

MAR 1 1 2004

L-PI-04-028
10CFR50.4

U S Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
DOCKETS 50-282 AND 50-306
LICENSE NOS. DPR-42 AND DPR-60
PRAIRIE ISLAND EMERGENCY PLAN IMPLEMENTING PROCEDURES

Furnished with this letter are the recent changes to the Prairie Island Nuclear Generating Plant (PINGP) Emergency Plan Implementing Procedures (EPIPs) F3 and F8. This submittal includes the following documents:

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Emergency Plan Implementing Procedures Table of Contents
EOF Emergency Plan Implementing Procedures Table of Contents

REVISIONS

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| F3-1 | Onsite Emergency Organization | Rev. 21 |
| F3-4 | Responsibilities During an Alert, Site Area, or General Emergency | Rev. 29 |
| F3-6 | Activation & Operation of Technical Support Center | Rev. 18 |
| F3-7 | Activation & Operation of Operational Support Center (OSC) | Rev. 17 |
| F3-12 | Emergency Exposure Control | Rev. 15 |
| F3-15 | Responsibilities of the Radiation Survey Teams During a Radioactive Airborne Release | Rev. 24 |
| F8-2 | EOF Responsibilities During an Alert, Site Area, or General Emergency | Rev. 8 |
| F8-3 | Activation & Operation of the EOF | Rev. 6 |
| F8-4 | Emergency Support & Logistics | Rev. 6 |

ADDITIONS:

None

A045

DELETIONS:

None

TEMPORARY CHANGE DELETIONS:

None

INSTRUCTIONS:

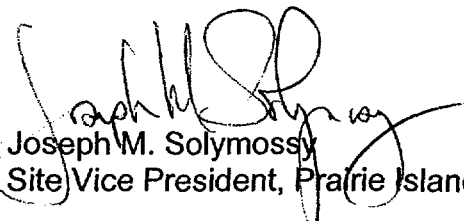
Instructions for updating the manual are included.

The changes to procedures F3-1, F3-6, and F3-7 added a section stating that the support centers will be staffed and ready within 30 minutes of declaration during work hours and 1 hour during off-normal hours. F3-1, F8-2, and F8-3 were also changed to specify that the Emergency Offsite Facility should be ready within 1 hour of "declaration" versus "notification".

The changes to F3-4 included a personnel "title change" and merged the steps for Maintenance department tasks to reflect the current plant organization. The change to F8-4 provides updated information regarding helicopter service. Procedure F3-12 was a total rewrite to align emergency exposure control to Prairie Island's radiation protection processes. F3-15 was changed to provide additional guidance associated with sampling to determine ground deposition activity.

The revised EIPs do not decrease the effectiveness of the Emergency Plan and the plan continues to comply with the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50. This letter contains no new commitments and no revisions to existing commitments.

As per 10 CFR 50.4, two copies have also been provided to the NRC Region III Office and one to the NRC Resident Inspector. If you have any questions, please contact Steve Skoyen at 651-388-1121 Extension 4156.


Joseph M. Solymosy
Site Vice President, Prairie Island Nuclear Generating Plant

CC Steve Orth, USNRC, Region III (2 copies)
NRC Resident Inspector- Prairie Island Nuclear Generating Plant
(w/o attachment)

Attachment

Significant changes to the F3 and F8 sections

Revised on 2/12/04

F3-1 Onsite Emergency Organization

Change from Rev. 20 to Rev. 21.

| Page # | Step | Changes |
|--------|-------|---|
| 9 | 4.2.1 | Added section related to TSC being staffed and ready within 30 minutes of declaration during work hours and 1 hour during off normal hours. |
| 8 | 4.1.2 | Changed to say EOF should be staffing and ready within 1 hour of "declaration" versus the old revision of within 1 hour of notification. |
| 10 | 4.2.2 | Added section related to OSC being staffed and ready within 30 minutes of declaration during work hours and 1 hour during off normal hours. |

F3-4 Responsibilities during an Alert, Site Area or General Emergency

Change from Rev. 28 to Rev. 29.

| Page # | Step | Changes |
|----------|---------|--|
| 17 | 7.11.1 | Changed title from Shift Radiation Protection Specialist to Shift Chemist. |
| 21 | 7.14.1 | Merged the step for the Maintenance/I&C/Electricians department tasks. |
| Numerous | Figures | Attached PINGP forms were removed. |

F3-6 Activation and Operating of Technical Support Center

Change from Rev. 17 to Rev. 18.

| Page # | Step | Changes |
|--------|-------|--|
| 3 | 7.1.1 | Added a step related to TSC being staffed and ready within 30 minutes of declaration during work hours and 1 hour during off normal hours. |

F3-7 Activation and Operating of Operational Support Center

Change from Rev. 16 to Rev. 17.

| Page # | Step | Changes |
|--------|-------|---|
| 4 | 7.1.1 | Added section related to OSC being staffed and ready within 30 minutes of declaration during work hours and 1 hour during off normal hours. |

F3-12 Emergency Exposure Control

Change from Rev. 14 to Rev. 15.

| Page # | Step | Changes |
|--------|------|--|
| 2 | 1.0 | Total rewrite to align emergency exposure control to the radiation protection processes. |

Significant changes to the F3 and F8 sections

Revised on 2/12/04

F3-15 Responsibilities of the Radiation Survey Teams during a Radioactive Airborne Release.

Change from Rev. 23 to Rev. 24.

| Page # | Step | Changes |
|--------|------|---|
| 24 | 1. | Added guidance about when to determine ground deposition activity. |
| 24 | 2.2 | Changed guidance from "proceed to designated area" to "proceed to low background area". |
| 25 | 3. | Added guidance about when to determine ground deposition activity. |
| 26 | 4. | Added guidance to the snow/dirt sampling. |

F8-2 EOF Responsibilities during an Alert, Site Area, or General Emergency.

Change from Rev. 7 to Rev. 8.

| Page # | Step | Changes |
|----------|---------|---|
| 3 | 1.0 | Added it is expected that the EOF can be staffed and ready to assume its emergency responsibilities within one (1) hour of declaration. |
| Numerous | Figures | Attached PINGP forms were removed. |

F8-3 Activation and Operating of the EOF

Change from Rev. 5 to Rev. 6.

| Page # | Step | Changes |
|--------|---------------|---|
| 2 | 1.0 | It is expected that the EOF can be staffed and ready to assume its emergency responsibilities within one (1) hour of declaration. |
| 3 | 5.1.1 & 5.1.2 | Removed the statement about staff from NGS PITC responding instead clarified that Emergency Response personnel will respond. |

F8-4 Emergency Support and Logistics

Change from Rev. 5 to Rev. 6.

| Page # | Step | Changes |
|--------|-------------------|--|
| 8 | Table 1 Step 3 | Gave updated information about the helicopter service. |

PINGP ####, Rev. draft
Retention: 2 years

LICENSING MANIFEST WORKSHEET
(SWI-RA-2)

| | |
|--------------------------------|--|
| Document Info | Title: PRAIRIE ISLAND EMERGENCY PLAN IMPLEMENTING PROCEDURES Letter No.: L-PI-04-028 Manifest: e-planF3 .doc File: H:\data\NEEDTASK\NMC Procedures\Licensing Manifest Worksheet.doc |
| Review Info (as applicable) | OC Review Date: NA OSRC Review Date: NA |
| T-Track Info | T-Track Number(s) of commitment(s): NA T-Track Number(s) of associated CAP(s): NA |
| Distribution Info | Additional distribution not on standard manifest (e.g., System Engineer) |
| Manifest Info | Comments on manifest: Keywords (not in document title): |

Regulatory Correspondence Review & Approval Record

TITLE: L-PI-04-028 – PI EPIP F3 & F8 Update

DATE:

FILE NAME:

PLANT REVIEW COMMITTEE NO.: NA



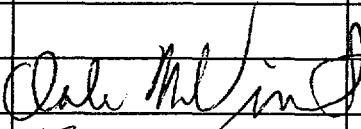


OFFSITE REVIEW COMMITTEE NO.: NA

RELATED CORRECTIVE ACTION DOCUMENTS: NA

DATE(S) OF PREVIOUS NRC CORRESPONDENCE: NA

DATE(S) OF PREVIOUS NMC CORRESPONDENCE: NA

The attached document requires your review as described below. **Your concurrence is requested by Feb 27.** The Responsible Licensing Engineer contact is Bob Alexander, phone extension 4154. This letter is not required to be submitted under oath.

| REVIEWER | REVIEW CODES* | CONCURRENCE SIGNATURE/DATE • Comments Resolved • Validation Comp./Appv'd.** (√) after date if you want a copy of submittal. | | | COMMENTS PROVIDED*** (Indicate type and method) |
|---|---------------|--|----------|--|--|
| Responsible Technical Manager S Skoyen | |  | 02-22-04 | | |
| Technical Lead Mel Agen | |  | 2/23/04 | | |
| | | | | | |
| | | | | | |
| Licensing Peer | Peer |  | 2/23/04 | | |
| Licensing Supv | Admin |  | | | |
| Manager, Regulatory Affairs (Required) | Admin |  | 3-11-04 | | |

- *1. Reviewer is certifying the accuracy and completeness of the correspondence in the reviewer's area of expertise (including consistency with FSAR, P&IDs, procedures). Each reviewer is also expected to assess the entire document for consistency. Please document any required changes on the document itself and return it to the Licensing contact. If you desire formal comment resolution, please indicate this on the document or in the comment section above.
- *2. Reviewer is familiar with the subject matter and should review the entire document, or appropriate sections of the document, to verify the information is accurate and complete.
- *3. Reviewer is assigned an NRC commitment contained within the correspondence and listed in the cover letter. The commitment wording and completion date should be verified to be proper within the commitment tracking system, and concurrence provided by initials of assigned person or their supervisor.
- **1. The Responsible Technical Manager's and the Licensing Peer's concurrence indicates their approval of the validation package. The Technical Lead's concurrence indicates the validation package is complete.
- ***1. Types of comments include: editorial, technical, format, regulatory requirements, validation material
Method of comments includes: hard-copy markup, electronic markup, attached page.

LICENSING PEER REVIEW CHECKLIST (SWI-RA-2)

Letter Number: L-PI-04-028

| Review Item | Initial |
|--|---------|
| Correct letterhead was used. | CM |
| Letter Number included, matches log, and consistent on all pages | CM |
| Oath and Affirmation statement included, as necessary | NA |
| Page numbering is correct on all pages. | CM |
| TAC number is used in the title if appropriate, and the TAC number is correct. | NA |
| Docket and License numbers are correct. | CM |
| Appropriate persons are listed on "cc:" list. (State of MN; Part50 vs. Part72) | CM |
| Names, associated position title, and phone number (as appropriate) are correct. | CM |
| Body of letter has a statement addressing new commitments made in the letter. | CM |
| Upper right corner of letter references the pertinent regulation, generic letter, etc. | CM |
| New commitments are correctly identified and entered into commitment tracking. | NA |
| References to other documents (esp. Tech Specs) are correct. | CM |
| Attachments are noted in cover letter as appropriate. | CM |
| Attachments are not missing any pages. | |
| Acronyms (PINGP etc.) are defined prior to use. | CM |
| References to NMC or PINGP (or Xcel or NSP) are correct. | CM |
| Correct Manifest has been identified on the Manifest Worksheet. | CM |
| Manifest Worksheet has been completed, including appropriate (search) keywords. | |
| No typos detected (numerical, value versus value, etc.) were observed. | CM |
| No missing words were identified. | CM |

①

NA

NA

Comments:

① Error in letter #
Corrected RGL

Mfst Num: 2004 - 0092 Date : 02/12/04
FROM : Bruce Loesch/Mary Gadiant Loc : Prairie Island
TO : UNDERWOOD, BETTY J
Copy Num: 515 Holder : US NRC DOC CONTROL DESK
SUBJECT : Revisions to CONTROLLED DOCUMENTS

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

Revisions:

=====

| | | |
|-------|----|---|
| F3-12 | 15 | EMERGENCY EXPOSURE CONTROL |
| F3-15 | 24 | RESPONSIBILITIES OF THE RADIATION SURVEY DURING A RADIOACTIVE AIRBORNE RELEASE |
| F3-1 | 21 | ONSITE EMERGENCY ORGANIZATION |
| F3-4 | 29 | RESPONSIBILITIES DURING AN ALERT, SITE AR OR GENERAL EMERGENCY |
| F3-6 | 18 | ACTIVATION & OPERATION OF TECHNICAL SUPPO |
| F3-7 | 17 | ACTIVATION & OPERATION OF OPERATIONAL SUP CENTER (OSC) |

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 _____

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|--|--|
| PRAIRIE ISLAND NUCLEAR GENERATING PLANT | Title: Emergency Plan Implementing Procedures TOC Effective Date : 02/12/04 NOTE: This set may contain a partial distribution of this Document Type. Please refer to the CHAMPS Module for specific Copy Holder Contents. |
| Approved By: <u>Mary Gadient</u> EPA Designee | |

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| F3 | ONSITE EMERGENCY ORGANIZATION | NUMBER: | F3-1 |
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REFERENCE USE

- *Procedure segments may be performed from memory.*
- *Use the procedure to verify segments are complete.*
- *Mark off steps within segment before continuing.*
- *Procedure should be available at the work location.*

| | | |
|---------------------------------------|----------------------------|----------------------------------|
| O.C. REVIEW DATE: 021104 SC | OWNER: M. Werner | Effective Date 2-12-04 |
|---------------------------------------|----------------------------|----------------------------------|

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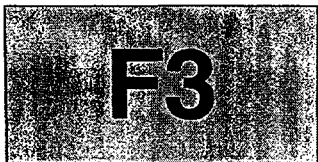

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|  | ONSITE EMERGENCY ORGANIZATION | NUMBER: | F3-1 |
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1.0 PURPOSE

The purpose of this instruction is to:

- 1.1 Specify the onsite emergency organization during normal and off normal hours.
- 1.2 Describe the general duties and responsibilities of emergency response personnel.

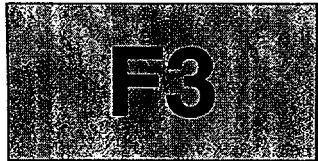
The onsite emergency organization is illustrated in Figure 1 and is comprised of personnel from the normal plant organization. The detailed organization discussed in this procedure may be further augmented or decreased as the needs of the emergency condition dictate.

2.0 APPLICABILITY


This procedure is applicable to all plant personnel whenever the Emergency Response Organization (ERO) is activated. The ERO will be activated at an Alert, Site Area Emergency or General Emergency. The ERO may be activated at a Notification of Unusual Event (NUE), if necessary.

3.0 PRECAUTIONS

- 3.1 Prairie Island plant staff should NOT make any information releases to members of the news media or the public. All inquiries by the news media should be directed to the ERO Communications personnel at the Joint Public Information Center (JPIC) located at the Minnesota State EOC in St. Paul.
- 3.2 In order to provide a sufficient number of alternates to fill the various Prairie Island emergency organization positions, some individuals may be listed in more than one emergency organization position. In the event that an individual is assigned to more than one emergency organization position, the position required to implement immediate actions by the onsite emergency organization should take precedence over all other positions.
- 3.3 All Prairie Island emergency response personnel should carry their company Picture ID for access through potentially established road blocks and card access to an emergency facility.

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- 3.4** All Prairie Island personnel are subject to the Fitness For Duty policy and call-in requirements during a declared emergency.
- 3.4.1** Post-Accident Fitness For Duty examinations will be conducted if there is reasonable suspicion that a person's behavior contributed to plant's accident condition.
- 3.4.2** In the event of an off-normal hours activation, emergency response personnel should report to their duty station unless they feel impaired or know themselves to be unfit for duty in which case they should notify their supervisor.
- 3.4.3** During an off-normal hours activation, those individuals who do not consider themselves impaired but have ingested alcohol within five (5) hours preceding their arrival **SHALL** inform the Badge Issue Station or EOF Access Control Station that they have ingested alcohol within five (5) hours preceding their arrival. Security will administer a breath analysis test and allow access to those who have a Blood Alcohol Concentration (BAC) less than 0.02%.
- 3.4.4** Under extreme emergency conditions, it may be determined that the services of an individual having a BAC of 0.02% is required. Under these circumstances necessary controls, e.g., constant escort, etc., **SHALL** be established to ensure the individual performs the assignment as required.

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4.0 RESPONSIBILITIES

4.1 DIRECTION AND CONTROL

4.1.1 Emergency Director (ED)

During the initial stages of an emergency condition, the Emergency Director has overall coordinating authority for NMC. The Emergency Director has the authority and responsibility to immediately initiate any emergency actions including providing protective action recommendations to offsite authorities responsible for implementing offsite emergency measures. Following activation of the EOF emergency organization, the Emergency Manager **SHALL** assume the offsite coordinating authority for NMC and the Emergency Director **SHALL** retain the responsibility for onsite operations.

Initially, the Duty Shift Manager assumes the responsibility of the Emergency Director. If necessary, the Shift Supervisor of the unaffected unit may function as an alternate Emergency Director backing up the Shift Manager.


The Shift Manager should be relieved of the Emergency Director responsibilities when the designated Emergency Director arrives on-site. The Plant Manager should be the designated Emergency Director and should be available with a pager on a twenty-four (24) hour basis. When he is unavailable, (e.g., out of town), the designated Emergency Director responsibility should be passed to an individual in the line of succession described in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory.

Any of the individuals above the Shift Manager in the line of succession may take over the responsibility of the Emergency Director until the designated Emergency Director arrives onsite.

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| F3 | ONSITE EMERGENCY ORGANIZATION | NUMBER: | F3-1 |
| | | REV: | 21 |

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| NOTE: | The duty Shift Supervisor of the affected unit, until relieved, SHALL remain in the Control Room at all times during accident situations to direct the activities of the Control Room operators. |
|--------------|--|

- A. The general responsibilities of the Emergency Director are:
1. Coordinate response of the plant onsite emergency organization;
 2. Emergency classification and notification of offsite authorities until the Emergency Manager assumes this responsibility at which time the ED makes reclassification recommendations to the EM;
 3. Authorize offsite Protective Action Recommendations until the Emergency Manager assumes this responsibility;
 4. Direct the activation of all onsite emergency response centers, delegate coordinators for all onsite emergency response centers, and ensure that the emergency response center's environment is being monitored for habitability;
 5. Direct onsite protective actions as necessary;
 6. Ensure twenty-four (24) hour coverage for key positions in the onsite emergency organization;
 7. During plant evacuations, initiate personnel accountability, ensure that it is completed within thirty (30) minutes following declaration of the Site Area or General Emergency requiring evacuation, and maintain accountability throughout the emergency condition;
 8. Authorize radiation exposure in excess of normal limits (this responsibility **SHALL NOT** be delegated);
 9. Ensure that radiological monitoring (onsite and offsite) is initiated (when required).
 10. Ensure the Severe Accident Management process is implemented as necessary and become the Severe Accident Management Decision-maker.

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|  | ONSITE EMERGENCY ORGANIZATION | NUMBER: F3-1 |
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4.1.2 Emergency Manager (EM)

During an Alert, Site Area or General Emergency, the Emergency Operations Facility (EOF) Organization **SHALL** be activated. It is expected that the EOF Organization can be fully staffed and ready to assume its emergency responsibilities within one (1) hour of declaration. The EOF Organization will base its operations at the Near-Site EOF, under the direction of the Emergency Manager (EM).


The Emergency Manager **SHALL** assume, from the Emergency Director, responsibility for overall management of all offsite support efforts. This includes offsite coordinating authority for NMC, efforts to enhance control of the plant and efforts to determine the potential or actual radiological impact in the environs of the plant.

A. Emergency Manager - Designees and Alternates

The Emergency Manager **SHALL** be staffed by a person named in the Emergency Manager call list. A list of Emergency Managers is given in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory.

B. The general responsibilities of the Emergency Manager are:

1. Determine the extent of the offsite response;
2. Authorize reclassifications including event termination or recovery;
3. Authorize offsite Protective Action Recommendations;
4. Supervise the operation of the EOF;
5. Direct personnel to provide the necessary offsite support for the plant as requested by the Emergency Director.
6. Provide technical support as necessary;
7. Provide direction to personnel performing offsite radiation surveys and dose estimates as to the desired types of samples and sample location;
8. Direct assessment and implementation of a modified Radiological Environmental Monitoring Program as needed;
9. Direct personnel to provide the necessary logistics support for the plant and EOF operation;
10. Provide information to utility management, as necessary, to assist in development of news releases;
11. Provide a direct interface with NRC representatives assigned to the EOF.

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|  | ONSITE EMERGENCY ORGANIZATION | NUMBER: F3-1 |
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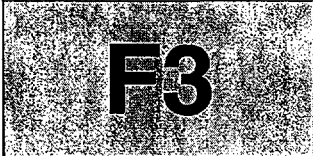
4.2 EMERGENCY ORGANIZATION COORDINATORS

4.2.1 Technical Support Center Coordinator

The Technical Support Center Coordinator **SHALL** be responsible for the general activation, operation and coordination of activities in the Technical Support Center (TSC).

It is expected that the TSC Organization can be fully staffed and ready to assume its emergency responsibilities within 30 minutes of declaration during normal work hours, and within one (1) hour during off normal hours.

- A. A list of TSC Coordinators is given in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory.
- B. The general responsibilities of the TSC Coordinator are:
 - 1. Establish and verify radiological monitoring for the TSC including startup of the TSC ventilation cleanup systems;
 - 2. Assist personnel performing the accountability check;
 - 3. Maintain or designate individuals to maintain records throughout the emergency condition;
 - 4. Coordinate activities of plant and non-plant personnel located in the TSC;
 - 5. Establish, or ensure that communications are established, between all onsite emergency facilities and the EOF;
 - 6. Ensure plant status is obtained via the ERCS plant process computer and/or via the communicator assigned to the Control Room;
 - 7. Ensure ERDS (Emergency Response Data System) is activated with NRC.
 - 8. Ensure periodic updates are occurring in the TSC with appropriate information;
 - 9. Ensure TSC status boards are maintained;
 - 10. Provide technical guidance to the Emergency Director and Control Room operators on plant operations;
 - 11. Obtain engineering and technical assistance as required to support the Control Room operations.


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4.2.2 Operational Support Center Coordinator

The Operational Support Center Coordinator **SHALL** be responsible for the general activation, operation, and coordination of activities in the Operational Support Center (OSC).

It is expected that the OSC Organization can be fully staffed and ready to assume its emergency responsibilities within 30 minutes of declaration during normal work hours, and within one (1) hour during off normal hours.

