



**Nuclear Management Company, LLC**  
Prairie Island Nuclear Generating Plant  
1717 Wakonade Dr. East • Welch MN 55089

July 24, 2001

US Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

**PRAIRIE ISLAND NUCLEAR GENERATING PLANT**  
Docket Nos. 50-282 License Nos. DPR-42  
Docket Nos. 50-306 License Nos. DPR-60

**Prairie Island Emergency Plan**  
**Implementing Procedures - F3**

**Emergency Response Plan Implementing Procedures**

Furnished with this letter are the Prairie Island Nuclear Generating Plant Emergency Plan Implementing Procedures F3. This revision includes the following procedures:

**INDEXES:**      Emergency Plan Implementing Procedures TOC

**REVISIONS**

F3-32	Review of Emergency Preparedness During or After Natural Disaster Events	Rev 2
F3-20.2	Determination of Shield Building Vent Stack Dose Rates	Rev 9
F3-14.1	Onsite Radiological Monitoring	Rev 11
F3-8	Recommendations for Offsite Protective Actions	Rev 19
F3-8.1	Recommendations for Offsite Protective Actions for the On Shift Emergency Director/Shift Manager	Rev 12

**TEMPORARY CHANGE DELETIONS**

2001 0953 F3-8	Recommendations for Offsite Protective Actions
2001 0954 F3-8.1	Recommendations for Offsite Protective Actions for the On Shift Emergency Director/Shift Manager

A045

INSTRUCTIONS:

Please post changes in your copy of the Prairie Island Nuclear Generating Plant Emergency Plan Implementing Procedures. Procedures, which have been superseded or deleted, should be destroyed. Please sign and return the acknowledgment of this update to Bruce Loesch, Prairie Island Nuclear Generating Plant, 1717 Wakonade Drive East, Welch, MN 55089.

If you have any questions, please contact Mel Agen at 651-388-1121 Extension 4240.

 For Joel Sorensen

Joel P. Sorensen  
Site Vice President  
Prairie Island Nuclear Generating Plant

- c: USNRC – James Foster, Region III (2 copies)
- NRC Resident Inspector (w/o attachment)
- J Silberg (w/o attachment)
- M Agen (w/o attachment)
- Records Management (Doc Control Copy) (w/o attachment)
- NL File (w/o attachment)

Mfst Num: 2001 - 0510  
FROM : Bruce Loesch/Mary Gadiant  
TO : UNDERWOOD, BETTY J

Date : 07/23/01  
Loc : Prairie Island

Copy Num: 515

Holder : US NRC DOC CONTROL DESK

SUBJECT : Revisions to CONTROLLED DOCUMENTS

\*\*\*\*\*

Procedure #	Rev	Title
-------------	-----	-------

Revisions:

=====

F3-32	2	REVIEW OF EMERGENCY PREPAREDNESS DURING OR NATURAL DISASTER EVENTS
F3-20.2	9	DETERMINATION OF SHIELD BUILDING VENT STAC DOSE RATES
F3-14.1	11	ONSITE RADIOLOGICAL MONITORING
F3-8	19	RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACT
F3-8.1	12	RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACT THE ON SHIFT EMERGENCY DIRECTOR /SHIFT MAN

Temporary Change Deletions:

=====

2001 0953 F3-8	RECOMMENDATIONS FOR OFFSITE PROTECTIVE
2001 0954 F3-8.1	RECOMMENDATIONS FOR OFFSITE PROTECTIVE THE ON SHIFT EMERGENCY DIRECTOR /SHIFT

UPDATING INSTRUCTIONS

-----

Place this material in your Prairie Island Controlled Manual or File. Remove revised or cancelled material and recycle it. Sign and date this letter in the space provided below within ten working days and return to Bruce Loesch or Mary Gadiant, Prairie Island Nuclear Plant, 1717 Wakonade Drive E., Welch, MN 55089.

Contact Bruce Loesch (ext 4664) or Mary Gadiant (ext 4478) if you have any questions.

Received the material stated above and complied with the updating instructions

\_\_\_\_\_ Date \_\_\_\_\_

PRAIRIE ISLAND NUCLEAR GENERATING PLANT	Title: Emergency Plan Implementing Procedures TOC  Effective Date : 07/23/01
Approved By: <u>Joyce Chetty / BT</u> BPS Supt	

Document #	Title	Rev
F3-1	ONSITE EMERGENCY ORGANIZATION	19
F3-2	CLASSIFICATIONS OF EMERGENCIES	27
F3-3	RESPONSIBILITIES DURING A NOTIFICATION OF UNUSUAL EVENT	16
F3-4	RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY	27
F3-5	EMERGENCY NOTIFICATIONS	20
F3-5.1	SWITCHBOARD OPERATOR DUTIES	8
F3-5.2	RESPONSE TO FALSE SIREN ACTIVATION	9
F3-5.3	RESPONSE TO RAILROAD GRADE CROSSING BLOCKAGE	7
F3-6	ACTIVATION & OPERATION OF TECHNICAL SUPPORT CENTER	15
F3-7	ACTIVATION & OPERATION OF OPERATIONAL SUPPORT CENTER (OSC)	15
F3-8	RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS	19
F3-8.1	RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR /SHIFT MANAGER	12
F3-9	EMERGENCY EVACUATION	16
F3-10	PERSONNEL ACCOUNTABILITY	17
F3-11	SEARCH & RESCUE	6
F3-12	EMERGENCY EXPOSURE CONTROL	14
F3-13	OFFSITE DOSE CALCULATIONS	14
F3-13.3	MANUAL DOSE CALCULATIONS	10
F3-13.4	MIDAS METEOROLOGICAL DATA DISPLAY	6
F3-13.5	ALTERNATE METEOROLOGICAL DATA	4

Document #	Title	Rev
F3-13.6	WEATHER FORECASTING INFORMATION	11
F3-14.1	ONSITE RADIOLOGICAL MONITORING	11
F3-14.2	OPERATIONS EMERGENCY SURVEYS	9
F3-15	RESPONSIBILITIES OF THE RADIATION SURVEY TEAMS DURING A RADIOACTIVE AIRBORNE RELEASE	21
F3-16	RESPONSIBILITIES OF THE RADIATION SURVEY TEAMS DURING A RADIOACTIVE LIQUID RELEASE	16
F3-17	CORE DAMAGE ASSESSMENT	8
F3-18	THYROID IODINE BLOCKING AGENT (POTASSIUM IODIDE)	9
F3-19	PERSONNEL & EQUIPMENT MONITORING & DECONTAMINATION	6
F3-20	DETERMINATION OF RADIOACTIVE RELEASE CONCENTRATIONS	17
F3-20.1	DETERMINATION OF STEAM LINE DOSE RATES	7
F3-20.2	DETERMINATION OF SHIELD BUILDING VENT STACK DOSE RATES	9
F3-21	ESTABLISHMENT OF A SECONDARY ACCESS CONTROL POINT	9
F3-22	PRAIRIE ISLAND RADIATION PROTECTION GROUP RESPONSE TO A MONTICELLO EMERGENCY	16
F3-23	EMERGENCY SAMPLING	18
F3-23.1	EMERGENCY HOTCELL PROCEDURE	10
F3-23.2	POST ACCIDENT CHLORIDE ANALYSIS BY ION EXCHANGE CHROMATOGRAPHY	6
F3-24	RECORD KEEPING DURING AN EMERGENCY	7
F3-25	REENTRY	8
F3-26.1	OPERATION OF THE ERCS DISPLAY	7
F3-26.2	RADIATION MONITOR DATA ON ERCS	6
F3-26.3	ERDS - NRC DATA LINK	1
F3-29	EMERGENCY SECURITY PROCEDURES	17

PRAIRIE ISLAND NUCLEAR  
GENERATING PLANT

Title : Emergency Plan Implementing  
Effective Date : 07/23/01

Procedures TOC

Document #	Title	Rev
F3-30	RECOVERY	5
F3-31	RESPONSE TO SECURITY RELATED THREATS	3
F3-32	REVIEW OF EMERGENCY PREPAREDNESS DURING OR AFTER NATURAL DISASTER EVENTS	2

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER: <b>F3-8</b>
		REV: <b>19</b>

<b>REFERENCE USE</b>
<ul style="list-style-type: none"> <li>• <i>Procedure segments may be performed from memory.</i></li> <li>• <i>Use the procedure to verify segments are complete.</i></li> <li>• <i>Mark off steps within segment before continuing.</i></li> <li>• <i>Procedure should be available at the work location.</i></li> </ul>

O.C. REVIEW DATE: <i>7-15-01 S.C.</i>	OWNER:  <b>M. Werner</b>	EFFECTIVE DATE  <i>7-23-01</i>
------------------------------------------	--------------------------------	--------------------------------------

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:	<b>F3-8</b>
		REV:	<b>19</b>

**TABLE OF CONTENTS**

Section	Title	Page
1.0	PURPOSE.....	3
2.0	APPLICABILITY .....	3
3.0	PRECAUTIONS .....	3
4.0	RESPONSIBILITIES .....	4
5.0	DISCUSSION.....	4
6.0	PREREQUISITES .....	4
7.0	PROCEDURE .....	5
7.1	Protective Action Recommendations for Liquid Releases .....	5
7.2	Protective Action Recommendations During a Site Area Emergency.....	7
7.3	Protective Action Recommendation For A General Emergency .....	8
7.4	Protective Action Recommendations Based On Offsite Dose Projections.....	9

**LIST OF FIGURES**

Figure 1	Protective Action Recommendation Checklist.....	11
Figure 2	Criteria for Determining Protective Actions During a Liquid Release .....	13
Figure 3	Recycle Canal Activity.....	14
Figure 4	General Emergency Protective Actions Recommendations.....	15
Figure 5	Summary of Protective Action Guidelines (PAGs) .....	16
Figure 6	Containment Dose Rate Versus Time.....	17
Figure 7	Evacuation Time Estimate Summary .....	18
Figure 8	Permanent Resident Population Estimates.....	19

**LIST OF ATTACHMENTS**

Attachment 1	General Discussion of PARS.....	20
Attachment 2	Definitions Related to PARS.....	24

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:	<b>F3-8</b>
		REV:	<b>19</b>

## 1.0 PURPOSE

The purpose of this procedure is to provide guidance for formulating offsite Protective Action Recommendations (PARs) for the general public during the early and intermediate phases of a radiological emergency.

## 2.0 APPLICABILITY

This instruction **SHALL** apply to Radiological Emergency Coordinators, non-shift Emergency Directors, Radiation Protection Support Supervisors and Emergency Managers.

## 3.0 PRECAUTIONS

- 3.1** Declaration of a General Emergency requires immediate initial protective action recommendations (PARs) to offsite agencies. Under these circumstances, NO dose projections are required for formulating the initial offsite protective action recommendation.
- 3.2** Implementation of protective actions for offsite areas is the responsibility of the State of Minnesota and the State of Wisconsin. If it is determined, by the Emergency Director, that, immediate protective actions are required, and the State EOC's are not activated, the Emergency Director **SHALL** authorize such recommendations to be made directly to the offsite authorities. Once the State EOC's are activated, all protective action recommendations **SHALL** be made to the State EOC's.
- 3.3** It is the responsibility of the county and state agencies and the National Weather Service to notify members of the Prairie Island Indian Community of approved protective actions. Protective action notification is accomplished by the activation of the Public Alert and Notification System (PANS).
- 3.4** Offsite protective actions for the ingestion exposure pathway (ingestion of contaminated food and water) will be determined and implemented by the appropriate offsite authorities during the intermediate phase of an emergency.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:
		<b>F3-8</b>
		REV: <b>19</b>

#### 4.0 RESPONSIBILITIES

- 4.1 The Emergency Director is responsible to implement this procedure and has the non-delegatable authority to authorize offsite protective action recommendations until activation of the EOF.
- 4.2 Upon activation of the EOF, the Emergency Manager (EM) **SHALL** assume the non-delegatable authority and responsibility of offsite protective action recommendations.
- 4.3 The Radiological Emergency Coordinator (REC), once activated, **SHALL** be responsible to promulgate protective action recommendations and **SHALL** channel all such recommendations through the Emergency Director for approval. The Radiological Emergency Coordinator (REC) **SHALL** continue to formulate protective action recommendations until relieved of that responsibility by the Radiation Protection Support Supervisor (RPSS).

#### 5.0 DISCUSSION

- 5.1 General Discussion of PARs - See Attachment 1.
- 5.2 Definitions Related to PARs - See Attachment 2.

#### 6.0 PREREQUISITES

- 6.1 A General Emergency has been or will be declared.
- 6.2 A Site Area Emergency has been or will be declared and there is an actual or potential airborne radioactive release that meets or exceeds the PAGs.
- 6.3 An Alert or Site Area Emergency has been or will be declared and there is an actual or potential liquid radioactive release that meets or exceeds the PAGs.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:	<b>F3-8</b>
		REV:	<b>19</b>

**7.0 PROCEDURE**

**7.1 Protective Action Recommendations for Liquid Releases**

**7.1.1 The Radiological Emergency Coordinator SHALL:**

- A. **Determine** the source of the liquid release.
- B. **Estimate** the activity released and expected duration of the release, if known.

