restoration of the plant involving contractors, consultants, vendors, government and other outside agencies
4. High estimated restoration costs
5. Significant environmental damage or anticipated projects requiring environmental impact studies.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibilities - Power Production Management
- B. In Charge - Recovery Manager
- C. Assistance - Emergency Manager  
- EOF Coordinator

RESPONSIBILITIESA. POWER PRODUCTION MANAGEMENT

1. Direct the Recovery Manager to prepare the Recovery Organization to assume control of the offsite organization when immediate emergency condition is over, the plant is in a stable condition, all releases are terminated, there is insignificant potential for additional release, and preparation of the Recovery Organization would not adversely affect the operation of the Emergency Organization, by detracting key individuals from assigned responsibilities.
2. When the Emergency Manager, Emergency Director and Power Production Management agree that all Emergency Organization activities in progress can be safely transferred to the Recovery Organization, direct the Recovery Plan to be activated.

B. RECOVERY MANAGER

1. When directed by Power Production Management to prepare the Recovery Organization:
  - a. Contact the Emergency Manager to determine the extent of damage and overall plant conditions. He shall determine when the emergency condition is likely to be terminated.
  - b. Assign personnel to function in the following positions:
    - 1) Administration and Logistics Superintendent
    - 2) Technical Support Superintendent
    - 3) Superintendent of Radiation Control and Waste Management
  - c. Direct these Recovery Organization personnel to assemble their respective staffs in accordance with the Recovery Plan.

- d. If the emergency conditions will not be concluded immediately, contact the Emergency Manager to determine if it is desirable to assume control of long term logistics support for the Emergency Organization.
  - e. When the Recovery Organization is assembled and ready to assume responsibility for technical, logistics, planning and waste management support of the affected plant, report this fact to Power Production Management.
2. When directed to activate the Recovery Plan, direct the Recovery Organization superintendents to relieve their respective counterparts in the Emergency Organization. (This may occur over a period of time if the Recovery Organization assumes logistics support responsibilities prior to termination of the emergency condition.)
    - a. Administration and Logistics Superintendent relieves the EOF Coordinator, the Logistics Coordinator, and the Communications Coordinator.
    - b. The Technical Support Superintendent relieves the EOF Technical Support Supervisor.
    - c. The Superintendent of Radiation Control and Waste Management relieves the Radiation Protection Support Supervisor.
  3. Upon completing familiarization with any operations in progress, conduct a relief of the Emergency Manager.
  4. Activate the Recovery Plan in accordance with the Recovery Plan Implementing Procedures.

C. EMERGENCY MANAGER

1. If plant conditions indicate a need for long term recovery efforts, contact the HQEC and inform Power Production Management of the assessment of the situation, and any recommendations for activation of the Recovery Organization.
2. Provide information to the Recovery Manager concerning the plant conditions, estimated duration of the emergency response phase of the Corporate Plan, and necessary logistics.
3. If long term recovery will be necessary, transfer logistics support activities to the recovery organization when the Recovery Manager is ready to assume that function.

4. When the emergency condition has been officially reclassified to a non-emergency status and the Recovery Organization has completed preparations to assume control of offsite activities, turn over control to the Recovery Organization as follows:
  - a. Conduct a briefing of the Recovery Manager, concerning the activities in progress, long term problems and established interfaces.
  - b. Direct the Emergency Organizations supervisors to brief their respective Recovery Organization counterparts.
  - c. Transfer the radiation protection, technical support and logistics functions to the Recovery Manager.
  - d. Direct the EOF Coordinator to transfer control of the Communications Coordinator and Security Forces to the Administrative and Logistics Superintendent.
  - e. With concurrence from Power Production Management transfer control of EOF to the Recovery Manager.
  - f. Record the transfer of activities in the Narrative Log.



NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.16 OFFSITE PERSONNEL AND VEHICLE MONITORING  
& DECONTAMINATION REV 0

The following changes are included in this revision:

.New Procedure.

.Provides a standardized NSP Procedure for  
OFFSITE PERSONNEL AND VEHICLE MONITORING  
& DECONTAMINATION.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.16 REV: 0
PREPARED BY: <i>Gay Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edward</i> Manager Nuclear Environmental Services	TITLE: 1.1.16 OFFSITE PERSONNEL AND VEHICLE MONITORING AND DECONTAMINATION
APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plants	

PURPOSE AND OBJECTIVES

This procedure will specify the requirements and directives for monitoring and decontaminating onsite personnel and vehicles from the Prairie Island or Monticello Nuclear Generating Plant that have been evacuated to a radiologically unaffected offsite area.