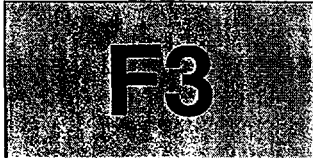
- A. A list of Operational Support Center Coordinators is given in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory.
- B. The general responsibilities of the OSC Coordinator are:
 - 1. Establish and verify radiological monitoring for the OSC and the Control Room;
 - 2. Coordinate activities of plant personnel located in the OSC to support plant operations as requested by the Control Room and TSC.
 - 3. Assist personnel performing the accountability check.
 - 4. Maintain the communications systems in the OSC. A person may be designated to act as a communicator.
 - 5. Issue dosimetry to OSC and Control Room personnel.
 - 6. Ensure OSC status boards are updated as required.
 - 7. Periodically update personnel located in the OSC with appropriate information.
 - 8. Control the use of equipment located in the emergency locker.

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4.2.3 Assembly Point Coordinator

The Assembly Point Coordinator **SHALL** be responsible for the general operation of the assembly area.


- A. A list of Assembly Point Coordinators is given in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory.
- B. The general responsibilities of the Assembly Point Coordinator are:
 - 1. Verify that radiological monitoring has been established for the Assembly Point.
 - 2. Coordinate activities of all personnel (plant and non-plant) located at the Assembly Point.
 - 3. Assist the Emergency Director in performing the accountability check, as necessary.
 - 4. Maintain the communication systems. A person may be designated as the communicator, if necessary.
 - 5. Control the use of the equipment located in the Emergency Locker.
 - 6. Update all personnel with appropriate information when directed by the Emergency Director.
 - 7. Provide instructions to personnel when they are released from the assembly point for reentry or transport offsite.

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4.2.4 Radiological Emergency Coordinator

The Radiological Emergency Coordinator (REC) **SHALL** be responsible for radiological accident assessment, onsite and offsite. The REC should report to the Technical Support Center when the TSC is activated. Upon activation of the Near-Site EOF, the Radiation Protection Support Supervisor (RPSS) should assume responsibility for the offsite accident assessment.

- A. A list of Radiological Emergency Coordinators (RECs) is given in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory.
- B. The general responsibilities of the REC are:
 - 1. Offsite dose assessment
 - 2. Formulating offsite Protective Action Recommendations
 - 3. Offsite surveys
 - 4. Onsite surveys
 - 5. Chemistry
 - 6. Radiochemistry
 - 7. Onsite Radiation Protection for:
 - a. access control
 - b. damage control and repair
 - c. search and rescue
 - d. first-aid
 - e. fire fighting
 - f. personnel monitoring & decontamination
 - g. dosimetry

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4.3 SHIFT ORGANIZATION

4.3.1 Shift Manager (SM)

The Shift Manager (SM) **SHALL** remain within ten (10) minutes of the Control Room. The Shift Manager **SHALL** assume overall coordination and control in the Control Room and provide direction as necessary to the Shift Supervisor.

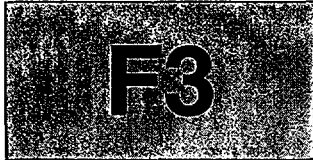
A. SM - Line of Succession

1. Duty Shift Manager
2. Shift Manager

B. Responsibilities

The Shift Manager **SHALL**:

1. Assume the duties of Emergency Director until relieved by the designated Emergency Director. Portions of the E-Plan implementation may be delegated to other members of the plant staff as dictated by plant conditions.
2. Assess the emergency condition, event evaluation, and safety related aspects of the plant.
3. Implement the Severe Accident Management process as necessary.

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4.3.2 Operations Group

The Operations Group consists of the Operations Manager, Shift Managers, Shift Supervisors, and all operators. The Operations Group Leader should report to the Technical Support Center when the TSC is activated.

- A. The designated Group Leader list is given in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory.
- B. Responsibilities

The Operations Group **SHALL** have responsibility for:

1. Plant Operations and assessment of operational aspects of the emergency
2. Rad Waste equipment operation
3. Emergency radiation surveys
4. Short term damage control and repair for electrical, mechanical, and I&C equipment.
5. Implement the Severe Accident Management process as necessary.

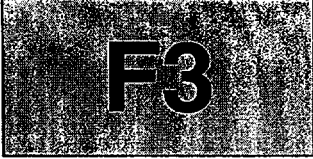
4.3.3 Security Group

The Security Group consists of the Security Manager, the Security Staff, and contract Security Force.

- A. The designated Group Leader list is given in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory.
- B. Responsibilities

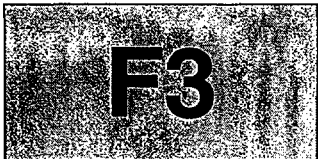
The Security Force **SHALL**:

1. Carry out the plant security and Access Control program.
2. Maintain strict personnel accountability onsite.
3. Assist communications efforts when necessary.
4. Assist in first aid treatment.

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4.3.4 Shift Emergency Communicator (SEC)

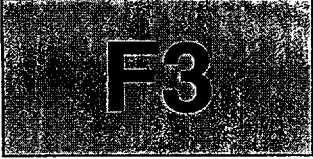
- A. The designated SEC list is given in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory.
- B. Responsibilities
 - 1. Complying with NRC overtime restrictions.
 - 2. Assuring that assigned shifts are covered when changes have been made on the schedule.
 - 3. Assuring that communication with Shift Supervisors is adequate.
 - 4. Performing normal and emergency SEC duties.
 - 5. Meeting the specified training requirements.
- C. General Requirements
 - 1. Working Hours
 - a. The SEC **SHALL** comply with overtime restriction policies of 5AWI 3.15.0.
 - b. The SEC should remain on duty until relieved by another SEC.
 - 2. SEC Availability
 - a. The SEC should be available so that he or she can be in the Control Room within 10 minutes of being notified.
 - b. To ensure the 10 minute requirement can be met, the SEC should ensure that:
 - 1) Their personal communication equipment (pager) is operable.
 - 2) Shift Supervisors are aware of SEC location if personal communication equipment or plant page system will not provide adequate communication, e.g., noisy areas, structures where pager and page system are not available, etc. In such cases the SEC should ensure that Shift Supervisors can make immediate notification.

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- 3) The SEC **SHALL NOT** leave the plant site while on duty. (PI Training Center is included in the plant site for this requirement).
- 4) The SEC should notify the Shift Supervisor when going to the PI Training Center, Cooling Tower area or ISFSI area. When at the PI Training Center, the SEC should inform the Training Center receptionist of their classroom location.

D. Normal Duties

1. The SEC should report to the Shift Supervisor upon arrival on site and check plant status.
2. The SEC should proceed to the Technical Support Center (TSC), conduct the National Warning System (NAWAS) test, and document completion in the SEC Log.
3. The SEC should conduct Communication Surveillance Tests as directed by the Shift Supervisor, inform the Shift Supervisor of the results and document the results in the SEC Log.
4. The SEC should transmit PINGP 666 (NRC Form 361 - Event Notification Worksheet) to NRC Operations Center and send a copy to the NRC Resident Inspectors.
5. The SEC should make courtesy notifications to state and local authorities as requested by the Shift Supervisor or plant management for situations or conditions, which are abnormal but non-emergencies, that may have consequences extending beyond immediate site concern, e.g., serious injuries, fires, explosions, breaches of security, media sensitive events, etc.

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E. Emergency Duties

1. The SEC should be notified by the Shift Supervisor in the event of:
 - a. Implementation of the Plant Emergency Plan.
 - b. Implementation of Plant Emergency Procedures (Operations Manual E-Section) that require SEC notification.
 - c. Abnormal events e.g., trip, shutdown, etc., that may be of interest to the public.
2. The SEC should report to the Control Room within 10 minutes of being notified. In the case of a fire alarm or plant trip announcement, the SEC should report immediately to the Control Room without waiting for notification by the Supervisor.
3. The SEC should report to the Shift Manager or Shift Supervisor and perform Emergency Notifications and documentation in accordance with Emergency Plan Implementing Procedure F3-5.
4. The SEC **SHALL** notify state and local authorities within 15 minutes of Emergency Class declaration.

4.3.5 Fire Brigade

- A. The Fire Brigade should consist of:
1. Brigade Chief - U-1 Turb. Bldg. APEO or as designated by the Shift Manager.
 2. Assistant Chief - Turbine Building APEO
 3. Fire Fighters - BOP Operators
 4. Runner - As designated to accompany fire department, operate equipment, or bring additional equipment to fire scene.

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| F3 | ONSITE EMERGENCY ORGANIZATION | NUMBER: | F3-1 |
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NOTE

The Red Wing Fire Department provides emergency assistance and should be called immediately on report of fire. Other plant personnel on site may be called on for emergency work or called to plant for emergency service.

B. Responsibilities

The Fire Brigade **SHALL** be:

1. Responsible for fire fighting per F5, "Fire Fighting".
2. Primary responders for Search and Rescue efforts.

4.3.6 Shift Radiation Protection Specialist

The Shift Radiation Protection Organization consists of one Radiation Protection Specialist (RPS) onsite at all times.


A. Shift RPS - Line of Succession

1. Shift RPS
2. Non-licensed operators are trained to perform emergency radiation surveys.

B. Responsibilities

During emergency conditions, the Shift Radiation Protection Specialist **SHALL** be responsible for:

1. In-Plant surveys
2. Chemistry
3. Radiochemistry
4. Dose Assessment
5. Assist Fire Brigade

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4.4 EMERGENCY STAFF AUGMENTATION GROUPS

4.4.1 Maintenance Group

The Maintenance Group consists of mechanical maintenance personnel, plant electricians, and I&C Specialists. The onsite Emergency Organization includes the Maintenance Manager, who should report to the Technical Support Center (TSC); and the Maintenance Supervisors (mechanical, electrical and I&C), and designated electricians, mechanical and I&C staff who should report to the Operational Support Center (OSC). The mechanical, electrical, and I&C staff in the OSC can be further augmented or decreased as emergency conditions dictate.

A. The designated Group Leader list is given in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory.

B. Responsibilities

The Mechanical, Electrical and I&C Maintenance Group **SHALL** have responsibility for:

1. Supporting the repair and corrective actions for the mechanical, electrical and I&C systems in support of emergency response and recovery actions.
2. Supporting the Search and Rescue effort.

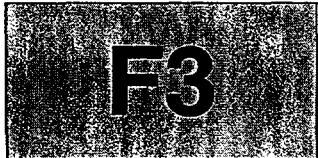
4.4.2 Work Management Group

The Work Management Group consists of Work Control Center (WCC) personnel and the Work It Now Team (WIN Team). The Work Control Center personnel should report to or remain in the Work Control Center. The WIN Team leader should report to the WCC and WIN Team workers should report to the OSC.

A. The WCC personnel and the WIN Team workers are made up of those personnel who work in these groups during normal non-emergency situations.

B. Responsibilities

1. The WCC personnel should be responsible for control, review and preparation of work packages and for tagging operations.
2. The WIN Team workers should be responsible for repair and corrective actions in support of emergency response as assigned by the OSC.

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4.4.3 Radiation Protection and Chemistry Groups

The Radiation Protection and Chemistry Groups consists of the Radiation Protection Manager and Chemistry Manager, who should report to the Technical Support Center; and all members of the Radiation Protection and Chemistry Groups.

- A. The designated Group Leader (REC) list is given in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory.
- B. Responsibilities

The responsibilities of the Radiation Protection and Chemistry Groups are:

1. Offsite Dose Assessment
2. Offsite Surveys
3. Onsite Surveys
4. Chemistry
5. Radiochemistry
6. Radiation Protection for:
 - a. Access Control
 - b. Damage control and repair
 - c. Search and rescue
 - d. First aid
 - e. Fire fighting
 - f. Personnel monitoring and decontamination
 - g. Dosimetry

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4.4.4 Engineering Group

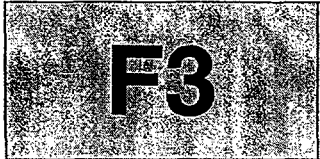
The Engineering Group consists of Systems, Programs, Design and Projects Engineering.

Upon activation of the onsite emergency organization, Systems and Programs Engineering Managers and designated engineers assigned to the emergency organization should report to the Technical Support Center. Other designated engineers may be requested to further augment engineering support in the TSC, as required.

- A. The designated Group leader list is given in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory.
- B. Responsibilities

The Engineering Group **SHALL** have responsibility for:

1. Providing technical support for plant system engineering on electrical/mechanical systems.
2. Providing technical support for operating radioactive waste control systems.
3. Providing core parameter analysis to determine current core status.
4. Providing plant parameter trending and analysis utilizing the Emergency Response Computer System (ERCS)
5. Project possible loss of key equipment and its consequences.
6. Providing technical support for emergency repairs and corrective actions on electrical/mechanical systems.
7. Update TSC staff of potential problems and developments.

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4.4.5 Logistics Support Group

The Logistics Support Group consists of the Business Support Group (Administrative Services and Document Control), the Plant Services and Site Materials (Warehouse).

- A. The designated Group Leader list is given in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory.
- B. Responsibilities

The Business Support Group (Administrative Services and Document Control) **SHALL** supply logistical support in their area of expertise. This includes a switchboard operator reporting to the TSC Communications area and operating the TSC telephone switchboard. Other personnel in these areas may be called in to provide support for emergency response on an "as needed" basis.

Site Materials (Warehouse) **SHALL** provide assistance in retrieving the parts necessary for an emergency response from Warehouse No. 1. During an off hours emergency activation or during plant evacuations, designated Site Materials personnel should report to the Operations Support Center.

The Plant Services **SHALL** support an emergency response by providing necessary assistance by the nuclear plant service attendants. Designated nuclear plant service attendants should report to the Operational Support Center. The Plant Services Group should have responsibility for:


1. Providing Offsite Survey Team Drivers and/or Sample Couriers for Offsite Radiation Survey Teams.
2. Providing general support of emergency response and recovery actions, as requested.

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4.4.6 Severe Accident Management Group

The Severe Accident Management Group **SHALL** be responsible for the implementation of the Severe Accident Management process.

- A. The Severe Accident Management Group consists of Decision Makers, Evaluators and Implementors made up of selected individuals from plant management, operations, engineering and technical staff. The Decision Maker and a team of Evaluators report to the TSC. Decision Maker and Evaluator lists are given in the front of the Mo & PI Nuclear Emergency Preparedness Telephone Directory. All other individuals who support the Severe Accident Management process by implementing the Severe Accident Management strategies are considered to be Implementors. Implementors consist of all other emergency personnel that may be asked to assist based on their plant expertise and experience.
- B. The general responsibilities of the Severe Accident Management Group are:
1. Implement the use of the Severe Accident Management Guidelines when the Control Room has transitioned into severe accident management.
 2. Using the Severe Accident Management Guidelines formulate and evaluate various severe accident management strategies for implementation.
 3. Implement the appropriate severe accident management strategies.

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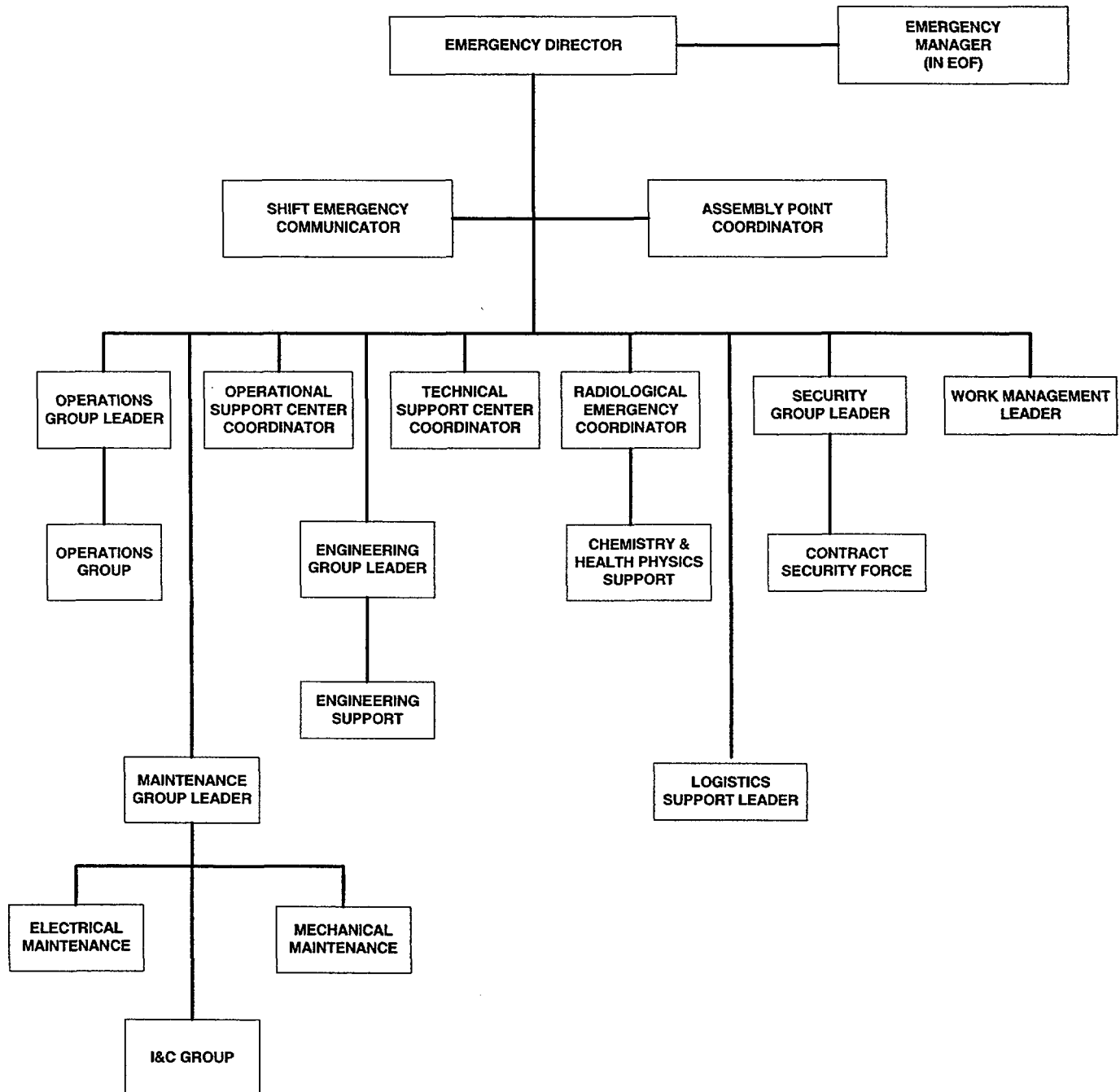
5.0 PREREQUISITES

An Unusual Event, Alert, Site Area Emergency, or General Emergency has been or will be declared.

6.0 PROCEDURE

- 6.1 If an Unusual Event has been or will be declared, the Operations Group and Shift Emergency Communicator **SHALL** perform their Emergency Plan duties in accordance with the instructions outlined in F3-2, Classifications of Emergencies and F3-3, Responsibilities During A Notification Of Unusual Event.
- 6.2 If an Alert, Site Area Emergency, or General Emergency has been or will be declared, all plant emergency response personnel **SHALL** perform their Emergency Plan duties in accordance with the instructions outlined in F3-2, Classifications of Emergencies and F3-4, Responsibilities During An Alert, Site Area, or General Emergency.

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| F3 | ONSITE EMERGENCY ORGANIZATION | NUMBER: F3-1 |
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Figure 1 On-Site Emergency Organization

F3**RESPONSIBILITIES DURING AN ALERT,
SITE AREA, OR GENERAL EMERGENCY**

NUMBER:

F3-4

REV:

29**REFERENCE USE**

- *Procedure segments may be performed from memory.*
- *Use the procedure to verify segments are complete.*
- *Mark off steps within segment before continuing.*
- *Procedure should be available at the work location.*

O.C. REVIEW DATE:

021104 SC

OWNER:

M. Werner

EFFECTIVE DATE

2-12-04

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: F3-4 |
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1.0 PURPOSE

The purpose of this instruction is to delineate the responsibilities of various emergency organization personnel and onsite organizations required to respond to an Alert, a Site Area Emergency, or a General Emergency.

2.0 APPLICABILITY

This instruction **SHALL** apply to all plant personnel.

3.0 PRECAUTIONS

- 3.1 All personnel should stay clear of any areas as announced over the public address system.
- 3.2 All personnel should refrain from using the public address system or telephone system during an emergency.
- 3.3 When the evacuation alarm is heard, evacuate your work area while listening to specific instructions on the plant's public address system. If you cannot hear or understand the instructions, continue to leave the immediate area until you learn of the evacuation instructions.
- 3.4 Anyone working in a contaminated area when the evacuation alarm sounds should remove as much protective clothing as time permits, especially gloves, booties or rubbers. If wearing a double suit, removal of outside clothing would only be necessary. Proceed to the designated assembly area. If unable to remove all protective clothing, inform personnel in charge at the assembly area of your condition.

NOTE:

When the evacuation alarm sounds during a DRILL, remove ALL protective clothing prior to evacuating.

- 3.5 When exiting the Protective Area via the Guardhouse, proceed through the portal monitor quickly and step through without stopping. All I.D. cards (badges) should be collected and checked out by the Security Force, so an early printout of all personnel within the Protected Area can be obtained.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: F3-- |
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- 3.6** Everyone should remain at assembly area for monitoring and accountability checks until released by the Emergency Director or directed for reassignment for duty within the plant. Follow instructions from the Assembly Point Coordinator. When departing the site property, obey all instructions from traffic control personnel.
- 3.7** All entries into the Auxiliary Building should be controlled through the OSC. Aux Building entries made for purposes of equipment operation, search and rescue, damage control, etc., should be accompanied by a Radiation Protection Specialist, or other qualified individual.
- 3.8** In the case of a credible security event, personnel may be asked to take cover for immediate personal protection or TSC and OSC staff may be directed to report to alternate locations different from the TSC and OSC (e.g., Plant Manager's Conference Room or EOF). See F3-31 for more security event guidance.

4.0 RESPONSIBILITIES

4.1 Overall Onsite Responsibility - Emergency Director

4.2 In Charge, Control Room - Shift Manager

Technical Support Center - TSC Coordinator

Operational Support Center - OSC Coordinator

Assembly Point - Assembly Point Coordinator

- 4.3** Assistance, Control Room - Shift Supervisors
- Control Room Operators
 - TSC - Operations Committee
 - Shift Emergency Communicator
 - Radiological Emergency Coordinator
 - Engineering support as needed (i.e., systems experts)
 - OSC - Extra Operators
 - Rad Survey Teams
 - Maintenance Supervisors
 - I&C Supv & Coordinators
 - Chief Station Electrician and Alternates
 - Additional Support as needed

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: | F3-4 |
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5.0 DISCUSSION

A graded scale of response is provided for the different classes of emergencies, each requiring a specific response by emergency organization personnel for the protection of the public health and safety.