<b>NOTES:</b>	<ol style="list-style-type: none"> <li>1. The probability of a radioactive liquid release to the river via the discharge canal that would meet the established preventative or protective action level is extremely small. Based on a maximum blowdown to the river of 1360 cfs, minimum river flow of 7000 cfs, the discharge canal activity concentration would have to exceed 0.01 <math>\mu\text{Ci/ml}</math> (assuming all Na-24) to approach the preventative action level swimmer dose rate.</li> <li>2. No withdrawal of river water for city water supply occurs for at least 300 miles downstream.</li> <li>3. Minor withdrawals of river water for irrigation purposes does occur, the nearest being 53 miles downstream.</li> <li>4. The estimated main channel average river velocity is 0.75 mph, therefore from sluice gates: <ol style="list-style-type: none"> <li>a. Time to reach Lock &amp; Dam #3 is about 80 minutes.</li> <li>b. Time to reach Eisenhower Bridge is 7 hours.</li> </ol> </li> </ol>
---------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

- C. **Assess** the river's main channel activity by running a liquid dose projection program "LI" on MIDAS or performing a manual liquid dose calculation. See RPIP 6310, Liquid Dose Calculations, for liquid dose projection calculation directions.
- D. **IF** appropriate, **THEN initiate** the "Protective Action Recommendation Checklist", Figure 1, PINGP 585. Refer to Figure 2 for guidance.
- E. **Initiate** a 3-way conference call with the Minnesota Program & Assessment Center (PAC) Planning Leader and the Wisconsin State Radiological Coordinator to discuss possible Protective Action Recommendations.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:
		<b>F3-8</b> REV: <b>19</b>

- F. **Forward** the Protective Action Recommendation Checklist and **discuss** the Recommended Protective Actions with the Emergency Director.
- 7.1.2 Prior to or simultaneously with the transmittal of Protective Action Recommendations, the Emergency Director should **ensure** that a 3-way conference call with the Minnesota PAC Planning Leader, the Wisconsin Radiological Coordinator, and the REC has occurred or is occurring reviewing the basis for the Protective Action Recommendations.
- 7.1.3 The Emergency Director **SHALL authorize** the Protective Action Recommendation (PINGP 577), "Emergency Notification Report Form" and **direct** the Shift Emergency Communicator to notify state and local authorities using PINGP 577.
- 7.1.4 **Consider** possible onsite measures to stop or minimize the liquid release, for example:
- A. IF activity/release is in the recirc canal, THEN **consider** terminating use of the cooling towers to prevent activity from becoming airborne. (Refer to Figure 3).
- B. IF activity/release is in the discharge canal piping (15,000 gal capacity), THEN **stop** all pipe flushing or other releases through the discharge pipe. **Consider** pumping the contaminated liquid back into the plant for processing.
- C. IF activity/release is in the discharge canal, THEN **consider** closing down on the sluice gates to attempt to contain the activity in the recirc canal and/or minimize the activity being released to the river.
- 7.1.5 **Continue** assessment and **update** the protective action recommendation, as appropriate.
- 7.1.6 Verification should be made with the state authorities, regarding actual Protective Actions being implemented and the affected populace.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:	<b>F3-8</b>
		REV:	<b>19</b>

## 7.2 Protective Action Recommendations During a Site Area Emergency

- 7.2.1** NO offsite Protective Action Recommendations for the general public are warranted during a Site Area Emergency unless the offsite dose projections exceed the Protective Action Guides listed in Figure 5.
- 7.2.2** Nearsite Special Population Precautionary PARs
- A. Precautionary recommendations may be warranted for the nearsite special population (Treasure Island (TI) Casino) under certain conditions.
  - B. After the declaration of a Site Area Emergency, the RPSS (or REC if EOF is not activated) should **determine** if a precautionary shutdown of TI Casino should be recommended according to the guidance of PINGP 585, Protective Action Recommendation Checklist.
- 7.2.3** Consideration should be given to Protective Action Recommendations for the general public during serious flooding conditions.
- A. A recommendation to relocate people in areas with restricted egress due to flooding within a ten (10) mile radius of the plant should be made at the Site Area Emergency level if it is clear we are not to de-escalate from the SAE in less than 2 hours. This is to ensure that should the event escalate to a General Emergency, people are already relocated from areas where additional evacuation time would be required.
  - B. Each county sheriff's department is aware of those areas in which there are restrictions to normal evacuation routes.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:
		F3-8
		REV: 19

**7.3 Protective Action Recommendation For A General Emergency**

<b>NOTES:</b>	<ol style="list-style-type: none"> <li>1. <b>DO NOT DELAY</b> Protective Action Recommendations during <b>GENERAL EMERGENCY</b> conditions. No dose projections are required.</li> <li>2. If the 10 meter wind speed &lt;5mph, all sectors should be designated.</li> <li>3. If the 10 meter wind speed ≥5mph, the 10 meter and 60 meter sensors should be used to best describe wind direction and speed for the river valley and bluffs, respectively.</li> <li>4. If the 22 meter met tower is used for wind direction, all sectors should be designated.</li> </ol>
---------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

- 7.3.1 Refer to Figure 4 “GENERAL EMERGENCY PROTECTIVE ACTION GUIDELINES” for immediate Protective Action Recommendations.
- 7.3.2 The Radiological Emergency Coordinator **SHALL document** the Protective Action Recommendations and reclassification to a General Emergency on the “Emergency Notification Report Form”, PINGP 577.
- 7.3.3 The REC **SHALL forward** the “Emergency Notification Report Form”, PINGP 577 and **discuss** the Protective Action Recommendations with the Emergency Director.

<b>NOTE:</b>	<b>Prior to activation of the State EOC’s, Protective Action Recommendations SHALL be issued to state, tribal, and local authorities.</b>
--------------	-------------------------------------------------------------------------------------------------------------------------------------------

- 7.3.4 Prior to or simultaneously with the transmittal of Protective Action Recommendations, the Emergency Director should **ensure** that a 3-way conference call with the Minnesota PAC Planning Leader, the Wisconsin Radiological Coordinator, and the REC has occurred or is occurring reviewing the basis for the Protective Action Recommendations.
- 7.3.5 The Emergency Director **SHALL authorize** the “Emergency Notification Report Form”, PINGP 577, and **direct** the Shift Emergency Communicator to notify state and local authorities using PINGP 577.
- 7.3.6 **Continue** with assessment of dose projection results and meteorological conditions. **Update** the Protective Action Recommendations, as necessary.
- 7.3.7 Verification should be made with state authorities, regarding actual Protective Actions being implemented and the affected populace.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:
		<b>F3-8</b>
		REV: <b>19</b>

**7.4 Protective Action Recommendations Based On Offsite Dose Projections**

**7.4.1** IF there is an actual release or potential for release, THEN obtain the offsite dose projection data utilizing F3-13, "Offsite Dose Calculations."

<b>NOTES:</b>	<ol style="list-style-type: none"> <li>1. If the 10 meter wind speed &lt;5mph, all sectors should be designated.</li> <li>2. If the 10 meter wind speed ≥5mph, the 10 meter and 60 meter sensors should be used to best describe wind direction and speed for the river valley and bluffs, respectively.</li> <li>3. If the 22 meter met tower is used for wind direction, all sectors should be designated.</li> <li>4. Weather forecast information may be obtained by calling the National Weather Service by telephone. (See F3-13.6, "Weather Forecasting Information", for instructions).</li> </ol>
---------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**7.4.2** Using current meteorological data, **determine** the plume direction and wind speed.

<b>NOTE:</b>	A potential release of the airborne activity in containment (for LOCA type accidents) may be estimated by converting the R48/R49 Containment Radiation Monitor readings (R/Hr) to containment activity concentrations (μCi/cc Xe133 Equivalent) by using Figure 6, "Containment Dose Rate Versus Time."
--------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**7.4.3** Based on plant conditions, **estimate** the duration of the release (applies to releases in progress or potential releases).

**7.4.4** Using the data obtained above, **estimate** the projected doses to the offsite population.

**7.4.5** **Determine** the appropriate Protective Action Recommendation by comparing the projected offsite doses with the Protective Action Guides listed in Figure 5.

**7.4.6** The Radiological Emergency Coordinator **SHALL document** all Protective Action Recommendations on the "Emergency Notification Report Form", PINGP 577.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:
		<b>F3-8</b>
		REV: <b>19</b>

- 7.4.7 The REC **SHALL forward** and **discuss** the Recommended Protective Actions with the Emergency Director.

<b>NOTE:</b>	<b>Prior to activation of the State EOC's, Protective Action Recommendations SHALL be issued to state and local authorities.</b>
--------------	----------------------------------------------------------------------------------------------------------------------------------

- 7.4.8 Prior to or simultaneously with the transmittal of Protective Action Recommendations, the Emergency Director should **ensure** that a 3-way conference call with the Minnesota PAC Planning Leader, the Wisconsin Radiological Coordinator, and the REC has occurred or is occurring reviewing the basis for the Protective Action Recommendations.
- 7.4.9 The Emergency Director **SHALL authorize** the Protective Action Recommendation and **direct** the Shift Emergency Communicator to fax PINGP 577 to state and local authorities, as appropriate.
- 7.4.10 IF dose projection results or meteorological conditions change significantly, **THEN re-evaluate** the recommended protective action and, if necessary, **update** the recommendation. This may include PAR beyond 10 miles if dose projection results warrant.
- 7.4.11 Verification should be made with state authorities, regarding actual Protective Actions being implemented and the affected populace.
- 7.4.12 For more information, **consider** reviewing:
- A. Figure 7, Evacuation Time Estimate Summary
  - B. Figure 8, Permanent Resident Population Estimates
  - C. Attachment 1 - General Discussion of PARs

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER: <b>F3-8</b>
		REV: <b>19</b>

**Figure 1 Protective Action Recommendation Checklist**

**EXAMPLE ONLY  
USE CURRENT REVISION**

PINGP 585, Rev. 18  
Page 1 of 2 (FRONT)  
Document Type: 7.36D  
Retention: Life of Plant

**PROTECTIVE ACTION RECOMMENDATION CHECKLIST**

**NEARSITE SPECIAL POPULATION PRECAUTIONARY PARS**

<b>NOTE:</b>	<ol style="list-style-type: none"> <li>1. Formulation of the Casino Shut Down precautionary PAR and its notification may occur at same time as declaration of Site Area Emergency is conducted or within 30 minutes of the Site Area Emergency declaration.</li> <li>2. It is preferred that this recommendation is communicated to the NMC/Xcel Goodhue County Liaison in addition to the normal emergency notifications contacts.</li> </ol>
--------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

1. **Complete** the following precautionary PAR determination within 30 minutes of the declared Site Area Emergency.
2. **IF** this Site Area Emergency is based on any of the following EAL #'s  
2C, 4D, 4E, 5C, 7C, 8E, or 16C  
**THEN recommend:**  
SHUTDOWN OF CASINO AND DISMISSAL OF CASINO PATRONS,  
otherwise, **do NOT recommend** any precautionary actions.
3. **Complete** PINGP 577 and **indicate** either NONE or SHUT DOWN OF CASINO AND DISMISSAL OF CASINO PATRONS in the PAR section.
4. **Obtain** approval of precautionary PAR decision from Emergency Director or Emergency Manager via approval signature on PINGP 577.
5. **Ensure** the precautionary PAR notifications are conducted to state, county and tribal governments using PINGP 577 by the EOF Offsite Emergency Communicators (or SEC if EOF is NOT activated).
6. **IF** the Goodhue County EOC is activated, **THEN** immediately **contact** the NMC/Xcel County Liaison in the Goodhue County EOC. **Inform** them of the precautionary shutdown decision made above.
  - a. **Dial** 651-267-2786 or 651-267-2870.
  - b. **Ask** for the NMC/Xcel County Liaison.
  - c. **Direct** the NMC/Xcel County Liaison to pass this information onto the Prairie Island Tribal Representative or County EOC Director.

**AIRBORNE RELEASE PARS**

1. **Review** latest offsite dose projections.
2. **Indicate** any PAR changes according to the guidance of F3-8 (Recommendations for Offsite Protective Actions) on PINGP 577 (Emergency Notification Report Form).
3. **Review** the Protective Action Recommendation with WI & MN Health Depts.
4. **Ensure** the PAR notifications using PINGP 577 are conducted to state, county and tribal governments by the EOF Offsite Communicators (or SEC if EOF is NOT activated).

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER: <b>F3-8</b>
		REV: <b>19</b>

**Figure 1 Protective Action Recommendation Checklist**

**EXAMPLE ONLY  
USE CURRENT REVISION**

PINGP 585, Rev. 18  
Page 2 of 2 (BACK)

**LIQUID RELEASE PARS**

1. Blowdown Flow \_\_\_\_\_ cfs. Discharge Canal \_\_\_\_\_  $\mu\text{Ci/cc}$ .
2. River Flow \_\_\_\_\_ cfs. Estimated River Velocity is 0.75 mph.
3. **Determine** the projected liquid dose rates according to RPIP 6310 Liquid Dose Calculations.
4. **Consider** an appropriate river usage PAR as necessary. See F3-8 Figure 2, Criteria for Determining Protective Actions During a Liquid Release.

TERMINATE RIVER WATER USAGE (INTAKE, IRRIGATION, RECREATION)

5. **Indicate** any PAR on PINGP 577 (Emergency Notification Report Form).
6. **Review** the Protective Action Recommendation with WI & MN Health Depts.
7. **Ensure** the PAR notifications using PINGP 577 are conducted to state, county and tribal governments by the EOF Offsite Communicators (or SEC if EOF is NOT activated).

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_  
(REC/RPSS)

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:	<b>F3-8</b>
		REV:	<b>19</b>

**Figure 2 Criteria for Determining Protective Actions During a Liquid Release**

PROJECTED DOSE RATE (mrem/hour)	PROJECTED DOSE (mrem)	ACTION LEVEL
< 30	< 250	No action necessary
> 30	> 250	Implement preventative protective actions
> 125	> 1000	Implement emergency protective actions

<b>NOTE:</b>	<ol style="list-style-type: none"> <li>1. All projected dose rate action levels are based on an 8-hour release duration.</li> <li>2. Swimmers receive the highest projected dose rate and total dose.</li> <li>3. Use of the projected swimmers dose rate during the winter months leads to conservative PARs. Use discretion in this situation.</li> </ol>
--------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**RECOMMENDED PREVENTIVE PROTECTIVE ACTIONS**

1. Restrict Intake of Drinking Water, and Foodstuffs Obtained from River
2. Restrict Swimming and Boating on River
3. Restrict Access to River
4. Restrict Use of River for Irrigation and Industry

**RECOMMENDED EMERGENCY PROTECTIVE ACTIONS**

1. Condemn Affected Foodstuffs (milk or meat from animals consuming contaminated water or foodstuffs)
2. Prevent Access to River
3. Condemn Use of River for Irrigation and Industry
4. Substitute Uncontaminated Water and Foodstuffs for Contaminated Water and Foodstuffs
5. Condemn Water Usage from River

**F3**

**RECOMMENDATIONS FOR OFFSITE  
PROTECTIVE ACTIONS**

NUMBER:

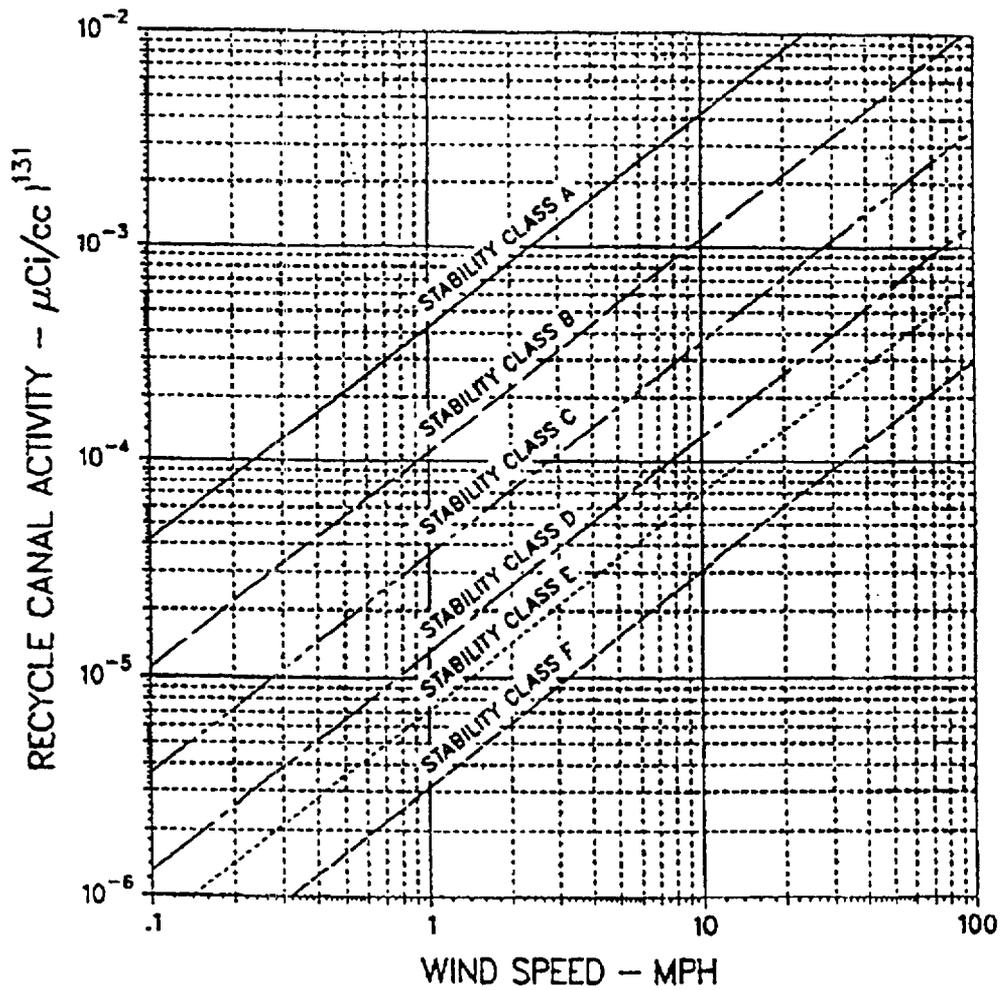
**F3-8**

REV:

**19**

**Figure 3 Recycle Canal Activity**

RECYCLE CANAL ACTIVITY -  $I^{131}$   
YIELDING 10 MR/HR AT SITE BOUNDARY  
DUE TO ENTRAINMENT IN  
COOLING TOWER PLUME



<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:	<b>F3-8</b>
		REV:	<b>19</b>

**Figure 4 General Emergency Protective Actions Recommendations**

The following situations require urgent actions by offsite officials. Conditions are based on Control Room indications with no dose projections required. The following protective action recommendations in this table should be conducted at the same time the General Emergency notifications are conducted.