CONDITIONS AND PREREQUISITES

- A. A radiological contaminating event is occurring.
- B. An evacuation of station personnel has been ordered and is under way.
- C. The EOF is activated and staffed.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibility - Emergency Manager
- B. In Charge - Emergency Manager
- C. Assistance - Radiation Protection Support Supervisor  
- Radiological Emergency Coordinator

DISCUSSION AND PRECAUTIONS

- A. The safety of personnel shall take precedence over the monitoring of personnel and vehicles for radiation/contamination control purposes. Monitoring of personnel and/or vehicles shall be terminated (or delayed) if such monitoring is known or suspected to be increasing the hazard to personnel during evacuation.
- B. Evacuation of each site shall be in accordance with applicable site procedures.

- C. When advised by the station radiation protection personnel (health physics) that a radiological contaminating event is occurring, the Emergency Director may elect to order an evacuation of site personnel. This decision will be made in accordance with guidelines established in Prairie Island Implementing Procedure F.3-9, "Emergency Evacuation", or Monticello Implementing Procedure A.2-301, "Emergency Evacuation".
- D. Offsite assembly areas at each nuclear site may facilitate the set-up of monitoring and decontamination stations. These areas are as follows:
1. Prairie Island
    - a. NSP Red Wing Service Center
    - b. NSP Farmington District Service Center
  2. Monticello
    - a. NSP Monticello District Service Center
    - b. NSP Sherburne County Generating Plant

These areas or alternative areas may be selected at the discretion of the Emergency Director or Emergency Manager.

The site that is selected as the offsite assembly area will depend on various factors such as wind direction, weather conditions and availability of the site. The following guidelines are used to assist in the selection of the assembly area:

1. Selected site should be upwind from release.
  2. Selected offsite assembly area should be accessible.
  3. Evacuation routes to the selected assembly area should minimize the time personnel would be exposed to any offsite radioactive release.
- E. Accountability of onsite personnel will be performed in accordance with Prairie Island EPIP F.3-10, "Personnel Accountability" or Monticello EPIP A.2-206, "Personnel Accountability Assembly Points", as applicable.
- F. Plant technicians will attempt to monitor and decontaminate all personnel prior to their evacuating the site. When this is not possible, the evacuating personnel will be directed by the plant to proceed to one of the two offsite assembly areas.
- G. The offsite assembly areas will serve as a holding area for evacuees until they can be monitored and released. The assembly area monitoring and decontamination teams will be supplied by the affected plant until the EOF is activated and the Corporate Emergency Response Organization is manned. After activation of the EOF, the offsite assembly area will be staffed by the Offsite Organization.

RESPONSIBILITIESA. Emergency Manager

1. Assist in determining need for evacuation of site personnel in conjunction with the Emergency Director. If the site has been evacuated prior to activation of the EOF, assume control of the assembly area activities.
2. Direct the effort of personnel and vehicle monitoring and decontamination following evacuation of personnel to an offsite area.

B. Radiation Protection Support Supervisor

1. Assist the Emergency Manager in determining evacuation routes (to prevent evacuees from prolonged exposure to the plume).
2. The Radiation Protection Support Supervisor shall assign personnel to serve on monitoring and decontamination teams as needed, in accordance with TAB A.
3. Direct the activities of the offsite assembly personnel and vehicle monitoring and decontamination functions. Monitoring of personnel and equipment shall be conducted in accordance with TAB B. Decontamination of personnel and equipment shall be conducted in accordance with TAB C. Decontamination materials are listed in TAB D.

## TAB A

MONITORING AND DECONTAMINATION TEAM ASSIGNMENTS

- A. The Radiation Protection Support Supervisor shall appoint (from available personnel) teams for personnel and vehicle monitoring and decontamination.
1. Monitoring Team
    - a. Consists of three personnel. Two personnel should be qualified in radiation protection monitoring techniques. The third, a data recorder, does not have to be rad-con qualified, but must understand terms used during monitoring.
    - b. Surveys should be conducted on personnel first.
    - c. Skin contamination levels requiring decontamination are listed in TAB B.
    - d. Vehicles should be parked in a holding area and surveyed on a time-allowed basis. Vehicles with levels greater than those expressed in TAB B should be decontaminated on a time-allowed basis. Contaminated vehicles should not be utilized until decontaminated.
  2. Decontamination Team
    - a. Consists of two or more personnel with a selected Radiation Protection Specialist as team leader. It is suggested these personnel be trained in radioactive decontamination techniques, however, this is not a necessity with guidance from the Radiation Protection Specialist.
    - b. Teams shall decontaminate affected personnel following the guidance of a qualified Radiation Protection Specialist.
    - c. Decontamination techniques should follow guidelines expressed in TAB C.
    - d. All monitoring and decontamination personnel should wear personal monitoring devices, i.e. TLD and self-reading dosimeter.