5.1 Alert

5.1.1 Definition

The Alert Conditions are events which are in progress or have occurred which involve actual or potential substantial degradation of the level of safety of the plant.

Some releases of radioactive material to offsite areas are probable. Hence, there is some necessity for emergency planning and response by offsite agencies. Any radioactive release will be limited to a small fraction of the EPA Protective Action Guideline exposure levels.

5.1.2 Purpose of Alert Class

The purpose of the Alert Emergency classification is to (1) assure that emergency personnel are readily available to respond if the situation becomes more serious or to perform confirmatory radiation monitoring, if required; (2) provide offsite authorities current status information.

5.1.3 Plant Actions and Responsibilities

- A. Promptly inform State and/or local authorities of Alert status and reason for Alert as soon as discovered.
- B. Augment resources by activating onsite Technical Support Center, onsite Operational Support Center and Near-Site Emergency Operations Facility (EOF).
- C. Assess and respond to the Alert condition.
- D. Dispatch onsite or offsite survey teams and associated communications (if needed).
- E. Provide periodic plant status updates to offsite authorities.

F3**RESPONSIBILITIES DURING AN ALERT,
SITE AREA, OR GENERAL EMERGENCY**

NUMBER:

F3-4

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- F. Provide periodic meteorological assessments to offsite authorities, and if any releases are occurring, dose estimates for actual releases.
- G. Close out by verbal summary to offsite authorities and assess need for recovery.

or

- H. Escalate to a more severe class.

5.1.4 State and/or Local Offsite Authority Actions

- A. Provide fire or security assistance, if required.
- B. Augment resources by activating Emergency Operating Centers and Emergency Alert System to standby status.
- C. Alert to standby status key emergency personnel including monitoring teams and associated communications.
- D. Provide confirmatory offsite radiation monitoring and ingestion pathway dose projections if actual releases substantially exceed technical specification limits.
- E. Maintain alert status until verbal close-out.

or

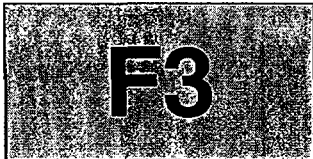
- F. Escalate to a more severe class.

5.2 Site Area Emergency**5.2.1 Definition**

The Site Area Emergency describes events which are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public.

Significant offsite releases are likely to occur or are occurring, but where a core melt situation is not expected although severe fuel damage may have occurred.

Any radioactive releases are not expected to exceed the EPA Protective Action Guideline exposure levels except near the site boundary.

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|  | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: | F3-4 |
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5.2.2 Purpose of Site Area Emergency Class

The purpose of the Site Area Emergency classification is to:

- A. Assure that response centers are manned.
- B. Assure that monitoring teams are dispatched (if needed).
- C. Assure that personnel required for evacuation of Near-Site areas are at duty stations if the situation becomes more serious.
- D. Provide current information for and consultation with offsite authorities.
- E. Provide updates for the public through offsite authorities.

5.2.3 Plant Actions and Responsibilities

- A. Promptly inform State and/or local offsite authorities of Site Area Emergency status and reason for emergency as soon as discovered.
- B. Augment resources by activating onsite Technical Support Center, onsite Operational Support Center and the Near-Site Emergency Operations Facility (EOF).
- C. Assess and respond to the Site Area Emergency.
- D. If radiological or environmental conditions permit, evacuate onsite, nonessential personnel.
- E. Dispatch onsite and offsite survey teams and associated communications (if needed).
- F. Provide a dedicated individual for plant status updates to offsite authorities.
- G. Make senior technical and management staff onsite available for consultation with NRC and State on a periodic basis.
- H. Provide meteorological and dose estimates to offsite authorities for actual releases via a dedicated individual.
- I. Provide release and dose projections based on available plant condition information and foreseeable contingencies.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: F3-4 |
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- J. Close out or terminate emergency class by contacting offsite authorities and assess need for recovery.

or

- K. Escalate to General Emergency class.

5.2.4 State and/or Local Offsite Authority Actions

- A. Provide any assistance requested.
- B. If protective actions are desirable, activate the Public Alert & Notification System.
- C. Provide public within at least 10 miles, periodic updates on emergency status.
- D. Augment resources by activating Emergency Operating Centers.
- E. Dispatch key emergency personnel including monitoring teams and associated communications.
- F. Alert to standby status other emergency personnel (e.g., those needed for evacuation) and dispatch personnel to Near-Site duty stations.
- G. Provide offsite monitoring results to licensee and others and jointly assess them.
- H. Continuously assess information from licensee and offsite monitoring with regard to changes to protective actions already initiated for public and mobilizing evacuation resources.
- I. Recommend placing milk animals within 2 miles on stored feed and assess need to extend distance.
- J. Provide press briefings, perhaps with licensee.
- K. Maintain Site Area Emergency status until close-out.

or

- L. Escalate to General Emergency class.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: | F3-4 |
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5.3 General Emergency

5.3.1 Definition

The General Emergency describes events in progress or which have occurred which involve actual or imminent substantial core degradation or melting with the potential for loss of containment .

Radioactive releases can be reasonably expected to exceed the EPA Protective Action Guideline exposure levels offsite for more than the immediate site area. Hence, protective actions may have to be taken for protection of the general public.

5.3.2 Purpose of General Emergency Class

The purpose of the General Emergency classification is to:

- A. Initiate predetermined protective actions for the public.
- B. Provide continuous assessment of information from licensee and offsite measurements.
- C. Initiate additional measures as indicated by actual or potential releases.
- D. Provide current information for the public and consultation with offsite authorities.
- E. Provide updates for the public through offsite authorities.

5.3.3 Plant Actions and Responsibilities

- A. Promptly inform state and local offsite authorities of General Emergency status and reason for emergency as soon as discovered.
- B. Augment resources by activating onsite Technical Support Center, onsite Operational Support Center and Near-Site Emergency Operations Facility (EOF).
- C. Assess and respond to General Emergency.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: F3-4 |
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- D. If radiological or environmental conditions permit, evacuate onsite, nonessential personnel.
- E. Dispatch onsite and offsite survey teams and associated communications.
- F. Provide a dedicated individual for plant status updates to offsite authorities.
- G. Make senior technical and management staff onsite available for consultation with NRC and State on a periodic basis.
- H. Provide meteorological and dose estimates to offsite authorities for actual releases via a dedicated individual.
- I. Provide release and dose projections based on available plant condition information and foreseeable contingencies.
- J. Implement the Severe Accident Management process as necessary.
- K. Close out or terminate emergency class by briefing offsite authorities and transition to recovery.

5.3.4 State and/or Local Offsite Authority Actions

- A. Provide any assistance requested.
- B. Activate immediate public notification of emergency status and provide public periodic updates.
- C. Recommend evacuation for 2 mile radius and 5 miles downwind and assess need to extend distances.
- D. Augment resources by activating Near-Site EOC and any other primary response centers.
- E. Dispatch key emergency personnel including monitoring teams and associated communications.
- F. Dispatch other emergency personnel to duty stations within 5 mile radius and alert all others to standby status.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: | F3-4 |
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- G. Provide offsite monitoring results to licensee and others and jointly assess these.
- H. Continuously assess information from licensee and offsite monitoring with regard to changes to protective actions already initiated for public and mobilizing evacuation resources.
- I. Recommend placing milk animals within 10 miles on stored feed and assess need to extend distance.
- J. Provide press briefings, perhaps with licensee.
- K. Maintain General Emergency status until close-out or termination of emergency class.

6.0 PREREQUISITES

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

7.0 PROCEDURE

7.1 Shift Supervisor of Affected Unit

7.1.1 Proceed to the Control Room (if not already there).

NOTE:

The Shift Supervisor of the affected unit SHALL remain in the Control Room at all times during accident conditions until properly relieved.

- #### 7.1.2
- Implement the appropriate Emergency Operating Procedures (EOPs) and Severe Accident Management Guidelines (SAMGs), as needed, and respond to the emergency condition with the objective of returning the plant to a normal safe condition (Mode 5, Cold Shutdown, if necessary).

NOTE:

The Shift Manager and SEC will be summoned to the Control Room per the EOPs.

7.1.3 Direct activities of the Control Room Operators.

- #### 7.1.4
- Coordinate, with the Emergency Director, all plant operations which may impact on radioactive releases.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: F3-4 |
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7.2 Shift Supervisor of Unaffected Unit

- 7.2.1 Proceed to the Control Room (if not already there).
- 7.2.2 Direct operations on the unaffected unit.
- 7.2.3 Assist the Shift Manager, as necessary.

7.3 Shift Manager

NOTE:

In the case of a credible security event, if you are unable to safely go to the Control Room, consider directing the emergency response from another safe location (e.g., SM Office, CAS or Plant Manager's Conference Room). An informational copy of the SM/SS Emergency Director Checklist (PINGP 1125) is located in the back of F3-4, located in the SM Office, Plant Manager's Conference Room, EOF and New Admin Reference Library.

NOTE:

The initial E-Plan response to the event should be made by the Shift Manager. However, in order to adequately maintain oversight of the operational aspects of the event, it may be necessary for the Shift Manager to delegate specific E-Plan duties to the unaffected unit SS during the initial response while still maintaining the ED position.

- 7.3.1 Report to the Control Room immediately upon notification.
- 7.3.2 Assess the emergency condition, event evaluation, and safety aspects of the plant.

NOTE:

It is recommended that the Shift Manager stands at the Reactor Operator's desk to hear key communications, use an ERCS terminal for monitoring CSFSTs (Critical Safety Function Status Trees), and solicit or answer questions of the SS.

- 7.3.3 Temporarily assume the position of Emergency Director until relieved by the oncoming Designated Emergency Director using PINGP 1125, Shift Manager/Shift Supervisor Emergency Director Checklist, for specific guidance on emergency plan duties.
- 7.3.4 If the Severe Accident Management process is initiated and the TSC is functioning, the Shift Manager should report to the TSC and become a member of the Severe Accident Management Team.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: | F3-4 |
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7.4 Designated Emergency Director (Plant Manager or ED Designee)

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| NOTE: | In the case of a credible security event, if you are unable to safely go to the Control Room or TSC, consider directing the emergency response from another safe location (e.g., Plant Manager's Conference Room or EOF). An information copy of PINGP 571, Emergency Director Checklist is located in the back of F3-4, located in the Plant Manager's Conference Room, EOF and New Admin Reference Library. See F3-31 for more security event guidance. |
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7.4.1 The Emergency Director (Plant Manager or designee) should report to Control Room and assume the role of Emergency Director from the Shift Manager/Shift Supervisor.

7.4.2 Use PINGP 571, TSC Emergency Director Checklist.

7.5 Operations Group

7.5.1 Operations Manager or Designee

- A. Report to the Technical Support Center to perform the role of the Operations Group Leader.
- B. Assist in the activation of onsite emergency centers and organization by ensuring adequate Operations staffing in Control Room and OSC.
- C. Ensure the OSC Operations Advisor is staffed by an Operations Support Pool personnel.
- D. Assess the operational aspects of the emergency.
- E. Periodically review the status and implementation of the EOPs and/or Abnormal Operations procedures with the TSC Staff.
- F. If the Severe Accident Management process is initiated, staff the Severe Accident Evaluation Team Leader position.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: | F3-4 |
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7.5.2 Control Room Personnel

- A. Assist the Shift Supervisor as requested.
- B. Utilize applicable Operations Manual procedures to respond to the Emergency Condition as appropriate, with the objective of returning the plant to a normal safe status (Mode 5, Cold Shutdown, if necessary).
- C. Announce the location and nature of the Emergency over the public address system. See PINGP 1125 for example of announcement.
- D. When an evacuation is declared, sound the evacuation alarm and direct all nonessential personnel to evacuate to the designated assembly point. Direct all personnel to remain clear of the affected area (if applicable). See F3-9, Emergency Evacuation or PINGP 1125 for example of announcement.
- E. Continuously monitor the Control Room instrumentation, radiation monitors, or any other developments which could be indicative of further system degradation. Inform the Shift Supervisor immediately of any changes in plant status.
- F. Implement Severe Accident Management strategies as directed by the TSC.

7.5.3 Auxiliary Building and BOP Operators

- A. Aux and BOP Operators should report to their duty station when the emergency is declared.
- B. Aux and BOP Operators will continue to take direction from the Control Room during the emergency.
- C. Aux Operators **SHALL** ensure that they have appropriate dosimetry and a dose rate indicating device for all further required operations in the Auxiliary Building.
- D. Aux & BOP Operators should give consideration to terminating all nonessential plant operations (e.g., shutdown resin sluicing).
- E. When a Plant Evacuation is declared, the Aux & BOP Operators should periodically call the OSC (for exposure control purposes) and inform the OSC of outplant operational activities.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: F3-4 |
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- F. If the Auxiliary Building general rad levels exceed 100 mR/hr or upon recommendations from the Emergency Director or Radiation Protection Group, the Aux Operators **SHALL** evacuate to the OSC. For exposure control purposes, all further Auxiliary Building entries **SHALL** be controlled through the OSC.
- G. Perform the necessary onsite and in-plant radiation surveys as requested by the Shift Supervisor.

7.5.4 Relief Shift, Training Operators, and Operations Support Pool

- A. Relief Shift and Training Operators should proceed to the Operational Support Center for further instructions to support Operations.
- B. An available Shift Supervisor should staff the OSC Coordinator position.
- C. Operations Support Pool should provide assistance to the OSC Coordinator in an advisory capacity by staffing the OSC Operations Advisor position. PINGP 1095, OSC Operations Advisor Checklist, should be used as a guide.
- D. Operations Support Pool should assist the OSC in tracking work groups, outplant operational activities, and updating the emergency work status board.

7.6 Shift Emergency Communicator

- 7.6.1 Report to the Control Room immediately upon notification unless directed otherwise by Shift Manager/Emergency Director.
- 7.6.2 Complete PINGP 577, Notification Report Form, and have it reviewed and approved by the Emergency Director.

NOTE

State and local authorities **SHALL** be notified within 15 minutes of the declaration of the emergency classification.

- 7.6.3 Complete the required notification of state and local authorities, and site personnel in accordance with F3-5, Emergency Notifications.
- 7.6.4 Notify applicable offsite authorities if conditions escalate to a more severe emergency class in accordance with F3-5, Emergency Notifications.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: F3-4 |
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NOTE:

If the EOF has been activated, notifications of offsite agencies for an escalation or termination will be completed by EOF personnel.

- 7.6.5 When the emergency classification has been terminated, close-out the emergency classification, by notifying the state, local, and site personnel in accordance with F3-5, Emergency Notification.

7.7 Technical Support Coordinator

- 7.7.1 The Technical Support Center Coordinator **SHALL** be responsible for the general activation, operation and coordination of activities in the Technical Support Center (TSC).
- 7.7.2 The TSC Coordinator should report to the TSC and assume the role as TSC Coordinator. Use PINGP 573, Technical Support Center Coordinator Checklist.

7.8 Operational Support Coordinator

- 7.8.1 The Operational Support Center Coordinator **SHALL** be responsible for the general activation, operation, and coordination of activities in the Operational Support Center (OSC).
- 7.8.2 The OSC Coordinator should report to the OSC and assume the role as OSC Coordinator. Use PINGP 574, Operational Support Center Coordinator Checklist.

7.9 Assembly Point Coordinator

- 7.9.1 The Assembly Point Coordinator **SHALL** be responsible for the general operation of the assembly area.
- 7.9.2 The Assembly Point Coordinator should report to the Assembly Point and assume the role of Assembly Point Coordinator. Use PINGP 911, Assembly Point Coordinator Checklist and F3-9, Emergency Evacuation.


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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: | F3-4 |
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7.10 Radiological Emergency Coordinator

- 7.10.1** The Radiological Emergency Coordinator (REC) **SHALL** be responsible for accident assessment, onsite and offsite.
- 7.10.2** The REC should report to the Technical Support Center and assume responsibility for the Radiological Emergency Coordinator position. Use PINGP 572, Radiological Emergency Coordinator Checklist.

7.11 Radiation Protection and Chemistry Groups

- 7.11.1** The Shift Chemist **SHALL** provide assistance (e.g., sampling, chemistry, radio-chemistry, surveys, or dose assessment) as requested by the Emergency Director.
- 7.11.2** The Radiation Survey Teams should be dispatched to initiate offsite surveys as directed per F3-15 and/or F3-16.
- 7.11.3** All other radiation survey group members should report to the plant site for further instructions. The radiation survey group members reporting to the plant site should:
- A. Proceed to the Operational Support Center and wait for further instructions, unless otherwise directed by the Emergency Director or Radiological Emergency Coordinator.
 - B. Supervise any checks for personnel contamination and direct decontamination at the assembly point.
 - C. Provide radiation protection coverage for:
 1. Damage control and repair teams
 2. First aid
 3. Search and Rescue Teams
 4. Reentry Teams
 - D. Perform emergency sampling (air and liquid), chemistry, radio-chemistry, surveys, etc., as directed by the Emergency Director or the Radiological Emergency Coordinator.

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|  | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: F3-4 |
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- 7.11.4 One individual should assume OSC Radiation Protection Coordinator. Use PINGP 1245, OSC Radiation Protection Coordinator Checklist.

7.12 Security Group

- 7.12.1 The Security Manager, or designee, should report to the Technical Support Center (TSC). The Security Manager should:

- A. Ensure FFD breath analysis testing is set up and performed as required for off-hours emergency call-in.
- B. Consider suspending selected plant access controls to expedite the staffing of the emergency centers during an emergency. See SIP 5.2, Security Response to Site Emergencies.
- C. Assume responsibility for personnel accountability following a plant evacuation and continuing accountability throughout the duration of the emergency. See Procedure F3-10.
- D. Coordinate security control throughout the duration of the emergency situation. See Procedure F3-29.
- E. Evaluate aspects concerning attempted acts of sabotage.

7.12.2 The Security Force

- A. The Security First or Second Lieutenant or designee **SHALL** perform the responsibilities of the Shift Emergency Communicator (SEC).
- B. All other plant security force should continue with normal duties unless otherwise notified.
- C. During off-normal work hours and when requested by the Shift Emergency Communicator (SEC), a designated Security Force Member will control the telephone switchboard in the TSC. See Procedure F3-5.1.
- D. When the evacuation alarm sounds, all Security Officers, with the exception of Roving Patrol and the SAS Operator, evacuate to the Guardhouse for further instructions.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: | F3-4 |
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NOTE:

The SAS Operator should evacuate when directed by the Emergency Director.

- E. Assist with the evacuation of personnel to the designated assembly point in accordance with F3-29, "Emergency Security Procedures" and F3-9, Emergency Evacuation.

NOTE:

1. It should be necessary for personnel to exit quickly thru the portal monitor and turnstile. Collect all I.D.'s and process badges so an Employee Onsite List of personnel inside Protected Area can be obtained.
2. To speed evacuation from the Protected Area, it may be beneficial to open the vehicle gates and allow personnel to exit there.
3. The Security Force SHALL ensure that all personnel onsite, within the Protected Area, have heard the evacuation alarm.

- F. Perform a check of all areas immediately surrounding the Protected Area so that all personnel are notified of the evacuation in progress.

NOTE:

The owner Controlled Area will be checked when directed by the Emergency Director.

- G. Control access to Protected Area per instructions from the Emergency Director.
- H. Be prepared to obtain a printout for an accountability check in accordance with F3-10, Personnel Accountability.
- I. Assist the Radiation Protection Group in establishing a secondary access control point when directed by the Emergency Director.
- J. Station a Security Force Member, with dosimetry, at the plant entrance, if conditions permit, to control access to the plant site.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: F3-4 |
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7.13 Logistics Group

The Logistics Support Group includes the Business Support Group (Administrative Services and Document Control), the Plant Services Group and Materials Management (Warehouse).

7.13.1 The Logistics Group Leader designee should report to the TSC and utilize PINGP 1188, TSC Logistics Checklist.

7.13.2 The Business Support Group, and Materials Management Group should:

A. Continue with normal duties unless directed otherwise.

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| NOTE: | <ol style="list-style-type: none"> 1. During off hours emergency activation, designated Warehouse personnel should report to the Operations Support Center (OSC) to provide support in retrieving emergency parts. 2. During normal hours emergency activation, designated Warehouse personnel should continue with normal duties until a Plant Evacuation occurs, at which time they should report to the OSC. |
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- B. Immediately vacate any emergency operating center (Control Room, OSC, or TSC) when an emergency is declared.
- C. Remain clear of any areas, as announced over the public address system.
- D. When requested by the Shift Emergency Communicator (SEC), the office staff should transfer control of the telephone switchboard to the TSC.

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| NOTE: | The switchboard operator should report to the TSC to control the switchboard from the TSC until relieved by an alternate communicator. See F3-5.1. |
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- E. When the evacuation alarm sounds, proceed to the designated assembly point.
- F. Follow instructions from the Assembly Point Coordinator for either reentry into the plant or departure from the site property.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: F3-4 |
| | | REV: 29 |

7.13.3 The Nuclear Plant Service Attendants should:

- A. Report to the Operational Support Center to receive specific instructions from the OSC Coordinator.
- B. Provide Offsite Survey Team Drivers and/or Sample Couriers for Offsite Radiation Survey Teams.
- C. Provide assistance for monitoring and decontamination at the assembly point as requested.
- D. Provide general support of emergency response and recovery actions, as requested.

7.14 Maintenance Group

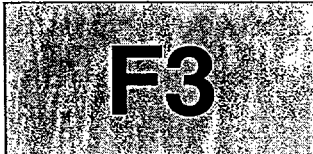
The Maintenance Group consists of all Maintenance personnel, plant Electricians, and I&C personnel.

7.14.1 The Maintenance Supervisors (Mechanical, Electrical and I&C), and designated Lead Electricians, Lead Machinists, Lead Riggers and I&C Specialists should report to the OSC to provide support for:

- A. Repair and corrective actions for mechanical, electrical systems, and Instrument and control systems, and;
- B. Search and rescue efforts.

7.14.2 All other Maintenance personnel, Electricians and I&C Specialists should:

- A. Continue with normal duties unless directed otherwise.
- B. Immediately vacate any emergency operating center (Control Room, OSC, or TSC) when an emergency is declared unless directed otherwise.
- C. Remain clear of any areas, as announced over the public address system.
- D. When the evacuation alarm sounds, proceed to the designated assembly point unless directed to staff the OSC.
- E. Follow instructions from the Assembly Point Coordinator for either reentry into the plant or departure from the site property.