Prerequisite: Plant Staff Detects **GENERAL EMERGENCY**

1. If wind is  $\geq 5$  mph:
  - (1) RECOMMEND EVACUATE A 2 MILE RADIUS AND 5 MILES DOWNWIND AND ADVISE REMAINDER OF PLUME EPZ TO GO INDOORS TO MONITOR EAS BROADCASTS.
  - (2) Continue with Step 2.
  
- If wind is  $< 5$  mph:
  - (1) RECOMMEND EVACUATE A 5 MILE RADIUS AND ADVISE REMAINDER OF PLUME EPZ TO GO INDOORS TO MONITOR EAS BROADCASTS.
  - (2) Continue with Step 2.
  
2. Continue with dose assessment throughout the emergency and revise initial Protective Action Recommendations in accordance with the protective action guidelines, Figure 5.

<b>NOTE:</b>	Based on NRC Response Technical Manual, RTM-93, Vol. 1, Rev. 3.
--------------	-----------------------------------------------------------------

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:
		<b>F3-8</b> REV: <b>19</b>

Figure 5 Summary of Protective Action Guidelines (PAGs)

**PAGs for Early Phase Projected Doses**

Offsite Projected Doses (mrem)	Recommended Protective Actions	Comments
TEDE < 1000 Thyroid CDE < 5000	No recommended protective actions	The states of MN and WI may choose to implement sheltering or precautionary evacuation for the general public at their discretion.
TEDE ≥ 1000 Thyroid CDE ≥ 5000	Evacuation of general public	Evacuation should be recommended in absence of local constraints. MN and WI may choose to shelter if evacuation were not immediately possible due to offsite constraints (severe weather, competing disasters or local traffic constraints).

- Notes:
1. TEDE = Total Effective Dose Equivalent, Thyroid CDE = Thyroid Committed Dose Equivalent
  2. Based on EPA 400-R-92-001, May 1992
  3. The Skin CDE PAG for evacuation of the general public is 50,000 mrem
  4. Offsite projected doses include exposure from radioactive plume (external & internal) and 4 day exposure to ground contamination.

**PAGs for Emergency Workers**

TEDE Dose Limit (mrem)	Activity	Condition
5,000	All	Lower dose not practicable
10,000	Protecting valuable property	Lower dose not practicable
25,000	Life saving or protection of large populations	Lower dose not practicable
>25,000	Life saving or protection of large populations	Only on a voluntary basis to persons fully aware of the risks involved.

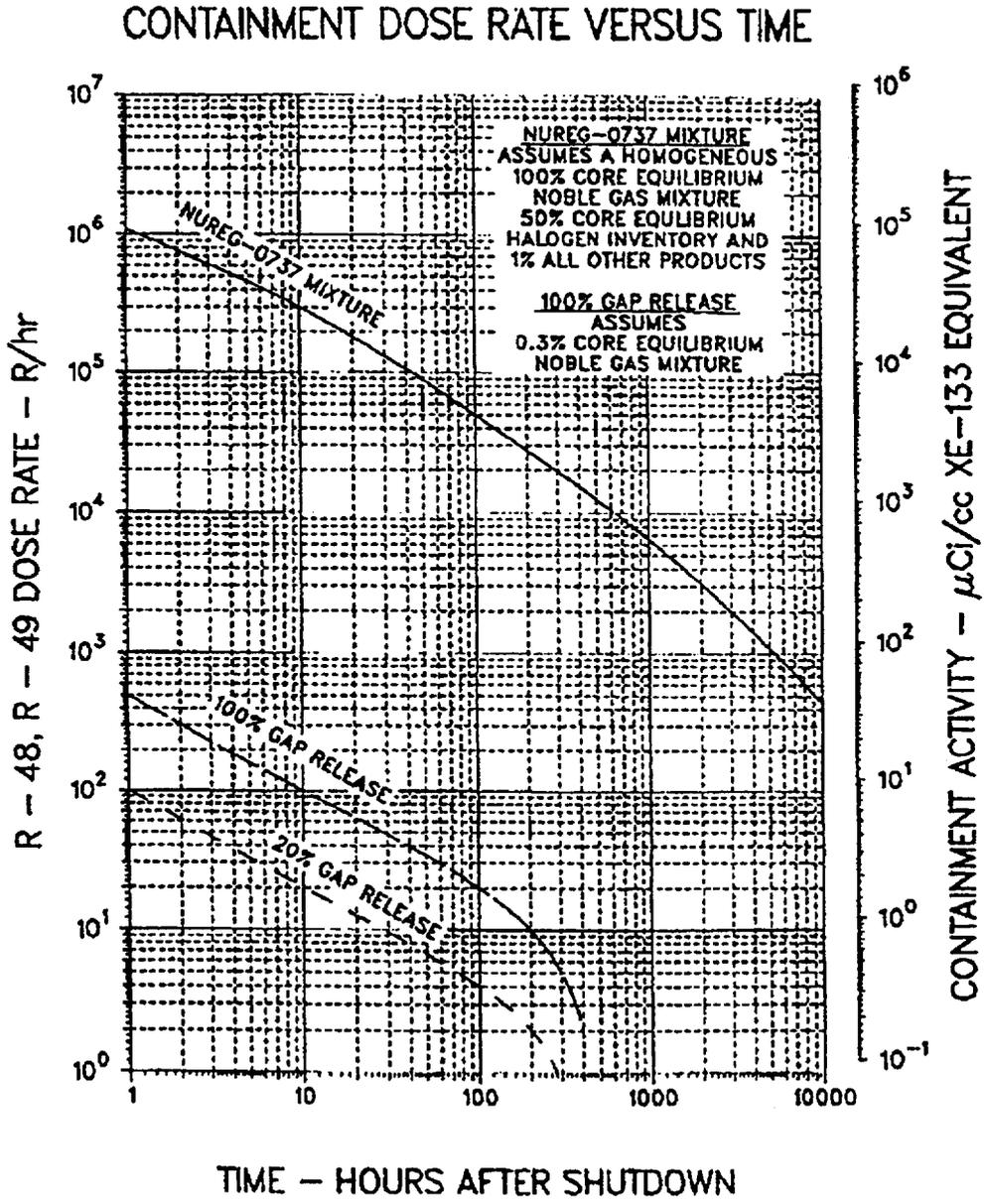
- Notes:
1. Based on EPA 400-R-92-001, May 1992
  2. These are doses to nonpregnant adults from external exposure and intake during an emergency.
  3. Workers should limit dose to the lens of the eye to 3 times the listed values and doses to extremities and any other organ to 10 times the doses listed above.

**F3**

**RECOMMENDATIONS FOR OFFSITE  
PROTECTIVE ACTIONS**

NUMBER: **F3-8**  
REV: **19**

**Figure 6 Containment Dose Rate Versus Time**



F3	RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS	NUMBER:  <b>F3-8</b>
		REV: <b>19</b>

**Figure 7 Evacuation Time Estimate Summary**

Case	Wind Direction (degrees from)	Evacuation Area Ring Downwind	Subareas	Evacuation Time (hours:minutes)*					
				Winter Day		Winter Night		Summer Weekend	
				Fair	** Adverse	Fair	** Adverse	Fair	*** Adverse
1		2-mile	2	2:20	2:25	2:20	2:25	3:00	3:30
2	348.75-11.25	2-mile & 5 mile	2, 5S, 5W	3:10	4:00	2:45	2:55	3:10	3:50
3		2-mile & 10-mile	2, 5S, 5W, 10SE, 10SW	4:35	5:40	3:30	4:30	3:30	4:05
4	11.25-33.75	2-mile & 5 mile	2, 5S, 5W	3:10	4:00	2:45	2:55	3:10	3:50
5		2-mile & 10-mile	2, 5S, 5W, 10SE, 10SW, 10W	4:35	5:40	3:30	4:30	3:30	4:05
6	33.75-56.25	2-mile & 5 mile	2, 5S, 5W	3:10	4:00	2:45	2:55	3:10	3:50
7		2-mile & 10-mile	2, 5S, 5W, 10SE, 10SW, 10W	4:35	5:40	3:30	4:30	3:30	4:05
8	56.25-78.75	2-mile & 5 mile	2, 5S, 5W	3:10	4:00	2:45	2:55	3:10	3:50
9		2-mile & 10-mile	2, 5S, 5W, 10SW, 10W	3:10	4:00	3:00	3:10	3:20	4:00
10	78.75-101.25	2-mile & 5 mile	2, 5W	2:45	2:50	2:45	2:55	3:10	3:50
11		2-mile & 10-mile	2, 5W, 10SW, 10W	3:00	3:05	3:00	3:10	3:20	4:00
12	101.25-123.75	2-mile & 5 mile	2, 5W, 5N	2:45	2:50	2:45	2:55	3:10	3:50
13		2-mile & 10-mile	2, 5W, 5N, 10W, 10NW	2:50	3:00	2:50	3:00	3:15	3:50
14	123.75-146.25	2-mile & 5 mile	2, 5W, 5N	2:45	2:50	2:45	2:55	3:10	3:50
15		2-mile & 10-mile	2, 5W, 5N, 10W, 10NW, 10N	2:50	3:00	2:50	3:00	3:15	3:50
16	146.25-168.75	2-mile & 5 mile	2, 5W, 5N	2:45	2:50	2:45	2:55	3:10	3:50
17		2-mile & 10-mile	2, 5W, 5N, 10W, 10NW, 10N, 10NE	2:50	3:00	2:50	3:00	3:15	3:50
18	168.75-191.25	2-mile & 5 mile	2, 5W, 5N, 5E	2:45	2:50	2:45	2:55	3:10	3:50
19		2-mile & 10-mile	2, 5W, 5N, 5E, 10W, 10NW, 10N, 10NE	2:50	3:00	2:50	3:00	3:15	3:50
20	191.25-213.75	2-mile & 5 mile	2, 5N, 5E	2:40	2:40	2:40	2:40	3:00	3:35
21		2-mile & 10-mile	2, 5N, 5E, 10NW, 10N, 10NE, 10E	2:50	3:00	2:50	3:00	3:00	3:35
22	213.75-236.25	2-mile & 5 mile	2, 5N, 5E	2:40	2:40	2:40	2:40	3:00	3:35
23		2-mile & 10-mile	2, 5N, 5E, 10NW, 10N, 10NE, 10E	2:50	3:00	2:50	3:00	3:00	3:35
24	236.25-258.75	2-mile & 5 mile	2, 5N, 5E	2:40	2:40	2:40	2:40	3:00	3:35
25		2-mile & 10-mile	2, 5N, 5E, 10N, 10NE, 10E	2:50	3:00	2:50	3:00	3:00	3:35
26	258.75-281.25	2-mile & 5 mile	2, 5N, 5E, 5S	3:10	4:00	2:45	2:50	3:10	3:45
27		2-mile & 10-mile	2, 5N, 5E, 5S, 10NE, 10E, 10SE	4:35	5:40	3:30	4:30	3:30	4:05
28	281.25-303.75	2-mile & 5 mile	2, 5N, 5E, 5S	3:10	4:00	2:45	2:50	3:10	3:45
29		2-mile & 10-mile	2, 5N, 5E, 5S, 10E, 10SE	4:35	5:40	3:30	4:30	3:30	4:05
30	303.75-326.25	2-mile & 5 mile	2, 5E, 5S	3:10	4:00	2:45	2:50	3:10	3:45
31		2-mile & 10-mile	2, 5E, 5S, 10E, 10SE	4:35	5:40	3:30	4:30	3:30	4:05
32	326.25-348.75	2-mile & 5 mile	2, 5E, 5S	3:10	4:00	2:45	2:50	3:10	3:45
33		2-mile & 10-mile	2, 5E, 5S, 10E, 10SE, 10SW	4:35	5:40	3:30	4:30	3:30	4:05
34		5-mile	5N, 5E, 5S, 5W	3:10	4:00	2:45	2:55	3:10	3:50
35		10-mile	Full EPZ	4:35	5:40	3:30	4:30	3:30	4:05

**NOTE:**

In order to estimate the evacuation time for partial EPZ cases not included above, determine the combination of cases which cover but do not extend beyond the area in question (they may overlap). The longest time for any of the individual evacuation areas is the evacuation time.

\* All residents, transients and special facilities within the Analysis Area would be evacuated. Evacuation time estimates include times associated with notification, preparation and mobilization events, as well as travel time out of the EPZ.

\*\* Snowstorms adverse weather, represented by a reduction in roadway capacities and travel speeds of 30%.

\*\*\* Rainstorm adverse weather, represented by a reduction in roadway capacities and travel speeds of 20%.

Taken from "Evacuation Time Estimates for the Plume Exposure Pathway Emergency Planning Zone, Prairie Island Nuclear Power Plant, dated December 1997, and prepared by: Earth Tech.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:
		<b>F3-8</b>
		REV: <b>19</b>

Figure 8 Permanent Resident Population Estimates\*

SUBAREA	MINNESOTA	WISCONSIN
2	310	110
5E	--	850
5N	--	480
5W	720	--
5S	3160	--
10E	--	1880
10NE	--	1380
10N	--	450
10NW	--	1200
10W	2900	--
10SW	780	--
10SE	13,550	--
<hr/> TOTALS	<hr/> 21,420	<hr/> 6,350

<b>NOTE:</b>	The Treasure Island Casino business can add 2,000 to 10,000 additional people depending on time of year and day to subarea 2.
--------------	-------------------------------------------------------------------------------------------------------------------------------

\* Based on "Evaluation Time Estimates for the Plume Exposure Pathway Emergency Planning Zone, Prairie Island Nuclear Power Plant, dated December 1997, and prepared by Earth Tech.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:
		<b>F3-8</b>
		REV: <b>19</b>

### Attachment 1 General Discussion of PARS

#### **A. No Protective Actions**

1. The recommendation for no protective actions is appropriate when the event is NOT a General Emergency and projected doses are less than 1000 mrem TEDE or 5000 mrem Thyroid CDE.
2. It should be noted that Wisconsin, Minnesota or Tribal officials may decide to initiate protective actions for the general public at lower offsite projected doses than stated above. In these cases, the RPSS and/or REC should ensure that the offsite officials have all the pertinent information such as actual release information, dose projection comparisons with offsite radiation field measurements and prognosis of future plant conditions.

