

## ERO TECHNICAL LIAISON CHECKLIST

INITIAL

### 1. ACTIVATION

- a. Sign in on the EOF roster board. \_\_\_\_\_
- b. Obtain the ERO Technical Liaison emergency response materials tote box at your position location, and attach your Station badge to the green identification tag located in the tote box. \_\_\_\_\_
- c. Maintain a log using form ER 2.0E, Emergency Facility Log. \_\_\_\_\_
- d. Contact the Technical Assistant to obtain a briefing on
  - (1) Station status
  - (2) radiological releases
  - (3) classification
  - (4) notifications
  - (5) protective action recommendations (PARs) status \_\_\_\_\_

### 2. ACCIDENT ASSESSMENT

- a. Obtain regular plant status briefings from the Technical Assistant.
- b. As required, obtain copies of logger trend printouts from the Technical Assistant. Other technical material can be obtained from the DCC Coordinator.

### 3. NOTIFICATIONS

- a. If not done already, call the Rockingham County Dispatch Center (RCDC) and the Massachusetts Emergency Management Agency (MEMA) communications officer and verify that they notified local EPZ communities as follows:
  - (1) Tell the RCDC and MEMA contacts your name and ERO position.
  - (2) Tell them the current emergency classification level and date and time of declaration.
  - (3) Ask them: "Have you made or initiated notifications of local EPZ communities?"
  - (4) If the answer is no, tell the RCDC dispatcher and/or the MEMA communications officer to notify local EPZ communities in accordance with their notification procedures.

**ERO TECHNICAL LIAISON CHECKLIST**  
(Continued)

**NOTE**

This is a one-time contact of the RCDC and the MEMA communications officer to confirm initial notification of local EPZ communities only. The states are responsible for confirming any subsequent notifications of local EPZ communities.

- b. Notify and provide periodic briefings to the New Hampshire Public Utilities Commission (NHPUC) Chief Engineer or Nuclear Engineer (or as conditions warrant). This contact is not required if an NHPUC representative has responded to the EOF. (Protected: Ref. 6.10)
- c. Notify and provide periodic briefings to the NHPUC Representative in the EOF and the Seabrook Station Technical Representative at NHOEM Headquarters. Provide other technical information as requested. (Protected: Ref. 6.10)
- d. Notify and provide periodic briefings to the MEMA Nuclear Engineer or the Seabrook Station Representative at MEMA Headquarters. Provide other technical information as requested. (Protected: Ref. 6.18)
- e. Provide periodic briefings to the MEMA Liaison at the EOF regarding plant information.
- f. Provide briefings and/or technical information to the Seabrook Station Technical Representatives at the NHOEM and MEMA state EOCs.
- g. As needed, request administrative support from the Administrative Services Coordinator.

**4. DEACTIVATION**

Submit all emergency documentation to the Administrative Services Coordinator.

## TRAINING CENTER STAFF CHECKLIST

INITIAL

### 1. ACTIVATION

- a. Sign in on the EOF roster board. \_\_\_\_\_
- b. Report to the Technical Assistant and obtain a briefing and instructions. \_\_\_\_\_
- c. Obtain the Training Center Staff emergency response position materials from the tote-box at your work station, and attach your station badge to the green position identification tag. \_\_\_\_\_
- d. Refer to Supplemental Material 98-11 for MPCS printer use information. \_\_\_\_\_
- e. Activate the "EOF Logger Trend Report." Refer to Supplemental Material 99-06, SDS Operations for EOF Users, for MPCS EMERGENCY RESPONSE access instructions. \_\_\_\_\_
- f. Turn on MPCS SGVA Monitor per Supplemental Material 00-07. \_\_\_\_\_
- g. Conduct the following readiness checks on the standby diesel generator: \_\_\_\_\_

#### NOTE

A flashlight and gloves for conducting these checks are on top of the generator control cabinet in the utility room of the EOF.

- (1) Unscrew the latches on the left-hand and right-hand doors to the generator and open the doors. Turn on the light over the generator.
- (2) Verify the oil level using the dipstick located in the lower, left area of the generator engine inside the right-hand door.
  - Turn the dipstick handle counterclockwise until it can be withdrawn from the engine block.
  - The lower portion of the dipstick is labeled with an "L" and "F." The oil level should be on "F."
- (3) Check fuel rack trip to ensure it has been properly reset. The fuel rack trip is inside the left-hand door.
  - To reset the fuel rack trip, push in the smaller knob located to the right of the larger throttle knob until the fuel rack disengages. Release the smaller knob, then turn the fuel rack assembly counterclockwise until it latches on the smaller knob. The fuel rack will latch with an audible click.

## TRAINING CENTER STAFF CHECKLIST

(Continued)

- (4) Check overspeed shutdown solenoid trip to ensure it has been properly reset. The overspeed solenoid is on the right side of the engine inside the right-hand door.
  - To reset the overspeed solenoid, lift the overspeed solenoid up. This will release the red air box lever underneath the overspeed solenoid. Push the air box lever down until it latches with an audible click in a vertical position.
- (5) If the oil level is low and/or the above protection and shutdown trips cannot be properly reset, request the Administrative Services Coordinator to call the generator service vendor - Dawes Engine Generator Co. - as soon as possible.

### 2. ACCIDENT ASSESSMENT

- a. Obtain plant parameters to be monitored from the Technical Assistant.
- b. Monitor operational data and trends as directed by the Technical Assistant.
- c. Provide data updates to EOF staff, particularly to the METPAC Operator, as directed by the Technical Assistant. Refer to Supplemental Material 98-12 for logger trend report distribution logic. Request administrative staff support from the Administrative Services Coordinator for copying and distributing the logger trend reports.
- d. Assist the Technical Assistant with answering EOF staff inquiries and with obtaining accident assessment assistance from the Engineering Staff.
- e. In the event of total or partial failure of the Main Plant Computer System, assist the Technical Assistant with acquisition of plant data from the TSC. Use forms ER 2.0H through K to facilitate data transfer.
- f. Ensure that the following status boards are periodically updated and maintained current:
  - (1) Operational trend status boards
  - (2) System status board
  - (3) Critical Safety Function status board
- g. Assist the Technical Assistant with monitoring plant operational data, providing pertinent data to offsite liaison personnel, and performing other duties as assigned by the Technical Assistant.

### 3. STAFFING/EQUIPMENT NEEDS

- a. Assist the Technical Assistant with determining resource requirements and material purchases needed by plant personnel to support corrective actions.
- b. In the event of a power loss in the EOF, receive direction from the Technical Assistant to start the standby diesel generator using the instructions in ER 3.3, Figure 4.

**TRAINING CENTER STAFF CHECKLIST**  
(Continued)

4.     **DEACTIVATION**

- a.     Turn off loggers.
- b.     Turn off MPCS SGVA Monitor
- c.     Return green position identification tag to tote-box.
- d.     Submit all emergency documentation to the Technical Assistant.

## OFFSITE MONITORING COMMUNICATOR CHECKLIST

INITIAL

### 1. ACTIVATION

- a. Sign in on the EOF roster board. \_\_\_\_\_
- b. Attach your station badge to the green identification tag located at your workstation. \_\_\_\_\_
- c. Report to the Offsite Monitoring Coordinator for a briefing. \_\_\_\_\_
- d. As directed, set up the offsite monitoring and sampling team base radio system. \_\_\_\_\_
- e. Call the Fallon Ambulance Co. dispatcher at the number listed in Section C (General) of the Emergency Response Telephone Directory and say the following: "This is the Seabrook Station Offsite Monitoring Communicator in Newington, NH. Please relinquish use of channel 3 per directive of Michael McCabe and James Harris." \_\_\_\_\_

### NOTE

Fallon radio transmissions should be diverted to an alternate frequency within one (1) hour.