## TAB B

MONITORING TECHNIQUES AND REQUIREMENTS

A. Personnel monitoring takes precedence over all other monitoring requirements. Guidelines expressed below should be followed for personnel monitoring:

1. Monitoring teams should dress in appropriate protective clothing.
2. Using a RM-14 with a 2" GM pancake probe (or equivalent instrumentation) quickly scan evacuees's for high contamination levels, i.e. 50,000 dpm/scan or greater (5,000 cpm).
3. Segregate those personnel identified in Step 2 into three groups; highly contaminated, contaminated and non-contaminated. Non-contaminated personnel may be released immediately.
4. For highly contaminated personnel proceed as follows:
  - a. Initiate Whole Body Survey Form (Figure 1) for each contaminated person scanned.
  - b. Carefully scan personnel. If contamination appears to be confined to clothing, have the personnel carefully strip contaminated clothing and rescan. Pay particular attention to nose, mouth and eyes. Segregate contaminated clothing. Record results of initial scan on Figure 1.

NOTE: Contamination levels of 10,000 dpm/scan (1000 cpm) of nose or mouth shall require further bioassay information. Direct affected personnel to blow nose and scan for loose contamination in mucus. Rescan nose. If results of either scan or nasal blow are greater than 1000 dpm/scan (100 cpm), record name and social security number for future Body Burden Analysis. Record results on Figure 1.

- c. Personnel with body contamination levels greater than 1000 dpm/scan (100 cpm) should be segregated until they can be decontaminated in accordance with TAB C.
5. When monitoring of highly contaminated personnel is complete, begin monitoring the second group of contaminated personnel as specified in Step 4, a - c above.

## TAB B (Continued)

MONITORING TECHNIQUES AND REQUIREMENTS

6. When monitoring of personnel is complete, isolate all contaminated items.
7. Monitoring of vehicles should be performed on a time-allowed basis. Guidelines listed below should be followed for vehicle monitoring:
  - a. Dress monitoring teams in appropriate protective clothing.
  - b. Establish an area for "clean", i.e. non-contaminated, vehicle staging.
  - c. Using a RM-14 with a 2" GM pancake probe (or equivalent instrumentation) scan interior and exterior of vehicles for surface contamination.
  - d. Initiate a Vehicle Survey Form (Figure 2) for each contaminated vehicle.

NOTE: To avoid decontamination of entire vehicles and the resultant generation of large volumes of dry waste, indicate small areas of contamination using a grease pencil to outline the area.

- e. If area indicates greater than 1000 dpm/scan (100 cpm), smear the area with a paper disc smear and count.
- f. Record results of monitoring effort on a Vehicle Survey Form, Figure 2.
- g. If vehicle is not contaminated, i.e. less than 1000 dpm/100 cm<sup>2</sup> smearable (100 cpm), it may be released to a clean area.
- h. Contaminated vehicles, i.e. greater than 1000 dpm/100 cm<sup>2</sup> smearable (100 cpm), shall have a Vehicle Survey Form taped to the front windshield and shall be isolated. They will be decontaminated on a time-allowed basis.
- i. Decontamination of vehicles shall be performed in accordance with TAB C.
- j. When monitoring of vehicles is complete, isolate all contaminated materials.

## TAB C

DECONTAMINATION TECHNIQUES AND REQUIREMENTS

- A. Personnel and vehicles shall be decontaminated as low as reasonably achievable in the field. Personnel decontamination shall not proceed past the techniques expressed in this tab.
- B. Personnel shall not be released if skin contamination levels exceed 1000 dpm/scan (100 cpm). Personnel who indicate nasal, ear canal, mouth or eye contamination shall be decontaminated under medical supervision only. Personnel who indicate nasal or mouth contamination shall have further Body Burden Analysis performed as soon as practicable.
- C. Vehicles shall be decontaminated to less than 1000 dpm/100 cm<sup>2</sup> (100 cpm) smearable or 0.1 mRem/hr fixed. If these limits can not be reached by techniques expressed in this tab, notify the Radiation Protection Support Supervisor. Do not attempt mechanical decontamination as this may further spread contaminated material.
- D. Decontamination of personnel shall begin with the most highly contaminated personnel receiving priority.