#### **B. Activating PANS**

Activation of the PANS (Public Alert & Notification System) is automatically done when offsite agencies issue a protective action which requires action on the part of the general public within the 10 mile EPZ.

#### **C. Sheltering**

1. 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.
2. Sheltering may be an appropriate protective action when an evacuation is indicated, but local constraints, such as severe weather, poor road conditions, competing disasters, etc., dictate that directing the public to seek shelter is a more feasible and effective protective measure than evacuation. These factors can best be determined by the offsite agencies.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:	<b>F3-8</b>
		REV:	<b>19</b>

### Attachment 1 General Discussion of PARS

3. In general, sheltering is preferred to evacuation only if it provides equal or greater protection when considering exposure during and after plume passage.
4. The states or tribe may choose to implement sheltering at their discretion.

#### **D. Evacuation**

1. Evacuation is the movement of the public out of an area in order to reduce or eliminate radiation exposure. Timely evacuation of the public is the most effective protective action.
2. NRC indicates that immediate evacuation of the general public is justified based on Control Room indications resulting in a declared General Emergency.
3. EPA 400 indicates that evacuation of the general public will usually be justified when the projected dose to an individual is greater or equal to 1000 mrem TEDE (or 5000 mrem Adult Thyroid CDE). At these dose levels, the risk avoided due to the radiation exposure is usually much greater than the risk from evacuation itself.
4. Using the initial General Emergency criteria or projected dose criteria stated above, Prairie Island NGP should recommend evacuation to the states of WI and MN. In turn, they will independently assess and implement protection actions based on our recommendation, their independent assessment, and current offsite evacuation constraints.
5. The states or tribe may choose to implement sheltering or precautionary evacuation for the general public at their discretion.

#### **E. Secondary Evacuation or Relocation**

1. Based on EPA 400 PAGs, Prairie Island NGP should recommend relocation of the general public from affected areas not previously evacuated when the projected dose is greater or equal to 2000 mrem TEDE from exposure and intake during the first year.
2. This projected dose includes doses from external radiation and inhalation of resuspended materials.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:	<b>F3-8</b>
		REV:	<b>19</b>

### Attachment 1 General Discussion of PARS

#### F. Return

The decision to return segments of the public from previously evacuated areas will be determined by appropriate offsite agencies. Various cautions and dose reduction techniques will be assessed and, if necessary, communicated to the people upon their return.

#### G. Designation of the Protective Action Area

The designation of the protective action area will depend on the nature and extent of the incident and existing meteorological conditions. The area will be described by designating a keyhole area and geopolitical subareas.

##### 1. Keyhole Area

The keyhole area should resemble a keyhole consisting of a 360° area surrounding the plant out to a distance of two (2) or five (5) miles and continuing in the downwind direction which should include two (2) sectors on either side of the downwind sector, out to a distance determined by the PAGs.

##### 2. Geopolitical Subareas

Geopolitical subareas are subareas of the 10 mile EPZ defined by predetermined and/or political boundaries. A map of the geopolitical subareas and a table for determining the affected geopolitical subareas are shown in "Emergency Notification Report Form", PINGP 577.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER: <b>F3-8</b>
		REV: <b>19</b>

**Attachment 1 General Discussion of PARS**

**Exposure Pathways, Incident Phases, and Protective Actions**

	POTENTIAL EXPOSURE PATHWAYS AND INCIDENT PHASES		PROTECTIVE ACTIONS
1.	External radiation from facility		Sheltering Evacuation Control of access
2.	External radiation from plume		Sheltering Evacuation Control of access
<b>EARLY</b>			
3.	Inhalation of activity in plume		Sheltering Administration of stable iodine Evacuation Control of access
4.	Contamination of skin and clothes	<b>INTERMEDIATE</b>	Sheltering Evacuation Decontamination of persons
<b>LATE</b>			
5.	External radiation from ground deposition of activity		Evacuation Relocation Decontamination of land and property
6.	Ingestion of contaminated food and water		Food and water controls
7.	Inhalation of resuspended activity		Relocation Decontamination of land and property

**NOTE:**

1. Based on EPA 400-R-001, May 1992
2. The use of stored animal feed and uncontaminated water to limit the uptake of radionuclides by domestic animals in food chain can be applicable to any of the phases.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:
		<b>F3-8</b>
		REV: <b>19</b>

## Attachment 2 Definitions Related to PARS

- 1.0 Affected Area** is any area where radiation emanating from a plume or deposited material from the plume can be detected using field instruments. (Also known as the footprint.)
- 2.0 Affected Sectors** refer to those sectors that are in a downwind direction from the plant. If the wind speed  $\geq 5$  mph, the affected sectors are the 2 sectors on either side of the downwind sector and the downwind sector. If the wind speed  $< 5$  mph, all sectors are affected sectors (because of meandering).
- 3.0 Dose Terms**
- 3.1 Dose Equivalent (REM)** refers to the product of absorbed dose (rad) and the quality factor (i.e., rads X QF = rem).
- 3.2 Effective Dose Equivalent (REM)** is the sum of the products of the dose equivalent (rem) to each organ and a weighting factor, where the weighting factor is the ratio of the stochastic risk arising from an organ or tissue to the total risk when the whole body is irradiated uniformly.
- 3.3 Committed Dose Equivalent (REM)** refers to the dose equivalent to organs or tissues that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.
- 3.4 Committed Effective Dose Equivalent (REM) (CEDE)** refers to the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to those organs or tissues.
- 3.5 Deep Dose Equivalent (REM)** refers to the external whole body exposure due to external radiation from the radioactive plume or deposited radioactive material.
- 3.6 Total Effective Dose Equivalent (REM) (TEDE)** refers to the sum of the deep dose equivalent and the committed effective dose equivalent (TEDE = Deep Dose Equivalent + CEDE).
- 3.7 Thyroid Committed Dose Equivalent (REM) (Thyroid CDE)** refers to the committed dose equivalent to the thyroid due to internally deposited radionuclides from inhalation.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:	<b>F3-8</b>
		REV:	<b>19</b>

**Attachment 2 Definitions Related to PARS**

- 4.0 Emergency Planning Zone (EPZ)** is a defined area around the Prairie Island plant to facilitate emergency planning by state and local authorities, to assure that prompt and effective actions are taken to protect the public in the event of a release of radioactive material. It is defined for:
- 4.1 Plume Exposure Pathway (10 mile EPZ)**

The 10 mile radius around the Prairie Island plant defined for the early phase plume exposure. The principal exposure sources from this pathway are:

    - 4.1.1** External exposure from the radioactive plume (either overhead or submergence);
    - 4.1.2** External exposure from the radionuclides deposited on the ground by the plume; and
    - 4.1.3** Internal exposure from the inhaled radionuclides deposited in the body.
  - 4.2 Ingestion Exposure Pathway (50 mile EPZ)**

A 50 mile radius around the Prairie Island plant where the principal exposure would be from the ingestion of contaminated water or foods such as, milk or fresh vegetables.
- 5.0 Evacuation** is the urgent removal of people from an area to avoid or reduce high-level, short-term exposure, usually from the plume or from deposited activity.
- 6.0 Geopolitical Subareas** are subareas of the 10 mile EPZ defined by predetermined geographic and/or political boundaries. A map of the geopolitical subareas and a table for selecting the affected geopolitical subareas are shown in Figure 1, "Protective Action Recommendation Checklist", PINGP 585.
- 7.0 Keyhole Area** is a subarea of the 10 mile EPZ defined by a 360 degree area surrounding the plant out to a distance of 2 or 5 miles and continuing in a downwind direction which should include 2 sectors on either side of the affected sector, out to a distance determined by the Protective Action Guides.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER:	<b>F3-8</b>
		REV:	<b>19</b>

### Attachment 2 Definitions Related to PARS

- 8.0 Nuclear Incident Phases** relate to three time periods following the beginning of a nuclear incident.
- 8.1 Early Phase** or emergency phase is the period immediately following the beginning of the incident. There may be a threat of a radiological release or an actual ongoing radiological release to the environment. Immediate decisions concerning protective actions are required and usually based on plant conditions or offsite dose projections. This phase may last from hours to days.
- 8.2 Intermediate Phase** is the period beginning after the source and releases have been brought under control. Based on environmental measurements, additional protective actions may be made. This phase may overlap the early and late phase and may last from weeks to many months.
- 8.3 Late Phase** is the period beginning when offsite recovery action designed to reduce radiation levels in the environment to acceptable levels for unrestricted use are commenced. This period may extend from months to years.
- 9.0 Projected Dose** refers to the future dose calculated for a specified time period on the basis of estimated or measured initial concentration of radionuclides or exposure rates and in the absence or protective actions.
- 9.1 Plume Projected Dose** refers to future calculated doses from plume submersion, plume shine, plume inhalation and 4 days of ground deposition exposure.
- 9.2 Relocation Projected Dose** refers to future calculated doses from one year of exposure to ground deposition groundshine and inhalation of resuspended material, but excluding internal dose from consuming contaminated foodstuffs.
- 9.3 Ingestion Pathway Projected Dose** is the projected CEDE (ICRP-30) from consuming contaminated foodstuffs.
- 10.0 Protective Actions** refers to an action taken to avoid or reduce radiation dose to members of the public.
- 11.0 Protective Action Guide (PAG)** refers to a projected dose level that warrants protective actions.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS</b>	NUMBER: <b>F3-8</b>
		REV: <b>19</b>

### Attachment 2 Definitions Related to PARS

- 12.0 Public Alert and Notification System (PANS)** is used to alert the public within the 10 mile Emergency Planning Zone of an emergency Condition at Prairie Island. Once alerted, the public should then turn to local commercial broadcast messages for specific protective action instructions. The PANS consists of the following:
- 12.1** Fixed Sirens for 100% coverage throughout the 5 mile zone and in population centers in the 5-10 mile zone.
  - 12.2** Emergency vehicles with sirens and public address in the 5-10 mile areas not covered by fixed sirens.
  - 12.3** National Oceanic and Atmospheric Administration (NOAA) activated tone alert radios in institutional, educational, and commercial facilities.
  - 12.4** The Emergency Alert System (EAS) which has access to television and radio stations within the area.
- 13.0 Return** refers to people permanently reoccupying their normal residence within a previously evacuated area.
- 14.0 Reentry** refers to temporary entry into an evacuated area under controlled conditions.
- 15.0 Relocation** refers to removal or continued exclusion of people from contaminated areas to avoid chronic radiation exposure.
- 16.0 Sheltering** refers to the use of a structure for radiation protection from an airborne plume and/or deposited radioactive material.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER:
		<b>F3-8.1</b>
		REV: <b>12</b>

<b>REFERENCE USE</b>
<ul style="list-style-type: none"><li>• <i>Procedure segments may be performed from memory.</i></li><li>• <i>Use the procedure to verify segments are complete.</i></li><li>• <i>Mark off steps within segment before continuing.</i></li><li>• <i>Procedure should be available at the work location.</i></li></ul>

O.C. REVIEW DATE: <b>7-15-01 S.C.</b>	OWNER: <b>M. Werner</b>	EFFECTIVE DATE <b>7-23-01</b>
------------------------------------------	----------------------------	----------------------------------

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER: <b>F3-8.1</b>
		REV: <b>12</b>

## 1.0 PURPOSE

The purpose of this procedure is to provide guidance for the interim on-shift Emergency Director in formulating immediate offsite Protective Action Recommendations (PARs) for the general public during the early phase of a radiological emergency.

## 2.0 APPLICABILITY

This instruction **SHALL** apply to the Shift Manager OR Shift Supervisor who has assumed the position of interim Emergency Director.

## 3.0 PRECAUTIONS

- 3.1 Declaration of a General Emergency requires immediate initial protective action recommendations (PARs) to offsite agencies. Under these circumstances, NO dose projections are required for formulating the initial offsite protective action recommendation.
- 3.2 Implementation of protective actions for offsite areas is the responsibility of the State of Minnesota and the State of Wisconsin. If it is determined, by the Emergency Director, that, immediate protective actions are required, and the State EOCs are not activated, the Emergency Director **SHALL** authorize such recommendations to be made directly to the local authorities. Once the State EOCs are activated, all protective action recommendations **SHALL** be made to the State EOCs.
- 3.3 It is the responsibility of the county and state agencies and the National Weather Service to notify members of the Prairie Island community of approved protective actions. Protective action notification is accomplished by the activation of the Public Alert and Notification System (PANS).
- 3.4 Offsite protective actions for the ingestion exposure pathway (ingestion of contaminated food and water) will be determined and implemented by the appropriate state authorities during the intermediate phase of an emergency.

## 4.0 RESPONSIBILITIES

The Shift Manager OR Shift Supervisor, acting as interim Emergency Director, is responsible to implement this procedure and has the non-delegatable authority to authorize protective action recommendations until relieved by the designated Emergency Director.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER:	<b>F3-8.1</b>
		REV:	<b>12</b>

**5.0 DEFINITIONS**

See Attachment 1.

**6.0 PREREQUISITES**

**6.1** A General Emergency has been or will be declared, OR

**6.2** A Site Area Emergency has been or will be declared with actual or potential radioactive airborne release conditions that meets or exceeds the PAGs.

**7.0 PROCEDURE**

**7.1 Protective Action Recommendations For A General Emergency**

<b>NOTE:</b>	<b>DO NOT DELAY</b> Protective Action Recommendations during <b>GENERAL EMERGENCY</b> conditions. Urgent actions are required by offsite officials. The initiated protective action recommendation need only be based on Control Room indications. No dose projections are required.
--------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

- 7.1.1** Refer to Figure 1, "GENERAL EMERGENCY INITIAL PROTECTIVE ACTION GUIDELINES" for the initial Protective Action Recommendations.
- 7.1.2** The Emergency Director **SHALL** make recommendations for appropriate protective actions to State and local authorities by identifying the affected keyhole area and the affected geopolitical subareas on the "Emergency Notification Report Form", PINGP 577, Figure 3.
- 7.1.3** **Document** all Protective Action Recommendations on PINGP 577 and in the Operations log.
- 7.1.4** The Emergency Director **SHALL** authorize the "Emergency Notification Report Form", PINGP 577, and direct the Shift Emergency Communicator to notify State and local authorities using PINGP 577.
- 7.1.5** **Consider** future changes to the initial Protective Action Recommendation in case of changing wind direction or wind speeds. (A wind speed < 5 mph affects all sectors. A wind direction shift may possibly affect new sectors.)

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER: <b>F3-8.1</b>
		REV: <b>12</b>

- 7.1.6** IF R-50 is in valid alarm, THEN **ensure** that offsite dose assessment and review of the initial Protective Action Recommendation are conducted provided that such actions will NOT prevent the completion of any other critical actions needed to mitigate the event.
- A. IF the REC is available, THEN **direct** the REC to conduct the offsite dose projections and assessment.
- B. IF the REC is NOT available, THEN **direct** the Shift Chemist to perform the offsite dose projections.
- C. **Compare** the plume projected dose results with the Protective Action Guides (PAGs):
- TEDE 4-Day Integrated Dose > 1000 mrem?
  - Thyroid CDE 4-Day Integrated Dose > 5000 mrem?