- f. Obtain blank copies of ER 5.2C, and NH and MA forms for receiving and recording data from field teams. \_\_\_\_\_
- g. Obtain copies of ER 2.0E, Emergency Facility Log, to maintain a continuous log of communications and events. \_\_\_\_\_

### 2. FIELD TEAM DEPLOYMENT

Receive and acknowledge radio checks of teams preparing for deployment.

### 3. OFFSITE MONITORING

- a. As deployed teams establish radio communications with the EOF base radio, respond as appropriate.
- b. If more than one team attempts to communicate at the same time, direct other teams to remain on standby while communicating with the original team.

## OFFSITE MONITORING COMMUNICATOR CHECKLIST

(Continued)

- c. At the direction of the Offsite Monitoring Coordinator, relay additional details regarding surveys and techniques. Do not relay any units over the radio.
- d. As teams radio in to report data, ensure teams identify themselves as ERO (team #), NH (team #) or MA (team #).
- e. Record information radioed in by ERO teams on ER 5.2C. Record information radioed by NH and MA teams on the applicable state forms.
- f. Ensure that the Offsite Monitoring Coordinator is aware of incoming information.
- g. At the direction of the Offsite Monitoring Coordinator, report changes to emergency classification level, radiological release status, and meteorological conditions to field teams.
- h. Report other information to the field teams at the direction of the Offsite Monitoring Coordinator.
- i. If communications are lost with one or all teams, notify the Offsite Monitoring Coordinator. Use cellular telephones to contact the field teams.
- j. If the level of communications activity with the field teams increases to the point that field data cannot be received and recorded promptly, request the Offsite Monitoring Coordinator to initiate call-in of a second Offsite Monitoring Communicator or assignment of an EOF Support Staff to assist with recording field data.

### 4. DEACTIVATION

When directed to deactivate, submit documentation to the Offsite Monitoring Coordinator.

**SEABROOK STATION  
ADMINISTRATIVE PROCEDURE**

**Seabrook Station News Services Operations**

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**ER 3.4**

**Rev. 16**

SORC Review: 03-007 Date: 2-12-03

Effective Date: 2-21-03

<b>EXPIRATION DATE</b> <u>2-21-05</u>
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Procedure Owner:  
S. Perkins-Grew



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## **1.0 OBJECTIVES**

This procedure provides instructions for the activation and operation of the Seabrook Station News Services (SSNS).

## **2.0 RESPONSIBILITIES**

### **2.1 Short Term Emergency Director/Site Emergency Director/Response Manager**

Authorizes news statements for release to the news media and utilization of the Media Center during an Unusual Event emergency classification.

### **2.2 Emergency News Manager**

Manages the operation of the SSNS, acts as spokesperson to the news media, and determines when to utilize the Media Center.

### **2.3 Technical Advisor**

Coordinates plant status information between the Short Term Emergency Director (STED) or Site Emergency Director (SED) and the Emergency News Manager.

### **2.4 News Services Support Staff**

Assists the Emergency News Manager (ENM) with responses to media inquiries, preparation of news statements, and conduct of media briefings.

## **3.0 PRECAUTIONS**

1. All initial state notifications shall be completed prior to the Emergency News Manager briefing by Control Room personnel.
2. Seabrook Station News Services functions may be performed at the General Office Building, the Science and Nature Center, or other location as deemed appropriate by the Emergency News Manager.
3. Seabrook Station News Services shall be deactivated upon the declaration of an Alert, Site Area Emergency, General Emergency or at the discretion of the Emergency News Manager with STED/SED concurrence.

## **4.0 PREREQUISITES**

An Unusual Event has been declared in accordance with Procedure ER 1.1, Classification of Emergencies.

## **5.0 ACTIONS**

### **5.1 Verbal Media Briefings**

1. After obtaining event status information from the Control Room, the Emergency News Manager will update the Seabrook Station Information Line and contact the AP wire service, in that order.
2. The Emergency News Manager will provide a verbal briefing to the AP wire service representative based on official, verified information provided by the STED, SED, or Response Manager.
3. The Emergency News Manager will provide the Information Line telephone number to the AP wire service representative and will request AP to include the number in any wire service story for the public to call for updated information.
4. If possible from current location, the Emergency News Manager will use the ERO pager group call number, 603-771-2400, to send a brief event description to ERO members.
5. If the Emergency News Manager determines that assistance is required for obtaining emergency information or for providing technical responses to inquiries, the Emergency News Manager may use the ERO roster to call in a Technical Advisor for assistance.
6. If additional assistance is required to manage the news services operations, the Emergency News Manager may use the ERO roster to call in Media Center Support Staff to serve as News Services Support Staff.
7. The Emergency News Manager will respond to telephone inquiries from news media representatives with official, verified information.
8. If individual media representatives arrive at the site to obtain information, photographs, or film footage, the Emergency News Manager will provide a verbal briefing based on official, verified information.
9. The Emergency News Manager will accompany news media representatives while they are on the site or will assign an escort to remain with new media representatives while they are on the site.
10. The Emergency News Manager will coordinate activities of news media representatives on the site with Station Security.
11. If the Emergency News Manager cannot accompany news media representatives or cannot obtain an escort to remain with them while they are on the site, the Emergency News Manager will request news media representatives to remain in the Science and Nature Center while they are on the site.
12. While an emergency condition exists, no oral or written public statement regarding the emergency shall be made without the knowledge and concurrence of the Emergency News Manager.

13. Approved written news statements and verbal briefings provided by the Emergency News Manager or another designated company official are the only official sources of information concerning the status of the emergency.
14. Written news statements and verbal briefings may confirm whether or not there are injuries associated with the event. The news statement or briefing may not release names of injured personnel.
15. When appropriate, the Emergency News Manager will contact the public information officials of the following agencies to advise of information provided to the media and to coordinate public information activities:
  - NRC Region 1
  - New Hampshire Office of Emergency Management
  - Massachusetts Emergency Management Agency

## 5.2 Written News Statements

1. The Emergency News Manager will determine if and when written news statements are appropriate.
2. The Emergency News Manager will coordinate and supervise the preparation of sequentially numbered draft news statements.
3. The Emergency News Manager will provide a copy of draft news statements to the Technical Advisor for review and concurrence.
4. The Emergency News Manager or the Technical Advisor will obtain approval for the content of the news statement from the STED, SED, or Response Manager.
5. Each news statement will address the following appropriate elements:
  - News statement number
  - Date and time of the event
  - Event classification
  - Brief description of the event
  - Radiological release status

### NOTE

If a radiological release as occurred, consider including the applicable following description, if known:

“A minor release below federally approved operating limits has occurred.”

OR

“A small release above federally approved operating limits has occurred.”