Personnel shall be decontaminated as follows:

1. Decontamination team personnel should be equipped with the following:
  - a. Lab coat
  - b. Rubber gloves
  - c. Shoe covers
2. Establish a decontamination area.
3. Using Whole Body Survey Form, decontaminate individual using the following guidance:

(These steps are provided as guidelines. It is not mandatory that each step be followed in sequence. The individual technician's judgment may be used to determine the complete decontamination method.)

- a. Using soap and water, wash the affected area and survey.
- b. If results indicate less than 1000 dpm/scan (100 cpm), record results on Figure 1 and release individual from control group.
- c. If results are still greater than 1000 dpm/scan (100 cpm), repeat Step a as necessary.

## TAB C (Continued)

DECONTAMINATION TECHNIQUES AND REQUIREMENTS

- d. If results continue to indicate greater than 1000 dpm/scan (100 cpm), proceed to Step e.

NOTE: Do not use Tide paste near eyes, nose or ear canal.

- e. Make a paste using plain water and Tide detergent. Using a soft cloth, apply paste liberally to contaminated area. Wait two minutes. Rinse area with copious amounts of plain water, catching the water in a poly bag. Wipe area one time and survey.
- f. If results are less than 1000 dpm/scan (100 cpm), record results and release individual from control group. Issue appropriate clothing as necessary.
- g. If results are greater than 1000 dpm/scan (100 cpm), repeat Step e.
- h. If results continue to indicate greater than 1000 dpm/scan (100 cpm) after a second attempt to decon using Tide and water, record results and proceed to Step i.

CAUTION: Do not use betadyne near eyes. The application of betadyne should be used one time only.

- i. Using betadyne, water and soft cloth, make one application of betadyne, wipe one time with soft cloth. Fold cloth, rinse with copious amounts of water, wipe one final time with folded soft cloth and survey.
- j. If results indicate less than 1000 dpm/scan (100 cpm), record results and release individual from control group.
- k. If results are still greater than 1000 dpm/scan (100 cpm), notify the Radiation Protection Support Supervisor to receive medical guidance for more stringent decontamination methods.
- l. Segregate personnel with body contamination greater than 1000 dpm/scan (100 cpm) from other personnel in a holding area.
- m. Segregate all wastes generated by this procedure and label these materials as contaminated waste.

## TAB C (Continued)

DECONTAMINATION TECHNIQUES AND REQUIREMENTS

NOTE: Label all bags containing liquid or absorbed liquid for special processing.

- E. Vehicles shall be decontaminated on a time-allowed basis using the following techniques:
1. Establish a decontamination area.
  2. Decontamination personnel should be equipped with the following:
    - a. Lab coat
    - b. Rubber gloves
    - c. Shoe covers
  3. Using Vehicle Survey Form and indicated contamination areas as a guide, decontaminate vehicle as follows:
    - a. Using masslinn cloths or equivalent, wipe contaminated areas.
    - b. After each wipe-down, survey the area by smear and scan.
    - c. Vehicle may be released when smearable contamination levels are below 1000 dpm/100 cm<sup>2</sup> (100 cpm) or fixed activity is less than 0.1 mREM/hr. Note that air filters, radiators and similar equipment may contain concentrated levels of contamination and should be checked separately.
    - d. If after a reasonable number of attempts, levels are still greater than in Step c. above, isolate vehicle in a holding area.
    - e. Isolate all radioactive contaminated material.