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|  | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: | F3-4 |
| | | REV: | 29 |

7.15 Engineering Group

- 7.15.1** The Engineering Group consists of Systems, Programs, Design and Projects Engineering. All Superintendents, lead Engineers, and system experts (as requested by their supervisor) should report to the Technical Support Center (TSC). The Engineering Group should:
- A. Provide technical & engineering support for plant systems.
 - B. Provide technical & engineering support for operating radioactive waste systems.
 - C. Provide technical & engineering support on core parameter analysis.
 - D. Provide plant parameter trending and analysis utilizing the Emergency Response Computer System (ERCS).
 - E. Identify adverse trends and attempt to predict significant events that could adversely affect the plant or accident mitigation efforts.
 - F. Perform critical evaluations of "cause and effects" on failing equipment.
 - G. Update TSC staff of systems' status and key equipment problems or availability.
 - H. Provide technical support for emergency repairs and corrective action on electrical and mechanical systems.
 - I. Evaluate alternate systems, components or methods that may be used to restore needed capabilities or accomplish accident mitigation.
 - J. Develop and propose alternate electrical or fluid flow paths that would restore key functions that were lost.
 - K. If the Severe Accident Management process is initiated, monitor the Severe Challenge Status Trees (SCSTs) with the aid of the ERCS.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: | F3-4 |
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7.15.2 All other engineers (unless specifically requested to remain in the TSC) should:

- A. Continue with normal duties unless directed otherwise.
- B. Immediately vacate any emergency operating center (Control Room, OSC, or TSC) when an emergency is declared unless directed otherwise.
- C. Remain clear of any areas, as announced over the public address system.
- D. When the evacuation alarm sounds, proceed to the designated assembly point unless directed to staff the TSC.
- E. Follow instructions from the Assembly Point Coordinator for either reentry into the plant or departure from the site property.

7.16 Severe Accident Management Group

The Decision Maker and Evaluation Team of the Severe Accident Management (SAM) Group should report to the TSC.

7.16.1 The SAM Group Decision Maker **SHALL**:

- A. Consult with the SAM Evaluation Team.
- B. Authorize implementation of appropriate Severe Accident Management strategies as they are developed and evaluated.

7.16.2 The SAM Evaluation Team **SHALL**:

- A. Evaluate the Diagnostics Flow Charts and Severe Challenge Status Trees.
- B. Implement the use of the Severe Accident Guidelines and Severe Challenge Guidelines.
- C. Recommend for authorization the implementation of Severe Accident Strategies to the SAM Group Decision Maker (Emergency Director).
- D. See PINGP 1237, SAM Evaluation Team Leader Checklist, for guidance.

7.16.3 The SAM Implementors who are site emergency response individuals **SHALL** implement the strategies as directed by the SAM Decision Maker.

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| F3 | RESPONSIBILITIES DURING AN ALERT, SITE AREA, OR GENERAL EMERGENCY | NUMBER: | F3-4 |
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7.17 Contract, Temporary Personnel and Visitors

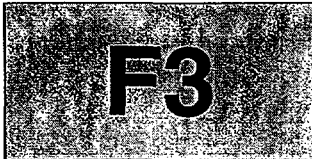
- 7.17.1 Continue with normal duties unless directed otherwise.
- 7.17.2 Immediately vacate any emergency operating center (Control Room, OSC, or TSC) when an emergency is declared.
- 7.17.3 Remain clear of any areas, as announced over the public address system.
- 7.17.4 When the evacuation alarm sounds, proceed to the designated assembly point.
- 7.17.5 Follow instructions from the Assembly Point Coordinator for either reentry into the plant or departure from the site property.

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| F3 | ACTIVATION AND OPERATION OF TECHNICAL SUPPORT CENTER | NUMBER: |
| | | F3-6 |
| | | REV: 18 |

REFERENCE USE

- *Procedure segments may be performed from memory.*
- *Use the procedure to verify segments are complete.*
- *Mark off steps within segment before continuing.*
- *Procedure should be available at the work location.*

| | | |
|--------------------------|---------------|-----------------------|
| O.C. REVIEW DATE: | OWNER: | EFFECTIVE DATE |
| 021104 SC | M. Werner | 2-12-04 |

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|  | ACTIVATION AND OPERATION OF TECHNICAL SUPPORT CENTER | NUMBER: | F3-6 |
| | | REV: | 18 |

1.0 PURPOSE

The purpose of this instruction is to describe the activation and monitoring requirements of the Technical Support Center.

2.0 APPLICABILITY

This instruction **SHALL** apply to all Shift Managers, Emergency Directors and all members of the TSC technical staff.

3.0 PRECAUTIONS


- 3.1 All unnecessary personnel **SHALL** be evacuated from the Technical Support Center when the Technical Support Center has been activated.
- 3.2 Monitoring of the Technical Support Center for direct radiation and airborne radioactive materials (particulate and iodine) **SHALL** be performed to ensure the habitability of the Technical Support Center.
- 3.3 Protective actions for individuals located in the Technical Support Center **SHALL** be taken at the prescribed levels of direct radiation or airborne radioactivity.

4.0 RESPONSIBILITIES

- 4.1 The TSC Coordinator is responsible to implement the actions directed in this procedure as necessary.
- 4.2 The Radiological Emergency Coordinator (REC) is responsible to provide oversight of the radiation monitoring of personnel and the TSC as necessary.

5.0 DISCUSSION

The first and second floor of the Old Administration Building Office Annex is designated as the onsite Technical Support Center (TSC). This area **SHALL** be used by plant management, technical and engineering groups, and NRC representatives as a center outside the main control room from which support for emergency operating conditions can be provided. The TSC **SHALL** be activated when an Alert, Site Area, or General Emergency is declared.

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|  | ACTIVATION AND OPERATION OF TECHNICAL SUPPORT CENTER | NUMBER: | F3-6 |
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6.0 PREREQUISITES

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

7.0 PROCEDURE

7.1 Activation of TSC

- 7.1.1** Activation of the Technical Support Center **SHALL** occur whenever an Alert, Site Area or General Emergency is declared. Activation of the TSC may occur during normal work hours or during off normal work hours:
- A. During normal work hours, the Technical Support Center **SHALL** be activated whenever an Alert, Site Area, or General Emergency is declared, as announced over the public address system. All members of the Operations Committee and other designated engineers and staff members **SHALL** report to the TSC.
 - B. If activation of the Technical Support Center occurs during off normal hours, the Emergency Director **SHALL** designate the Shift Emergency Communicator (SEC) to contact all Emergency Organization personnel, in accordance with F3-5.
 - C. It is expected that the TSC Organization can be fully staffed and ready to assume its emergency responsibilities within 30 minutes of declaration during normal work hours and within one (1) hour during off normal hours.
- 7.1.2** All nonessential personnel **SHALL** evacuate the TSC area when the TSC has been activated.
- 7.1.3** Additional personnel should be notified and requested to report to the Technical Support Center as deemed necessary.

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NOTE:

Nonessential personnel from the OSC may position themselves in the TSC lower level due to high radiation dose rates or airborne contamination in the OSC.

- 7.1.4 As the emergency proceeds from the initial phase, (the period immediately following the emergency initiation) into the recovery phase, all Protective Actions for radiological hazards in the Technical Support Center **SHALL** be consistent with the plant Radiation Protection Program.
- 7.1.5 The Technical Support Center **SHALL** remain activated until the emergency situation has been terminated or as otherwise directed by the Emergency Director.
- 7.1.6 The TSC Coordinator **SHALL** ensure proper activation and operation of the TSC by completing the duties listed on PINGP 573, TSC Coordinator Checklist.

7.2 Radiological Monitoring of TSC

NOTE:

If airborne radioactivity is present in the TSC, manual dampers can be manipulated to route 100% of the upper level OR lower level return air through the filter unit per PINGP 1498, TSC Ventilation Operation.

- 7.2.1 **Monitor** radiation dose rates on the TSC Area Monitor, R-68.
- 7.2.2 If R-68 fails, or is not working, set up the AM-2 for monitoring:
- Obtain** the AM-2 from the TSC Locker.
 - Plug** the AM-2 in.
 - Verify** the green power light is on.
 - Source check** the AM-2 with the button source in the TSC Locker and **verify** an upscaled reading of meter.
 - If the AM-2 fails (power loss, incorrect reading, etc.), **contact** the Radiation Protection Group for additional radiation monitoring.

F3**ACTIVATION AND OPERATION OF
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18**7.2.3 Establish operation of the TSC CAM****NOTE:**

The CAM, located in the Turbine Bldg. near the west entrance to the TSC, is in a hot standby condition with the electronics energized and the blower, chart, and filter paper off.

- A. **Turn** the blower switch to the ON position (located next to the recorder) to start the blower, strip chart recorder, and the filter paper drive.
- B. **Adjust** the blower flow rate to 3 SCFM using the toggle switch located on the right side of the CAM.
- C. **Verify** the CAM is in operation (i.e., verify the blower, filter, strip charts are operating; meters are on scale, etc.).
- D. If the CAM fails to operate properly, **contact** the Radiation Protection Group for additional sampling.

7.2.4 Routinely **monitor** R-68 and/or VAMP (if set up) for direct radiation levels, and the CAM for airborne particulate and iodine activity.

7.2.5 **Take** the following Protective Actions based on readings from the R-68, AM-2 or CAM.

A. **DIRECT RADIATION**

1. at about 15mR/hr **consider** evacuating all nonessential personnel from the Tech Support Center
2. at 1 R/hr evacuation to the Control Room is recommended

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NOTE:

A 1 mrem/hr background will cause a CAM reading of about 20 cpm on the particulate monitor.

B. CAM - Particulate

1. $< 1 \times 10^{-9} \mu\text{Ci/cc}$ no protective action necessary
2. $> 1 \times 10^{-9}$ but $< 1 \times 10^{-6} \mu\text{Ci/cc}$ **consider** use of respiratory protection and evacuation of all unnecessary personnel
3. $> 1 \times 10^{-6} \mu\text{Ci/cc}$ evacuation to the Control Room is recommended

NOTE:

A 1 mrem/hr background will cause a CAM reading of about 100 cpm on the Iodine monitor.

C. CAM - Iodine

1. If CAM alarms for iodine ($5 \times 10^{-9} \mu\text{Ci/cc}$), **establish** program of regular portable air samples by the Radiation Protection Group.
2. If portable air sample results > 1 DAC, **consider** evacuation of unnecessary personnel and limit exposures to less than 40 DAC - hours/week if possible.
3. If portable air sample results > 10 DAC, **consider** evacuation to the Control Room.

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18**NOTE**

The Radiological Emergency Coordinator (REC) should recommend the use of potassium iodide pills (thyroid blocking agent) if the projected thyroid exposure approaches 25 REM CDE. See F3-18, Thyroid Iodine Blocking Agent (Potassium Iodide), for determining projected thyroid exposures.

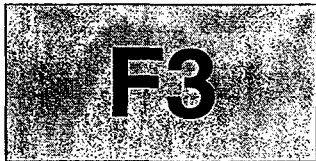
7.3 TSC Ventilation System

TSC Ventilation System Information and instructions for System Startup, Trouble Alarm, System Shutdown and TSC Airborne Reactivity Fast Cleanup is in PINGP 1498, TSC Ventilation Operation.

7.4 Dosimetry Issue**NOTE**

The purpose of issuing dosimetry to personnel in the TSC is to provide a record of exposures received while working in the TSC and exposures received while in transit to and from the emergency centers.

- 7.4.1** IF the event is a radiological event OR has potential to be a radiological event, THEN issue personnel dosimetry to each individual in the TSC and log initial dosimeter readings on PINGP 652, Emergency Center Activation Exposure Records.
- 7.4.2** As more personnel report to the TSC throughout the radiological event, **ensure** they are issued personnel dosimetry.
- 7.4.3** IF a Secondary Access Control Point is set up for plant access, THEN PINGP 652 should be forwarded to the Secondary Access Control Point for dosimetry logging when personnel leave the site at the end of their shift.
- 7.4.4** All entrances to the Aux Bldg and Radiological work inside the Owner Controlled Area (OCA) **SHALL** be made via the OSC where each individual is advised of current radiological conditions and issued appropriate dosimetry.

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7.5 Set up of TSC Frisking Station


- 7.5.1 IF there is a radiological release outside the normal Radiological Control Area, THEN set up the Frisking Station.
- 7.5.2 **Place** portable frisker on shelf, located in hallway outside east TSC entrance door, and **plug** into AC outlet.
- 7.5.3 **Place** Step-Off-Pad on floor outside East TSC entrance door.
- 7.5.4 All personnel entering TSC should **frisk** hands and feet (at a minimum) and areas of concern for possible radiological contamination.
- 7.5.5 IF no radiological contamination exists outside the normal radiological controlled areas, THEN consider removing the TSC frisking station.

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REFERENCE USE

- *Procedure segments may be performed from memory.*
- *Use the procedure to verify segments are complete.*
- *Mark off steps within segment before continuing.*
- *Procedure should be available at the work location.*

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| O.C. REVIEW DATE: | OWNER: | EFFECTIVE DATE |
| 021104 SC | M. Werner | 2-12-04 |

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|  | ACTIVATION AND OPERATION OF OPERATIONAL SUPPORT CENTER | NUMBER: F3-7 |
| | | REV: 17 |

1.0 PURPOSE

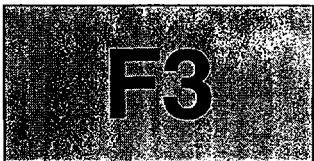
This procedure provides instruction for the activation and monitoring requirements of the Operational Support Center (OSC).

2.0 APPLICABILITY

This instruction **SHALL** apply to the OSC Coordinator and all other plant personnel who may report to the OSC.

3.0 PRECAUTIONS

- 3.1 Only those personnel designated by this instruction or as requested by plant supervisors, should assemble in the Operational Support Center. All other personnel in Records Room should evacuate when the OSC is activated.
- 3.2 All personnel assigned to the OSC should remain in the OSC unless directed to report elsewhere. DO NOT congregate in the Control Room.
- 3.3 The OSC is provided with makeup and exhaust ventilation from the Unit 1 turbine deck. This ventilation is equipped with fire dampers and motor dampers that fail shut on fan shutdown. The fans are controlled by local switches on the west wall of the OSC. These fans should be operated together and may be shutdown to mitigate introduction of smoke or airborne contamination from the turbine deck into the OSC.

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4.0 RESPONSIBILITIES

- 4.1 The OSC Coordinator is responsible to implement the actions directed in this procedure.
- 4.2 The Radiation Protection Specialists are responsible to provide oversight of radiation monitoring of personnel and facilities in the OSC and Control Room.
- 4.3 Operators, I&C Staff, Electricians, Mechanical Maintenance Staff and Nuclear Plant Service Attendants are responsible to assist in the repair and operation of plant equipment as directed by their supervisors or OSC Coordinator.

5.0 DISCUSSION

The Operational Support Center (OSC) is located in the plant Operating Records Room adjacent to the Control Room.

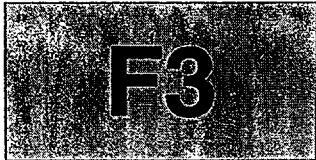
The OSC provides a central location to assemble the necessary Operations Staff, Radiation Survey Teams, I&C Supervisors and technicians, Electrical & Mechanical Supervisors and staff, and Nuclear Plant Service Attendants. These teams support the operations of the plant during emergency conditions. If more space is needed for OSC personnel waiting for emergency work, the Operators Lounge area may be used.

The OSC **SHALL** be activated whenever an Alert, Site Area Emergency, or General Emergency is declared.

Monitoring of the OSC for direct radiation and airborne radioactive materials (particulates and iodine) **SHALL** be performed to ensure habitability of the OSC.

6.0 PREREQUISITES

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

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7.0 PROCEDURE

7.1 Activation and Operation of the OSC

- 7.1.1** The Operational Support Center **SHALL** be activated whenever an Alert, Site Area or General Emergency is declared.

It is expected that the OSC Organization can be fully staffed and ready to assume its emergency responsibilities within 30 minutes of declaration during normal work hours, and within one (1) hour during off normal hours.

- A. During normal work hours, the following personnel should immediately report to the Operational Support Center, whenever an Alert, Site Area or General Emergency is announced over the Public Address System.
1. Operations personnel onsite, but not assigned to the on-shift crew.
 2. Mechanical & Electrical Maintenance Supervisors.
 3. Lead Electricians, Lead Machinists, Lead Riggers.
 4. I&C Supervisors and designated I&C Specialists.
 5. Radiation Survey Teams (unless directed otherwise by the Emergency Director or Radiological Emergency Coordinator).
 6. Nuclear Plant Service Attendants.
 7. Anyone as requested by their supervisor or the Emergency Director.

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B. If activation occurs during off-normal work hours, the Emergency Director **SHALL** direct the Shift Emergency Communicator (SEC) to notify and activate the emergency organization in accordance with F3-5. The following personnel should report to the OSC to establish an initial compliment of support personnel to assist in the emergency:

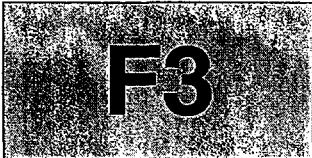
1. Mechanical & Electrical Maintenance Supervisors
2. I&C Supervisors and designated I&C Specialists
3. Designated Electricians
4. Radiation Survey Teams
5. Nuclear Plant Service Attendants
6. Designated Purchasing & Inventory Control personnel
7. Designated operations personnel and extra operators considered necessary by the Shift Supervisor.
8. Anyone called in by their supervisor or Emergency Director.

7.1.2 All nonessential personnel should evacuate the Records Room when the OSC is activated.

7.1.3 Additional personnel may augment the Operational Support Center staff as deemed necessary.

7.1.4 The Operational Support Center should remain activated until the emergency has been terminated or as otherwise directed by the Emergency Director.

7.1.5 The Operational Support Center Coordinator should ensure proper activation and operation of the OSC by completing the duties listed on PINGP 574, OSC Coordinator checklist.

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7.2 Radiological Monitoring

Described below are those actions taken to ensure radiological monitoring in the OSC and Control Room.

7.2.1 Verify operation of R-65, OSC Area Monitor.

7.2.2 If R-65 fails, or is not working, set up the AM-2 for monitoring:

- A. Obtain the AM-2 from the OSC Emergency Locker.
- B. Plug the AM-2 in and verify the green power light is on.
- C. Source check the AM-2 with the button source in the OSC Locker and verify an upscale reading.
- D. If the AM-2 fails (power loss, incorrect reading, etc.) contact the Radiation Protection Group for additional radiation monitors.

7.2.3 At about 15 mR/hr, consider evacuating all nonessential personnel to a low dose rate areas, such as the Operators Lounge area or first floor TSC.

7.2.4 Establish operation of the OSC/Control Room CAM.

- A. The CAM is in a hot standby condition with the electronics energized and the blower, chart, and filter paper off. Perform the following:
 - 1. Turn the blower switch (located next to the recorder) to the ON position to start the blower, strip chart recorder, and the filter paper.
 - 2. Adjust the blower flow rate to 3 SCFM using the toggle switch located on the right side of the CAM. Then adjust suction flow so that 50% is from OSC and 50% is from Control Room.

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OF OPERATIONAL SUPPORT CENTER****NUMBER:****F3-7****REV:****17**

3. Verify the CAM is in operation (i.e., verify the blower, filter, and strip charts are operating, meters are on scale, etc.).
 4. If the CAM fails to operate properly contact the Radiation Protection Group for additional sampling.
- B. Periodically monitor the CAM for airborne particulate and iodine activity.
- C. Recommend the following Protective Actions, based on readings from the CAM.
1. CAM - Particulate

1×10^{-9} $\mu\text{Ci/cc}$ - no protective action necessary.

$> 1 \times 10^{-9}$ - establish program of regular portable air samples by the Radiation Protection Group.

If portable air sample results > 1 DAC - consider evacuation of unnecessary personnel and limit exposures to less than 40 DAC - hours/week if possible.

If OSC portable air sample results > 10 DAC - consider evacuation of OSC personnel to the Control Room. Surplus OSC personnel may go to first floor TSC.

If Control Room air sample results > 10 DAC - respiratory protection for Control Room personnel is required.

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2. CAM – Iodine

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| NOTE: | The Radiological Emergency Coordinator (REC) should recommend the use of potassium iodide pills (thyroid blocking agent) if the projected thyroid exposure approaches 25 REM CDE. See F3-18, Thyroid Iodine blocking Agent (Potassium Iodide), for determining projected thyroid exposures. |
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If the CAM alarms for iodine (5×10^{-9} $\mu\text{Ci/cc}$) - establish program of regular portable air samples by the Radiation Protection Group.


If portable air sample results > 1 DAC - consider evacuation of unnecessary personnel and limit exposures to less than 40 DAC - hours/week if possible.

If OSC portable air sample results > 10 DAC - consider evacuation of OSC personnel to the Control Room. Surplus OSC personnel may go to first floor TSC.

If Control Room air sample results > 10 DAC - respiratory protection for Control Room personnel is required.

7.3 Dosimetry Issue

- 7.3.1 If the event is a radiological event, an RPS should issue dosimetry to each individual in the OSC and Control Room and log initial dosimeter readings on PINGP 652, Emergency Center Activation Exposure Records.
- 7.3.2 Refer to F3-12, Emergency Exposure Control, for the Administrative Control and Documentation of Exposure, in regards to work teams dispatched from OSC.

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7.4 Operations Lounge Area

The Operations Lounge Area may be used by OSC personnel, as necessary, for some of the following reasons:

- 7.4.1** Need for more space for large number of OSC personnel on standby for emergency work.
- 7.4.2** Dose rates in the Operations Lounge Area are lower than dose rates in the primary OSC.

7.5 Considerations during loss of AC power in the OSC

7.5.1 Equipment:

- A. Phones will continue to operate.
- B. Emergency lights will operate.
- C. Flashlights are stored in emergency locker.
- D. Dosimetry and radiation meters will continue to operate.
- E. The OSC access door will continue to operate.

7.5.2 Re-evaluate the number of craft workers needed in OSC and Operations Lounge.

7.5.3 Consider sending extra personnel back to work, to Maintenance Lunchroom, Old Admin Lunchroom, NAB Lunchroom, or PITC depending on radiological conditions.