- Plant operational status
- State and federal notifications completed

- Brief statement of actions being taken by plant personnel in response to the event
  - Status of site personnel
  - Statement related to personnel injuries associated with the event
  - Seabrook Station Information Line telephone number
6. The Emergency News Manager or the Technical Advisor may contact the Control Room periodically for updates on emergency conditions and plant status. These contacts will be minimized and will not be more frequent than every 30 minutes unless required to obtain approval for written news statements.
7. The Emergency News Manager will determine when updated news statements are warranted based on the following considerations:
- Change in plant status
  - Change in emergency classification
  - Rumor or inquiry that should be addressed publicly
  - Event associated with the emergency response or plant status that is deemed newsworthy by the Emergency News Manager
8. The Emergency News Manager will telefax approved written news statements to the following locations:
- NRC Headquarters
  - NRC Region 1
  - New Hampshire Office of Emergency Management
  - Massachusetts Emergency Management Agency

### 5.3 News Conferences

1. News conferences may be held at the Science and Nature Center depending on the level of media interest and presence on site.
2. At an Alert or higher emergency classification level, news conferences will be held at the Media Center at the Emergency Operations Facility.
3. The Media Center may be used for news conferences after declaration of an Unusual Event at the discretion of the Emergency News Manager with the concurrence of the STED, SED, or Response Manager.
4. The Emergency News Manager will preside at news conferences.
5. In accordance with the Seabrook Team Management Manual (STMM), Directive 4.0, Communications, a senior company official may speak for Seabrook Station and respond to inquiries during news conferences.
6. The Emergency News Manager may call on a Technical Advisor to provide technical explanations during news conferences.

7. Television cameras, film footage, still photography, and radio recordings will be permitted during news conferences.
8. News conference statements will be based on the following sources of information:
  - Approved written news statements
  - Updated information obtained from the Control Room
  - Rumors and incorrect information determined from media or public inquiries
  - Coordination activities with the states, FEMA, and NRC
9. The Emergency News Manager will document the date, time, and general purpose of all news conferences and record significant inquiries or issues raised at news conferences for which follow-up information was promised.

#### **5.4 Public Statements and Responses to Inquiries**

1. While an emergency condition exists, all oral or written public statements regarding the emergency shall be made with the knowledge and concurrence of the Emergency News Manager.
2. Approved news statements and news briefings are the only official sources of information concerning the status of an emergency.
3. News statements/briefings must include factual background data from official sources to answer media inquiries. They may confirm whether there are injuries or not, but will not release names of those injured.
4. All inquiries shall be logged using Form ER 2.0E.

#### **5.5 Special Media Requests**

1. Media interviews with Seabrook Station executive staff and/or employees are permitted and shall be arranged by the Emergency News Manager.
2. There are no restrictions on video or still photography at the Science and Nature Center during media briefings. Requests for additional video tape footage or still photography shall be coordinated by the Emergency News Manager.
3. All inquiries shall be logged using Form ER 2.0E.

#### **5.6 Utilization of the Media Center**

1. STED, Site Emergency Director or Response Manager approval is required to utilize the Media Center during an Unusual Event.
2. The Emergency News Manager shall perform the following:
  - a. Determine personnel required and develop a roster using ER 3.5, Figure 2, Media Center Support Staff Assignments.

- b. Contact the desired Media Center personnel utilizing their normal work extension or home telephone numbers.
- c. Direct personnel to begin a phased activation of the Media Center per procedure ER 3.5, Media Center Operations.

#### **5.7 Phased SSNS Deactivation/Media Center Activation**

If, during SSNS operation, an Alert, Site Area Emergency or General Emergency is declared, the Emergency News Manager shall perform the following:

- 1. Implement steps 1.a - 1.d of ER 3.5E, Emergency News Manager Checklist.
- 2. Refer news media calls to the Media Relations telephone number.
- 3. Collect all news statements and emergency documentation including SSNS event log and proceed to the Media Center.

#### **5.8 Checklist References**

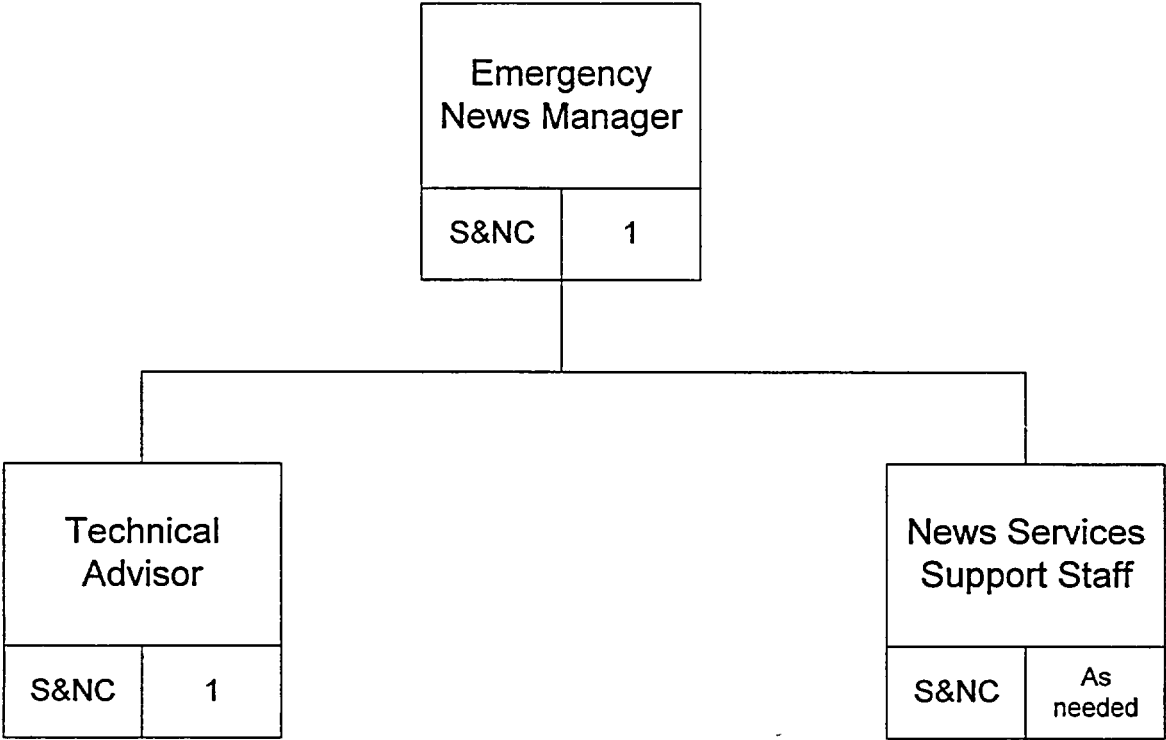
- 1. Emergency News Manager - refer to Form ER 3.4C, Emergency News Manager Checklist.
- 2. Technical Advisor - refer to Form ER 3.4D, Technical Advisor Checklist.
- 3. News Services Support Staff - refer to Form ER 3.4E, News Services Support Staff Checklist.

#### **6.0 REFERENCES**

- 1. Procedure ER 1.1, Classification of Emergencies
- 2. Procedure ER 3.3, Emergency Operations Facility Operations
- 3. Procedure ER 3.5, Media Center Operations
- 4. Procedure ER 2.0, Emergency Notification Documentation Forms Procedure
- 5. Seabrook Team Management Manual (STMM)



**Figure 1**  
**Seabrook Station News Services Organization**



**KEY**

Title	
Location	Number

S&NC: SEABROOK STATION SCIENCE AND NATURE CENTER

## Figure 2 Summary of Changes

### **Rev. 16:**

*In §5.1, added an action for the Emergency News Manager to send a pager message with brief event description using the ERO group call number if in a location where this can be done (CR 02-14346).*

*In §5.2 and on form ER 3.4A, added references to radiological release descriptions in news statements consistent with NRC Regulatory Issues Summary 2002-16 (CR 02-13733).*

*In §5.3 and §6.0, changed NAMM references to STMM for location of Directive 4.*

### **Rev. 15:**

In §5.1 referred to news briefings as verbal briefings. On form ER 3.4C changed Team Leader title to Communications Supervisor.

### **Rev. 14:**

In §2.2 clarified that the Emergency News Manager acts as spokesperson to the news media.

In §5.1, step 12, changed "designated Corporate Spokesperson" to "another designated company official."