**NOTE:**

The initial General Emergency Protective Action Recommendation should be more than adequate for most severe plant accidents. Dose projection results exceeding PAGs beyond the initial evacuation area may be because of errors in meteorological or rad monitor data inputs.

- D. IF the plume projected dose exceeds the Protective Action Guides for areas which evacuation has not been recommended (which is very unlikely), THEN **re-evaluate** the validity of the dose projection results.
- E. IF projections are confirmed correct, THEN **revise** the initial Protective Action Recommendation to ensure the public is evacuated from areas which exceed the PAGs using Figure 2.
- F. **Utilize** the "Emergency Notification Report Form", PINGP 577, Figure 3, for any changes to the initial Protective Action Recommendation.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER: <b>F3-8.1</b>
		REV: <b>12</b>

## 7.2 Protective Action Recommendations During a Site Area Emergency

- 7.2.1** Based on the definition of a Site Area Emergency classification, **NO** immediate offsite Protective Action Recommendations for the general public are warranted during a Site Area Emergency.
- 7.2.2** IF R-50 is in valid alarm, THEN **ensure** offsite dose assessment AND **review** of the initial Protective Action Recommendation are conducted provided that such actions will NOT prevent the completion of any other critical actions needed to mitigate the event.
- A. IF the REC is available, THEN **direct** the REC to conduct the offsite dose projections and assessment.
- B. IF the REC is NOT available, THEN **direct** the Shift Chemist to perform the offsite dose projections.
- C. **Compare** the plume projected dose results with the Protective Action Guides (PAGs):
- TEDE 4-Day Integrated Dose > 1000 mrem?
  - Thyroid CDE 4-Day Integrated Dose > 5000 mrem?
- D. IF the plume projected dose exceeds the Protective Action Guides, **re-evaluate** the emergency classification AND **reclassify** to a General Emergency if appropriate.
- E. **Utilize** the "Emergency Notification Report Form", PINGP 577, Figure 3, for the reclassification and issuance of the Protective Action Recommendation.
- 7.2.3** Precautionary recommendations may be warranted for the nearsite special population (Treasure Island Casino) under certain conditions. The REC or RPSS will conduct this evaluation.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER: <b>F3-8.1</b>
		REV: <b>12</b>

#### 7.2.4 Prairie Island Flooding Considerations

- A. The REC or RPSS will conduct this evaluation of whether to issue a Protective Action Recommendation because of severe flooding in 10 mile EPZ.
- B. A recommendation to relocate people in areas with restricted egress due to flooding within a ten (10) mile radius of the plant should be made at the Site Area Emergency level if it is clear we are not to de-escalate from the SAE in less than 2 hours. This is to ensure that should the event escalate to a General Emergency, people are already relocated from areas where additional evacuation time would be required.
- C. Each county sheriff's department is aware of those areas in which there are restrictions to normal evacuation routes.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER:	<b>F3-8.1</b>
		REV:	<b>12</b>

**Figure 1 General Emergency Initial Protective Actions Recommendations**

The following protective action recommendations in this table should be conducted at the same time the General Emergency notifications are conducted.

Prerequisite: Plant Staff Detects **GENERAL EMERGENCY**

<p><u>IF</u> wind is <math>\geq</math> 5 mph, <u>THEN:</u></p>	<p>Evacuate all sectors out to 2 miles; <u>AND</u></p> <p>The five downwind sectors out to 5 miles; <u>AND</u></p> <p>Advise remainder of plume EPZ to monitor radio/TV broadcasts for further emergency information.</p>
<p><u>IF</u> wind is <math>&lt;</math> 5 mph, <u>THEN:</u></p>	<p>Evacuate all sectors out to 5 miles; <u>AND</u></p> <p>Advise remainder of plume EPZ to monitor radio/TV broadcasts for further emergency information.</p>

<b>NOTE:</b>	Based on NRC Response Technical Manual, RTM-93, Vol. 1, Rev. 3.
--------------	-----------------------------------------------------------------

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER:	<b>F3-8.1</b>
		REV:	<b>12</b>

**Figure 2 Protective Action Guides for On Shift Interim Emergency Director**

**PAGS for Early Phase Projected Doses**

Use the MIDAS 4-Day Integrated Dose to determine the Protective Action Recommendation base on the Protective Action Guidelines<sup>1, 2, 3, 4</sup> below:

Offsite Projected Doses (mrem)	Recommended Protective Actions	Comments
<p><u>IF</u> TEDE dose &lt; 1000 mrem at Site Boundary</p> <p><u>AND</u></p> <p>Thy CDE &lt; 5000 mrem at Site Boundary; <u>THEN</u>:</p>	<p>No protective actions recommended.</p>	<p>The states of MN &amp; WI may choose to implement sheltering or precautionary evacuation for the general public at their discretion.</p>
<p><u>IF</u> TEDE dose ≥ 1000 mrem at Site Boundary;</p> <p><u>OR</u></p> <p>Thy CDE ≥ 5000 mrem at Site Boundary; <u>THEN</u>:</p>	<p>See Next Page for specific evacuation recommendation.</p>	<p>Evacuation should be recommended in absence of local constraints. MN, WI or Local Tribe may choose to shelter if evacuation were not immediately possible due to offsite constraints (severe weather, competing disasters or local traffic constraints).</p>

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER: <b>F3-8.1</b>
		REV: <b>12</b>

**Figure 2 Protective Action Guides for On Shift Interim Emergency Director**

**PAGS for Early Phase Projected Doses (Continued)**

Use the MIDAS 4-Day Integrated Dose to determine the Protective Action Recommendation base on the Protective Action Guidelines<sup>1, 2, 3, 4</sup> below:

Wind Condition	Offsite Projected Doses (mrem)	Recommended Protective Actions
<u>IF</u> wind is $\geq 5$ mph <u>AND</u>	<u>IF</u> TEDE dose $\geq 1000$ mrem beyond 5 miles; <u>OR</u> Thy CDE $\geq 5000$ mrem beyond 5 miles; <u>THEN</u> :	Evacuate all sectors out to 5 miles; <u>AND</u> The five downwind sectors out to 10 miles; <u>AND</u> Advise remainder of plume EPZ to monitor radio/TV broadcasts for further emergency information.
	<u>IF</u> TEDE dose $\geq 1000$ mrem beyond 2 miles; <u>OR</u> Thy CDE $\geq 5000$ mrem beyond 2 miles; <u>THEN</u> :	Evacuate all sectors out to 2 miles; <u>AND</u> The five downwind sectors out to 5 miles; <u>AND</u> Advise remainder of plume EPZ to monitor radio/TV broadcasts for further emergency information.
	<u>IF</u> TEDE dose $\geq 1000$ mrem at Site Boundary; <u>OR</u> Thy CDE $\geq 5000$ mrem at Site Boundary; <u>THEN</u> :	Evacuate all sectors out to 2 miles; <u>AND</u> Advise remainder of plume EPZ to monitor radio/TV broadcasts for further emergency information.
<u>IF</u> wind is $< 5$ mph; <u>THEN</u>	See next page.	

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER: <b>F3-8.1</b>
		REV: <b>12</b>

**Figure 2 Protective Action Guides for On Shift Interim Emergency Director**

**PAGS for Early Phase Projected Doses (Continued)**

Use the MIDAS 4-Day Integrated Dose to determine the Protective Action Recommendation base on the Protective Action Guidelines<sup>1, 2, 3, 4</sup> below:

Wind Condition	Offsite Projected Doses (mrem)	Recommended Protective Actions
<u>IF</u> wind is < 5 mph <u>AND</u>	<u>IF</u> TEDE dose $\geq$ 1000 mrem beyond 5 miles; <u>OR</u>	Evacuate all sectors out to 10 miles; <u>AND</u>
	Thy CDE $\geq$ 5000 mrem beyond 5 miles; <u>THEN:</u>	Advise remainder of plume EPZ to monitor radio/TV broadcasts for further emergency information.
	<u>IF</u> TEDE dose $\geq$ 1000 mrem beyond 2 miles; <u>OR</u>	Evacuate all sectors out to 5 miles; <u>AND</u>
	Thy CDE $\geq$ 5000 mrem beyond 2 miles; <u>THEN:</u>	Advise remainder of plume EPZ to monitor radio/TV broadcasts for further emergency information.
	<u>IF</u> TEDE dose $\geq$ 1000 mrem at Site Boundary; <u>OR</u>	Evacuate all sectors out to 2 miles; <u>AND</u>
	Thy CDE $\geq$ 5000 mrem at Site Boundary; <u>THEN:</u>	Advise remainder of plume EPZ to monitor radio/TV broadcasts for further emergency information.

- Notes: 1. TEDE = Total Effective Dose Equivalent, Thyroid CDE = Thyroid Committed Dose Equivalent
2. Based on EPA 400-R-92-001, May 1992
3. The Skin CDE PAG for evacuation of the general public is 50,000 mrem
4. Offsite projected doses include exposure from radioactive plume (external & internal) and 4 days exposure to ground contamination.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER:	<b>F3-8.1</b>
		REV:	<b>12</b>

**Figure 2 Protective Action Guides for On Shift Interim Emergency Director**

**PAGs for Emergency Workers**

TEDE Dose Limit (mrem)	Activity	Condition
5,000	All	
10,000	Protecting valuable property	Lower dose not practicable
25,000	Life saving or protection of large populations	Lower dose not practicable
>25,000	Life saving or protection of large populations	Only on a voluntary basis to persons fully aware of the risks involved.

- Notes: 1. Based on EPA 400-R-92-001, May 1992
2. These are doses to nonpregnant adults from external exposure and intake during an emergency.
3. Workers should limit dose to the lens of the eye to 3 times the listed values and doses to extremities and any other organ to 10 times the doses listed above.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER: <b>F3-8.1</b>
		REV: <b>12</b>

Figure 3 Emergency Notification Report Form

**EXAMPLE ONLY  
USE CURRENT REVISION**

PINGP 577, Rev 27  
Page 1 of 2  
Retention: Life of Plant  
Document Type: 7.36E

**EMERGENCY NOTIFICATION REPORT FORM**

**INSTRUCTIONS**

1. Complete all sections of this form for Alert, S.A., or General Emergency and NUEs involving a hazardous release; otherwise, Section 2.2 (Met Info) is not necessary.
2. Use Table 1 on Back of Page 2 to determine geopolitical subareas.
3. Notify State/Local authorities within 15 minutes, with information contained on Pages 1 and 2.
4. Fax only Page 1 and Page 2 Front to State/Local authorities.

**1.1 PLANT IDENTIFICATION**

This is \_\_\_\_\_, Emergency Communicator at the Prairie Island Nuclear Generating Plant. (651-388-1121)

- \_\_\_\_\_ (a) This is a Real Emergency.
- \_\_\_\_\_ (b) This is a Drill.

**1.2 EVENT CLASSIFICATION**

We have \_\_\_\_\_ (a) Declared a(an) \_\_\_\_\_ (a) Notification of Unusual Event  
 \_\_\_\_\_ (b) Escalated to a(an) \_\_\_\_\_ (b) Alert  
 \_\_\_\_\_ (c) No classification change, PAR update only. \_\_\_\_\_ (c) Site Area Emergency  
 \_\_\_\_\_ (d) Terminated the \_\_\_\_\_ (d) General Emergency  
 \_\_\_\_\_ (e) and entered the Recovery Phase

At \_\_\_\_\_ hours on \_\_\_\_\_ (date).

**1.3 RELEASE INFORMATION** (Report a radioactive release if any RCS activity or Rad Waste System activity is released to the environment during an emergency.)

The emergency \_\_\_\_\_ (a) DOES NOT involve a radioactive release.  
 \_\_\_\_\_ (b) DOES involve a \_\_\_\_\_ radioactive release.  
 liquid/airborne

**1.4 PROTECTIVE ACTION RECOMMENDATION**

The protective action recommended at this time is:

- \_\_\_\_\_ (a) Evacuate ALL sectors out to \_\_\_\_\_ miles  
 \_\_\_\_\_ sectors out to \_\_\_\_\_ miles

(circle) SUBAREAS (2) 5N 5E 5S 5W 10NW 10N 10NE 10E 10SE 10SW 10W

Advise remainder of plume EPZ to monitor radio/TV broadcasts for further emergency information.

- \_\_\_\_\_ (b) None
- \_\_\_\_\_ (c) Other \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

F3	RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER	NUMBER: <b>F3-8.1</b>
		REV: <b>12</b>

Figure 3 Emergency Notification Report Form

**EXAMPLE ONLY  
USE CURRENT REVISION**

PINGP 577, Rev 27  
Page 2 of 2 (FRONT)

**EMERGENCY NOTIFICATION REPORT FORM**

**2.1 EVENT DESCRIPTION** (Use the generic Initiating Condition and the EAL Ref. Manual # from F3-2.)

The initiating event causing the emergency is:

\_\_\_\_\_

\_\_\_\_\_

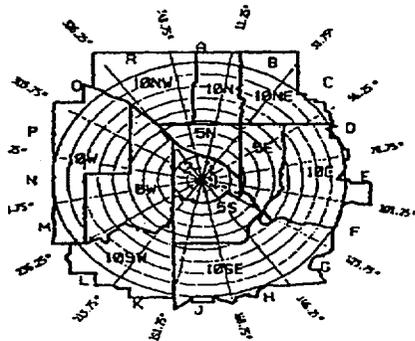
The EAL Reference Manual Condition Number is \_\_\_\_\_.

This event is related to: ( ) Unit 1                      ( ) Unit 2                      ( ) Both Units

**2.2 METEOROLOGICAL INFORMATION** (Complete this section for an Alert, S.A. or General Emergency and an NUE involving a hazardous release; otherwise NA may be indicated. Use the 10 meter 15 minutes average met data, from the 10a sensor if reliable, otherwise use 10b, 60a, 60b, or 22 meter tower. Use 60a for stability class, otherwise use 60b. If met not available via MIDAS, access met via ERCS per F3-13.5.)

Present Meteorological data is:

- a. Wind Speed \_\_\_\_\_ mph
- b. Wind direction (from) \_\_\_\_\_ °
- c. Temperature \_\_\_\_\_ °F
- d. Precipitation \_\_\_\_\_
- e. Stability Class: A B C D E F G  
(Circle One)  
unstable ← ⇒ stable
- f. Affected sectors: \_\_\_\_\_  
\_\_\_\_\_



**2.3 PLEASE RELAY THIS INFORMATION TO YOUR EMERGENCY ORGANIZATION PERSONNEL.**

**NOTE:** ED/EM should ensure date & time are correct in Section 1.2.

EMERGENCY DIRECTOR/MANAGER APPROVAL \_\_\_\_\_ NAME

.....

For NUE Routing Only \_\_\_\_\_ Supt. Radiation Protection and Chemistry

F3	RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER	NUMBER:  <b>F3-8.1</b>
		REV: <b>12</b>

Figure 3 Emergency Notification Report Form

**EXAMPLE ONLY  
USE CURRENT REVISION**

PINGP 577, Rev. 27  
Page 2 of 2 (BACK)

**EMERGENCY NOTIFICATION REPORT FORM**

**NOTE:** DO NOT FAX THIS PAGE TO STATE AND LOCAL AUTHORITIES

**TABLE 1  
SELECTING GEOPOLITICAL SUBAREAS**

Choose geopolitical subareas corresponding to the current wind direction (or affected downwind sectors) and the desired downwind distance one needs to apply the Protective Action Recommendations.