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| REFERENCE USE |
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| <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> |

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| O.C. REVIEW DATE: | OWNER: | EFFECTIVE DATE |
| 021104 SC | M. Werner | 2-12-04 |

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| F3 | EMERGENCY EXPOSURE CONTROL | NUMBER: |
| | | F3-12 |
| | | REV: 15 |

1.0 PURPOSE

This procedure provides guidance and criteria for the authorization of personnel exposures in excess of the NRC 10CFR20 limits or administrative dose guidelines (ADGs) during an emergency. It also delineates the procedures for emergency entry to ISFSI Radiological Controlled Area and for follow-up action following exposure above the NRC annual limit.

This instruction will delineate the responsibilities of the Emergency Director, Radiological Emergency Coordinator, (REC) and Radiation Protection Group in carrying out a program of exposure control under emergency conditions.

2.0 APPLICABILITY

This instruction **SHALL** apply to the Emergency Director, Shift Managers, Shift Supervisors, Radiation Protection Group and Radiological Emergency Coordinators.

3.0 PRECAUTIONS

- 3.1 Appropriate dosimetry equipment, which is capable of measuring the anticipated maximum exposure, **SHALL** be worn.
- 3.2 Extremity exposure **SHALL** be monitored through the use of extremity TLD badges per RPIP 1105, Extremity Monitoring.
- 3.3 An individual **SHALL** be allowed only one excessive exposure in a lifetime.
- 3.4 Women of child-bearing age **SHALL** be advised not to receive emergency exposure.
- 3.5 Internal exposure may be controlled through the use of respiratory equipment or potassium iodide (see F3-18), but ALARA considerations should be utilized to determine respiratory protection.
- 3.6 All personnel who are assigned emergency exposure limits **SHALL** be made aware of the effects of significant radiation exposure.
- 3.7 Total Effective Dose Equivalent (TEDE) exposures for lifesaving missions should be limited to 25 Rem, however, the TEDE may exceed 25 Rem on a voluntary basis to persons fully aware of the risks involved.
- 3.8 Volunteers above the age of 45 are recommended.
- 3.9 An RPS should accompany all entries made into areas where the radiological conditions are unknown.

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4.0 RESPONSIBILITIES

- 4.1 The Emergency Director is the sole individual having the responsibility to authorize all radiation exposure above the 10CFR20 NRC annual dose limits, during a Declared Emergency.
- 4.2 The REC has the responsibility to determine the need for emergency exposure authorization and **SHALL** make recommendations to the Emergency Director.
- 4.3 The Radiation Protection Group has the responsibility to control radiation exposure for the plant work force and to keep the REC informed of pertinent survey data.

5.0 DISCUSSION

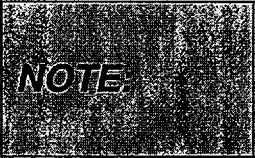
The exposure of all personnel during emergency conditions should be maintained as low as reasonably achievable (ALARA).

During special emergency conditions, normal exposure practices may have to be waived to protect equipment and/or life.

6.0 PREREQUISITES

The Prairie Island Nuclear Plant has declared an Emergency Classification.

7.0 EMERGENCY EXPOSURE LESS THAN 10CFR20 DOSE LIMITS

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|  | Radiation Protection personnel, Out-Plant Operators, and other individuals expected to be involved in high exposure tasks should be issued electronic dosimeters or high range dosimeters and be equipped with a dose rate instrument. |
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- 7.1 Prior to authorization of emergency exposure using EPA-400 dose limits (Step 8.0), an individual's available exposure remains unchanged from normal administrative guidelines and includes adjustment for current year exposure.
- 7.2 Initial accident dosimetry should be issued to all personnel in the OSC, the Control Room and the TSC, when the OSC and TSC are activated. Dosimeter readings are recorded on the Emergency Center Activation Exposure Record PINGP 652 and forwarded to the Secondary Access Control Point, if established. Data from PINGP 652 form should be entered into the PMETS exposure history under the "Emergency Center Activation" RWP No. at the end of each shift.

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| F3 | EMERGENCY EXPOSURE CONTROL | NUMBER: |
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- 7.3** The RPS in the OSC should ensure each individual leaving the OSC to perform emergency work is logged into the PMETS exposure history program under the correct emergency work RWP No. and issued an electronic dosimeter. The back-up exposure control method is to issue an Access Control Card (RP-133) with proper dosimetry to personnel leaving OSC for Emerg. work activities.
- 7.3.1** For RP-133 card issue the RPS should calculate the individual's available exposure and record on top lines of Access Control Card:
- 7.3.2** The RPS should read and record dosimeter readings, Emerg. Work RWP No., the date and time on the RP-133 card.
- 7.3.3** Individuals should be briefed as to scope of work, radiological information, any known hazards, special precautions, etc. and obtain portable radio, if needed.
- 7.3.4** Individuals should leave OSC and conduct their assigned Emerg. Work activities.
- 7.3.5** **After each entry into the controlled area**, individuals should be logged out of the emergency work RWP No. on PMETS and logged back into PMETS under the appropriate emergency work RWP No. **or** the RPS should read and record the dosimeter readings on the RP-133 card and should then recalculate the new available exposure and record on the next line of the Access Control Card.
- 7.3.6** Personnel returning to OSC from Emerg. Work activities should debrief with their respective OSC Group Leader.
- 7.4** All work groups should be controlled by the Radiation Protection Group through the Operations Support Center (OSC). The RPS in the OSC should issue a PINGP 738, Dose Monitor Worksheet (Timekeeping), for each individual who is expected to enter an area with dose rates >10 R/Hr or is expected to receive >1 Rem dose.
- 7.5** TSC personnel needing to go into Aux. Bldg., should go into OSC to review Aux. Bldg. conditions, review appropriate RWP, and obtain RPS escort, if needed.
- 7.6** IF an individual has received or exceeded his/her administrative dose guideline, THEN the RPS should mark the individual's Access Control Card "NO FURTHER EXPOSURE" and keep the card at the TLD issue desk. Authorization by the Emergency Director **SHALL** be issued prior to allowing any further exposure.

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8.0 EMERGENCY EXPOSURE USING EPA-400 DOSE LIMITS

In the event of a potential emergency exposure in excess of the 10CFR20 NRC limits, the following procedure **SHALL** be followed. If necessary, the Emergency Director may verbally authorize increased exposure when time is a limiting factor and documentation **SHALL** be completed as a follow-up. The Emergency Director **SHALL** authorize any use of EPA-400 dose limits. Review Table 1 - Criteria for Emergency Exposures.

The Total Effective Dose Equivalent (TEDE) exposure should be limited to 25 Rem for search and rescue missions and vital equipment operation. TEDE exposures for lifesaving missions should also be limited to 25 Rem, however, the TEDE may exceed 25 Rem only on a voluntary basis to persons fully aware of the risks involved.

- 8.1 The Emergency Director (or his designee) should complete Part I of the Emergency Exposure Authorization Form. Only the Emergency Director can sign Part I of PINGP 600.
- 8.2 The individual(s) should complete Part II of the Emergency Exposure Authorization Form. This documentation may be completed after receiving the exposure if time was a limiting factor.
- 8.3 The individual(s) **SHALL** be briefed on the expected radiation levels to be encountered based on actual measured readings or expected values. Use procedure F3-25, Reentry, if necessary. Briefing **SHALL** include expected exposure rate, expected exposure to personnel, and effects of the high exposure. Refer to PINGP 600.
- 8.4 The individual(s) **SHALL** be instructed to use all ALARA concepts available.
- 8.5 The Radiation Protection Group **SHALL** issue dosimetry (TLD's, dosimeters, extremity badges) and survey meters (as applicable) to all individuals as necessary.

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| NOTE: | If the use of SCBA lengthens the time required to complete the mission, it may be ALARA to not wear the respiratory protection and thereby accept a higher internal exposure, and keep the overall exposure lower. Thyroid Blocking Agents may be considered. |
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- 8.6 The Radiation Protection Group **SHALL** designate the required protective clothing and respiratory protection.

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| F3 | EMERGENCY EXPOSURE CONTROL | NUMBER: |
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8.7 When the mission (emergency exposure) is completed, the Radiation Protection Group **SHALL**:

8.7.1 Restrict the individual(s) from further exposure until the exposure evaluation is completed.

8.7.2 Complete an exposure evaluation of each individual based on dosimetry results, measured dose rates, airborne activity measurements, whole body counts, and stay times in the area.

8.7.3 Complete Part III of the Emergency Exposure Authorization Form, PINGP 600.

NOTE:

For purposes of this procedure, the dose equivalent is exposure received from external and internal sources.

8.8 IF an individual's dose exceeds two (2) times the NRC Annual 10CFR20 occupational dose limits,

| | |
|-----------------|---|
| 10 Rem TEDE | (Total Effective Dose Equivalent) or |
| 30 Rem LDE | (Lens Dose Equivalent) or |
| 100 Rem SDE, ME | (Shallow Dose Equivalent, Maximum Extremity) or |
| 100 Rem SDE, WB | (Shallow Dose Equivalent, Whole Body) or |
| 100 Rem TODE | (Total Organ Dose Equivalent) |

THEN the details of the exposure **SHALL** be evaluated by the Radiation Protection Manager; and the individual **SHALL** be examined by a physician and appropriate tests completed.

8.9 The Radiological Emergency Coordinator **SHALL** review the Emergency Exposure Authorization Form, PINGP 600.

8.10 10CFR20 requires NRC notification of all overexposures.

8.11 The Emergency Director **SHALL** be informed of all results including the medical evaluation if necessary.

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9.0 SECONDARY ACCESS CONTROL POINT PROTOCOLS

- 9.1 A Secondary Access Control Point should be established per F3-21 "Establishment of a Secondary Access Control Point" whenever a site evacuation is necessary.
- 9.2 All normal dosimetry should be issued at the Secondary Access Control Point with the exception of initial accident dosimetry.
- 9.3 The Radiation Protection Specialist (RPS) stationed at the Secondary Access Control Point should write Radiation Work Permits (RWP) for all entries made beyond the Secondary Access Control Point except for Aux. Building RWP's, which should be written by the RPS in the OSC. RWP numbers should start at 5000 for the Secondary Access Control Point and 6000 for the RWP's issued in the OSC. RWP's should be as job specific as possible.
- 9.4 When an individual approaches his maximum allowable exposure limit, his Access Control Card (RP-133) should be marked "NO FURTHER EXPOSURE" and kept at the TLD issue desk. Only the Emergency Director can authorize additional exposure.
- 9.5 Issuing TLD's.
 - 9.5.1 If initial dose is expected to exceed 200 millirem, personnel **SHALL** complete a dose history for the current year, if not available.
 - 9.5.2 The RPS should issue numbered TLD's using numbers 2100 to 2199 and 2251 to 2999.
 - 9.5.3 The RPS should put the assigned number on the TLD and the Access Control Card.
 - 9.5.4 The RPS should calculate the individual's available exposure and record on the top line of the Access Control Card (RP-133).

NOTE:

The Emergency Director may authorize individuals to receive greater exposures in accordance with Section 8.0.

- 9.5.5 If the individual is reporting to the OSC, the RPS at Secondary Access Control should complete a PINGP 738, Dose Monitor Worksheet (Timekeeping) (RP-112A), and have the individual take it to the OSC.

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- 9.5.6 If possible, the individual's personal and exposure data should be added to the computer exposure system per the RPIP-2116, PMETS Personnel Activation and Deactivation.
- 9.5.7 If the exposure system is not available, the individual's data should be added to the emergency Exposure Record per Attachment A.
- 9.5.8 An "X" should be placed behind the TLD number, on the TLD of anyone who is issued a TLD who has already been issued a TLD for the period when the original TLD is unavailable.

NOTE:

Any exposure received by EOF personnel or Offsite Survey Team members should be included.

9.6 Recording Exposure

- 9.6.1 After each entry into the controlled area, the RPS should read and record the dosimeter readings. The lowest range dosimeter on scale should be the reading for exposure records. The RPS should then calculate the new available exposure and record on the next line of the Access Control Card.
- 9.6.2 Low range dosimeter readings should be logged in mR and high range dosimeters in R. The lowest range dosimeter should be logged on the top and the highest range on the bottom.
- 9.6.3 At the end of each shift, the RPS should record the exposures from the cards, and enter in the computer per the RPIP-2118, PMETS Dosimeter Entry and Special Exposure Entry.
- 9.6.4 If the computer is not available, the RPS should add the exposure to the Emergency Weekly Exposure Record (PINGP 755) per Attachment A.
- 9.6.5 The RPS should add the exposures from the Emergency Center Activation Exposure Records to the computer system or the manual system of Attachment A.
- 9.6.6 If an individual has received his/her maximum allowable dose, the RPS should mark the individual's Access Control Card "NO FURTHER EXPOSURE" and keep the card at the TLD issue desk. Authorization by the Emergency Director **SHALL** be issued prior to allowing any further exposure.

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- 9.7 Red Wing Fire Department has 1R dosimeters on their fire trucks and 1R dosimeters with normal TLDs on their ambulances. These personnel should be wearing their dosimetry when responding to situations at Prairie Island Plant.
- 9.8 Other Offsite Agency response should be coordinated with RP Group for any response into a Prairie Island Radiological Controlled Area. Appropriate dosimetry and documentation of exposure should be utilized.

10.0 EMERGENCY ENTRY INTO ISFSI CONTROLLED AREA

- 10.1 IF an ISFSI cask barrier is breached (bomb, missile, explosion), THEN all personnel should stay clear of the ISFSI Controlled Area until RP Group can assess radiological implications and make recommendations to Prairie Island Site Management, and/or personnel in Security Response Command Post.

NOTE:

Very little exposure would be expected since all casks are less than 10 mRem/hr general area.

- 10.2 During an off-hours event at the ISFSI Controlled Area, which requires IMMEDIATE access within the facility (to save life or prevent injury) by plant or offsite agency personnel, dosimetry will NOT be required for entry.
- 10.2.1 This will avoid any delay of responding personnel.
- 10.2.2 There is no need for duty Shift Chemist to issue dosimetry in the initial one or two hours.
- 10.2.3 The duty Shift Chemist, Operations or Security should contact RP Group Supervision and request additional RP personnel to report to plant.
- 10.2.4 Personnel radiation exposure will need to be assessed and assigned (after the fact) by RP Group.

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- 10.3** Once additional RP personnel arrives onsite, personnel dosimetry should be issued to personnel entering the ISFSI Controlled Area.
- 10.3.1** This may be a regular TLD and dosimeter from Secondary Access Control locker in EOF, for Offsite Agency personnel. PI Site personnel may wear their normal TLD and a dosimeter or electronic dosimeter. Neutron exposure correction calculations will need to be considered and necessary documentation of radiation exposure completed.
- 10.3.2** ISFSI Visitor dosimetry protocols may be utilized.
- 10.3.3** Electronic dosimeter and Neutron TLD are the preferred dosimetry to be issued, if time permits.
- 10.3.4** The RP Group needs to conduct radiation surveys of ISFSI and collect dosimetry information during and after event termination. All personnel entering ISFSI need to be tracked to ensure appropriate radiation exposure is properly assigned, including Offsite Agency personnel that may be relieved at the end of their normal shift.
- 10.4** During a security event, when RP Supervisor/Supt. arrives onsite, this person should go to Security Response Command Post (if established) and provide radiological advice.

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Attachment A**A. Adding Individuals**

1. The RPS should record the following information on the Emergency Weekly Exposure Record PINGP 755.

The individual's name, TLD number, accumulated yearly exposure, and yearly available exposure.

B. Daily Exposure Documentation

1. The exposure total for the day is placed in the upper half of the block.
2. The exposure for the day is subtracted from the previous available exposure (lower half of previous day's column number 3) to give the new calculated available exposure which is recorded in the lower half of the daily column number 3.
3. New forms are started at the beginning of each week. The yearly exposure total from column number 4 is placed in column number 1 for new week. The previous week's total exposure is subtracted from the previous week's yearly permissible -column no 2 - and the resultant placed in column number 2 for the new week. The weekly total can also be added to the previous week's dose for the year - column number 1 - to yield the accumulated for year, which should be equal to the number in column number 4.
4. The RPS **SHALL** save all exposure paperwork for further reference and microfilming.

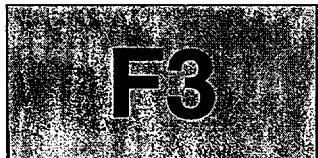
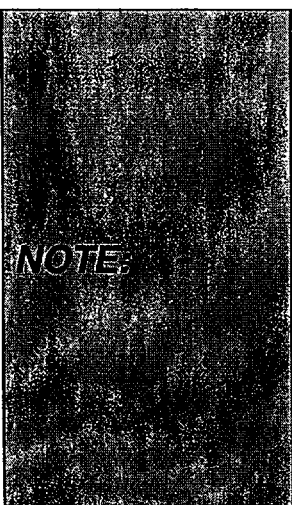
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Table 1 Criteria for Emergency Exposures

| | TEDE Dose Limit | LDE Dose Limit | Any Other Organ or Extremity Dose Limit | Condition |
|--|--------------------------------|-------------------------------|--|---|
| Performing Emergency Services | 5 Rem | 15 Rem | 50 Rem | If lower dose not practical |
| Protecting valuable property | 10 Rem | 30 Rem | 100 Rem | If lower dose not practical |
| Life saving or protection of large populations (operate vital equipment) | 25 Rem | 75 Rem | 250 Rem | If lower dose not practical |
| Life saving or protection of large populations (operate vital equipment) | >25 Rem | >75 Rem | >250 Rem | Only on a voluntary basis to persons fully aware of the risks involved. |

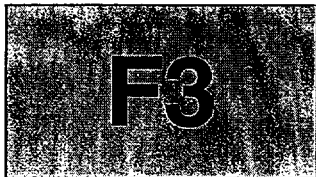
| | |
|---|---|
|  | 1. Based on EPA 400-R-92-001, May 1992. |
| | 2. TEDE = Total Effective Dose Equivalent LDE = Lens (eye) Dose Equivalent |
| | 3. These are doses to nonpregnant adults from external exposure and intake during an emergency. |
| | 4. The Thyroid exposure should be minimized to the extent feasible by the use of respiratory protection and/or thyroid blocking agents. |
| | 5. Dose accumulated prior to the emergency is NOT subtracted from the EPA-400 dose limits. |

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REFERENCE USE

- *Procedure segments may be performed from memory.*
- *Use the procedure to verify segments are complete.*
- *Mark off steps within segment before continuing.*
- *Procedure should be available at the work location.*

| | | |
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| O.C. REVIEW DATE: 1-29-04 | OWNER: M. Werner | EFFECTIVE DATE 2-12-04 |
|-------------------------------------|----------------------------|----------------------------------|

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|  | RESPONSIBILITIES OF THE RADIATION SURVEY TEAMS DURING A RADIOACTIVE AIRBORNE RELEASE | NUMBER: F3-15 |
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1.0 PURPOSE

This procedure describes the responsibilities of the Radiation Survey Teams during an airborne radioactive release to the environment.

2.0 APPLICABILITY

This procedure applies to all members of the Prairie Island Radiation Protection Group.

3.0 PRECAUTIONS AND SPECIAL CONSIDERATIONS

- 3.1** Each team should obtain information pertaining to the magnitude and the direction of the release, either from the Control Room, the Radiological Emergency Coordinator (REC), or the Radiation Protection Support Supervisor (RPSS).
- 3.2** Radiation Survey Teams should observe the respiratory protection requirements and the field dose rate precautions as stated in Attachment B.
- 3.3** Report airborne activity sample results in whole numbers, (i.e., microcuries per cc with no decimal places).
- 3.4** Report all radiation levels in whole number mREM per hour, (i.e., three Rem per hour should be reported as three thousand mREM per hour).
- 3.5** Preface each communication with the title or name of the receiving party and your title or name. For example: "Prairie Island TSC; "Survey Team 1..."

After the communication is completed, request the receiving party to repeat the message, if numerical data was relayed.

End message transmission with an appropriate termination phrase. For example: "Survey Team 1, out". During drills always include the words, "THIS IS A DRILL," with each transmission.
- 3.6** When making field estimates of gross activity, if background exceeds 1000 cpm, notify the REC, or RPSS, and proceed to an area of lower background, <1000 cpm for counting, if so instructed by the REC, or RPSS.

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- 3.7** The normal means of transportation for survey teams during any emergency is plant vehicles. Extreme environmental conditions (blocked roads, snow, bridges out, etc.) may preclude the use of these vehicles. The following alternate transportation is available:

NOTE

This does not prohibit the use of personal vehicles in cases where plant vehicles are not available in sufficient numbers.

- 3.7.1 Power Boats** - Sheriff's Department, plant environmental monitoring team, Red Wing Police.

- 3.7.2 Four Wheel Drive Vehicle** - at Prairie Island

- 3.7.3 Helicopter** - available during suitable weather conditions from charter services in Minneapolis and St. Paul. Arrangements to be made via the site emergency organization at the EOF.

- 3.8** The normal means of communication for the survey teams is the portable radios. The normal telephone system will serve as a backup communication system. Telephone numbers in the TSC for the Radiological Emergency Coordinator are:

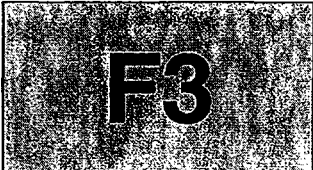
(651) 388-1121
(800) 216-1986
x4350
x4334
(715) 839-0382
(612) 330-7690

Local Plant
Long Distance Plant
REC
F.T. Com.
REC (Wisconsin)
REC (Twin Cities)

Telephone numbers at the EOF are:

| Prairie Island EOF | Contact | Monticello EOF |
|---------------------------|-----------------|----------------|
| (651) 388-1121, Ext. 4502 | Field Team Comm | (763) 295-1504 |
| (651) 388-1165, Ext. 5244 | RPSS | (763) 295-1503 |
| (651) 388-1121, Ext. 4500 | EOF Coordinator | (763) 295-1502 |
| (651) 388-1121, Ext. 4505 | EOF Count Room | (763) 295-1435 |
| (651) 388-1165, Ext. 5236 | EOF Count Room | (763) 295-1583 |


- 3.9** Periodically check dosimeter readings and report results to the Radiological Emergency Coordinator (REC), or the Radiation Protection Support Supervisor (RPSS).

