



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

May 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

F3-18	Thyroid Iodine Blocking Agent (Potassium Iodine)	Rev 9
F3-5.2	Response to False Siren Activation	Rev 9

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 Procedures, which have been superseded or deleted, should be destroyed.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.

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

A045

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 - 0355 Date : 05/23/01
FROM: Bruce Loesch/Mary Gadiant Loc : Prairie Island
TO : UNDERWOOD, BETTY J
Copy Num: 213 Holder : JAMES FOSTER (US NRC)
SUBJECT : Revisions to CONTROLLED DOCUMENTS

Procedure # Rev Title

Revisions:
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F3-18	9	THYROID IODINE BLOCKING AGENT (POTASSIUM I
F3-5.2	9	RESPONSE TO FALSE SIREN ACTIVATION

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 : 05/23/01

Approved By:

Joyce Chitty /BL
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	18
F3-8.1	RECOMMENDATIONS FOR OFFSITE PROTECTIVE ACTIONS FOR THE ON SHIFT EMERGENCY DIRECTOR /SHIFT MANAGER	11
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	10
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	8
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 : 05/23/01

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	1

F3	RESPONSE TO FALSE SIREN ACTIVATION	NUMBER:	F3-5.2
		REV:	9

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

O.C. REVIEW DATE:	OWNER:	EFFECTIVE DATE
5-9-01 S.C.	M. Werner	5-23-01

F3	RESPONSE TO FALSE SIREN ACTIVATION	NUMBER:	F3-5.2
		REV:	9

1.0 PURPOSE

This instruction provides guidance to take appropriate action in order to respond to reports of malfunctioning (false) sirens.

2.0 APPLICABILITY

This instruction **SHALL** apply to the Shift Manager or Shift Supervisor and the Shift Emergency Communicator when a report of a false siren is received.

3.0 PRECAUTIONS

If the false siren activation and subsequent siren deactivation results in greater than 30% of the 10 mile EPZ sirens being out of service or nonfunctional, an NRC one-hour non-emergency 10CFR50.72 notification may apply. See 5AWI 3.6.0 for reporting requirements.

4.0 RESPONSIBILITIES

- 4.1 The Shift Manager or Shift Supervisor has the responsibility to ensure that the Shift Emergency Communicator collects the necessary false siren information and makes notifications per this instruction.
- 4.2 The Shift Emergency Communicator has the responsibility to collect the necessary false siren information and make notification per this instruction.

F3	RESPONSE TO FALSE SIREN ACTIVATION	NUMBER: F3-5.2
		REV: 9

5.0 DISCUSSION

False siren activation is generally caused by malfunction of the electronic receiver, located inside the siren's control box. Occasionally, the power switches malfunction and close, causing the siren to operate. These two problems can cause the siren to operate longer than the regular cam period of three minutes. In order to shut it down, the keyswitch (located about 5 feet up siren pole) must be operated to the downward position.

Pierce, Dakota, and Goodhue County Sheriff's Departments and Treasure Island Security are equipped to deactivate a malfunctioning siren. Upon notification of a malfunctioning siren, we need to verify that the appropriate agency will deactivate the siren to minimize any nuisance to the general public.

County Sheriff Departments and Treasure Island Casino Security have procedures that require them to: verify the validity of the siren activation, deactivate the falsing siren(s), notify local radio stations of false siren activation, notify Nelson Radio Communications (Prairie Island NGP's siren contractor) to investigate the false siren(s) immediately, notify the Prairie Island Nuclear Generating Plant Shift Supervisor, and notify the applicable emergency government directors.

If the siren(s) will be out of service for more than eight (8) hours, Nelson Radio Communications will notify the affected sheriff so the sheriff can make adjustments in the mobile route alerting if a real nuclear plant emergency requiring siren activation occurs.

6.0 PREREQUISITES

The Shift Supervisor or Shift Manager has been notified that a siren has or is malfunctioning.

7.0 PROCEDURE

7.1 Shift Supervisor

- 7.1.1** Normally, the report of malfunctioning siren will be received by the Shift Supervisor, which may come directly from one of the Sheriff's Dispatchers or Treasure Island Security Dispatcher.
- A. Attempt to determine, from phone call, the general location of the malfunctioning siren(s).
 - B. Verify that the Sheriff's Department or Treasure Island Security has deactivated or is proceeding to deactivate the malfunctioning siren(s).
- 7.1.2** Contact the SEC to report to the Control Room to assist in response to false siren activation.