	AFFECTED DOWNWIND SECTORS	AFFECTED GEOPOLITICAL SUBAREAS		
		2 MILES	5 MILES	10 MILES
IF WIND < 5 MPH OR FROM 22 M MET TOWER	ALL	2	5N, 5E, 5S, 5W	10NW, 10N, 10NE, 10E, 10SE, 10SW, 10W
FOR WIND ≥ 5 MPH, WIND FROM (DEGREES)	AFFECTED DOWNWIND SECTORS	AFFECTED GEOPOLITICAL SUBAREAS		
		2 MILES	5 MILES	10 MILES
348.75 - 11.25	GHJKL	2	5S, 5W	10SE, 10SW
11.25 - 33.75	HJKLM	2	5S, 5W	10SE, 10SW, 10W
33.75 - 56.25	JKLMN	2	5S, 5W	10SE, 10SW, 10W
56.25 - 78.75	KLMNP	2	5S, 5W	10SW, 10W
78.75 - 101.25	LMNPQ	2	5W	10SW, 10W
101.25 - 123.75	MNPQR	2	5W, 5N	10W, 10NW
123.75 - 146.25	NPQRA	2	5W, 5N	10W, 10NW, 10N
146.25 - 168.75	PQRAB	2	5W, 5N	10W, 10NW, 10N, 10NE
168.75 - 191.25	QRABC	2	5W, 5N, 5E	10W, 10WN, 10N, 10NE
191.25 - 213.75	RABCD	2	5N, 5E	10NW, 10N, 10NE, 10E
213.75 - 236.25	ABCDE	2	5N, 5E	10NW, 10N, 10NE, 10E
236.25 - 258.75	BCDEF	2	5N, 5E	10N, 10NE, 10E
258.75 - 281.25	CDEFG	2	5N, 5E, 5S	10NE, 10E, 10SE
281.25 - 303.75	DEFGH	2	5N, 5E, 5S	10E, 10SE
303.75 - 326.25	EFGHJ	2	5E, 5S	10E, 10SE
326.25 - 348.75	FGHJK	2	5E, 5S	10E, 10SE, 10SW

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER: <b>F3-8.1</b>
		REV: <b>12</b>

### Attachment 1 Definitions Related to PARS

- 1.0 Affected Area** is any area where radiation emanating from a plume or deposited material from the plume can be detected using field instruments. (Also known as the footprint.)
- 2.0 Affected Sectors** refer to those sectors that are in a downwind direction from the plant. If the wind speed  $\geq 5$  mph, the affected sectors are the 2 sectors on either side of the downwind sector and the downwind sector. If the wind speed  $< 5$  mph, all sectors are affected sectors (because of meandering).
- 3.0 Dose Terms**
- 3.1 Dose Equivalent (rem)** refers to the product of absorbed dose (rad) and the quality factor (i.e., rads X QF = rem).
- 3.2 Effective Dose Equivalent (rem)** is the sum of the products of the dose equivalent (rem) to each organ and a weighting factor, where the weighting factor is the ratio of the stochastic risk arising from an organ or tissue to the total risk when the whole body is irradiated uniformly.
- 3.3 Committed Dose Equivalent (rem)** refers to the dose equivalent to organs or tissues that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.
- 3.4 Committed Effective Dose Equivalent (rem) (CEDE)** refers to the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to these organs or tissues.
- 3.5 Deep Dose Equivalent (rem)** refers to the external whole body exposure due to external radiation from the radioactive plume or deposited radioactive material.
- 3.6 Total Effective Dose Equivalent (rem) (TEDE)** refers to the sum of the deep dose equivalent and the committed effective dose equivalent (TEDE = Deep Dose Equivalent + CEDE).
- 3.7 Thyroid Committed Dose Equivalent (rem) (Thyroid CDE)** refers to the committed dose equivalent to the thyroid due to internally deposited radionuclides from inhalation.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER: <b>F3-8.1</b>
		REV: <b>12</b>

### Attachment 1 Definitions Related to PARS

**4.0 Emergency Planning Zone (EPZ)** is a defined area around the Prairie Island plant to facilitate emergency planning by state and local authorities, to assure that prompt and effective actions are taken to protect the public in the event of a release of radioactive material. It is defined for:

#### **4.1 Plume Exposure Pathway (10 mile EPZ)**

The 10 mile radius around the Prairie Island plant defined for the early phase plume exposure. The principal exposure sources from this pathway are:

**4.1.1** External exposure from the radioactive plume (either overhead or submergence);

**4.1.2** External exposure from the radionuclides deposited on the ground by the plume; and

**4.1.3** Internal exposure from the inhaled radionuclides deposited in the body.

#### **4.2 Ingestion Exposure Pathway (50 mile EPZ)**

A 50 mile radius around the Prairie Island plant where the principal exposure would be from the ingestion of contaminated water or foods such as, milk or fresh vegetables.

**5.0 Evacuation** is the urgent removal of people from an area to avoid or reduce high-level, short-term exposure, usually from the plume or from deposited activity.

**6.0 Geopolitical Subareas** are subareas of the 10 mile EPZ defined by predetermined geographic and/or political boundaries. A map of the geopolitical subareas and a table for selecting the affected geopolitical subareas are shown in Figure 3, PINGP 577, "Emergency Notification Report Form".

**7.0 Keyhole Area** is a subarea of the 10 mile EPZ defined by a 360 degree area surrounding the plant out to a distance of 2 or 5 miles and continuing in a downwind direction which should include 2 sectors on either side of the affected sector, out to a distance determined by the Protective Action Guides.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER: <b>F3-8.1</b>
		REV: <b>12</b>

### Attachment 1 Definitions Related to PARS

- 8.0 Nuclear Incident Phases** relate to three time periods following the beginning of a nuclear incident.
- 8.1 Early Phase** or emergency phase is the period immediately following the beginning of the incident. There may be a threat of a radiological release or an actual ongoing radiological release to the environment. Immediate decisions concerning protective actions are required and usually based on plant conditions or offsite dose projections. This phase may last from hours to days.
- 8.2 Intermediate Phase** is the period beginning after the source and releases have been brought under control. Based on environmental measurements, additional protective actions may be made. This phase may overlap the early and late phase and may last from weeks to many months.
- 8.3 Late Phase** is the period beginning when offsite recovery action designed to reduce radiation levels in the environment to acceptable levels for unrestricted use are commenced. This period may extend from months to years.
- 9.0 Projected Dose** refers to the future dose calculated for a specified time period on the basis of estimated or measured initial concentration of radionuclides or exposure rates and in the absence of protective actions.
- 9.1 Plume Projected Dose** refers to future calculated doses from plume submersion, plume shine, plume inhalation and 4 days of ground deposition exposure.
- 9.2 Relocation Projected Dose** refers to future calculated doses from one year of exposure to ground deposition groundshine and inhalation of resuspended material, but excluding internal dose from consuming contaminated foodstuffs.
- 9.3 Ingestion Pathway Projected Dose** is the projected CEDE (ICRP-30) from consuming contaminated foodstuffs.
- 10.0 Protective Action** refers to an action taken to avoid or reduce radiation dose to members of the public.
- 11.0 Protective Action Guide (PAG)** refers to a projected dose level that warrants protective actions.

<b>F3</b>	<b>RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR/SHIFT MANAGER</b>	NUMBER:	<b>F3-8.1</b>
		REV:	<b>12</b>

### Attachment 1 Definitions Related to PARS

- 12.0 Public Alert and Notification System (PANS)** is used to alert the public within the 10 mile Emergency Planning Zone of an emergency condition at Prairie Island. Once alerted, the public should then turn to local commercial broadcast messages for specific protective action instructions. The PANS consists of the following:
- 12.1** Fixed Sirens for 100% coverage throughout the 5 mile zone and in population centers in the 5-10 mile zone.
  - 12.2** Emergency vehicles with sirens and public address in the 5-10 mile areas not covered by fixed sirens.
  - 12.3** National Oceanic and Atmospheric Administration (NOAA) activated tone alert radios in institutional, educational, and commercial facilities.
  - 12.4** The Emergency Alert System (EAS) which has access to television and radio stations within the area.
- 13.0 Return** refers to people permanently reoccupying their normal residence within a previously evacuated area.
- 14.0 Reentry** refers to temporary entry into an evacuated area under controlled conditions.
- 15.0 Relocation** refers to removal or continued exclusion of people from contaminated areas to avoid chronic radiation exposure.
- 16.0 Sheltering** refers to the use of a structure for radiation protection from an airborne plume and/or deposited radioactive material.

<b>F3</b>	<b>ONSITE RADIOLOGICAL MONITORING</b>	NUMBER:
		<b>F3-14.1</b>
		REV: <b>11</b>

<b>REFERENCE USE</b>
<ul style="list-style-type: none"> <li>• <i>Procedure segments may be performed from memory.</i></li> <li>• <i>Use the procedure to verify segments are complete.</i></li> <li>• <i>Mark off steps within segment before continuing.</i></li> <li>• <i>Procedure should be available at the work location.</i></li> </ul>

O.C. REVIEW DATE: <b>7-15-01</b>	OWNER:  <b>M. Werner</b>	EFFECTIVE DATE <b>7-23-01</b>
-------------------------------------	--------------------------------	----------------------------------

<b>F3</b>	<b>ONSITE RADIOLOGICAL MONITORING</b>	NUMBER:	<b>F3-14.1</b>
		REV:	<b>11</b>

## 1.0 PURPOSE

The purpose of this instruction is to delineate the responsibilities of the onsite Radiation Survey Team in radiation exposure control (inplant and out of plant), contamination control, respiratory protection control, and food and water control.

## 2.0 APPLICABILITY

This instruction **SHALL** apply to all Prairie Island Radiation Protection Specialists.

## 3.0 PRECAUTIONS

- 3.1 Minimize personnel exposure by waiting in lower dose rate areas.
- 3.2 If survey equipment should fail, all personnel **SHALL** return to a safe area.
- 3.3 Periodically check dosimeters. If above your allowable limit or off scale, return to a safe area, and notify the Radiological Emergency Coordinator.

## 4.0 RESPONSIBILITIES

- 4.1 The Radiological Emergency Coordinator has the overall responsibility for ensuring the Radiation Protection Group is conducting onsite radiological monitoring and to brief the Emergency Director concerning onsite Radiological conditions.
- 4.2 The Radiation Protection Specialists have the responsibility to conduct onsite radiological monitoring in accordance with this procedure and to report radiological conditions to the REC.

## 5.0 DISCUSSION

The Radiation Survey Team will be available onsite within 30 minutes after notification that an emergency has been declared to augment the shift Radiation Protection Specialist. The Radiological Emergency Coordinator (REC) will direct the onsite response actions of the Radiation Survey Team. Additional Radiation Protection personnel will assume onsite responsibilities when they are relieved of offsite sampling responsibilities by sister plant personnel.

## 6.0 PREREQUISITES

An Alert, Site Area, or General Emergency has been declared.

<b>F3</b>	<b>ONSITE RADIOLOGICAL MONITORING</b>	NUMBER: <b>F3-14.1</b>
		REV: <b>11</b>

**7.0 PROCEDURE**

The Emergency Director **SHALL** direct the Radiological Emergency Coordinator (REC) to assume responsibility for onsite radiological controls in the following areas:

**7.1 Radiation Exposure Control**

**7.1.1** Upon activation of the onsite emergency organization, the onsite Radiation Survey Team **SHALL** perform radiation surveys (Beta and Gamma) in various onsite areas of the plant (inplant and out of plant) on a routine basis or a job specific basis ensuring that no unexpected radiation levels are encountered by emergency response personnel.

<b>NOTES:</b>	<ol style="list-style-type: none"> <li>1. Calculated radiation levels following a design basis accident are contained in F3-25, "Reentry".</li> <li>2. Two (2) doserate meters should be used if radiation levels are expected to be greater than 10 REM/hr.</li> </ol>
---------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**7.1.2** The Radiation Survey Team **SHALL** perform Beta-Gamma radiation surveys (inplant and out of plant) as follows:

- A. Energize instrument, observing proper precautions for cold weather (Table 2) when conducting out of plant surveys.
- B. Allow the instruments to stabilize and complete meter checks for the instrument.
- C. Turn the instrument to the highest range and scale down until a reading is observed.

<b>NOTE:</b>	<b>General Area surveys conducted with meter approximately at waist level. Contact surveys of floors, valves, piping, etc. with meter adjacent to object, but not touching object.</b>
--------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

- D. Open the probe window and scan the area for a Beta-Gamma reading. This is the "Window Open" reading.
- E. Close the probe window and scan the area for a Gamma reading. This is the "Window Closed" reading.

<b>F3</b>	<b>ONSITE RADIOLOGICAL MONITORING</b>	NUMBER:
		<b>F3-14.1</b>
		REV: <b>11</b>

F. Calculate the Gamma and Beta dose readings as follows:

Gamma (mRem/hr) = Window Closed Reading

Beta (mRem/hr) = CF times (window open reading - window closed reading)

Where CF = Beta correction factor for instrument.  
If none is available, use five (5).

**NOTE:**

The Beta dose rate is reported in mREM/hr assuming a quality factor of 1.

7.1.3 Record survey results (Beta-Gamma) on survey maps and report results to REC. Use the normal inplant survey maps or PINGP Forms 603, 604, or 605 to record results.

**NOTE:**

- (1)  $\beta$  radiation levels indicate high level contamination or airborne activity.
- (2)  $\beta$  readings greater than 100 mREM/hr requires SCBA or respirator with GMR-I canister.
- (3) Use a RO-20 or equivalent while performing surveys onsite but out-of-plant. A  $\beta$  plus  $\gamma$  reading indicates the plume has been encountered. A  $\gamma$  with no  $\beta$  indicates the plume is elevated or dispersed. DO NOT linger in the plume longer than necessary. Refer to Table 3 for Survey Team Radiation Protection Guidelines.

7.1.4 The REC **SHALL** review all survey results and advise the Emergency Director of significant radiation levels.

7.1.5 Survey results **SHALL** be reviewed prior to any entry into any areas of high radiation.

7.1.6 The REC **SHALL** control all radiation exposure in accordance with F3-12 "Emergency Exposure Control".

7.1.7 The Radiation Survey Team should post all areas of high radiation and implement any further controls restricting entry to the area.

7.1.8 The Radiation Protection Group **SHALL** specify the dosimetry necessary for entry into high radiation areas of the plant and write RWP's for entry.