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- 3.10 Check meter batteries by switching to BATTERY CHECK position. Replace if necessary.
- 3.11 Meters checks **SHALL** be completed prior to use.
- 3.12 Observe the cold weather operation restrictions (Attachment C).
- 3.13 All surveys should be taken at approximately one meter from ground unless specifically directed by the REC, or RPSS.
- 3.14 During inclement weather, the instrument may be placed against the inside vehicle window or on the dash.
- 3.15 IF connecting or disconnecting the air sampler to the vehicle battery, located in the engine compartment, THEN turn the vehicle **OFF**. (personnel safety)
- 3.16 Particulate filters and silver zeolite adsorbers must be installed and removed carefully to prevent cross-contamination from foreign objects.
- 3.17 The air sample should be a standard 25 cubic foot sample. Sample collection time may be affected if the activity is too high.
- 3.18 All samples **SHALL** be labeled properly with the required information and saved for further analysis.
- 3.19 If hands are contaminated, handle samples with surgeon gloves.
- 3.20 Don appropriate protective clothing for the situation to be expected, this includes orange safety vests when working along roadsides.

4.0 RESPONSIBILITIES

- 4.1 The REC and the RPSS have the responsibility to determine sample priorities and to direct the Radiation Survey teams sampling.
- 4.2 The Radiation Survey teams have the responsibility to conduct sampling during a radioactive Airborne release in accordance with this procedure.
- 4.3 The Radiation Team communicator has the responsibility to maintain communications between the Radiation Survey Teams and the REC in the TSC or the RPSS in the EOF.

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5.0 DISCUSSION

There are three radiation survey teams. Two (2) teams perform offsite surveys and another team provides onsite coverage. Each offsite Survey Team as a minimum requires one (1) Survey Team Member. A second Survey Team Member is desirable. Another person may be assigned as a driver. All team members report to the Radiological Emergency Coordinator (REC) in the Operation Support Center, for assignments. Other personnel can be used to assist Survey Team Members. The Survey Team Member has the responsibility to ensure proper survey and sampling technique and to perform field calculations.

In the event of an offsite airborne release, the Radiological Emergency Coordinator (REC) may request support for offsite surveys from Monticello. When the Monticello Field Teams arrive at the Prairie Island Near-Site EOF, they will be provided Prairie Island Radios if necessary and they will accept the responsibility for offsite surveys and sampling. This allows Prairie Island personnel to augment the Onsite Radiation Survey Team. All offsite surveys will continue under the direction of the Emergency Manager at the Prairie Island Near-Site EOF, with the Offsite Survey Teams reporting their activities to the Radiation Protection Support Supervisor.

6.0 EQUIPMENT AND PERSONNEL REQUIRED

6.1 Team Members

Personnel trained in performing surveys.

6.2 Team Equipment Required

6.2.1 Field Teams 1 & 2 (Offsite Survey Teams)


- A. Vehicle (plant or personal)
- B. Offsite sample kit (Attachment A)

6.2.2 Onsite Radiation Monitoring Team

- A. Normal counting room equipment, if available
- B. E.O.F. counting room equipment
- C. All available onsite radiation protection equipment

7.0 PREREQUISITES

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

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8.0 PROCEDURE

8.1 All members of Radiation Survey Teams should **assemble** in the Operational Support Center, unless directed by the Emergency Director or the Radiological Emergency Coordinator (REC):

8.2 Field Teams 1 & 2 (Offsite Survey Teams)

8.2.1 **Obtain** the necessary information from the Control Room Operator or TSC personnel regarding the type and amount of release, wind direction, etc.

8.2.2 **Designate** two (2) members for Team 1 and two (2) members for Team 2 (if available) to perform offsite surveys.

NOTE:

Any available plant personnel may be designated as the driver for a single team member.

8.2.3 **Obtain** a plant vehicle or personal vehicle.

8.2.4 **Obtain** the necessary equipment (Attachment A) from the NPD Office Building equipment locker or EOF.

8.2.5 **Obtain** TLD's and dosimeters for each Team member.

NOTE:

Survey Team Members should keep their personal TLD's if departing from the plant site.

8.2.6 **Ensure** dosimeter is <25% of scale and **record** readings on the dosimeter signout sheet.

8.2.7 IF vehicle with installed radio is NOT available, THEN **obtain** a portable radio, and magnetic antenna from EOF Receiving Area.

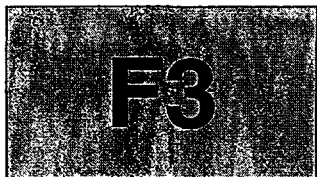
8.2.8 **Test** the operation of the radios (on channel 13, Rad Team 1) and meter check all meters prior to departing.

8.2.9 **Perform** offsite surveys as directed by REC or RPSS.

8.2.10 **Conduct** a search for the plume, in accordance with Attachment D, when departing the plant site.

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- 8.2.11 **Observe** the respiratory protection and the field dose rate precautions, as stated in Attachment B, at all times.
- 8.2.12 **Perform** beta and gamma surveys in accordance with the applicable procedure, Attachment E, as directed by the REC, or the RPSS at areas where the plume is encountered, or at each designated survey point.
- 8.2.13 **Identify** survey locations using either:
- A. Predesignated survey location numbers, as shown on the applicable Radiological Sampling Points map;
- OR
- B. Known landmarks, road intersections, grid coordinates, etc. to identify locations the plume is encountered and/or sampling is done when NOT at a predesignated survey point.
- 8.2.14 **Report** results to the REC, or the RPSS, via the radio or telephone.
- 8.2.15 **Obtain** airborne samples (particulate, iodine and gas), or ground deposition samples, at locations requested by the REC, or RPSS, IAW Attachments F, G, and H.
- 8.2.16 **Document** all survey data on the PINGP 1226, Field Team Air Sample Results Log, PINGP 1227, Plume Search Log, or PINGP 956, Ground Deposition Sample Results Log.
- 8.2.17 WHEN directed by REC or RPSS, One (1) Team should **perform** offsite surveys depending on the wind direction and time of emergency per Attachment I.
- 8.2.18 **Check** personal dosimeters frequently. IF cumulative exposure approaches administrative limits, THEN **request** relief.
- 8.2.19 WHEN directed by the REC or RPSS, THEN **deliver** samples to the designated location for pickup by a Sample Courier.

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8.3 Radiological Monitoring Team

- 8.3.1 **Perform** all operations requested by the Emergency Director or REC.
- 8.3.2 **Control** radiation exposure onsite (internal and external).
- 8.3.3 **Analyze** air samples, ground deposition samples, food stuffs, etc., obtained by the onsite and offsite survey teams, using the Count Room facilities and/or the EOF count room facilities. **Store** all samples for future analysis.
- 8.3.4 **Perform** onsite surveys as requested by the Emergency Director and/or REC per F3-14.1, Onsite Radiological Monitoring.
- 8.3.5 **Perform** required personnel monitoring at the emergency operating centers and **supervise** any necessary personnel decontamination per F3-19, Personnel and Equipment Monitoring and Decontamination.
- 8.3.6 **Obtain** and **process** samples from the reactor coolant system, containment air, stack release, etc., as requested by the REC per F3-23, Emergency Sampling and F3-20, Determination of Radioactive Release Concentrations.
- 8.3.7 **Report** all results to the REC via the available communication system.

8.4 Radiation Field Team Communicator

- 8.4.1 **Report** to the Technical Support Center when the emergency is declared, and utilize PINGP 1156, TSC Field Team Communicator Checklist.
- 8.4.2 **Obtain** current plant status, release information and meteorological data.
- 8.4.3 **Establish** communications with the Field Teams, using the TSC Console in the REC area.
 - A. **Identify** teams as PI Team 1, etc.
 - B. **Obtain** team member names.
 - C. IF radio communication is NOT possible, THEN Survey Teams will **utilize** telephone system.
 - D. **Update** Teams with present plant status, release information, met data, etc.

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- 8.4.4 **Dispatch** Survey Teams in the downwind direction, to conduct a search where the plume is expected. The search area should be wide enough to ensure plume is encountered. **DO NOT** let Survey Teams sit idle. Crossing of the plume by field teams should be limited in order to minimize personnel dose.
- 8.4.5 IF and WHEN directed by the REC, THEN direct one field team to perform surveys IAW Attachment I.
- 8.4.6 Plume search should be conducted to identify the edges of the plume, confirm the projected dose rates associated with the plume, and verify the expected isotopic mixture.

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| NOTE: | <p>Consider that plume diversion is likely to occur if the wind is from the East or West such that the plume is traveling towards the Minnesota or Wisconsin bluffs. Deploy the survey teams to conduct a plume search both beyond the bluffs and up and down the valley, where plume diversion is likely to occur.</p> <ul style="list-style-type: none"> a. A tall object (bluff or mountain) will normally prevent dispersion and will almost always change the plume direction. b. The bluffs and hills around the plant can change the plume direction by more than 90° depending on the time of day. During morning hours it is possible for the plume to double back on itself due to heating of the air in the valley. c. Most of the bluffs are within about 1.5 miles of the plant and therefore plume diversion is going to occur within about the first 20 minutes of the release in low wind situations. d. A wind direction from about 345° to about 35° can result in severe diversion as the plume goes over Mt. Carmel and into the Cannon Valley. |
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- 8.4.7 **Log** pertinent information and Survey Team results on the REC Log, PINGP 598, Emergency Center Narrative Log, or PINGP 647, Field Team Communicator Emergency Sample Results Log.

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NOTE:

Repeat results for verification from survey teams if numerical results are communicated.

- 8.4.8 Instruct** the Survey Teams to obtain particulate, iodine and gas samples, as directed by the REC when the plume has been encountered. Air samples taken within the plume (beta activity detected) should be taken in areas of low dose rates, if possible.

Obtaining a sample for iodine and radioactive gas and determining the ratio of gas to iodine is crucial for verifying the offsite doses and can affect protective action recommendations. This is especially critical during steam releases as there are limited sampling methods in the plant. Therefore, these samples should be taken as soon as possible when the plume is encountered. These samples must be taken in the plume (area where beta is detectable).


NOTE:

These samples take approximately 20-30 minutes to accomplish. Communicator should minimize radio contacts with sampling team until the team reports sampling results.

- 8.4.9 Instruct** the Survey Teams to return samples to the EOF Count Room for analysis, or dispatch a sample courier.

- 8.4.10 Develop** a plume map as follows:

- A. **Obtain** dose projection data, if available, and **plot** on survey map (use red marker). Also plot the time on the mile markers when the plume is expected to arrive.
- B. **Plot** Survey Team results on map (use blue marker). **Log** gamma and beta survey results in mREM/hr followed by air sample results in $\mu\text{Ci/cc}$.
- C. **Determine** the plume edges and **plot** on the map.
- D. **Plot** or **outline** areas (using green marker) indicating where protective actions have been implemented or recommended.
- E. Occasionally **direct** survey team to check location of plume front edge and **note** on map with time circled.

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8.4.11 Perform a comparison of radiological data as follows:

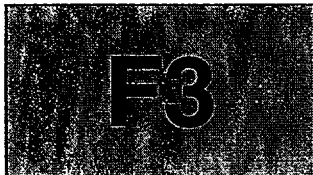
- A. **Compare** offsite monitoring results for consistency.
Re-monitor areas of concern.
- B. **Compare** offsite monitoring results with dose calculation projections. **Re-monitor** areas of concern.
- C. **Compare** plume dose rates close to plant with projected dose rates. This will allow dose projection adjustments and may affect offsite protective action recommendations.
- D. **Inform** REC, or RPSS, of results.

8.4.12 Update the Field Teams periodically with:

- A. Emergency Classification
- B. Plant Status
- C. Release Information
- D. Meteorological Data

8.4.13 Direct the Field Teams periodically to read their dosimeters and log results.


8.4.14 Instruct the Prairie Island Field Teams to report to the OSC for onsite assignments when the Monticello Field Teams assume responsibility for offsite surveys.

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|  | RESPONSIBILITIES OF THE RADIATION SURVEY TEAMS DURING A RADIOACTIVE AIRBORNE RELEASE | NUMBER: |
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Attachment A Offsite Survey Team Equipment Package

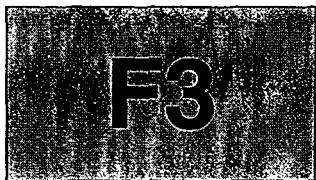
1. Each offsite survey team should be equipped with a kit containing the following:

- Dose rate instrument RO-2 or equivalent
- Count rate instrument RM-14 or equivalent
- 2" GM pancake probe
- Battery powered air sampler
- Personnel self-reading dosimeters (Low Range)
- Personnel self-reading dosimeters (High Range)
- TLD's (if individuals have a normally assigned TLD, they should wear those assigned)
- Plastic Sample Bags
- Garbage bags
- Paper towels
- Masking tape
- Silver zeolite adsorbers
- GMR-I canisters
- Full Face respirators
- Gas Sample Chambers
- Filter assembly (gas sampler)
- Suction bulb (gas sampler)
- Filter paper (gas sampler)
- One liter poly bottles
- Four inch air sampler filter papers
- Survey sample labels
- For Monticello response: IF NOT using vehicles with a radio installed pick up spare radio in EOF or get radio from Monti.
- Flashlight
- D-Cell batteries
- Potassium Iodide Tablets (Thyroid Blocking Agent)
- Orange safety vests
- Tweezers
- Anti-C clothing
- Life Jackets
- PI Field Team vehicles have PI radios installed

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|  | RESPONSIBILITIES OF THE RADIATION SURVEY TEAMS DURING A RADIOACTIVE AIRBORNE RELEASE | NUMBER: F3-15 |
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Attachment A - Offsite Survey Team Equipment Package

- Compass
 - Clipboard
 - Pens
 - Pad of paper (8-1/2" x 11" minimum size)
 - Road map of State of Minnesota
 - Road map of State of Wisconsin
 - Umbrella
 - Watch or clock
 - Calculator
 - Foul weather (rain) gear
 - Line (100 feet)
 - Weighted poly bottle holder
 - Snow Scoop
 - Surgeon gloves
2. The Procedures Binder contains:
- Ground Deposition Sample Results Log Forms
 - Plume Search Survey Log Forms
 - Copy of F3-15, "Responsibilities of the Radiation Survey Teams During a Radioactive Airborne Release"
 - Copy of F3-16, "Responsibilities of the Radiation Survey Teams During a Radioactive Liquid Release"
 - Copy of F3-22, "Prairie Island Radiation Protection Group Response to A Monticello Emergency"
 - Narrative Log
3. Prairie Island and Monticello Emergency Plan Map Sets
4. Aluminum Forms Clipboard/holder:
- Field Team Air Sample Results Forms

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|  | RESPONSIBILITIES OF THE RADIATION SURVEY TEAMS DURING A RADIOACTIVE AIRBORNE RELEASE | NUMBER: F3-15 |
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Attachment B Survey Team Radiation Protection Guidelines

1.0 Respiratory Protection

1.1 Radiation Survey Team members should **don** respirators with GMR-I canisters IF the following conditions occur:

1.1.1 A General Emergency is declared AND the affected sectors have been evacuated;

AND

1.1.2 Measured dose rates are more than 100 mREM/hr β , [(w/o - w/c)5] OR IF directed otherwise by the REC or RPSS.

1.2 Respiratory equipment may be **removed** IF the following is indicated:

1.2.1 Field measurement of gross iodine activity indicates less than $1E-7$ μ Ci/cc;

OR

1.2.2 The REC, or RPSS, indicates that no significant iodine is OR has been released from the plant.

OR

1.2.3 Measured dose rates are less than 100 mREM/hr β , [(w/o - w/c)5] OR as directed by the REC or RPSS.

2.0 Plume Dose Rates

2.1 Survey Teams should periodically **read** their personal dosimeters as determined by observed dose rates.

2.2 Survey Teams should **NOT linger** in areas greater than 100 mREM/hr gamma.

2.3 Survey Teams should **NOT proceed** to areas greater than 1000 mREM/hr gamma unless directed by the REC, or the RPSS.

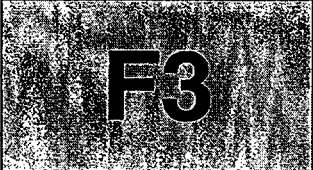
2.4 Survey Teams **SHALL NOT proceed** to areas exceeding 10,000 mREM/hr gamma.

**RESPONSIBILITIES OF THE RADIATION
SURVEY TEAMS DURING A
RADIOACTIVE AIRBORNE RELEASE**

| | |
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Attachment C Cold Weather Operation

1. IF outside temperature is greater than 32°F (0°C), THEN instrument use is unlimited.
2. IF outside temperature is between 32°F (0°C) and 0°F (-18°C), THEN no instrument should be used for more than 5 minutes.
3. IF outside temperature is between 0°F (-18°C) and -20°F (-28°C), THEN no instrument should be used for more than 2 minutes.
4. IF the outside temperature is below -20°F (-28°C), THEN 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).
5. 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.

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Attachment D Plume Search Technique

1. Purpose

Plume search should be conducted to identify the edges of the plume, confirm the projected dose rates associated with the plume, and verify the expected isotopic mixture.

NOTE

All surveys should be taken at approximately one meter from ground unless specifically directed by the REC, or RPSS.

2. WHEN departing the plant site:

2.1 **Energize** the instrument observing proper precautions for cold weather (Attachment C).

2.2 **Allow** meter to stabilize and **zero** meter.

2.3 **Record** the sample results on PINGP 1227, Plume Search Survey Log.

3. Hold the instrument out the vehicle window, while in transit, and watch the instrument for a meter deflection.

NOTE

During inclement weather, the instrument may be placed against the inside vehicle window or on the dash.

4. **Stop** the vehicle and **perform** a beta and gamma survey of the area when a meter deflection is observed as follows:

4.1 **Scan** the area for maximum meter deflection.

4.2 **Open** the probe window for beta gamma reading.

4.3 **Record** the "window open" reading.

4.4 **Close** the probe window.

4.5 **Record** the "window closed" reading.

4.6 **Determine** the corrected beta reading.

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| F3 | RESPONSIBILITIES OF THE RADIATION SURVEY TEAMS DURING A RADIOACTIVE AIRBORNE RELEASE | NUMBER: F3-15 |
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Attachment D Plume Search Technique

5. **Calculate** the beta and gamma dose utilizing PINGP 1227, Plume Search Survey Log 7.


| | |
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| NOTE: | <ol style="list-style-type: none">1. A gamma reading with zero beta reading indicates the plume is elevated or displaced.2. A gamma reading and a beta reading indicates that the plume is at ground elevation.3. Crossing of the plume by field teams should be limited in order to minimize personnel dose. |
|--------------|---|

6. **Report** the results to the REC, or the RPSS via the Field Team Communicator, as follows:

6.1 Location: _____

6.2 _____ milliRem/hr Gamma

6.3 _____ milliRem/hr Beta, [(w/o - w/c)5]

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Attachment E Beta and Gamma Survey

1. **Record** results on PINGP 1227, Plume Search Survey Log.
2. **Energize** the instrument.
3. **Allow** the meter to stabilize and **zero** meter.
4. **Switch** to the highest scale and **scale down** until an onscale reading is obtained.
5. **Scan** area at approximately one meter from ground for maximum reading.
 - 5.1 **OPEN** the probe window to obtain the beta-gamma reading.
 - 5.2 **CLOSE** the probe window to obtain the gamma reading.
6. Determine the beta and gamma dose rates as follows:
 - 6.1 **GAMMA (mRem/hr)** = "Window CLOSED" reading
 - 6.2 **BETA (mRem/hr)** = "Window OPEN" reading minus
"Window CLOSED" reading times
CF or (w/o - w/c) CF

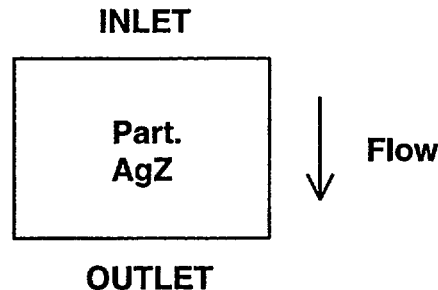
Where: CF = beta correction factor for meter or
assume 5.

Beta dose rate reported in mRem/hr "Beta"
assuming a quality factor of 1.
7. **Report** results to REC, or RPSS via the field team communicator.


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Attachment F Particulate and Iodine Sampling


1. **Record** results on PINGP 1226, Field Team Air Sample Results.



2. **Install** a new particulate filter and silver zeolite adsorber into the cartridge/filter paper holder as follows:
3. The air sampler **SHALL** be placed in an area that will ensure a representative sample. **DO NOT** place the sampler on the ground or on contaminated surfaces.
4. IF connecting OR disconnecting to the battery in the Engine compartment, THEN turn OFF the engine.
5. IF using terminals located in rear of vehicle, THEN connect the negative (yellow) terminal and then the positive (red) terminal
6. **Connect** the air sampler (CF-18V) to the vehicle 12 Volt battery terminals.
 - 6.1 IF the vehicle engine is NOT running, THEN start the engine to maintain a steady battery voltage.
 - 6.2 **Set** the TIMER toggle switch to either the TIME or the MANUAL POSITION.
 - 6.3 IF the TIMER switch is in the TIME position, THEN WHEN the TIMER times out, the sample pump will stop:
 - 6.4 IF TIMER switch is in the MANUAL position, THEN the sampler needs to stop manually at the designated time.