In §5.3, step 5, added reference to NAMM, Directive 4.0.

In §6.0 added reference 5.

## Event Status

Briefing No. \_\_\_\_\_ Time \_\_\_\_\_ Date \_\_\_\_\_ Prepared by \_\_\_\_\_

I. Classification -

II. Reason for Declaration - (Initiating Condition Number from the Emergency Classification Flowchart)

III. Time of Declaration -

IV. Radiological Releases - (Yes / No) [If 'Yes', do either of the following:]

- A minor release below federally approved operating limits has occurred – (Yes / No)
- A small release above federally approved operating limits has occurred – (Yes / No)

Explanation:

V. State and Federal Governments Notified - (Yes / No)

## Seabrook Station News Services Manpower Planning

<u>Name</u>	<u>Time Contacted</u>	<u>Telephone Number</u>
Emergency News Manager:		
1st Shift _____	_____	_____
2nd Shift _____	_____	_____
Technical Advisor:		
1st Shift _____	_____	_____
2nd Shift _____	_____	_____
News Services Support Staff:		
1st Shift _____	_____	_____
1st Shift _____	_____	_____
2nd Shift _____	_____	_____
2nd Shift _____	_____	_____
2nd Shift Report Time: _____		

## Emergency News Manager Checklist

### 1. ACTIVATION

INITIAL

- a. Upon notification of an Unusual Event, call the Control Room and contact the STED, SED, or Control Room Communicator to obtain a briefing using Form ER 3.4A, Event Status.

#### NOTE

Minimize follow-up contacts with the Control Room to 1/2 hour frequency unless required for news statement approval.

- b. Update the Seabrook Station Information Line.
- c. Call AP wire service and provide information recorded on Form ER 3.4A.
- d. Request AP to include in any story on the event the Seabrook Station Information Line telephone number for the public to call for additional information.
- e. Report to the North Atlantic Communications Office.
- f. Obtain the Emergency News Manager Response Position Manual located in the emergency response storage area.
- g. Using the Seabrook Station Emergency Response Telephone Directory or ERO roster, contact a Technical Advisor and other support staff deemed necessary to support SSNS operations.
- h. Contact and brief the Communications Supervisor.
- i. Ensure the Technical Advisor contacts the Control Room for a briefing if additional information is required.
- j. Document response actions taken on Form ER 2.0E, Emergency Facility Log.

### 2. VERBAL MEDIA BRIEFINGS

- a. Provide verbal updates to the AP wire service and other media contacts determined to be appropriate as emergency or plant conditions change.
- b. Respond to media inquiries via telephone or in person at the site in accordance with §5.1 of this procedure.
- c. Coordinate activities with state and federal public information officials in accordance with §5.1 of this procedure.

### 3. WRITTEN NEWS STATEMENTS

- a. Prepare news statements in accordance with §5.2 of this procedure.

## **Emergency News Manager Checklist**

(Continued)

INITIAL

- b. Obtain STED/SED/Response Manager approval prior to public release of news statements.
- c. Distribute approved written news statements to appropriate news media outlets and site locations.
- d. Fax approved news statements to the following: (Fax numbers are in the ERO telephone directory)
  - (1) NRC Region 1 Public Affairs
  - (2) NRC Headquarters
  - (3) New Hampshire Office of Emergency Management
  - (4) Massachusetts Emergency Management Agency

### 4. NEWS CONFERENCES

- a. Inform Seabrook Station Security Supervisor of time and location of news conferences and to prepare for the arrival of news media personnel.
- b. Conduct news conferences in accordance with §5.3 of this procedure.

### 5. PUBLIC STATEMENTS AND RESPONSES TO INQUIRIES

Respond to inquiries and public statements in accordance with §5.1 of this procedure.

### 6. SPECIAL MEDIA REQUESTS

Coordinate special media requests in accordance with §5.5 of this procedure.

### 7. INFORMATION LINE

Update the Telephone Information Line with the latest information from approved news statements or official, verified information obtained from the STED, SED, or Response Manager.

### 8. UTILIZATION OF THE MEDIA CENTER

Develop Media Center activation strategies in accordance with §5.6 of this procedure.

### 9. PHASED SSNS DEACTIVATION/MEDIA CENTER ACTIVATION

- a. Perform phased SSNS deactivation/Media Center activation in accordance with §5.7 of this procedure.
- b. Submit all emergency documentation to the Emergency Preparedness Manager.

## Technical Advisor Checklist

### 1. ACTIVATION

INITIAL

- a. Upon request from the Emergency News Manager, report to the North Atlantic Communications offices. \_\_\_\_\_
- b. Obtain the Technical Advisor Emergency Response Position Manual located in the emergency response storage area. \_\_\_\_\_
- c. As directed by the ENM, obtain regular briefings, using Form ER 3.4A, from the STED/SED or Control Room Coordinator. \_\_\_\_\_
  - (1) Coordinate Control Room contact with the Emergency News Manager.
  - (2) Follow-up contact with the STED/SED or Control Room Communicator should not be more than once every 1/2 hour except to obtain approval of written news statements for public release.

### 2. MEDIA BRIEFINGS AND NEWS STATEMENTS

Brief and advise the Emergency News Manager on technical issues in accordance with §5.1 and §5.2 of this procedure.

### 3. NEWS CONFERENCES

Assist in news conferences in accordance with §5.3 of this procedure.

### 4. DEACTIVATION

Submit all emergency documentation to the Emergency News Manager. \_\_\_\_\_

## News Services Support Staff Checklist

### 1. ACTIVATION

INITIAL

- a. Upon request from the Emergency News Manager, report to the North Atlantic Communications offices.
- b. Obtain the News Services Support Staff Emergency Response Position Manual located in the emergency response storage area.

### 2. MEDIA BRIEFINGS AND NEWS RELEASES

- a. Respond to news media calls or rumor-related calls as directed by the Emergency News Manager and in accordance with §5.1 of this procedure.
- b. Assist the Emergency News Manager in preparing news statements in accordance with §5.2 of this procedure.
- c. At the direction of the Emergency News Manager, copy and distribute approved news statements in the following order:
  - 1 copy to each SSNS staff member
  - 20 copies on counter at entrance to the General Office Building (GOB)
  - 20 copies on counter at entrance to the Science and Nature Center
  - 5 copies to the Emergency Preparedness Department
- d. Assist the Emergency News Manager with telefaxing approved news statements in accordance with §5.2 of this procedure.

### 3. NEWS CONFERENCES

Assist in the conduct of news conferences in accordance with §5.3 of this procedure.

### 4. PUBLIC STATEMENTS AND RESPONSES TO INQUIRIES

Respond to inquiries and public statements in accordance with §5.1 of this procedure.

### 5. SPECIAL MEDIA REQUESTS

Arrange special media requests as directed by the Emergency News Manager and in accordance with §5.5 of this procedure.

### 6. UTILIZATION OF THE MEDIA CENTER

Implement Media Center utilization strategies as directed by the Emergency News Manager and in accordance with §5.6 of this procedure.



**News Services Support Staff Checklist**  
(Continued)

7. PHASED SSNS DEACTIVATION/MEDIA CENTER ACTIVATION

INITIAL

- a. Perform phased SSNS deactivation/Media Center activation in accordance with §5.7 of this procedure.
- b. Submit all emergency documentation to the Emergency News Manager.

**SEABROOK STATION  
ADMINISTRATIVE PROCEDURE**

**Media Center Operations**

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**ER 3.5**

**Rev. 24**

SORC Review: 03-007 Date: 2-12-03

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<b>EXPIRATION DATE</b> <u>2-21-05</u>
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Procedure Owner:  
S. Perkins-Grew

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## **1.0 OBJECTIVE**

This procedure specifies the actions taken to manage emergency public information at the Media Center located adjacent to the Emergency Operations Facility at Newington Station.