<b>F3</b>	<b>ONSITE RADIOLOGICAL MONITORING</b>	NUMBER:
		<b>F3-14.1</b>
		REV: <b>11</b>

## 7.2 Contamination Control

- 7.2.1 The Radiation Survey Team **SHALL** perform Beta-Gamma Contamination Surveys in various areas of the plant on a routine basis or a job specific basis ensuring that contamination is controlled within the limits of Table 1.
- 7.2.2 The Radiation Survey Team **SHALL** perform surveys for loose surface Contamination (Beta-Gamma) via smear samples on the suspected area. The smear samples **SHALL** be counted using the various equipment available.
- 7.2.3 Survey results **SHALL** be recorded on floor plans and routed to the REC for review.
- 7.2.4 The Radiation Survey Team should post all areas exceeding the limits of Table 1 and implement any controls required to restrict entry into the area.
- 7.2.5 Survey results **SHALL** be reviewed prior to any entry into an area of high contamination.
- 7.2.6 If activated, the Secondary Access Control Point RPS should specify all protective clothing requirements for entry into highly contaminated areas of the plant as directed by OSC.
- 7.2.7 If activated, the Secondary Access Control Point RPS **SHALL** ensure that all personnel are properly monitored prior to departure into an uncontrolled area of the plant. See F3-19 "Personnel and Equipment Monitoring and Decontamination" for requirements.
- 7.2.8 All equipment and vehicles exiting the controlled area of the plant **SHALL** be surveyed by the Radiation Survey Team for loose and fixed surface contamination as determined by the REC. See F3-19, "Personnel and Equipment Monitoring and Decontamination" for requirements.
- 7.2.9 Any necessary decontamination **SHALL** be performed in accordance with F3-19, "Personnel and Equipment Monitoring and Decontamination".

<b>F3</b>	<b>ONSITE RADIOLOGICAL MONITORING</b>	NUMBER:
		<b>F3-14.1</b>
		REV: <b>11</b>

### 7.3 Airborne Activity Sampling

7.3.1 Obtain particulate and iodine air samples and determine radioactivity levels.

7.3.2 Estimated airborne gas activity.

<b>NOTE:</b>	<p>Based on empirical data [high containment gas activity 1982-1984], a (w/o - w/c) reading of 30 mREM/hr indicates a gas concentration of about <math>1E-3 \mu\text{Ci/cc Xe-133 Dose Equivalent}</math>. Therefore, to estimate gas activity, multiply (w/o - w/c) mR/hr times <math>(3E-5 \mu\text{Ci/cc Xe-133 DE/mREM/hr})</math> to obtain the gas concentration (<math>\mu\text{Ci/cc Xe-133 DE}</math>).</p>
--------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

A. Obtain "window open" and "window closed" readings in area.

B. To obtain estimated gas activity, use

$$(\text{w/o - w/c}) \text{ mREM/hr} \times 3E-5 \left( \frac{\mu\text{Ci/cc Xe-133 DE}}{\text{mREM/hr}} \right) = \text{Gas Activity } (\mu\text{Ci/cc Xe-133 DE})$$

7.3.3 Obtain gas grab sample in areas of detectable beta.

7.3.4 Report results to REC.

### 7.4 Respiratory Protection Program

During an emergency situation, it may become necessary to expose personnel to airborne activity levels in excess of established limits resulting in some internal exposure. Communication difficulties, large numbers of people and possible large areas of high airborne activity may negate the use of respiratory protection equipment. In addition, personnel may be exposed to airborne activity from an unexpected source. The Radiological Emergency Coordinator **SHALL** institute a whole body count/bioassay program for all personnel suspected as having been exposed to airborne activity significantly above 1 DAC. This may or may not be coordinated with a Thyro-block distribution program.

7.4.1 The Radiation Survey Team should collect routine and/or job specific airborne samples (particulate, iodine, and gas) to determine respiratory equipment requirements. Airborne samples should be analyzed using equipment at Access Control, Count Room, or EOF Count Room.

<b>F3</b>	<b>ONSITE RADIOLOGICAL MONITORING</b>	NUMBER: <b>F3-14.1</b>
		REV: <b>11</b>

**7.4.2** If the Access Control, Count Room and EOF Count Room are not available, the airborne samples should be collected and analyzed in accordance with F3-14.2, "Operations Emergency Surveys" or F3-15, "Responsibilities of Survey Teams During Airborne Releases".

<b>NOTE:</b>	In case of station blackout, the OSC locker contains a battery powered air sampler.
--------------	-------------------------------------------------------------------------------------

**7.4.3** If activated, the Secondary Access Control Point RPS should specify the respiratory protection requirements for entry into any area of high airborne activity as directed by OSC.

<b>NOTE:</b>	It may be such that a respirator would cause additional work time resulting in a higher whole body dose. It may be beneficial not to wear a respirator, thereby accepting a higher internal dose with a lower whole body dose. In coordination with this, Thyroid-blocking agents could be used as a dose reduction method.
--------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**7.4.4** The REC **SHALL** implement a whole body counting program for personnel who have or may have exceeded 40 DAC hours in a week or 260 in a quarter.

<b>NOTE:</b>	If the Prairie Island whole body counter is not available, the REC <b>SHALL</b> make arrangements for a mobile whole body counter or direct the use of Monticello facilities.
--------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**7.4.5** The REC should evaluate whole body count results and determine if any further evaluation is necessary such as urinalysis and/or fecal analysis.

**7.4.6** All whole body count results **SHALL** be filed for future evaluation in cases where other follow-up actions are required.

<b>NOTE:</b>	Whole body count results exceeding 25% of an ALI require the calculation of the resultant whole body exposure which <b>SHALL</b> be added to the individual's exposure history.
--------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<b>F3</b>	<b>ONSITE RADIOLOGICAL MONITORING</b>	NUMBER:
		<b>F3-14.1</b>
		REV: <b>11</b>

## 7.5 Food and Water Control

The Radiological Emergency Coordinator **SHALL** control the use of all food and water onsite, following a plant evacuation when large areas of the plant site could possibly be contaminated to significant levels.

### 7.5.1 Food

- A. Following a plant evacuation, the Radiation Survey Team should restrict entry into food storage and preparation areas of the plant. These areas (lunchrooms, records room, etc.) should be posted as such.
- B. The Radiation Survey Team should perform contamination surveys in these areas and ensure that the areas are free of detectable contamination, defined as:
  1. < 100 dpm/100cm<sup>2</sup> Beta-Gamma
  2. < 10 dpm/100cm<sup>2</sup> alpha
- C. Additionally, some random items of food should be analyzed for low level contamination using the Gamma Spectrometer system.
- D. The REC should review the survey results and take the following appropriate action:
  1. release the food for use
  2. dispose of the foods as radioactive waste
  3. restrict entry into food storage areas until the area has been decontaminated to acceptable levels
  4. adopt emergency contamination guidelines in Table 1, if necessary.

<b>F3</b>	<b>ONSITE RADIOLOGICAL MONITORING</b>	NUMBER:
		<b>F3-14.1</b>
		REV: <b>11</b>

**7.5.2 Water**

- A. The REC should control the use of all water supplies used for human consumption.
- B. The Radiation Survey Team should periodically sample and analyze, using Gamma Spectrometer system, the Potable Water system for radioactive contamination. Report sample results to the REC.
- C. In addition, the Radiation Survey Team should control the use of all drinking utensils and coffee pots.
- D. The REC should evaluate the plant conditions and sample results and release the potable water system for unrestricted use when it is deemed safe.

<b>F3</b>	<b>ONSITE RADIOLOGICAL MONITORING</b>	NUMBER: <b>F3-14.1</b>
		REV: <b>11</b>

**Table 1 Contamination Limits**

	NORMAL GUIDELINES	EMERGENCY GUIDELINES
REMOVABLE, LOOSE SURFACE DPM/100 cm <sup>2</sup>		
$\beta\gamma$ $\alpha$	100 DPM/100 cm <sup>2</sup> 10 DPM/100 cm <sup>2</sup>	5000 DPM/100 cm <sup>2</sup> 500 DPM/100 cm <sup>2</sup>
FIXED	100 CPM	500 CPM
<b>NOTE: 100,000 DPM/100 cm<sup>2</sup> <math>\beta\gamma</math> requires respiratory protection</b>		

Based on Manual of Protective Action Guides and Protective Actions for Nuclear Accidents, EPA 400-R-92-001, May 1992, Table 7-7 Frisker response: 1mR/hr  $\approx$  5000 CPM Cs 137.

**Table 2 Cold Weather Operation**

- (1)  $\beta\gamma$  Portable survey instruments are located in all Emergency Centers and at both Assembly Points.
- (2)  $\alpha$  Portable survey instrument is located in the Hot cell Emergency Locker.
- (3) If outside temperature is greater than 32°F (0°C), instrument use is unlimited.
- (4) If outside temperature is between 32°F (0°C) and 0°F (-18°C), no instrument should be used for more than 5 minutes.
- (5) If outside temperature is between 0°F (-18°C) and -20°F (-28°C), no instrument should be used for more than 2 minutes.
- (6) 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 instrument 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).
- (7) The instrument should completely warm up between periods of cold weather use. Instrument warm-up may be indoors or in a heated vehicle and should take 2-5 minutes.

<b>F3</b>	<b>ONSITE RADIOLOGICAL MONITORING</b>	NUMBER:
		<b>F3-14.1</b>
		REV: <b>11</b>

**Table 3 Survey Team Radiation Protection Guidelines**

**I. Respiratory Protection**

1. Radiation Survey Team members **SHALL** don respirators with GMR-I canisters, or SCBA, if

Measured dose rates are more than 100 mREM/hr  $\beta$ .

2. Respiratory equipment may be removed, if

Measured dose rates are less than 100 mREM/hr  $\beta$ , or as directed by the REC or RPSS.

**II. Plume Dose Rates**

1. Survey Teams should periodically read their personal dosimeters as determined by observed dose rates.
2. Survey Teams should not linger in areas greater than 100 mREM/hr.
3. Survey Teams should not proceed to areas greater than 1 REM/hr unless directed by the Radiological Emergency Coordinator, or the Radiation Protection Support Supervisor.
4. Survey Teams **SHALL NOT** proceed to areas exceeding 10 REM/hr.

<b>F3</b>	<b>DETERMINATION OF SHIELD BUILDING VENT STACK DOSE RATES</b>	NUMBER: <b>F3-20.2</b>
		REV: <b>9</b>
		Page 1 of 8

<b>REFERENCE USE</b>
<ul style="list-style-type: none"><li>• <i>Procedure segments may be performed from memory.</i></li><li>• <i>Use the procedure to verify segments are complete.</i></li><li>• <i>Mark off steps within segment before continuing.</i></li><li>• <i>Procedure should be available at the work location.</i></li></ul>

O.C. REVIEW DATE: <b>7-15-01 SC</b>	OWNER: <b>M. Werner</b>	EFFECTIVE DATE <b>7-23-01</b>
----------------------------------------	----------------------------	----------------------------------

<b>F3</b>	<b>DETERMINATION OF SHIELD BUILDING VENT STACK DOSE RATES</b>	NUMBER: <b>F3-20.2</b>
		REV: <b>9</b>
		Page 2 of 8

**1.0 PURPOSE**

This procedure provides instructions to enable the Radiation Protection Specialist to locally determine the dose rates and obtain samples of the releases from the Shield Building Vent Stacks.

<b>NOTE:</b>	Use a new procedure for each shield building stack monitor.
--------------	-------------------------------------------------------------

<b>NOTE:</b>	The radiological controls specified in this procedure are applicable only when there is indication of fuel damage. Normal radiological control practices should be used when no fuel damage is indicated.
--------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**2.0 APPLICABILITY**

This procedure **SHALL** apply to the Radiation Protection Specialists, and to the Radiological Emergency Coordinator.

**3.0 PRECAUTIONS**

- 3.1 Minimize personnel exposure by waiting in lower dose rate areas.
- 3.2 If survey instruments should fail, all personnel **SHALL** return to a safe area.
- 3.3 Periodically check personal dosimeters. If above your allowable limit or off scale, return to a safe area, and notify the Radiological Emergency Coordinator.

F3	DETERMINATION OF SHIELD BUILDING VENT STACK DOSE RATES	NUMBER:	F3-20.2
		REV:	9
		Page 3 of 8	

**4.0 RESPONSIBILITIES**

- 4.1 The Radiological Emergency Coordinator has the responsibility to determine if Shield Building Vent Stack sampling is necessary and to request an emergency sampling team to obtain samples in accordance with this procedure.
- 4.2 The Radiation Protection Specialists comprise the emergency sampling team and have the responsibility to conduct requested sampling in accordance with this procedure.

**5.0 PREREQUISITES**

Plant conditions exist such that a radioactive release has occurred, or is occurring, from the Shield Building Vent Stack.

**6.0 PROCEDURE**

The emergency sampling team should:

**NOTE:** Use a new procedure for each shield building stack monitor.

- 6.1 **Determine**, from the REC, type of sampling to be done, and which unit sampling is requested from: Unit 1, Unit 2, \_\_\_\_\_  
(circle desired)
- 6.2 **Determine** allowable exposure in accordance with F3-12. \_\_\_\_\_

Name	TLD	Current Exposure	ADG	Allowable Exposure
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

- 6.3 **Verify** that each team member has their TLD and dosimeters. \_\_\_\_\_
- 6.4 **IF** filters are to be changed, **THEN include** finger rings. \_\_\_\_\_
- 6.5 **IF** OSC Rad Protection Coordinator has deemed protective clothing and/or respiratory protection necessary, **THEN don** necessary equipment. \_\_\_\_\_

<b>F3</b>	<b>DETERMINATION OF SHIELD BUILDING VENT STACK DOSE RATES</b>	NUMBER:
		<b>F3-20.2</b>
		REV: <b>9</b>
		Page 4 of 8

6.6 **Obtain** one of the following meters; RO-2A, RO-2, RO-20, Telescan, Extender, or equivalent and **ensure** meter check is done.

\_\_\_\_\_

6.7 **Obtain** a portable radio for communication with the OSC.

\_\_\_\_\_

6.8 **Proceed** to 1 [2] R-50 (Unit 1 [2] Shield Building Vent Stack Monitor) while observing dose rates enroute.

\_\_\_\_\_

6.9 **Determine** and record the background dose rate outside the gas chamber vault.

\_\_\_\_\_

1R-50/2R-50 Background \_\_\_\_\_ mRem/hr

6.10 **Enter** the 1 [2] R-50 gas chamber vault. Determine and record the dose rate on the gas chamber at the designated point as shown on Figure 1.

\_\_\_\_\_

Gas chamber dose rate \_\_\_\_\_ mRem/hr

6.11 **Report** results to the OSC.

\_\_\_\_\_

6.12 **Obtain** a gas grab sample as follows:

A. **Obtain** the gas syringe and a gas vial from the 1 [2] R-50 sample box.

\_\_\_\_\_

B. **Evacuate** air from the gas vial based on the following gas chamber dose rate limits: (dose rate obtained in Step 6.10 above).

1. 1 cc of air if > 1000 mRem/hr

\_\_\_\_\_

2. 5 cc of air if ≤ 1000 mRem/hr

\_\_\_\_\_

C. **Don** surgeons gloves and **enter** the filter vault , **monitor** dose rates while entering.

\_\_\_\_\_

D. **Place** gas syringe into in-line gas sample nipple and **obtain** a 1 cc or 5 cc gas sample, as determined in Step 6.12.B above.