## TAB D

DECONTAMINATION MATERIALS REQUIREDMaterial

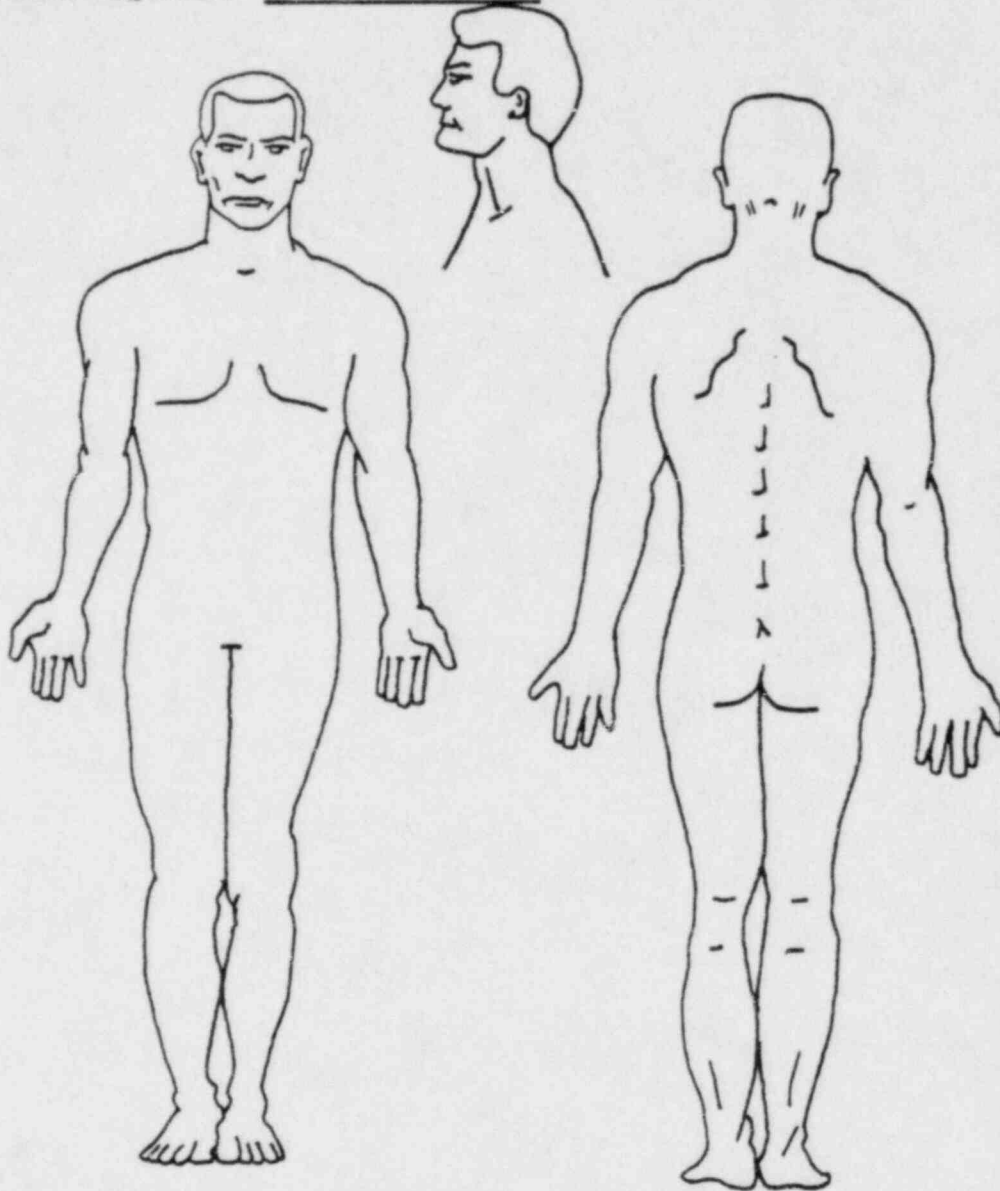
1. Water supply
2. Soft cloths
3. Tide detergent or soap
4. Betadyne solution
5. Masslinn cloths or equivalent
6. Absorbent paper
7. Survey meter (RM-14 with 2 inch GM pancake probe or equivalent)
8. Dose rate meter (RO-2 or equivalent)
9. Smears
10. Poly bags
11. Pens/pencils/grease pen
12. Survey forms (Figure 1 and Figure 2)
13. Clipboard
14. Buckets or similar means of containing water
15. Paper coveralls
16. Masking tape
17. 200 feet of rope or line

FIGURE 1

WHOLE BODY SURVEY FORM

NAME \_\_\_\_\_ SOCIAL SECURITY NUMBER \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

BIOASSAY REQUIRED: \_\_\_\_\_



Technician _____	Limits:
Instrument Type _____	1000 dpm
Instrument S/N _____	100 CPM

Indicate Contaminated Area on Drawing  
Record Results in \_\_\_\_\_ (CPM/scan)