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Attachment F Particulate and Iodine Sampling

| | |
|---|--|
|  | (1) DO NOT USE HIGH SWITCH POSITION (CAUSES HIGH FLOW AND MOTOR DAMAGE). |
| | (2) STOP THE AIR SAMPLER TO PREVENT DAMAGE TO THE UNIT IF THE SAMPLER BEGINS TO RUN HOT, (FLOW DECREASING CONTINUOUSLY). |

- 6.5 **Set** the FLOW TOGGLE switch to the VARIABLE position. The air sampler will now start.
- 6.6 **Adjust** the flow, using the flow adjustment knob, to 2.5 CFM and **collect** sample for 10 minutes to obtain a 25 cubic foot sample.
- 6.7 **Record** the flow rate, sample start and stop time on PINGP 1226, Field Team Air Sample Results.
- 6.8 **Disconnect** the positive (red) terminal and then the negative (yellow) terminal.
7. **Place** the particulate filter and silver zeolite adsorber in separate plastic sample bags.
8. **Utilize** PINGP 1226, Field Team Air Sample Results, to calculate field sample activities.
9. **Estimate** gross activity in the field by the following methods:
 - 9.1 Particulate Activity –
 - 9.1.1 **Count** the particulate filter outside plastic bag using an RM-14 (or equivalent) with a 2" GM pancake probe.
 - 9.1.2 **Estimate** the gross particulate activity using Figure 4 or the following formula:

| | | |
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Attachment F Particulate and Iodine Sampling

$$\text{Sample Vol cc's} = (\text{CFM})(\text{Sample Flow CF})(\text{Sample Time in Min.})(2.83\text{E}4\text{cc/ft}^3)$$

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

| | |
|---------------|--|
| NOTES: | 1. Probe efficiency = 0.1 for RM-14, or E120, with a 2" GM pancake probe. |
| | 2. Place the 2" GM pancake probe about 1/8" from the filter, with filter outside poly bag. |
| | 3. CF = Correction factor for sample. CF is .3 for 4 inch paper counted with a 2 inch probe. |
| | 4. Sample Volume (cc's) = (Cubic feet/min.) (Sample time in min.) (2.83 x 10 ⁴ cc/ft ³) (sampler flow correction factor). |

9.1.3 Log $\mu\text{Ci/cc}$ on PINGP 1226.

9.2 Iodine Activity –

9.2.1 Count the silver zeolite adsorber using an RM-14 or equivalent, with probe contacting the bag.


9.2.2 Calculate sample activity using Figure 2 or the following formula:

$$\text{Iodine Activity } (\mu\text{Ci/cc}) = \frac{(\mu\text{Ci's on adsorber})}{(\text{Sample Volume in cc's})}$$

| | |
|---------------|---|
| NOTES: | 1. $\mu\text{Ci's on adsorber}$ = activity on adsorber determined from Figure 2 using the corrected count rate. |
| | 2. Place 2" GM pancake probe directly on adsorber, with adsorber inside poly bag. |

9.2.3 Log $\mu\text{Ci/cc}$ on PINGP 1226.

10. IF requested, THEN conduct Gaseous Activity Sampling per Attachment G.

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Attachment F Particulate and Iodine Sampling

11. Report the results to the REC, or the RPSS.
12. Separate colored NCR copies of PINGP 1226 Field Team Air Sample Results, and attach to the respective samples:

| | |
|-----------------|--------------------|
| Golden Rod copy | Gas Sample |
| Pink copy | AgZ Adsorber |
| Yellow copy | Particulate Filter |
| White copy | Field Team copy |
13. **Save** all samples for future analysis.

| | | |
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| F3 | RESPONSIBILITIES OF THE RADIATION SURVEY TEAMS DURING A RADIOACTIVE AIRBORNE RELEASE | NUMBER: F3-15 |
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Attachment G Gaseous Activity Sampling

1. **Assemble** gas sample apparatus so air passes through filter, gas chamber, then suction bulb.
2. **Install** new filter in filter assembly.
3. **Open** the stop cocks on the gas chamber.
4. **Squeeze** suction bulb minimum of 10 times to obtain representative sample.
5. **Shut** the stop cocks on the gas chamber.
6. **Obtain** a count rate of the chamber volume using an RM-14 or equivalent and a 2 inch GM pancake probe by placing the probe over the mylar window.
7. **Log** the result as "gross CPM", on PINGP 1226, Field Team Air Sample Results.
8. **Obtain** a second chamber labeled "Background". **DO NOT OPEN** the stop cocks of the background chamber.
9. **Obtain** a background count rate by placing a 2 inch GM pancake probe over the mylar window.
10. **Log** the results as "Background CPM", on PINGP 1226.
11. **Obtain** the "Net CPM" by subtracting the "Background CPM" from the "Gross CPM".
12. **Apply** the "Net CPM", obtained by using, Figure 3 to determine the gross gas activity in $\mu\text{Ci/cc}$ Xe-133 equivalent.
13. **Record** the air sample results on PINGP 1226, and **report** the results to the Radiological Emergency Coordinator, or the Radiation Protection Support Supervisor.
14. **Attach** the Golden Rod copy of PINGP 1226 to the Gas Sample and **save** the sample for future analysis.
15. Estimating the Gross Gaseous Activity in the plume can be done by:

A (w/o - w/c) reading of about 30 mRem/hr indicates a gas concentration (Xe-133 Dose Equivalent) of about $1 \times 10^{-3} \mu\text{Ci/cc}$. Therefore (w/o - w/c) $(3 \times 10^{-5}) = \mu\text{Ci/cc}$ Xe-133 DE.

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Attachment H Ground Deposition Sampling

1. **IF** plume dose rate at the sample point is less than 0.5 mrem/hr gamma, Direct Frisk Survey to Determine Ground Deposition Activity, THEN perform the following:
 - 1.1 **Energize** an RM-14 or an E-120 survey meter with a 2" pancake probe, and **allow** the meter to stabilize.
 - 1.2 **Switch** to highest scale and **scale down** until an onscale reading is obtained.
 - 1.3 **Scan** flat surfaces in the designated area (e.g., roads, lawns, mailboxes, vehicle, fields, etc.), holding the pancake probe about 1" from the surface.
 - 1.4 **Record** survey results on a PINGP 956 Ground Deposition Sample Results Log and **calculate** ground deposition activity as follows:

$$\mu\text{Ci}/\text{m}^2 = \frac{\text{Net CPM}}{400}$$

| | |
|--------------|--|
| NOTE: | Net CPM is frisker count rate about 1" from surface. |
|--------------|--|

- 1.5 **Notify** the REC, or RPSS, of the survey results
2. Procedure for Smear Samples to Determine Ground Deposition Activity
 - 2.1 **Utilize** numbered cloth smears and plastic bags.
 - 2.2 **Proceed** to low background area for survey and using moderate pressure, **swipe** an area, along a line or shape 15 - 18 inches in length (100 cm²).

| | |
|--------------|--|
| NOTE: | Surfaces to be smeared should be smooth (e.g., cars, mail boxes, machinery, rain gutters, etc.). |
|--------------|--|

- 2.3 **Fold** the smear folder in half and **place** in a plastic bag.

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| F3 | RESPONSIBILITIES OF THE RADIATION SURVEY TEAMS DURING A RADIOACTIVE AIRBORNE RELEASE | NUMBER: F3-15 |
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Attachment H Ground Deposition Sampling

- 2.4 **Count** the smears in a low background area, using an RM-14 or E-120 with a 2" pancake probe. **Cover** work area with poly or absorbent paper to minimize contamination spread. **Hold** the probe about 1/8" above the smear while counting.
- 2.5 **Record** results on a Ground Deposition Sample Results Log PINGP 956, and **calculate** ground deposition activity as follows:

$$\mu\text{Ci}/\text{m}^2 = \frac{\text{Smear CPM} - \text{BKGD CPM}}{200}$$

- 2.6 **Notify** the REC, or RPSS, of the survey results.

3. **IF** plume dose rate at the sample point is less than 0.5 mrem/hr, Gamma Exposure Rate Survey to Determine Ground Deposition Activity, **THEN** perform the following:

- 3.1 **Proceed** to designated survey area, as requested by the REC, or RPSS.
- 3.2 **Conduct** a survey with an RO2/RO2A or equivalent.
- 3.3 **Energize** the instrument and **allow** meter to stabilize.
- 3.4 **Scan** area while observing meter for maximum meter deflection, with Beta Window CLOSED, one meter from the ground.
- 3.5 **Record** results on a Ground Deposition Sample Results Log PINGP 956, and **calculate** ground deposition activity as follows:

$$\mu\text{Ci}/\text{m}^2 = (\text{mR/hr}) \times 100$$

- 3.6 **Notify** the REC, RPSS, of the survey results.

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| F3 | RESPONSIBILITIES OF THE RADIATION SURVEY TEAMS DURING A RADIOACTIVE AIRBORNE RELEASE | NUMBER: |
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Attachment H Ground Deposition Sampling

4. Procedure for Snow/Dirt Sampling to Determine Ground Deposition Activity.
(Preferred method if the sample point is currently in the plume).

- 4.1 **Proceed** to designated survey area, as requested by the REC, or RPSS, and **select** an area where the sample will be taken.

| | |
|--------------|---|
| NOTE: | The area selected should be based on an evaluation of current weather and ground cover conditions (high winds, rain, snow, dirt, etc.) such that the sampled area is representative of the ground cover surface. Sample the area where the deposition of contamination is most likely to occur. |
|--------------|---|

- 4.2 **Remove** Snow/Dirt from area surface to a depth of about 1 centimeter (about 0.4 inches) utilizing the scoop from Field Survey Kit.

| | |
|--------------|---|
| NOTE: | The area of the snow scoop is approximately 1,000 square centimeters. By removing surface snow, to a depth of 1 centimeter, the volume of the melted snow sample will be approximately 100 cubic centimeters of liquid, assuming 10:1 snow/water ratio. |
|--------------|---|

- 4.3 **Place** the sample material in a poly bag, **seal**, **label** and **save** the sample or future analysis.
- 4.4 **Document** sample collection on a Ground Deposition Sample Results Log PINGP 956.
- 4.5 Activity will be determined by the Count Room.

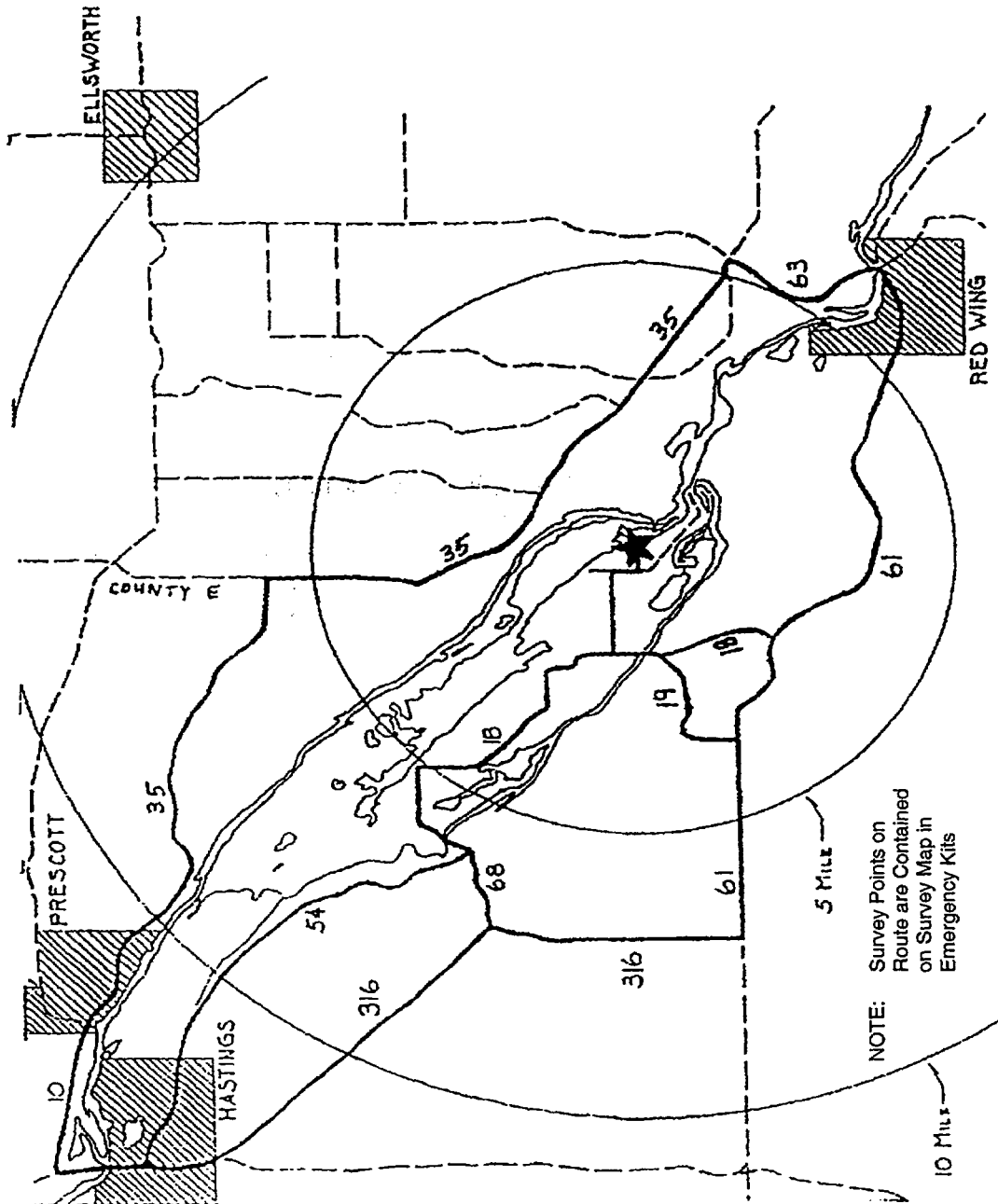
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Attachment I Radiation Survey Team Survey Route Description

1. IF the wind is from the north or west, THEN **proceed** on the Emergency Route from the plant, through Red Wing, to Diamond Bluff, to Prescott, to Hastings, and back to the plant as shown on Figure 3.
2. IF the wind is from the south or east, THEN **proceed** on the Emergency Route from the plant, to Hastings, to Prescott, to Diamond Bluff, to Red Wing, and back to the plant, as shown on Figure 3.
3. AFTER completing the emergency route (Figure 3), THEN report to the REC, or RPSS, for further survey instructions.

| | | |
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| F3 | RESPONSIBILITIES OF THE RADIATION SURVEY TEAMS DURING A RADIOACTIVE AIRBORNE RELEASE | NUMBER: |
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Figure 1 Radiation Survey Team Survey Route



| | | |
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Figure 2 Gross Iodine Table Using RM-14 or Equivalent With 2 Inch Pancake Probe With Silver Zeolite Absorber

| | | | | | |
|-----------|-----|---------|--------|--------|----|
| Run Time | 10 | Minutes | Volume | 707500 | cc |
| Flow rate | 2.5 | CFM | | | |
| Cor. Fact | 1 | | | | |

NOTE:

The uCi/cc activity assumes the above conditions.

| CCPM | uCi Iodine | uCi/ cc |
|------|------------|---------|
| 100 | 4.30E-02 | 6.E-08 |
| 120 | 5.30E-02 | 7.E-08 |
| 140 | 6.00E-02 | 8.E-08 |
| 160 | 7.00E-02 | 1.E-07 |
| 180 | 9.00E-02 | 1.E-07 |
| 200 | 1.00E-01 | 1.E-07 |
| 220 | 1.20E-01 | 2.E-07 |
| 240 | 1.40E-01 | 2.E-07 |
| 260 | 1.50E-01 | 2.E-07 |
| 280 | 1.60E-01 | 2.E-07 |
| 300 | 1.70E-01 | 2.E-07 |
| 350 | 1.80E-01 | 3.E-07 |
| 400 | 2.00E-01 | 3.E-07 |
| 450 | 2.30E-01 | 3.E-07 |
| 500 | 2.60E-01 | 4.E-07 |
| 600 | 3.00E-01 | 4.E-07 |
| 700 | 3.60E-01 | 5.E-07 |
| 800 | 4.00E-01 | 6.E-07 |
| 900 | 4.60E-01 | 7.E-07 |

| CCPM | uCi Iodine | uCi/ cc |
|------|------------|---------|
| 1000 | 5.00E-01 | 7.E-07 |
| 1200 | 6.00E-01 | 8.E-07 |
| 1400 | 7.00E-01 | 1.E-06 |
| 1600 | 8.00E-01 | 1.E-06 |
| 1800 | 9.00E-01 | 1.E-06 |
| 2000 | 1.00E-00 | 1.E-06 |
| 2200 | 1.10E-00 | 2.E-06 |
| 2400 | 1.20E-00 | 2.E-06 |
| 2600 | 1.40E-00 | 2.E-06 |
| 2800 | 1.50E-00 | 2.E-06 |
| 3000 | 1.60E-00 | 2.E-06 |
| 3500 | 1.80E-00 | 3.E-06 |
| 4000 | 2.10E-00 | 3.E-06 |
| 4500 | 2.50E-00 | 4.E-06 |
| 5000 | 2.80E-00 | 4.E-06 |
| 6000 | 3.20E-00 | 5.E-06 |
| 7000 | 3.80E-00 | 5.E-06 |
| 8000 | 4.50E-00 | 6.E-06 |
| 9000 | 5.00E-00 | 7.E-06 |

| CCPM | uCi Iodine | uCi/ cc |
|-------|------------|---------|
| 10000 | 5.60E+00 | 8.E-06 |
| 12000 | 6.00E+00 | 8.E-06 |
| 14000 | 7.50E+00 | 1.E-05 |
| 16000 | 1.00E+01 | 1.E-05 |
| 18000 | 1.30E+01 | 2.E-05 |
| 20000 | 1.50E+01 | 2.E-05 |
| 25000 | 2.50E+01 | 4.E-05 |
| 30000 | 3.30E+01 | 5.E-05 |
| 35000 | 5.00E+01 | 7.E-05 |
| 40000 | 6.00E+01 | 8.E-05 |
| 45000 | 1.00E+02 | 1.E-04 |
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|-----------|---|----------------|
| F3 | RESPONSIBILITIES OF THE RADIATION SURVEY TEAMS DURING A RADIOACTIVE AIRBORNE RELEASE | NUMBER: |
| | | F3-15 |
| | | REV: 24 |

**Figure 3 Gas Chamber Table Using RM-14 or equivalent with
2 Inch GM Pancake Probe with 100 CC S.S. Gas Chamber**

| CCPM | uCi/cc (Xe-133 equiv.) |
|------|---------------------------|
| 100 | 1.E-05 |
| 150 | 2.E-05 |
| 200 | 2.E-05 |
| 250 | 3.E-05 |
| 300 | 4.E-05 |
| 350 | 5.E-05 |
| 400 | 5.E-05 |
| 450 | 6.E-05 |
| 500 | 7.E-05 |
| 600 | 9.E-05 |
| 800 | 1.E-04 |
| 1000 | 2.E-04 |
| 1200 | 2.E-04 |
| 1400 | 2.E-04 |
| 1600 | 3.E-04 |
| 1800 | 3.E-04 |
| 2000 | 4.E-04 |

| CCPM | uCi/cc (Xe-133 equiv.) |
|-------|---------------------------|
| 2500 | 4.E-04 |
| 3000 | 6.E-04 |
| 3500 | 8.E-04 |
| 4000 | 9.E-04 |
| 4500 | 1.E-03 |
| 5000 | 1.E-03 |
| 5500 | 1.E-03 |
| 6000 | 1.E-03 |
| 8000 | 2.E-03 |
| 10000 | 3.E-03 |
| 12000 | 3.E-03 |
| 14000 | 4.E-03 |
| 16000 | 5.E-03 |
| 18000 | 5.E-03 |
| 20000 | 6.E-03 |
| 25000 | 8.E-03 |
| 30000 | 1.E-02 |

| | | |
|-----------|---|----------------|
| F3 | RESPONSIBILITIES OF THE RADIATION SURVEY TEAMS DURING A RADIOACTIVE AIRBORNE RELEASE | NUMBER: |
| | | F3-15 |
| | | REV: 24 |

**Figure 4 Gross Particulate Table Using RM-14 Or Equivalent With 2 Inch
Pancake Probe**

| | | | | | | | |
|-----------|-----|---------|------------|----------|---------|--------------|-----|
| Run Time | 10 | Minutes | volume | 707500 | cc | 4" filter CF | 0.3 |
| Flow rate | 2.5 | CFM | Probe eff. | 0.10 | | | |
| Flow CF | 1 | | Conversion | 4.51E-07 | uCi/dpm | | |

NOTE

The uCi/cc activity assumes the above conditions.

| CCPM | | uCi/ cc |
|------|--|---------|
| 100 | | 2.E-09 |
| 120 | | 3.E-09 |
| 140 | | 3.E-09 |
| 160 | | 3.E-09 |
| 180 | | 4.E-09 |
| 200 | | 4.E-09 |
| 220 | | 5.E-09 |
| 240 | | 5.E-09 |
| 260 | | 6.E-09 |
| 280 | | 6.E-09 |
| 300 | | 6.E-09 |
| 350 | | 7.E-09 |
| 400 | | 8.E-09 |
| 500 | | 1.E-08 |
| 600 | | 1.E-08 |
| 700 | | 1.E-08 |
| 800 | | 2.E-08 |
| 900 | | 2.E-08 |

| CCPM | | uCi/ cc |
|------|--|---------|
| 1000 | | 2.E-08 |
| 1200 | | 3.E-08 |
| 1400 | | 3.E-08 |
| 1600 | | 3.E-08 |
| 1800 | | 4.E-08 |
| 2000 | | 4.E-08 |
| 2200 | | 5.E-08 |
| 2400 | | 5.E-08 |
| 2600 | | 6.E-08 |
| 2800 | | 6.E-08 |
| 3000 | | 6.E-08 |
| 3500 | | 7.E-08 |
| 4000 | | 8.E-08 |
| 4500 | | 1.E-07 |
| 5000 | | 1.E-07 |
| 5500 | | 1.E-07 |
| 6500 | | 1.E-07 |
| 7000 | | 1.E-07 |

| CCPM | | uCi/ cc |
|-------|--|---------|
| 7000 | | 1.E-07 |
| 8000 | | 2.E-07 |
| 9000 | | 2.E-07 |
| 10000 | | 2.E-07 |
| 12000 | | 3.E-07 |
| 14000 | | 3.E-07 |
| 16000 | | 3.E-07 |
| 18000 | | 4.E-07 |
| 20000 | | 4.E-07 |
| 25000 | | 5.E-07 |
| 30000 | | 6.E-07 |
| 35000 | | 7.E-07 |
| 40000 | | 8.E-07 |
| 45000 | | 1.E-06 |
| | | |
| | | |
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| | | |

Mfst Num: 2004 - 0094 Date : 02/12/04
FROM : Bruce Loesch/Mary Gadiant Loc : Prairie Island
TO : UNDERWOOD, BETTY J
Copy Num: 515 Holder : US NRC DOC CONTROL DESK
SUBJECT : Revisions to CONTROLLED DOCUMENTS

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

Revisions:

=====

| | | |
|------|---|--|
| F8-4 | 6 | EMERGENCY SUPPORT & LOGISTICS |
| F8-2 | 8 | EOF RESPONSIBILITIES DURING AN ALERT, SIT GENERAL EMERGENCY |
| F8-3 | 6 | ACTIVATION & OPERATION OF THE EOF |

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 _____

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|--|--|
| <p>PRAIRIE ISLAND NUCLEAR GENERATING PLANT</p> | <p>Title: EOF Emerg Plan Implementing Procedures TOC</p> <p>Effective Date : 02/12/04</p> |
| <p>Approved By: <u>Mary Gadiant</u> BFA Designee</p> | <p>NOTE: This set may contain a partial distribution of this Document Type. Please refer to the CHAMPS Module for specific Copy Holder Contents.</p> |

| Document # | Title | Rev |
|------------|---|-----|
| F8-1 | EMERGENCY OPERATIONS FACILITY ORGANIZATION | 7 |
| F8-2 | EOF RESPONSIBILITIES DURING AN ALERT, SITE AREA OR GENERAL EMERGENCY | 8 |
| F8-3 | ACTIVATION & OPERATION OF THE EOF | 6 |
| F8-4 | EMERGENCY SUPPORT & LOGISTICS | 6 |
| F8-5 | OFFSITE DOSE ASSESSMENT & PROTECTIVE ACTION RECOMMENDATIONS | 8 |
| F8-6 | RADIOLOGICAL MONITORING & CONTROL AT THE EOF | 6 |
| F8-8 | OFFSITE AGENCY LIAISON ACTIVITIES | 4 |
| F8-9 | EVENT TERMINATION OR TRANSITION TO RECOVERY | 7 |
| F8-10 | RECORD KEEPING IN THE EOF | 2 |
| F8-11 | TRANSFER TO THE BACKUP EOF | 5 |
| F8-12 | EMERGENCY REMP | 3 |

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| F8 | EOF RESPONSIBILITIES DURING AN ALERT, SITE AREA OR GENERAL EMERGENCY | NUMBER: |
| | | F8-2 |
| | | REV: 8 |

| 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> |

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| O.C. REVIEW DATE: | OWNER: | EFFECTIVE DATE |
| 021104 SC | M. Werner | 2-12-04 |

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| F8 | EOF RESPONSIBILITIES DURING AN ALERT, SITE AREA OR GENERAL EMERGENCY | NUMBER: | F8-2 |
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| F8 | EOF RESPONSIBILITIES DURING AN ALERT, SITE AREA OR GENERAL EMERGENCY | NUMBER: |
| | | F8-2 |
| | | REV: 8 |

1.0 PURPOSE

The purpose of this procedure is to describe the specific duties of emergency response personnel who activate and operate the Emergency Operations Facility (EOF). It is expected that the EOF can be staffed and ready to assume its emergency responsibilities within one (1) hour of declaration.