F3	RESPONSE TO FALSE SIREN ACTIVATION	NUMBER:	F3-5.2
		REV:	9

7.2 Shift Emergency Communicator

7.2.1 Review the information received by the Shift Supervisor concerning the malfunctioning siren(s). Ensure the following information has been determined:

A. Location of the malfunctioning siren(s).

NOTE:	A map of fixed siren locations is located in the TSC, SEC area. Identify siren by it's individual prefix letter and number.
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B. The Sheriff's or Treasure Island Security Dispatch has or is proceeding to deactivate the malfunctioning siren(s).

7.2.2 If it is not known whether the appropriate Sheriff or Treasure Island Security Dispatch are proceeding to deactivate the falsing siren(s), then contact the appropriate agency and request that information. Use the Emergency Phone directory for agency phone numbers or the autodial function on the SEC TSC phone.

7.2.3 Contact Nelson Radio Communications and request the following information:

- A. The operational status of the malfunctioning siren(s).
- B. The number of sirens that are nonfunctional and the predicted period of time that they will remain out of service.
- C. Request that Nelson Radio Communications notify Prairie Island plant and the County as soon as the siren(s) is (are) back in service.

NELSON RADIO COMMUNICATIONS (STEVE NELSON)

- (651) 463-8111 (normal work hours)
- (651) 261-9026 (24 hour PCS Phone/Pager)
- (651) 460-6756 (Steve Nelson's home number)

7.2.4 If the malfunctioning sirens result in greater than 30% of the 10 mile EPZ sirens being out of service or nonfunctional, an NRC one-hour non-emergency 10CFR50.72 notification may apply. Notify the Shift Supervisor immediately if this is the case. See 5AWI 3.6.0 for reporting requirements.

7.2.5 On the first normal workday following the siren malfunction, contact the Prairie Island Emergency Planning group with information relating to the description of the problem and any corrective action.

F3	THYROID IODINE BLOCKING AGENT (POTASSIUM IODIDE)	NUMBER: F3-18
		REV: 9

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

O.C. REVIEW DATE: 3-2-01	OWNER: M. Werner	EFFECTIVE DATE 5-23-01
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F3	THYROID IODINE BLOCKING AGENT (POTASSIUM IODIDE)	NUMBER:	F3-18
		REV:	9

1.0 PURPOSE

This procedure provides instructions for the issuance of thyroid iodine blocking agent (Potassium Iodide Tablets).

2.0 APPLICABILITY

This Instruction **SHALL** apply to all plant personnel involved in the emergency organization at Prairie Island. This procedure does NOT apply to members of the general public offsite.

3.0 PRECAUTIONS

- 3.1 Thyroid blocking agents are to be used in a radiation emergency only.
- 3.2 Use only as directed by the Emergency Director.
- 3.3 Potassium Iodide **SHALL NOT** be used by anyone who is allergic to iodine.
- 3.4 Follow the dosage instructions carefully. Potassium Iodide should be taken as soon as possible after authorization by the Emergency Director.
- 3.5 Do not take more than one dose every 24 hours and do not take for more than 10 days unless directed by the Emergency Director.
- 3.6 In case of an allergic reaction, stop taking Potassium Iodide immediately. Contact your supervisor and a physician immediately.

4.0 PREREQUISITES

Dose assessment indicates a possible or actual thyroid exposure of 25 Rem CDE.

F3	THYROID IODINE BLOCKING AGENT (POTASSIUM IODIDE)	NUMBER:	F3-18
		REV:	9

5.0 RESPONSIBILITIES

- 5.1 The Radiological Emergency Coordinator (REC) has the responsibility to assess and recommend to the Emergency Director when Potassium Iodide should be used.
- 5.2 The Emergency Director has the responsibility to authorize using Potassium Iodide when recommended by REC.

6.0 PROCEDURE

- 6.1 During emergency conditions, the Radiation Protection Group should **sample** areas of the plant where airborne iodine activity may exist.