## **2.0 RESPONSIBILITIES**

### **2.1 Emergency News Manager**

Manages the emergency public information function, information dissemination, and media and public relations. Delivers Seabrook Station's statements on the emergency by participating in news briefings and answering media questions. Coordinates emergency public information and rumor control with State and Federal Public Information Officers (PIOs). Assigns Support Staff to perform specific functions.

### **2.2 Media Center Support Staff**

Assist in the gathering of information relevant to the emergency response and the preparation of Seabrook Station news statements and news briefing preparation. Provide members of the news media with background information and respond to media inquiries in between scheduled news conference. Monitor external news coverage for accuracy, trend rumors relating to plant conditions and maintain recorded status reports on the Information Line. Answer media inquiries over the telephone.

### **2.3 Technical Advisor (MC)**

Maintains contact with the EOF Technical Staff, continuously updates the Emergency News Manager and Support Staff on plant conditions, addresses technical questions during news briefings, and assists in the preparation of news releases and briefing summaries.

## **3.0 PRECAUTIONS**

None

## **4.0 PREREQUISITES**

1. An Alert, Site Area Emergency or General Emergency has been declared in accordance with Procedure ER 1.1, Classification of Emergencies.
2. A decision has been made by the Emergency News Manager to activate the Media Center to facilitate communications with the news media.

## **5.0 ACTIONS**

### **NOTE**

Telephone numbers for contacts referenced in the checklists are available in the Emergency Response Telephone Directory.

#### **5.1 Emergency News Manager**

Refer to form ER 3.5E, Emergency News Manager Checklist, for required actions for this position.

#### **5.2 Media Center Support Staff**

Refer to form ER 3.5F, Media Center Support Staff Checklist, for required actions for this position.

#### **5.3 Technical Advisor (MC)**

Refer to form ER 3.5G, Technical Advisor (MC) Checklist, for required actions for this position.

#### **5.4 News Statements**

At the onset of an emergency, the Emergency News Manager, the Media Center Support Staff and Technical Advisor prepare news statements to define the initial information to be released to the media. All news statements shall be approved by the Response Manager or, in his absence, the Site Emergency Director. If neither of these individuals is available, the Short Term Emergency Director may approve the statement.

News statements are prepared according to the following guidance:

1. The news statement may be in the form of a formal news release to be presented orally in the news briefing or over the telephone.
2. After the Media Center is operational and the media briefings have begun, the frequency of formal news statement development may be reduced at the discretion of the Emergency News Manager. The primary source of providing information is through news briefings. Written outlines, summaries, status boards and graphics supplement information presented orally in the briefings.
3. The Emergency Operations Facility (EOF) and the plant organization serve as primary sources of plant-related information for the Media Center.

#### **5.5 Briefings**

News briefings are the primary source for providing information to the news media and will be conducted on a regular basis, or as events dictate.

News briefings will be conducted according to the following guidance:

1. News briefings at the Media Center will be managed by the Seabrook Station Emergency News Manager. Seabrook Station is responsible for information concerning onsite status and conditions. Seabrook Station news briefing presentations are based on plant status information confirmed by the Response Manager.
2. Public Information Officers from the states are responsible for releasing information relating to the impact of the emergency on the health and safety the public including off-site radiological effects. As each agency prepares its information and statements, designated state spokespersons will participate in the news briefings.
3. At the discretion of the Emergency News Manager, the Technical Advisor may also participate in the news briefing. In a protracted emergency, assistance from subject matter experts and FPL Group executives may be obtained.
4. News briefing preparation is coordinated with representatives of the NRC, FEMA, and state agencies that are present at the Media Center.
5. Following a news conference, the key points presented to the media information used to respond to questions may be summarized and provided to the Media Center staff.
6. Briefing outlines are distributed to the Media Center staff for reference in carrying out their assigned function. The briefing outlines are not intended to be distributed to the news media.

## **5.6 Responses to Media Inquiries**

Responses to media inquiries regarding the plant status or Seabrook Station emergency response actions are confined to the information provided in approved news statements or briefing summaries; however, inquiries regarding general information about Seabrook Station (e.g. building, component or system descriptions, capacity, etc.) can be responded to using supporting written public information material and graphic displays.

1. ERO personnel authorized to address media inquiries are as follows:
  - Emergency News Manager
  - Senior company official in accordance with the Seabrook Team Management Manual (STMM), Directive 4.0, Communications
  - Technical Advisor
  - Media Center Support Staff designated by the Emergency News Manager
  - Other Seabrook Station or FPL Group technical experts as designated by the Emergency News Manager

## **5.7 Rumor Control**

Rumor control is accomplished as follows:

1. Monitoring news media coverage of the emergency and identifying any incorrect or misleading information so that Seabrook Station or the States may take appropriate action.
2. Coordinating emergency public information with the state and federal agency public information officers and obtaining feedback on rumor trends from the state agency rumor control telephone banks.
3. Expeditiously addressing incorrect or misleading information and rumor trends during news briefings or by direct contact with the source of the information (e.g., media outlet).
4. Maintaining a recorded information line with updated information on Seabrook Station emergency response and plant status. This line is accessible to the general public via a toll-free telephone number published in the annual public information material distributed to residents in the Emergency Planning Zone (EPZ), and provided during news briefings.
5. Monitoring Internet web sites for incorrect or misleading information.

## **5.8 Media Requests**

1. Media tours of the EOF-portion of the building may be conducted if they do not interfere with emergency and recovery activities. Such visits shall be approved by the Response Manager and arranged by the Media Center Support Staff.
2. Interviews with experts associated with Seabrook Station shall be arranged by the Media Center Support Staff under the direction of the Emergency News Manager.
3. Media tours of Seabrook Station are contingent upon plant conditions. Requests for tours of Seabrook Station shall be approved by the Response Manager and the Security Coordinator and may be conducted by Media Center Support Staff.

## **5.9 State/Federal Coordination in the Media Center**

1. Initial focus of the ERO Media Center staff will be on identification of Seabrook Station key message points for public dissemination.
2. As state/federal public information officials arrive at the Media Center, until Seabrook Station key message points are identified, the Emergency News Manager will assign Media Center staff to orient them to the Media Center and to assist them with establishing their state/federal Media Center operations.
3. After Seabrook Station key message points have been identified, the Emergency News Manager will take the lead in coordinating Media Center activities with state/federal public information officials and exchange key message points with them.



4. After the exchange of key message points between the utility and state/federal public information officials, the Emergency News Manager will determine the readiness of state/federal officials to participate in joint media briefings.
5. If state/federal public information officials are not yet present in the Media Center, or if they are not prepared to participate in joint media briefings, the Emergency News Manager will determine the official status of local, state and federal response (e.g., states have been notified, State Emergency Operations Centers are activated, public information officials are enroute) and brief the media accordingly.