\_\_\_\_\_

E. **Exit** the vault and **place** gas syringe sample into gas vial.

\_\_\_\_\_

F. **Label** sample and **place** gas sample into shielded transporter.

\_\_\_\_\_

<b>F3</b>	<b>DETERMINATION OF SHIELD BUILDING VENT STACK DOSE RATES</b>	NUMBER:
		<b>F3-20.2</b>
		REV: <b>9</b>
		Page 5 of 8

**6.13 Determine** both filter flow rates prior to changing, **record** the flow rates. \_\_\_\_\_

High Flow Filter Flow Rate \_\_\_\_\_ CFM

Low Flow Filter Flow Rate \_\_\_\_\_ cc/min

**6.14 Change** the low flow rate section silver zeolite/particulate filters, as follows:

A. **Preload** the spare particulate/silver zeolite filter holder. \_\_\_\_\_

B. **Change** the silver zeolite/particulate filter on the low flow rate section and **exit** the vault. \_\_\_\_\_

Time: \_\_\_\_\_ Date: \_\_\_\_\_

C. **Check** the contact dose rate on the silver zeolite/particulate filter. (Window closed) \_\_\_\_\_

Contact dose rate \_\_\_\_\_ mRem/hr

D. **Remove** and **bag** the filters separately, **label** and **place** in the Shielded Transporter. \_\_\_\_\_

E. **IF** Agz/Part contact dose rates is  $\leq$  1mRem/hr, **THEN proceed** to Step 6.15. \_\_\_\_\_

F. **IF** Agz/Part contact dose rates is  $>$  1mRem/hr, **THEN proceed** to Step 6.16. \_\_\_\_\_

<b>F3</b>	<b>DETERMINATION OF SHIELD BUILDING VENT STACK DOSE RATES</b>	NUMBER: <b>F3-20.2</b>
		REV: <b>9</b>
		Page 6 of 8

6.15 Change the high flow rate section silver zeolite/particulate filter as follows:

<b>NOTE:</b>	Meter should be even with the edge of the filter holder housing shield.
--------------	-------------------------------------------------------------------------

A. Enter the vault and check the dose rate on the high flow section silver zeolite/particulate filter.

High Flow Filter Dose Rate \_\_\_\_\_ mRem/hr

\_\_\_\_\_

B. IF dose rate in Step 6.15.A is  $\geq 5$  Rem/hr, THEN report results to OSC and proceed to Step 6.16.

C. IF dose rate in Step 6.15.A is  $< 5$  Rem/hr THEN load the spare filter assembly with a new silver zeolite/particulate filter, change the high flow section filters and exit vault.

D. Remove and bag the filters separately, label and place in the shielded transporter.

\_\_\_\_\_

6.16 IF the opposite unit's shield building vent stack monitor is to be checked OR IF samples are to be changed, THEN perform Steps 6.1 thru 6.15 of the other procedure prior to continuing.

\_\_\_\_\_

6.17 Transfer the filters and gas vials to the Hot Cell area.

\_\_\_\_\_

<b>NOTE:</b>	Enter "OFFSCALE" for any off scale readings.
--------------	----------------------------------------------

6.18 Record the count rate and dose rate on the Agz filter.

\_\_\_\_\_

RM-14/HP-210 (Contact) \_\_\_\_\_ cpm (12") \_\_\_\_\_ cpm

Dose rate meter (12") \_\_\_\_\_ mRem/hr

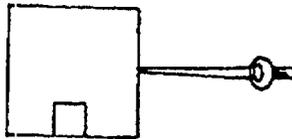
<b>F3</b>	<b>DETERMINATION OF SHIELD BUILDING VENT STACK DOSE RATES</b>	NUMBER:
		<b>F3-20.2</b>
		REV: <b>9</b>
		Page 7 of 8

- 6.19 **Report** results to the OSC. \_\_\_\_\_
  
- 6.20 **IF** OSC **determine** the Count Room AND Access Control environment does NOT permit their use, THEN **make** arrangements to transport samples to the EOF Count Room for analysis. \_\_\_\_\_
  
- 6.21 **Return** the shielded transporter or a spare to the 1 [2] R-50 sample chamber vault. \_\_\_\_\_
  
- 6.22 **Ensure** used procedure is given to the REC. The REC needs the date and time samples were changed for future sample calculations. \_\_\_\_\_

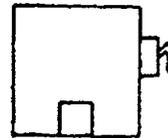
<b>F3</b>	<b>DETERMINATION OF SHIELD BUILDING VENT STACK DOSE RATES</b>	NUMBER: <b>F3-20.2</b>
		REV: <b>9</b>
		Page 8 of 8

**Figure 1 Shield Building Stack Monitor Sample Chamber Monitor Points**

TELESCAN or Equivalent  
End of probe against chamber, at designated point.



RO-20 or Equivalent  
Bottom of meter  
Against side.



<b>F3</b>	<b>REVIEW OF EMERGENCY PREPAREDNESS DURING OR AFTER NATURAL DISASTER EVENTS</b>	NUMBER: <b>F3-32</b>
		REV: <b>2</b>

<b>REFERENCE USE</b>
<ul style="list-style-type: none"> <li>• <i>Procedure segments may be performed from memory.</i></li> <li>• <i>Use the procedure to verify segments are complete.</i></li> <li>• <i>Mark off steps within segment before continuing.</i></li> <li>• <i>Procedure should be available at the work location.</i></li> </ul>

O.C. REVIEW DATE: <b>061401</b>	OWNER: <b>M. Werner</b>	EFFECTIVE DATE <b>7-23-01</b>
------------------------------------	----------------------------	----------------------------------

<b>F3</b>	<b>REVIEW OF EMERGENCY PREPAREDNESS DURING OR AFTER NATURAL DISASTER EVENTS</b>	NUMBER:	<b>F3-32</b>
		REV:	<b>2</b>

## 1.0 PURPOSE

This procedure provides guidance for assessing the adequacy of offsite emergency preparedness during or after severe natural disasters (floods, earthquakes, high winds, and tornadoes). This procedure also promotes initiation of early communications with offsite federal, state and local agencies in support of plant restart discussions following natural disasters (ref. NRC Administrative Letter 97-03: PLANT RESTART DISCUSSIONS FOLLOWING NATURAL DISASTERS, March 28, 1997).

## 2.0 APPLICABILITY

This procedure should apply to the duties of the site emergency planner(s).

## 3.0 PRECAUTIONS

If offsite emergency preparedness is negatively affected by a natural disaster as to prevent notification or evacuation of large segments of the general public, special emergency planning should be initiated to provide for the general safety of the affected residents in case of a major nuclear accident.

## 4.0 RESPONSIBILITIES

- 4.1 The Plant Manager or designee is responsible for safe operation of the plant during and after natural disasters.
- 4.2 The site emergency planner(s) is (are) responsible to use the guidance of this procedure to assess and communicate the status or adequacy of the established offsite nuclear emergency planning during or after natural disasters that have had potential to affect the offsite planning.

<b>F3</b>	<b>REVIEW OF EMERGENCY PREPAREDNESS DURING OR AFTER NATURAL DISASTER EVENTS</b>	NUMBER:	<b>F3-32</b>
		REV:	<b>2</b>

**5.0 GENERAL INFORMATION**

As a part of the plant's nuclear emergency planning, there exists an offsite infrastructure which incorporates agreements, procedures, facilities, and equipment with state and local governmental agencies. The planning elements include, but are not limited to, early notification of responsible agencies, notification of the general public, dissemination of protective action information to the general public, use of established evacuation routes and pre-established reception centers, if needed. It is recognized that some natural disasters have capacity to negatively affect the adequacy of offsite emergency preparedness.

As stated in NRC Administrative Letter 97-03: PLANT RESTART DISCUSSIONS FOLLOWING NATURAL DISASTERS, March 28, 1997, the NRC and FEMA will investigate and assess the adequacy of offsite preparedness in areas surrounding the PINGP following a severe natural event. Following this procedure will assist in a timely determination of the emergency preparedness adequacy and promote early discussions between the PINGP and state & local offsite emergency management agencies. The information concerning the adequacy of emergency preparedness should be shared with the NRC and FEMA.

In those cases when a restart of a nuclear unit is desired or planned after a major natural disaster, the NRC will probably assess and determine if the condition of the offsite emergency preparedness infrastructure can support a reactor restart.

**6.0 PREREQUISITES**

A major natural disaster is imminent, in progress, or has occurred, such that it is believed that some major elements of the offsite emergency preparedness infrastructure may be negatively affected.

<b>F3</b>	<b>REVIEW OF EMERGENCY PREPAREDNESS DURING OR AFTER NATURAL DISASTER EVENTS</b>	NUMBER:	<b>F3-32</b>
		REV:	<b>2</b>

## 7.0 PROCEDURE

**7.1** Perform an assessment of the following elements of emergency planning that may directly or indirectly affect the adequacy of offsite nuclear emergency preparedness.

### 7.1.1 Operability of the 10 mile EPZ fixed sirens:

- A. Status of electrical supply to area sirens (widespread power outage due to blackout or storms?)

Contact with the local sheriff's departments or electric utility may be conducted to inquire about known widespread power outages and what areas are affected.

- B. Status of sheriff's dispatch capability to activate sirens (Siren activation system operational, communications with sheriff operational?)

Contact with the local sheriff's departments may be conducted to inquire about status of their electrical and radio capabilities. A siren cancel test may be conducted to determine operability of the sheriff's siren activation capability.

- C. Capability of siren operation if activated (siren damage due to wind, tornado, ice, flood or earthquake?)

Contact with the local area sheriff's departments may be conducted to inquire about known wind, tornado, ice, flood or earthquake damage areas. Siren contractor may be asked to perform a physical survey of all sirens to determine their physical condition and siren operability status. A siren alert test may be performed to determine percent siren system operability.

### 7.1.2 Condition of the EPZ Evacuation Routes:

Condition of the current evacuation routes and alternate evacuation routes (Are there any public sectors where evacuation by vehicle is not possible due to snow, ice, destroyed roadways, or flooded roads?)

Contact with the local area emergency managers may be conducted to inquire about evacuation capabilities, challenges due to snow, ice, destroyed roadways, or flooded roads.

<b>F3</b>	<b>REVIEW OF EMERGENCY PREPAREDNESS DURING OR AFTER NATURAL DISASTER EVENTS</b>	NUMBER: <b>F3-32</b>
		REV: <b>2</b>

**7.1.3 Condition of Plant Access Road for Plant Employees:**

Condition of plant access routes (Are there any conditions where access by vehicle is not possible due to snow, ice, destroyed roadways, or flooded roads?)

Contact with the local sheriff's department or emergency managers may be conducted to inquire about plant access capability challenges due to snow, ice, destroyed roadways, or flooded roads.

**7.1.4 Assessment of ERO Augmentation Capability**

Evaluate how potential road closings may effect the augmentation capability of the emergency response organization. Consider where the key ERO members live and if their normal access to the plant is effected. In extreme cases, on-shift staffing of selected ERO members may be desired.

**7.1.5 Operational Status of Communication Systems:**

- A. Status of plant telephone systems (land lines, microwave, cellular, plant PA system?) and the plant radio system.

Contact with the site communications engineer may be conducted to inquire about the status of all onsite communications. Selected communication tests may be conducted to verify the system in question is operable.

- B. Status of Offsite communications with NRC, MN, WI, Dakota, Goodhue, Pierce and Casino (standard phone lines, radio band, red phone, ERDS, NAWAS, etc.).

Contact with offsite agency emergency managers may be conducted to inquire about the status of their various offsite communications. Selected onsite communication tests may be conducted with the offsite agencies to verify the communication links in question are operable.

**7.1.6 Emergency Facility Operational Status**

- A. Status of operational capabilities of onsite ERFs and EOF or Backup EOF.
- B. Status of operational capabilities of emergency centers at MN, WI, Dakota, Goodhue, and Pierce.

Contact with offsite agency emergency managers may be conducted to inquire about the status of the various offsite emergency centers.

<b>F3</b>	<b>REVIEW OF EMERGENCY PREPAREDNESS DURING OR AFTER NATURAL DISASTER EVENTS</b>	NUMBER:	<b>F3-32</b>
		REV:	<b>2</b>

**7.2** Communicate your findings to the parties listed below, as appropriate, and provide periodic updates, as necessary. The goal is to keep the offsite agencies responsible for nuclear emergency preparedness well informed of the situation.

**7.2.1** Plant Manager

**7.2.2** Shift Managers

**7.2.3** Plant Site Employees

**7.2.4** Utility Management & Communications Personnel

**7.2.5** MN & WI Emergency Management

**7.2.6** Goodhue, Pierce, and Dakota County Emergency Management

**7.2.7** City of Red Wing Emergency Management

**7.2.8** Prairie Island Indian Tribal Representatives

**7.2.9** NRC Resident Inspector

**7.2.10** NRC Region 3 Emergency Preparedness Inspector

**7.2.11** NRC NRR PINGP Project Manager

**7.2.12** FEMA Region V Administrator (may be updated through MN DEM or NRC)

**7.3** If it is determined that some degradation of offsite emergency preparedness has occurred, investigate alternate plans or contingency considerations to correct or minimize the deficiency. Based on previous experiences, special considerations are listed below that the Plant Manager or Shift Manager may implement at any time it is deemed necessary.

<b>F3</b>	<b>REVIEW OF EMERGENCY PREPAREDNESS DURING OR AFTER NATURAL DISASTER EVENTS</b>	NUMBER: <b>F3-32</b>
		REV: <b>2</b>

**7.3.1** Loss of the Prairie Island Access Road (Sturgeon Lake Road).

During conditions of limited access or egress from Prairie Island, consider implementing the following:

**A.** Partial augmentation of plant staffing during a NUE

Partial augmentation of plant staff should be considered if a NUE is declared. At a minimum, Site General Superintendents and designees may be asked to assess the support needs of Operations during the NUE. This is to ensure that on-site emergency center staffing levels can be obtained in a timely manner should the event escalate.

**B.** Staging of one emergency field team vehicle offsite

One emergency field team vehicle should be stationed off the island before plant access is restricted or lost. This would allow for immediate staffing of one emergency vehicle offsite for the offsite radiological surveying and one vehicle for surveying on the island. Monticello survey teams would perform additional surveys per the emergency plan.

**C.** A specialized shuttle service may be set up for the purpose of transporting plant personnel to and from the island. This may include procuring the service of MN National Guard to transport plant personnel in one or several heavy duty transport vehicles. The establishment of a water shuttle service may be considered. This would include a dock on each side of the lake and bus shuttle service to and from the docks.

<b>F3</b>	<b>REVIEW OF EMERGENCY PREPAREDNESS DURING OR AFTER NATURAL DISASTER EVENTS</b>	NUMBER:	<b>F3-32</b>
		REV:	<b>2</b>

### 7.3.2 Loss of Public Evacuation Capability

During conditions of limited access or egress by the general public from any area in the 10 Mile EPZ, consider implementing the following:

#### A. Evacuation at a Site Area Emergency

Recommend a precautionary evacuation of those residents in areas with restricted access if a Site Area Emergency is declared and it is clear that the plant will not de-escalate from the SAE in less than 2 hours. This is to ensure that should the event escalate to a General Emergency, residents are already relocated from areas where additional evacuation time would be required. Each county sheriff's department is aware of those areas in which there are restrictions to normal evacuation routes.

#### B. Verify Air National Guard Readiness

Contact the MN Division of Emergency Management and verify readiness of the Air National Guard to evacuate members of the public if the plant were to declare an emergency making public evacuation necessary.

### 7.4 Continue to assess the state of emergency preparedness throughout the event and update those offsite agency agents as necessary.