NOTE:	Since it is not feasible to conduct emergency operations with all emergency organization personnel wearing respiratory protection, the use of a thyroid blocking agent is highly recommended when thyroid dose could approach 25 REM CDE. (Final Recommendations, FDA, April, 1982)
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- 6.2 The Radiological Emergency Coordinator (REC) should **recommend**, to the Emergency Director, the use of Potassium Iodide WHEN:
- 6.2.1 Sample results indicate a possible thyroid exposure of 25 Rem CDE, using Figure 3 or Figure 4,
- OR
- 6.2.2 A large uncontrolled iodine release is imminent, AND the projected thyroid exposure could approach 25 Rem CDE.
- 6.3 The Emergency Director should **authorize** the use of Potassium Iodide and **order** its distribution.

F3	THYROID IODINE BLOCKING AGENT (POTASSIUM IODIDE)	NUMBER:	F3-18
		REV:	9

NOTE:

Use of Potassium Iodide **SHALL** be strictly on a voluntary basis.

- 6.4** The Coordinator at each of the emergency operating centers should complete the distribution of Potassium Iodide as follows:
- 6.4.1** **Distribute** a bottle containing Potassium Iodide tablets and an information sheet that describes the use of the tablets (See Figure 1), to each individual in the emergency operating center.
 - 6.4.2** **Maintain** a distribution record (Figure 2) of all individuals receiving Potassium Iodide and **forwarded** to the Emergency Director.
 - 6.4.3** **Instruct** each individual taking Potassium Iodide to read the informational leaflet (See Figure 1).
 - 6.4.4** **Report** any side effects to the Emergency Director so that a medical evaluation may be made.
- 6.5** Each individual should take the prescribed dosage of one tablet every twenty-four hours. This dosage should be taken for a maximum of ten days unless directed otherwise by the Emergency Director.
- 6.6** Conditions should be continually evaluated by the Radiological Emergency Coordinator to determine when the usage of Potassium Iodide may be terminated.
- 6.7** WHEN the need for Potassium Iodide no longer exists, THEN all emergency organization personnel issued Potassium Iodide should return all unused tablets to the Emergency Director or his designee.
- 6.8** Update records to verify that all unused Potassium Iodide tablets have been returned.

F3	THYROID IODINE BLOCKING AGENT (POTASSIUM IODIDE)	NUMBER: F3-18
		REV: 9

Figure 1

Patient Package Insert For

THYRO-BLOCK®
TABLETS
(POTASSIUM IODIDE TABLETS, USP)
(pronounced *poe TASS-ee-um EYE-oh-dyed*)
(abbreviated: KI)

TAKE POTASSIUM IODIDE ONLY WHEN PUBLIC HEALTH OFFICIALS TELL YOU. IN A RADIATION EMERGENCY, RADIOACTIVE IODINE COULD BE RELEASED INTO THE AIR. POTASSIUM IODIDE (A FORM OF IODINE) CAN HELP PROTECT YOU.

IF YOU ARE TOLD TO TAKE THIS MEDICINE, TAKE IT ONE TIME EVERY 24 HOURS. DO NOT TAKE IT MORE OFTEN. MORE WILL NOT HELP YOU AND MAY INCREASE THE RISK OF SIDE EFFECTS. **DO NOT TAKE THIS DRUG IF YOU KNOW YOU ARE ALLERGIC TO IODIDE.** (SEE SIDE EFFECTS BELOW.)

INDICATIONS

THYROID BLOCKING IN A RADIATION EMERGENCY ONLY.

DIRECTIONS FOR USE

Use only as directed by State or local public health authorities in the event of a radiation emergency.

DOSE

Tablets: **ADULTS AND CHILDREN 1 YEAR OF AGE OR OLDER:** One (1) tablet once a day. Crush for small children.
BABIES UNDER 1 YEAR OF AGE: One-half (1/2) tablet once a day. Crush first

Take for 10 days unless directed otherwise by State or local public health authorities.

Store at controlled room temperature between 15° and 30°C (59° to 86°F). Keep container tightly closed and protect from light.

WARNING

Potassium iodide should not be used by people allergic to iodide. Keep out of the reach of children. In case of overdose or allergic reaction, contact a physician or the public health authority.

DESCRIPTION

Each white, round, scored, monogrammed THYRO-BLOCK® TABLET contains 130 mg of potassium iodide. Other ingredients: magnesium stearate, microcrystalline cellulose, silica gel, and sodium thiosulfate.