2.0 APPLICABILITY

This procedure applies to all persons reporting to and operating in the EOF anytime the EOF organization is activated.

3.0 PRECAUTIONS

All Prairie Island emergency response personnel should carry their company Picture ID for access through potentially established road blocks and access to the EOF.

4.0 RESPONSIBILITIES

4.1 Emergency Manager (EM)

4.1.1 Complete the initial Emergency Manager actions as specified on the "EM WALLET CARD."

4.1.2 Locate and use PINGP 1052, Emergency Manager Checklist.

4.2 Emergency Operations Facility Coordinator (EOF Coord)

Assume the role of EOF Coordinator. Use PINGP 1051, EOF Coordinator Checklist.

4.3 Radiation Protection Support Supervisor (RPSS)

Assume the role of Radiation Protection Support Supervisor. Use PINGP 1049, RPSS Checklist.

4.4 Technical Support Supervisor (TSS)

Assume the role of Technical Support Supervisor. Use PINGP 1050, Technical Support Supervisor Checklist.

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| F8 | EOF RESPONSIBILITIES DURING AN ALERT, SITE AREA OR GENERAL EMERGENCY | NUMBER: |
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4.5 Offsite Emergency Communicator

Assume the role of Offsite Communicator. Use PINGP 1089, Offsite Communicator Checklist.

4.6 Administrative Staff

Assume role of Administrative Staff. Use PINGP 1043, Administrative Staff Checklist as a guide.

4.7 Security Coordinator

Assume the role of security coordinator. Use PINGP 1044, EOF Security Force Checklist.

4.8 Recovery Manager

4.8.1 Report to the EOF during the later stages of the emergency phase to review the events of the emergency and become updated on the present status of the plant.

4.8.2 Assess the status of the plant and implement F8-9, Event Termination or Recovery, as necessary.

5.0 DISCUSSION

NONE

6.0 PREREQUISITES

An Alert, Site Area, or General Emergency has been declared at Prairie Island Nuclear Generating Plant or the EOF organization has been activated.

7.0 PROCEDURE

All EOF emergency response personnel **SHALL** report to the EOF and perform their emergency duties as described in this procedure and other emergency procedures, as necessary.

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|----------|--|---------|-------------|
| F | ACTIVATION AND OPERATION OF THE EOF | NUMBER: | F8-3 |
| | | REV: | 6 |

| 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> |

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| O.C. REVIEW DATE: 021104SC | OWNER: M. Werner | EFFECTIVE DATE 2-12-04 |
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| F | ACTIVATION AND OPERATION OF THE EOF | NUMBER: | F8-3 |
| | | REV: | 6 |

1.0 PURPOSE

The purpose of this instruction is to provide guidance for the startup of the Near-site Emergency Operations Facility (EOF). This instruction will contain information on EOF Ventilation System operation and startup of EOF Radiological Monitoring equipment. The EOF **SHALL** be activated during an Alert, a Site Area or General Emergency classification. It is expected that the EOF can be staffed and ready to assume its emergency responsibilities within one (1) hour of declaration.

2.0 APPLICABILITY


This instruction is applicable to all EOF personnel.

3.0 PRECAUTIONS

All unnecessary personnel should be evacuated from the EOF portion of the Prairie Island Training Center (PITC) when the EOF is activated.

4.0 RESPONSIBILITIES

- 4.1 The Emergency Manager has the overall responsibility to ensure radiological safety for EOF personnel.
- 4.2 The EOF Coordinator has the responsibility to coordinate all activities of the EOF personnel, and to startup, operate, or shutdown the EOF Ventilation system.
- 4.3 The Radiation Protection Support Supervisor has the responsibility to ensure the CAM is operational, area radiation monitoring is established, and appropriate radiological surveys for radiation, contamination, and airborne radioactivity are conducted to verify habitability of the EOF.
- 4.4 The RPSS has the responsibility to keep the Emergency Manager informed of radiological conditions in the EOF and to make necessary recommendations to the Emergency Manager when the radiological safety of EOF personnel is jeopardized.
- 4.5 The EOF Security Force has the responsibility to establish and maintain access control for the EOF.

| | | | |
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|  | ACTIVATION AND OPERATION OF THE EOF | NUMBER: | F8-3 |
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5.0 PROCEDURE

5.1 Activation and Operation of the EOF

- 5.1.1 During the normal work hours, the EOF **SHALL** be activated whenever an Alert, Site Area, or General Emergency is declared, as announced over the public address system. The plant Shift Emergency Communicator will call the PITC switchboard, inform the receptionist of the emergency classification and request Emergency Response personnel to report to the EOF.
- 5.1.2 During off-normal hours, the Emergency Director **SHALL** designate the Shift Emergency Communicator (SEC) to contact all Emergency Organization personnel, in accordance with F3-5.
- 5.1.3 Additional personnel notified and requested to report to the EOF as deemed necessary.
- 5.1.4 As the emergency proceeds from the initial phase (immediately following the emergency initiation) into the recovery phase, all Protective Actions for radiological hazards in the EOF **SHALL** be consistent with the Prairie Island Radiation Protection Program. Refer to F8-6 for specific EOF guidelines.
- 5.1.5 The EOF should remain activated until the emergency situation has been terminated or as directed by the Emergency Manager.

5.2 Establishment of Radiological Monitoring

5.2.1 Set up AM-2 for continuous monitoring of the EOF Area dose rates

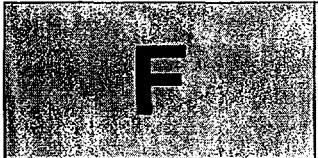
- A. Obtain the AM-2 from the EOF Equipment Locker, located in the receiving area.
- B. Plug the AM-2 into an AC receptacle.
- C. Verify the green power light is ON.
- D. Let AM-2 electronic circuitry warm-up approximately 1 minute.
- E. Source check the AM-2 with button source from the EOF Equipment Locker and verify an upscale reading of meter.
- F. If the AM-2 fails (power loss, incorrect readings, etc.), the RPSS should direct additional radiation monitoring utilizing a portable survey meter.

| | | |
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| F | ACTIVATION AND OPERATION OF THE EOF | NUMBER: |
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5.2.2 Establish operation of the EOF Continuous Air Monitor (CAM)

- A. The CAM is normally kept in the EOF Command Center in a hot standby condition with the electronics energized and the blower, chart recorder, and filter paper drive OFF.
- B. Turn OFF the High Voltage switch.
- C. Turn OFF the Master switch and unplug the cord.
- D. Relocate the CAM immediately outside the Command Center, in the hallway, and plug the cord into an AC receptacle.
- E. Turn ON the Master switch.
- F. Turn ON the High Voltage switch.
- G. Turn ON the switch to start the blower, chart recorder, and filter paper drive (Switch located next to chart).
- H. Adjust the blower flow rate to 3 + or - 1 SCFM using the toggle switch located on the right side of CAM near the flow indicator.
- I. Verify proper operation of the CAM (blower operating with proper flow, filter and strip chart operating, and meters are onscale, etc.)
- J. If the CAM fails to operate properly, contact the RPSS for additional sampling.

5.2.3 Routinely monitor the AM-2 for direct radiation levels and the CAM for airborne particulate and iodine activity. Refer to F8-6, Radiological Monitoring and Control at the EOF for guidelines.

| | | |
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|  | ACTIVATION AND OPERATION OF THE EOF | NUMBER: |
| | | F8-3 |
| | | REV: 6 |

5.3 Activation of the EOF Ventilation System

The EOF ventilation emergency configuration is designed to recirculate the air within the EOF area of the PITC through HEPA filters with a 10% outside air damper position setting for fresh air make-up.

5.3.1 Precautions

- A. Use the Ventilation HEPA Filter **ONLY DURING AN ACTUAL EMERGENCY**.
- B. The ventilation system may become a radiological hazard during emergency operation.

5.3.2 Initial Conditions

- A. All filters are installed.
- B. There are two (2) possible sets of initial conditions:
 - 1. Normal ventilation system running.
 - 2. Normal ventilation system not running.

In either case, the establishment of the ventilation emergency configuration is the same.

5.3.3 Procedure to Establish Ventilation Emergency Configuration

- A. **ONLY DURING AN ACTUAL EMERGENCY - OPEN** HEPA Filter Damper **AND CLOSE** HEPA Filter By-Pass Damper as follows:
 - 1. Loosen the HEPA Filter Damper wing nuts on both sides of the filter housing located on the damper position indicators.
 - 2. Position HEPA Filter Damper to the **OPEN** Position and tighten the wing nuts.
 - 3. Loosen locking bolt on the HEPA Filter By-Pass Damper and reposition to the **CLOSED** position and tighten the locking bolt.
- B. Place the control switch on the Robertshaw cabinet to "EMERGENCY".

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| F | ACTIVATION AND OPERATION OF THE EOF | NUMBER: | F8-3 |
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- C. Verify the "OCC/UNOCC/AUTO" three-position toggle switch in the Robertshaw cabinet is in the "OCC" position.
- D. Observe the ventilation system operation and ensure the supply and return fans are operating as indicated by their RED lights located on the unit's electrical control cabinets on the West wall.

5.3.4 Routine Operation Checks

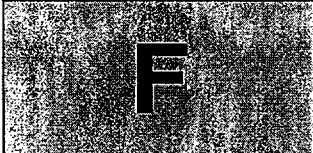
- A. At least every eight (8) hours, check the filter D/P Manometer (located on the backside [South] of the filter cabinet). Acceptable D/P reading is <0.8"W.G.
- B. Verify "Outside Air Damper" is OPEN at least 10% for fresh air make-up. This can be observed on the indicator located in the EOF labeled "S-1".
- C. At least every eight (8) hours, check the EOF Magnehelic indicator for positive pressure indication. This can be observed on the indicator located in the EOF labeled "S-1".

| | |
|-------------|--|
| NOTE | 1. For extended emergency operation, the routine maintenance of ventilation equipment may be necessary, including the replacement of filter media. |
| | 2. Radiological precautions may be necessary for these activities. |

- D. Contact facility maintenance personnel for any filter replacement.

5.3.5 Procedure to Return the Ventilation System to Normal Operation

- A. Ensure the three-position toggle switch is in the "OCC" position in the Robertshaw cabinet.
- B. Place the control switch to "NORMAL" on the Robertshaw Cabinet.
- C. OPEN the HEPA By-Pass Damper and CLOSE the HEPA Filter Damper.

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5.3.6 EOF Ventilation System References

- A. Filters
- | | | |
|-----------------|-----------------|--|
| Pre-Filter Pads | 20"x24"x21" | Furnace Type Disposal Media |
| Bag Filters | 20"x24"x21" | Dri-Pak Dry Cartridge Type |
| HEPA Filters | 24"x24"x11 1/2" | Astrocele III with a minimum of 99.8% on 0.3 micron DOP particles. |
- B. Drawings
- | | |
|------------|-----------------|
| Schematic | SK-1 Robertshaw |
| Mechanical | NF-93231-16 |
| Electrical | NF-93231-24 |

| | | | |
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| F8 | EMERGENCY SUPPORT AND LOGISTICS | NUMBER: | F8-4 |
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REFERENCE USE

- *Procedure segments may be performed from memory.*
- *Use the procedure to verify segments are complete.*
- *Mark off steps within segment before continuing.*
- *Procedure should be available at the work location.*

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| O.C. REVIEW DATE: | OWNER: | EFFECTIVE DATE |
| 021104 SC | M. Werner | 2-12-04 |

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| F8 | EMERGENCY SUPPORT AND LOGISTICS | NUMBER: | F8-4 |
| | | REV: | 6 |

1.0 PURPOSE

The purpose of this procedure is to provide guidance for implementing various emergency support and logistic activities that may be needed to support the plant's emergency response or support operation of the EOF. Emergency support and logistic activities include: coordinating services of nuclear consultants and vendors, emergency processing of purchase orders and providing logistics support for extended EOF operation.

2.0 APPLICABILITY

This procedure applies to the Emergency Manager, Technical Support Supervisor, EOF Coordinator, EOF Coordinator Assistant or anyone in the EOF that may need to coordinate activities related to emergency support or logistics.

3.0 PRECAUTIONS

NONE

4.0 RESPONSIBILITIES

- 4.1 The Emergency Manager is responsible to ensure that the EOF is providing the plant the necessary support and coordination of offsite vendor, consultant or contractor services in support of the emergency.
- 4.2 The Technical Support Supervisor is responsible to ensure appropriate and necessary technical support actions are provided according to this procedure.
- 4.3 The EOF Coordinator is responsible to ensure that the necessary emergency support actions related to the effective operation of the EOF are completed according to this procedure.
- 4.4 The EOF Coordinator Assistant is responsible to assist the EOF Coordinator as necessary.

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| F8 | EMERGENCY SUPPORT AND LOGISTICS | NUMBER: | F8-4 |
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5.0 PREREQUISITES

An Alert, Site Area or General Emergency has been declared at Prairie Island Nuclear Generating Plant.

6.0 PROCEDURE

6.1 Coordinating Services of Nuclear Consultants and Vendors

| | |
|--------------|---|
| NOTE: | The plant notifies Westinghouse Electric Corporation (<u>W</u>) and INPO of the emergency event as part of the initial notification for an Alert, Site Area or General Emergency. The plant does not provide periodic updates to these organizations. |
|--------------|---|

6.1.1 Emergency Manager

- A. Review the need to update W of the emergency condition and direct the Technical Support Supervisor to update W, as necessary.
- B. If site assistance from W is required, direct the Technical Support Supervisor to request that W send a site response team to the EOF.
- C. Direct Technical Support Group to provide update information to INPO as necessary.
- D. Determine the need for additional assistance from any other vendor, consultant or contractor and direct the Technical Support Supervisor or the EOF Coordinator, as appropriate, to initiate the procurement of the necessary services. See Table 1 for a list of vendors, consultants and contractors to consider.

| | | | |
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| F8 | EMERGENCY SUPPORT AND LOGISTICS | NUMBER: | F8-4 |
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6.1.2 Technical Support Supervisor

- A. Refer to Table 1 for a list of vendors, consultants and contractors when considering the need for possible assistance.
- B. Provide emergency status updates to W as directed by the Emergency Manager.
- C. If necessary, identify equipment or assistance that is desired from the vendor.
- D. If directed by the Emergency Manager, request that the vendor send a site response team to the EOF.
- E. The procurement of equipment or services should be coordinated with PI Materials and Procurement Services group. See Section 6.3 for more guidance on emergency processing of purchase orders.
- F. If vendor assistance will be required for more than three days, initiate procedures to procure long-term services in accordance with section 6.3.
- G. Ensure that appropriate contacts are established to facilitate the timely ordering of equipment or services.
- H. Ensure all logistics information concerning requests for services or purchases are logged on PINGP 1042.

6.1.3 EOF Coordinator

- A. Refer to Table 1 for a list of vendors, consultants or contractors when considering the need for assistance in support of EOF operation.
- B. Contact the plant's Communication System Specialist for assistance with EOF Communication System modification or repairs.

| | | | |
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| F8 | EMERGENCY SUPPORT AND LOGISTICS | NUMBER: | F8-4 |
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- C. If possible, use the normal local food supply vendors for continued EOF operation. If widespread contamination exists offsite, consult with the RPSS before ordering the delivery of food to the EOF.
- D. When the Emergency Manager approves the request for goods or services, direct the EOF Coordinator Assistant or an administrative staff person to notify the vendor and order the goods or services.
- E. Ensure that appropriate contacts are established to facilitate the timely ordering of goods or services.
- F. Ensure all logistics information concerning requests for goods or services are logged on PINGP 1042.

6.2 Vendor and Consultant Services

- 6.2.1** A partial list of vendors, consultants, and contractors are listed in Table 1. Additional vendors, consultants, and contractors are known by Site Materials Engineering personnel and site engineers.
- 6.2.2** Telephone numbers for the listed organizations are located in the Nuclear Emergency Preparedness Telephone Directory.
- 6.2.3** Ensure all logistics information concerning requests for services or purchases are logged on PINGP 1042.
- 6.2.4** When requesting equipment or services, contact the organization and describe plant conditions.
- 6.2.5** The vendor will control the contacting of applicable organizations within his own company to supply whatever assistance is required.

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| F8 | EMERGENCY SUPPORT AND LOGISTICS | NUMBER: | F8-4 |
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6.3 Emergency Processing of Purchase Orders

- 6.3.1** When the need for equipment and/or services are realized, the Site Materials Engineering group should be requested to assist in the procurement of the equipment and/or services.
- 6.3.2** The Technical Support Supervisor (or EOF Coordinator, as appropriate) should ensure that one individual is assigned to be responsible for the processing of the purchase order.
- 6.3.3** Maintain a list of all arrangements for services or equipment that are obtained or being negotiated. All logistics information concerning requests for services or purchases should be logged on PINGP 1042.
- 6.3.4** When assigned to process a purchase request for the Technical Support Supervisor (or EOF Coordinator), the responsible individual should review the following guidance:
- A. Determine the applicable sources to supply the equipment or service requested.
 - B. Contact the vendor or supplier and order the equipment or service.
 - C. If it is necessary to obtain a purchase order for the vendor or supplier before they will provide their service or work, the Materials Engineering group will provide a purchase order number.
 - D. As time permits, fill out a purchase requisition.
 - E. Assist in making arrangements for production and shipment with the vendor, as applicable.
 - F. Assist in coordinating delivery and transportation schedules.
 - G. Provide feedback concerning the projected deliveries, or other information concerning the assigned purchase order, to the Technical Support Supervisor (or EOF Coordinator, as appropriate).

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| F8 | EMERGENCY SUPPORT AND LOGISTICS | NUMBER: | F8-4 |
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Table 1 Vendor And Consultant Services

- Telephone numbers for these organizations are located in the Nuclear Emergency Preparedness Telephone Directory.
- Ensure all logistics information concerning requests for services or purchases are logged on PINGP 1042.
- When requesting equipment or services, contact the organization and describe plant conditions.
- The vendor will control the contacting of applicable organizations within his own company to supply whatever assistance is required.

PRAIRIE ISLAND'S NSSS**NSSS - Westinghouse Electric Corporation**

- The plant's Shift Emergency Communicator only notifies W of the initial emergency classification of an Alert, Site Area or General Emergency.
- Be prepared to discuss as many facts as are available at the time of the follow-up call and identify a cognizant individual in your group to provide continuing updates to W.
- PINGP/NMC has a letter of agreement for receiving necessary emergency support from W.

GENERAL SUPPORT SERVICES AND VENDORS

- Emergency Response Coordination Assistance - INPO
 - The plant's Shift Emergency Communicator only notifies INPO of the initial emergency classification of an Alert, Site Area or General Emergency. The Technical Staff provides periodic updates to INPO, as necessary.
 - Be prepared to discuss as many facts as are available at the time of the follow-up call.
 - INPO has access to many supplier's and contracting firm's emergency contact telephone numbers.
 - INPO may provide additional technical assistance as requested.
 - The INPO Resources Manual has additional nuclear emergency support information.
 - PINGP/NMC has a letter of agreement for receiving necessary emergency support from INPO.

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Table 1 Vendor and Consultant Services1. Radio Repair - Folsom Communications, Inc.

Folsom Communications, Inc. provides radio repair services.

2. Emergency Siren Repair - Nelson Radio Communications

Nelson Radio Communication provides periodic maintenance and repair to the emergency sirens.

3. Helicopter Service – Scott's Helicopter Service

A. See Nuclear Emergency Preparedness Telephone Directory (Air Transport or Helicopter Services) for phone numbers.

B. Scott's Helicopter Service may provide immediate transportation via helicopter.

4. Radiological Protection Services

A. Before contacting these contractors, contact the REC to assess the total need for radiological services.

B. Radiological monitoring and decontamination services may be provided by:

Bartlett Nuclear Inc.
P.O. Box 1800
Plymouth Industrial Park
Plymouth, MA 02360

C. Additional GMR-I Canisters provided by:

MSA
Mine Safety Appliances Co.
121 Gamma Drive
Pittsburgh, PA 15238-2937

| | | | |
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| F8 | EMERGENCY SUPPORT AND LOGISTICS | NUMBER: | F8-4 |
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Table 1 Vendor And Consultant Services**5. Emergency Radiological Laboratory Facilities and Assistance**

- A. The following vendors have personnel and laboratory facilities available for emergency response:

- 1) Environmental, Inc.
Midwest Laboratory
700 Landwehr Road
Northbrook, IL 60062

Midwest Labs has 24 hour lab service. Contact Bronia Grob.

- 2) Scientech, Inc
910 Clopper Rd
Gaithersburg, MD 20878

Scientech, Inc has 24 hour lab service.

- 3) ICN Dosimetry Service
ICN Plaza
3300 Hyland Ave.
Costa Mesa, CA 92626

Contact: Hamy Hoang

- B. Before contacting these contractors, contact the REC to assess the total need for radiological services.