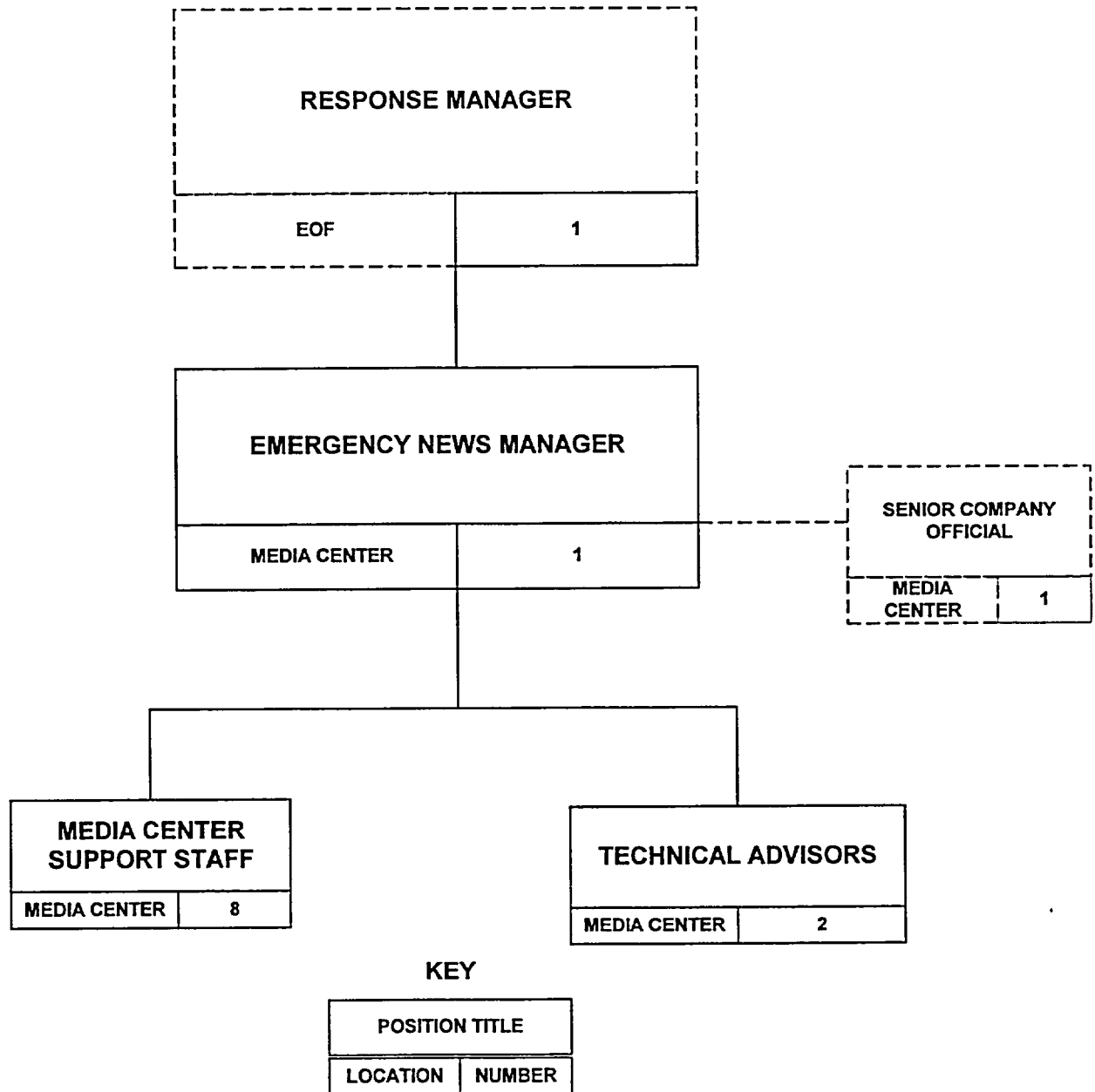
#### **NOTE**

The public needs to perceive clearly the cooperation and teamwork between the state and utility emergency response organizations. It is incumbent on the Emergency News Manager to work actively with representatives in the Media Center to establish this perception.

## **6.0 REFERENCES**

1. ER 1.1, Classification of Emergencies
2. ER 2.0, Emergency Notification Documentation Forms Procedure
3. ER 3.3, Emergency Operations Facility Operations
4. ER 3.4, Seabrook Station News Services Operations
5. Seabrook Team Management Manual (STMM), Chapter 3, Directive 4.0
6. NRC Inspection Report 50-443/93-07

**Figure 1**  
**Media Center Organization**



**Figure 2**  
**Media Center Assignments**

<b>FUNCTION</b>	<b>NAME (FIRST SHIFT)</b>	<b>NOTES</b>
EMERGENCY NEWS MANAGER		
TECH ADVISOR - EOF LIAISON		
TECH ADVISOR - MEDIA CENTER		
SUPPORT STAFF - ASSIST. TO ENM:	1.	
SUPPORT STAFF - OPS ROOM	1.	
	2.	
SUPPORT STAFF - M. R. ROOM	1.	
	2.	
	3.	
SUPPORT STAFF - MEDIA BRIEFING ROOM	1.	
	2.	

### **Figure 3** **Information Line Instructions**

1. Complete form ER 3.5A, Information Line Checklist.
2. Obtain approved news statement and Information Line password from the Emergency News Manager.

#### **NOTE**

The duration of an information line message is limited to two (2) minutes.

3. Dial the Information Line number: (800) 774-4771 or (508) 937-4095.
4. Anytime after the message has started, press "0" or "\*" key and wait for system prompt.
5. At end of introduction recording, enter password when asked.
6. Press "8" for options menu.
7. Press 4 for Message Feature.
8. As appropriate, select one of the following:
  - Press 2 to append information to an existing message
  - Press 3 to discard and re-record message
  - Press 5 to listen to the current message
  - Press 7 to record/review a message
  - Press 9 to exit/save message recording
  - Press 9 again to exit to main menu
9. Upon completion, document on form ER 3.5A the time the recording was made.

#### **NOTE**

Prior to deactivation, record a message that describes the current status of plant conditions and response activities.

## Figure 4 Media Relations Telephone Guidelines

Review the following information before answering phones.

- (1) Sources of Official Information for Media Relations Staff: The Media Relations Staff shall use official Seabrook Station, State of New Hampshire, and Commonwealth of Massachusetts news statements or news releases, oral information as related by the Emergency News Manager or designee, and general, factual information as contained in written public information materials.

As general guidance, the staff should feel free to relate general, factual plan information such as how many people are involved in the Seabrook Station response organization, etc.

- (2) Receipt of Phone Calls: Answer all calls according to your function. People are calling a specific number for a specific purpose; they should immediately know they got the right number.

"Hello, Seabrook Station Media Center. This is (First and Last Name). May I help you?"

Media Relations staff members shall give reporters their full name, since they are acting as spokespersons.

Reporters are required by their employers to identify themselves as reporters, and they should do so automatically. If they do not, ask for their name and affiliation. If they are unwilling to give that, they are probably not real reporters.

Explain to such callers that you are not authorized to talk to callers who refuse to identify themselves; refer them to appropriate rumor control numbers or taped message, if appropriate. You are there to help reporters only; refer members of the public seeking information to rumor control numbers or the Information Line.

- (3) Interviews: Media Center staff shall conduct only telephone interviews. Special requests for additional interviews will be taken, but with no guarantees given to the press; efforts will be made to satisfy appropriate requests.

Radio: Media Center staff members are allowed to give taped interviews to radio stations for broadcast, with an understanding and agreement beforehand that information will be limited to the constraints outlined in the previous section. In addition, Media Center staff are allowed to go "live" on air to answer questions, subject to the constraints listed above.

Newspapers: Media Relations staff members are allowed to give newspaper interviews on the phone for attribution, subject to the above constraints.

Television: Media Relations staff members are allowed to talk to television reporters on the phone for attribution. Media Relations staff members do not give videotaped interviews to television reporters; encourage reporters to come to the Media Center where they can get taped interviews with appropriate spokespersons.