Initial Survey Results	Final Survey Results

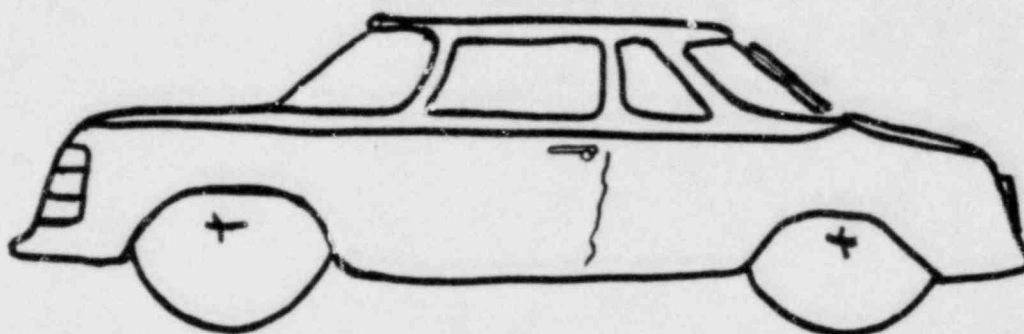
FIGURE 2

VEHICLE SURVEY FORM

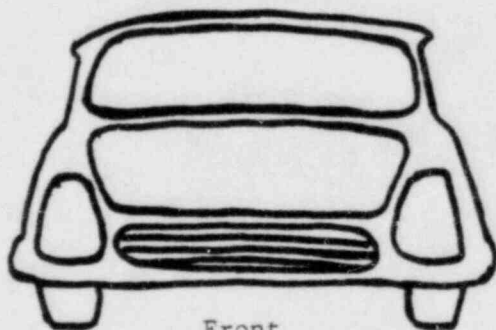
VEHICLE OWNED BY \_\_\_\_\_  
OWNERS SOCIAL SECURITY NUMBER \_\_\_\_ - \_\_\_\_ - \_\_\_\_

VEHICLE IDENTIFICATION

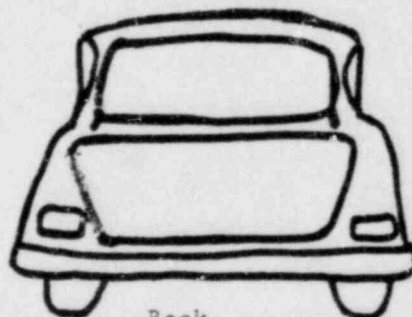
Type \_\_\_\_\_  
Make \_\_\_\_\_  
License No. \_\_\_\_\_  
Color \_\_\_\_\_



left side \_\_\_\_\_ right side \_\_\_\_\_



Front



Back

Technician _____	Limits:
Instrument Type _____	1000 dpm/scan
Instrument S/N _____	100 CPM
	.1 MREM/hr

Indicate Contaminated Area on Drawing  
Record Results in \_\_\_\_\_ (CPM/scan)

Initial Survey Results

Final Survey Results

Blank space for Initial Survey Results

Blank space for Final Survey Results

NORTHERN STATES POWER COMPANY  
NUCLEAR SUPPORT SERVICES DEPARTMENT

SUMMARY OF CHANGE

EPIP 1.1.17 PERSONNEL MONITORING AT THE EOF REV 0

The following changes are included in this revision:

.New Procedure.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: EPIP 1.1.17                      REV: 0
PREPARED BY: <u><i>Gary Hudson</i></u> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <u><i>EC Ward</i></u> Manager Nuclear Environmental Services	TITLE: 1.1.17 PERSONNEL MONITORING AT THE EOF
APPROVED BY: <u><i>[Signature]</i></u> General Manager Nuclear Plants	

PURPOSE AND OBJECTIVES

The purpose of this procedure is to establish the requirements and techniques for the issuance and collection of personnel monitoring devices, (Thermoluminescent Dosimeters (TLD) and Self Reading Dosimeters), to personnel entering the Emergency Operations Facility (EOF) during a declared emergency at either Prairie Island or Monticello Nuclear Generating Stations.

CONDITIONS AND PREREQUISITES

- A. The EOF is activated and personnel are entering to man emergency support positions.
- B. Personnel entering are required to be monitored for potential exposure to radiation resulting from accident conditions at the affected plant.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibility - Emergency Manager
- B. In Charge - Radiation Protection Support Supervisor
- C. Assistance - EOF Coordinator  
- Security Guard

DISCUSSION AND PRECAUTIONS

- A. Personnel manning emergency support positions at the EOF should be monitored for radiation exposure. In order to accomplish this, personnel shall be issued a TLD and a self-reading dosimeter upon entering the EOF or while functioning as members of the Corporate Emergency Response Team. When leaving the EOF, or upon completion of assigned duties, personnel shall surrender the TLD and self-reading dosimeter to the entry guard.
- B. The administrative limit for personnel whole body exposure is 1250 mr/qtr. If an individual exceeds 300 mRem in one quarter, a signed statement



specifying their known cumulative exposure for the current quarter shall be obtained on the Individual Exposure Record. (Figure 2) The Emergency Manager is authorized to allow additional exposure during any emergency situation. The following requirements shall be used by the Emergency Manager to determine when to allow an individual to exceed administrative limits:

1. Individual must have a current NRC Form 4 or equivalent on file.
2. No individual may exceed 3 Rem per calendar quarter or 5 (N-18) Rem where N is current age in whole years.

#### RESPONSIBILITIES

##### A. Emergency Manager

1. Overall responsibility for exposure limits of workers.

##### B. Radiation Protection Support Supervisor

1. Verifies and supervises the records of exposure including rezeroing and recording self-reading dosimeter results.
2. Provides administrative control information to the Emergency Manager.
3. Assigns qualified personnel for record keeping and dose assessment.