HOW POTASSIUM IODIDE WORKS

Certain forms of iodine help your thyroid gland work right. Most people get the iodine they need from foods, like iodized salt or fish. The thyroid can "store" or hold only a certain amount of iodine.

In a radiation emergency, radioactive iodine may be released in the air. This material may be breathed or swallowed. It may enter the thyroid gland and damage it. The damage would probably not show itself for years. Children are most likely to have thyroid damage.

If you take potassium iodide, it will fill up your thyroid gland. This reduces the chance that harmful radioactive iodine will enter the thyroid gland.

WHO SHOULD NOT TAKE POTASSIUM IODIDE

The only people who should not take potassium iodide are people who know they are allergic to iodide. You may take potassium iodide even if you are taking medicines for a thyroid problem (for example, a thyroid hormone or antithyroid drug). Pregnant and nursing women and babies and children may also take this drug.

HOW AND WHEN TO TAKE POTASSIUM IODIDE

Potassium iodide should be taken as soon as possible after public health officials tell you. You should take one dose every 24 hours. More will not help you because the thyroid can "hold" only limited amounts of iodine. Larger doses will increase the risk of side effects. You will probably be told not to take the drug for more than 10 days.

SIDE EFFECTS

Usually, side effects of potassium iodide happen when people take higher doses for a long time. You should be careful not to take more than the recommended dose or take it for longer than you are told. Side effects are unlikely because of the low dose and the short time you will be taking the drug.

Possible side effects include skin rashes, swelling of the salivary glands, and "iodism" (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold, and sometimes stomach upset and diarrhea).

A few people have an allergic reaction with more serious symptoms. These could be fever and joint pains, or swelling of parts of the face and body and at times severe shortness of breath requiring immediate medical attention.

Taking iodide may rarely cause overactivity of the thyroid gland, underactivity of the thyroid gland, or enlargement of the thyroid gland (goiter).

WHAT TO DO IF SIDE EFFECTS OCCUR

If the side effects are severe or if you have an allergic reaction, stop taking potassium iodide. Then, if possible, call a doctor or public health authority for instructions.

HOW SUPPLIED

THYRO-BLOCK® TABLETS (Potassium Iodide Tablets, USP) are white, round tablets, one side scored, other side debossed 472 WALLACE, each containing 130 mg potassium iodide. Available in bottles of 14 tablets (NDC 0037-0472-20).

WALLACE LABORATORIES
Division of
CARTER-WALLACE, INC.
Cranbury, New Jersey 08512

IN-0472-03

Rev. 5/94

F3	THYROID IODINE BLOCKING AGENT (POTASSIUM IODIDE)	NUMBER:	F3-18
		REV:	9

Figure 3 Frisker Count Rate vs. Thyroid Dose Rate

Net Count Rate (cpm)	Thyroid Dose Rate (rem/h)	Net Count Rate (cpm)	Thyroid Dose Rate (rem/h)	Net Count Rate (cpm)	Thyroid Dose Rate (rem/h)	Net Count Rate (cpm)	Thyroid Dose Rate (rem/h)
30	0.002	240	0.28	1400	1.3	7000	6.8
40	0.017	260	0.29	1600	1.5	8000	8.3
50	0.024	280	0.31	1800	1.7	9000	9.2
60	0.037	300	0.33	2000	1.8	10000	10
70	0.046	350	0.37	2200	2.0	12000	11
80	0.057	400	0.42	2400	2.2	14000	14
90	0.064	450	0.48	2600	2.6	16000	18
100	0.079	500	0.55	2800	2.8	18000	24
120	0.097	600	0.66	3000	2.9	20000	28
140	0.11	700	0.73	3500	3.3	25000	46
160	0.13	800	0.84	4000	3.9	30000	61
180	0.17	900	0.92	4500	4.6	35000	92
200	0.18	1000	1.1	5000	5.1	40000	110
220	0.22	1200	1.3	6000	5.9	45000	180

Based on: - 25 Cubic Foot Air Sample
 - Silver Zeolite Frisker Count Rate

Reference: NSP Internal Correspondence, Wildenborg to Agen,
 Airborne Radioactive Versus Thyroid Dose, December 10, 1996.

F3	THYROID IODINE BLOCKING AGENT (POTASSIUM IODIDE)	NUMBER: F3-18
		REV: 9

Figure 4

Iodine Concentration Vs. Exposure Time
Resulting in 25 Rem CDE