**Figure 4**  
**Media Relations Telephone Guidelines**  
(Continued)

Interviews shall be given only while filling an ERO role. You should inform the individual interviewing you that once the emergency has been terminated, all subsequent requests for information should be directed to Seabrook Station Communications. You will not be available for further interviews once the emergency has been terminated.

- (4) Release of Phone Numbers: Under no circumstances should staff release EOF, EOC or other facility telephone numbers. Release only State or Seabrook Station approved emergency information numbers, as posted. As the emergency is terminated and the Media Center is deactivated, provide the telephone number for Seabrook Station Communications for follow-up after the emergency.
- (5) Faxing of News Statements: The Media Center does not have resources to telefax news statements to news organizations. If a caller requests that you fax them a news release, politely inform them that they should consult the wire services for latest news release updates.
- (6) Calls from Utilities: Callers from other utilities should be politely informed that 1) your purpose is to respond to media inquiries and 2) for information on the emergency, they may call the Institute for Nuclear Power Operations (INPO) or the American Nuclear Society (ANS), or review wire service reports.
- (7) Calls Concerning Injuries/Deaths: For inquiries concerning injured or dead plant personnel, you may provide confirmation as to such an occurrence, if known and officially confirmed by the Response Manager. Do not release any individual's name or personal information unless specifically authorized to do so by the Response Manager. (After the Emergency News Manager has released this information at a news briefing, the Media Center Staff will have the flexibility to repeat this information to reporters who ask.)

## Figure 5 News Statement Development Guidelines

### NOTE

For drills, ensure news statements are developed using the drill directory to ensure that the statements are printed as "Drill Only" news statements.

### NOTE

As press briefings are held on a routine basis, the development of briefing outlines may reduce the frequency of the preparation of formal news statements.

- Consult with the Technical Advisor on the technical aspects of the news statement.
- Ensure that each news statement contains the following elements:

- \_\_\_\_\_ Statement number (sequential)
- \_\_\_\_\_ Date and time of the event
- \_\_\_\_\_ Event classification
- \_\_\_\_\_ Event description
- \_\_\_\_\_ Action being taken to mitigate the event
- \_\_\_\_\_ Operational status
- \_\_\_\_\_ Radiological release status

### NOTE

If a radiological release as occurred, consider including one of the following descriptions, if known:

"A minor release below federally approved operating limits has occurred."

OR

"A small release above federally approved operating limits has occurred."

- \_\_\_\_\_ Injuries associated with the event
- \_\_\_\_\_ Status of plant personnel
- \_\_\_\_\_ Definition of the classification

**Figure 5**  
**News Statement Development Guidelines**  
**(continued)**

- \_\_\_\_\_ Information Line number
- \_\_\_\_\_ Reminder that public should listen to EAS messages and media broadcast from NHOEM & MEMA (for Site Area Emergency and General Emergency only).
- Provide draft statement to Emergency News Manager for review and approval prior to review and approval by the Response Manager.



## Figure 6 News Briefing Outline Development Guidelines

In conjunction with the Emergency News Manager and Technical Advisor, develop Media Briefing Outline:

### NOTE

For drills, ensure briefing outlines are developed using the drill directory to ensure that the outlines are printed as "Drill Only" news outlines.

- Ensure that the briefing contains the following elements:

- \_\_\_ New information (e.g., key message points)
- \_\_\_ Summary/Review of previous events
  - affected plant system or component (nuclear / non-nuclear side)
  - mitigating or corrective actions
  - notification of offsite authorities and agencies
  - radiological release status

### NOTE

If a radiological release as occurred, consider including one of the following descriptions, if known:

“A minor release below federally approved operating limits has occurred.”

OR

“A small release above federally approved operating limits has occurred.”

- \_\_\_ Resolve any inconsistencies and address concerns with media coverage or trends in rumor control

- All outlines should be numbered sequentially and contain the date and time.

As directed by the Emergency News Manager, distribute copies of the briefing outline to the Media Center Staff in accordance with Figure 9, Media Center Document Distribution Matrix.

## Figure 7 Media Briefing Room Operations

### NOTE

One support staff member should remain in the Media Briefing Area at all times.

### READINESS CHECKLIST

#### Sound System:

1. Using the power strip, place switch in to the "ON" position. This should power the sound system.
2. Ensure the gain settings on the mixer console are set to the levels indicated on the console labels.
3. Perform a microphone test verifying the audibility of the system in the following locations:
  - Briefing Room
  - Media Work Area
  - Operations Room
  - State Coordination Room

#### Stage Area:

1. Ensure hard copy graphics for use in media briefings are available in the Media Center storage closet.
2. Ensure the stage area and podium are ready for conducting news briefings.
  - Easel for graphics displays is available
  - Laser pointer is available
  - Background curtain is fully drawn
3. Ensure easel with Seabrook Station cutaway diagram is in position on the right-side corner of stage.
4. Determine from the Emergency News Manager what graphics should be displayed, if any, on the second easel.

#### Video Monitor:

1. Test the operation of the video monitor by turning the unit on. Ensure the monitor channel indicator is set to Channel 3.
2. Turn the monitor off until the first news briefing is conducted.

**Figure 7**  
**Media Briefing Room Operations**  
(Continued)

**Media Registration Sheets:**

Establish the registration area at the Media Center entrance.

- Ensure there are sufficient copies of Media Center Registration (form ER 3.5B) and pens available in the foyer.

**General:**

Remove any paper or materials not relevant to the emergency from the Briefing Room and the Media Work Room.

**NOTE**

When the briefing room is prepared to receive members of the press, inform the Emergency News Manager or designee.

**Greeting the Media**

1. As media representatives arrive:
  - Encourage them to sign the registration form
  - Brief them on the accommodations of the Media Center
  - Provide them with the latest Seabrook Station news statement
2. Ensure copies of all official Seabrook Station, state and federal news releases are available in the Media Briefing Area.
3. Provide copies of state public information materials to members of the media, if requested.
4. Keep the Emergency News Manager informed on the news organizations represented in the Media Center.
5. Inform the Emergency News Manager of news media representatives' questions, issues and information needs.

**MEDIA BRIEFING CONDUCT:**

1. Announce time of next briefing to the media representatives.
2. Prepare lights on stage.
3. Prepare podium; turn on light.

**Figure 7**  
**Media Briefing Room Operations**  
(Continued)

4. Obtain graphics needs from Emergency News Manager or designee, and stage them in the required order.
5. Ensure storage room door is closed.
6. Post "News Briefing in Progress" sign on the door entering into Briefing Room.
7. Turn ON sound system.
8. At the close of the briefing, remove the "News Briefing In Progress" sign.
9. Turn OFF sound system.
10. Following news briefings, take follow-up questions and reinforce information provided in news briefings.

**NOTE**

In between formal briefings, the Media Center Support Staff assigned to the briefing room may provide official information to news media representatives or, as directed by the Emergency News Manager, may provide updated information to the media.

## **Figure 8** **Media Monitoring Checklist**

### **READINESS CHECKLIST:**

1. Turn television units on. Verify that each unit is tuned to the designated station.
2. Ensure VHS tapes are inserted and recorders are operational.

### **NOTE**

Tapes should be labeled with the station, and the date and time of the recording period before inserting into the VCR unit. If more than one tape is used per unit, identify them sequentially.

3. Establish a Media Monitoring Log (form ER 3.5D) for each broadcast station.
4. Verify stereo units are tuned to the designated EAS stations.