##### C. EOF Coordinator

1. Assigns personnel to maintain entry log, issue and collect dosimetry.

##### D. EOF Entrance Guard (Area Guard)

1. Initiates Entry Log (Figure 1) in accordance with EPIP 1.1.5, TAB F, "EOF Security Force Duties".
2. Issues and collects dosimetry.
3. Records self-reading dosimeter reading in log upon issue and collection.
4. Notifies Radiation Protection Support Supervisor in the event of lost, damaged or off-scale dosimeter readings.

#### PROCEDURE

- A. Personnel authorized to enter the EOF in accordance with the EOF Security Force Duties, TAB F, EPIP 1.1.5, shall be logged into area and issued dosimetry as follows:

1. After verifying personnel authorization, enter name on EOF Entry Log, Figure 1, in column (1).
  2. Enter individual's social security number in column (2) of entry log.
  3. Enter individual's organization, i.e. NSP Corp., Monticello, PI, NRC, etc. on entry log in column (3).
  4. Remove one TLD and one self-reading dosimeter from emergency dosimetry box and record TLD number in column (4) of entry log.
  5. Enter time personnel entered EOF in column (5) of entry log. Use 24 hour notation (i.e. 0700 for 7:00 am, 1215 for 12:15 pm, 2130 for 9:30 pm.)
  6. Read and record reading from self-reading dosimeter on entry log in column (6). Guidance on reading self-reading dosimeters is provided in TAB A.
- B. Personnel leaving EOF environs shall surrender issued dosimetry equipment to the EOF Area Guard. Personnel shall be logged out as follows:
1. Locate name of individual leaving EOF on Entry Log.
  2. Enter time individual exited EOF in column (7) of Entry Log. Use 24 hour notation as explained in A.5 above.
  3. Read and record the reading of the dosimeter on Entry Log, column (8). Guidance on reading self-reading dosimeters is provided in TAB A.
  4. Collect TLD and self-reading dosimeter, check and verify the number of the TLD. Place the collected TLD and self-reading dosimeter in the box provided.
- C. If personnel who are exiting area present entry guard with a damaged or off-scale dosimeter, the entry guard shall immediately notify the Radiation Protection Support Supervisor who will perform the appropriate follow-up actions as required.
- D. Personnel should be reminded on a periodic basis, as required by area measured dose rate, to read dosimeters. When dosimeter reaches three-quarter scale; (150 mR on 0-200 mR dosimeter, 375 on 0-500, etc.) dosimeters should be taken to the Radiation Protection Support Supervisor or his designee for reading and rezeroing.
- E. Dosimeters requiring rezeroing shall be handled as follows:

1. The Radiation Protection Support Supervisor or his designee shall initiate Individual Exposure Record, Figure 2, and record dosimeter results. If a record has already been initiated, results shall be recorded on the existing form.
  2. Zero dosimeter and reissue to personnel as applicable.
  3. If the cumulative total (column 4) is near 300 mR, the Radiation Protection Support Supervisor shall verify the individuals cumulative quarterly exposure and request they sign the acknowledgement statement on Figure 2.
  4. If cumulative total (column 4) is near 1000 mR then the Radiation Protection Support Supervisor shall require the individual to fill out an NRC Form 4.
- F. If an individual has presented a damaged or off-scale dosimeter, the Radiation Protection Support Supervisor shall analyze the situation.
- G. Personnel exiting the EOF shall not remove emergency personnel dosimetry from the environs of the EOF unless authorized to do so by the Radiation Protection Support Supervisor or the Emergency Manager.
- H. Periodically, the Radiation Protection Support Supervisor or his designee shall obtain all collected dosimeters and a copy of the entry log, initiate Individual Exposure Records for personnel listed on entry log, read and record dosimeter results and assess dose received. Personnel shall not be allowed to exceed limits as specified in Discussion and Precautions, item B, of this procedure, without written permission of the Emergency Manager.
- I. The Radiation Protection Support Supervisor shall notify the Emergency Manager of individuals who are nearing or have exceeded 1000 mR during the current quarter.
- J. Records of individuals who received doses shall be forwarded to the affected plant for daily inclusion into the permanent plant records and forwarding to the appropriate organizations as required by 10 CFR 20.

Date \_\_\_\_\_

FORM 1

EPI 1.17

EOF ENTRY LOG

(1) NAME	(2) SOC. SECURITY NUMBER	(3) ORGANIZATION	(4) TLD/NUMBER	(5) TIME IN	(6) DOSIMETER IN	(7) TIME OUT	(8) DOSIMETER OUT







TAB A

GUIDANCE ON READING SELF-READING DOSIMETER RESULTS

1. Holding dosimeter with lens toward eye, aim dosimeter at light source.
2. Individual should observe scale in dosimeter.
3. Look for hairline and read value from hairline.
4. Record results.

Northern States Power Company  
Nuclear Support Services Department

Summary of Change

EPIP 1.2.2 Exercises and Drills

The following changes are included in this revision:

- Delineates responsibilities
- Removes Drill Development, Conduct of Drills, Drill Observers, Critiques, Correction of Deficiencies and Documentation Sections from the Procedure.
- Checksheets and Implementation Forms are Removed.
- Requires the Development of a Drill & Exercise Program that Contains the Above Information.

NUCLEAR SUPPORT SERVICES DEPT  NORTHERN STATES POWER COMPANY	CORPORATE NUCLEAR EMERGENCY PLAN IMPLEMENTING PROCEDURE  NUMBER: 1.2.2                      REV: 1
PREPARED BY: <i>Gary Hudson</i> Asst. Adm. Emergency Preparedness	EFFECTIVE DATE: October 6, 1981
REVIEWED BY: <i>Edward</i> Manager Nuclear Environmental Services	TITLE: EXERCISES AND DRILLS
APPROVED BY: <i>[Signature]</i> General Manager Nuclear Plants	

PURPOSE AND OBJECTIVE

The purpose of this procedure is to specify the responsibilities and requirements for drills and exercises that are conducted to test the NSP Corporate and Plant Emergency Response Plans.

CONDITIONS AND PREREQUISITES

Exercises and drills to evaluate major portions of emergency response capabilities, maintain and develop key skills, and identify and correct deficiencies shall be conducted in accordance with the NSP Drill & Exercise Program.

ORGANIZATION AND RESPONSIBILITIES

- A. Overall Responsibility - General Manager Headquarters Nuclear Group
- B. In Charge                      - Manager Nuclear Environmental Services  
   - Manager Production Training
- C. Assistance                      - Assistant Administrator Emergency Preparedness

RESPONSIBILITIES

- A. General Manager Headquarters Nuclear Group
  - 1. Overall Management responsibility for development, implementation, and maintenance of the Drill and Exercise Program.
- B. General Manager Nuclear Plants
  - 1. Responsible for overall approval of drill schedule and integrated plant and corporate exercise scenarios.
  - 2. Responsible for authorizing the conduct of major exercises specified in the program.

C. Manager Nuclear Environmental Services

1. Planning and organizational responsibility for the Drill and Exercise Program.
2. Responsible to ensure that applicable regulatory requirements are met.
3. Responsible for coordinating drills and exercises with the activities of all involved NSP organizations, state and local officials, and the NRC, as appropriate.

D. Manager Production Training

1. Principally responsible for the conduct of all drills and exercises with assistance from the Assistant Administrator Emergency Preparedness.
2. Responsible for coordinating the Emergency Response Training Program with the Drill and Exercise Program.
3. Responsible to assist in development of drill/exercise scenarios.
4. Responsible for assistance in the assignment of observers for the conduct of the Drill and Exercise Program.
5. Responsible for revision to the Training Program as required to correct deficiencies identified during drills/exercises.
6. Responsible for developing a schedule of drills as specified in the program.
7. Responsible for verifying completion of the drill schedule.
8. Responsible for maintaining records associated with the Drill and Exercise Program.

E. Assistant Administrator Emergency Preparedness

1. Overall administrative responsibility for the development, implementation and maintenance of the Drill and Exercise Program.
2. Responsible to assist the Manager Production Training in the conduct of drills and exercises.
3. Responsible for reviewing drill critiques, assigning individual action requirements and tracking deficiencies identified with the procedures, plan or scenarios.
4. Responsible to assist in scenario development.

F. Plant Manager

1. Responsible for providing personnel to assist in the development of scenarios.
2. Responsible for providing personnel to serve as safety and drill observers.
3. Responsible for assisting in the conduct of drills and exercises at plant sites.
4. Responsible for approval of plant drill scenarios and authorizing the implementation of drills at the plant site.

PROCEDURESA. Drill and Exercise Program Development

1. A comprehensive program of drills and exercises shall be developed and maintained.
2. The program shall describe the administrative organization for planning, conducting and documenting drills and exercises.
3. The program shall describe all the necessary drills and exercises required to maintain NSP personnel qualifications in emergency preparedness activities. These requirements shall satisfy the guidelines provided in NUREG-0654.