### **MONITORING NEWS COVERAGE:**

1. Review all written statements, EAS messages, and briefing outlines.
2. As coverage on the emergency is broadcast, record the coverage. Document the time/date of the coverage on the Media Monitoring Log.
3. Monitor the news stories for the following:
  - inaccuracies,
  - overemotional or exaggerated statements by members of the general public, or any otherwise misleading information or presentation of the emergency events,
  - Interviews with "experts" that may misrepresent events and that should be balanced by additional statements from the Emergency News Manager (ENM) or state or federal agency Public Information Officer.
4. Inform the ENM of any news stories that contain the characteristics above. Document any action taken on the Media Monitoring Log.
5. Periodically review logs for any trends in biased or misleading coverage. Advise the Emergency News Manager when a trend has been identified.

**Figure 9**  
**Media Center Document Distribution Matrix**

**NOTE: Before documents are distributed, they must be signed / approved.**

	<b>Seabrook Station News Statements</b>	<b>Seabrook Station Briefing Outlines</b>	<b>State &amp; Federal Agency News Releases/EAS</b>
<b>Media Center</b>			
Media Relations Room	3	3	3
Media Briefing Room	50*		50*
State Coordination Room	6	6	
Media Center Hallway	10*	10*	10*
<b>EOF</b>			
Response Manager	1	1	
EOF Technical Advisor	1	1	
Industry Liaison	1	1	
Licensing Coordinator	1	1	1
RMD Coordinator	1	1	
<b>IFO</b>			
NH Rumor Control	5		5
<b>TELEFAX</b>			
NHOEM (if PIO is not present at Media Center)	1		
MEMA (if PIO is not present at Media Center)	1		
NRC Public Affairs Headquarters	1		
NRC Public Affairs Region 1	1		
Associated Press (AP) Concord, NH	1		
<b>Total Copies</b>	<b>84</b>	<b>24</b>	<b>69</b>

**\* Place in Vertical File**

## Figure 10 Summary of Changes

**Rev. 24:**

*On Figures 5 and 6, added references to the radiological release descriptions for use in news statements consistent with NRC Regulatory Issues Summary 2002-16 (CR 02-13733).*

**Rev. 23:**

Throughout the procedure updated organizations' names as a result of new ownership (e.g., changed "North Atlantic" to "Seabrook Station") and updated manual references.

**Rev. 22:**

In §5.4 indicated that at the onset of an emergency initial information will be released to the media via a prepared news statement.

In Figure 7 clarified instructions regarding Media Briefing Room sound system.

In Figure 9 revised Media Center Document Distribution Matrix.

**Rev. 21:**

In §6.0 added reference 6.

In Figure 3 added Note after step 9.

On form ER 3.5A deleted radio station call letters.

On form ER 3.5E added step 2.e regarding the minimum staff required before the Media Center may be declared activated. In step 4.a added the requirement for a Technical Advisor to concur with the news statement and protected the step. Added step 7.c regarding updating the Information Line message.

**Rev. 20:**

Throughout the procedure eliminated having a Seabrook Station senior official act as spokesperson. This change was made as a result of an NRC inspection.

In §5.6, step 1, added reference to NAMM, Directive 4.0.

In §6.0 added reference 5.

Updated Figure 1 to show Media Center organization.

In Figure 2 deleted Seabrook Station spokesperson.

On form ER 3.5E, step 5.d, deleted "or the assigned corporate spokesperson."

On form ER 3.5F deleted occurrences of "Corporate Spokesperson." Clarified action to be taken in step 6.m.

## INFORMATION LINE CHECKLIST

Begin each recording with the following greeting:

Thank you for calling the Seabrook Station Information Line.

This message was recorded at \_\_\_\_\_ on \_\_\_\_\_  
(time) (date)

- ☐ an Alert
- ☐ a Site Area Emergency
- ☐ a General Emergency (was declared/continues)

at Seabrook Station in Seabrook, N.H.

[read news statement]

- ☐ An Alert is the second lowest of four emergency categories that apply to nuclear power plants.
- ☐ A Site Area Emergency is the second highest of four emergency categories that apply to nuclear power plants.
- ☐ A General Emergency is the highest of four emergency categories that apply to nuclear power plants.

There (have/have not) been (any) radioactive releases from the station.

The State(s) of New Hampshire/Massachusetts

- ☐ has (have) not made any protective action recommendations.
- ☐ has (have) made protective action recommendations you should know about.

Tune to one of the following radio stations

- ☐ for information about what you should do.
- ☐ for further details as soon as they become available.

New Hampshire residents should listen to the primary Emergency Alert System radio station 97.5 FM.

Massachusetts residents should listen to the primary Emergency Alert System radio station 93.7 FM.

Seabrook Station management has asked the public not to call the station.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Time Recorded

Emergency News Manager Initials: \_\_\_\_\_

Media Center Support Staff Initials: \_\_\_\_\_

ATTACH NEWS STATEMENT OR BRIEFING OUTLINE USED TO RECORD THIS UPDATE.





## MEDIA INQUIRY LOG

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_ LOGGED BY: \_\_\_\_\_ PAGE \_\_\_\_ OF \_\_\_\_

TIME	REPORTER Name / Contact No.	MEDIA OUTLET	INQUIRY	FOLLOW UP REQUIRED
__:__ am/pm			_____ _____ _____ _____	YES NO Follow-up Completed:
__:__ am/pm			_____ _____ _____ _____	YES NO Follow-up Completed:
__:__ am/pm			_____ _____ _____ _____	YES NO Follow-up Completed:
__:__ am/pm			_____ _____ _____ _____	YES NO Follow-up Completed:
__:__ am/pm			_____ _____ _____ _____	YES NO Follow-up Completed:
__:__ am/pm			_____ _____ _____ _____	YES NO Follow-up Completed:
__:__ am/pm			_____ _____ _____ _____	YES NO Follow-up Completed:

NOTE: The Massachusetts Rumor Control number is (800) 982-6846.  
 The New Hampshire Rumor Control number is (800) 458-2407.  
 The Seabrook Station Recorded Information Line number is (800) 774-4771.

# MEDIA MONITORING LOG

STATION: \_\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_ PAGE \_\_\_\_ OF \_\_\_\_

TIME / DURATION	DESCRIPTION	FOLLOW-UP REQUIRED	MEDIA MONITOR INITIALS
_:_ am/pm approx. length: sec./min.	_____ _____ _____	YES NO Follow-up Completed:	
_:_ am/pm approx. length: sec./min.	_____ _____ _____	YES NO Follow-up Completed:	
_:_ am/pm approx. length: sec./min.	_____ _____ _____	YES NO Follow-up Completed:	
_:_ am/pm approx. length: sec./min.	_____ _____ _____	YES NO Follow-up Completed:	
_:_ am/pm approx. length: sec./min.	_____ _____ _____	YES NO Follow-up Completed:	
_:_ am/pm approx. length: sec./min.	_____ _____ _____	YES NO Follow-up Completed:	
_:_ am/pm approx. length: sec./min.	_____ _____ _____	YES NO Follow-up Completed:	

## EMERGENCY NEWS MANAGER CHECKLIST

### 1. NOTIFICATION

- a. Upon notification of an ALERT or higher emergency classification level, call the Control Room and contact the STED, SED or Control Room Communicator to obtain the following information:
  - emergency classification level
  - reason for declaration (initiating condition)
  - time of declaration
  - release in progress (yes/no)
  - state and federal notifications completed
  - protective actions recommended
  - actions directed for site personnel

#### NOTE

If SSNS is operational, conduct a phased activation of the Media Center per Procedure ER 3.4, Seabrook Station News Services Operations.

- b. During normal business hours, ensure a site-wide e-mail message is sent via the LAN announcing the emergency classification level and actions directed for site personnel.
  - c. Update the Information Line with information regarding the emergency status.
  - d. Report to the Media Center. While traveling to the Media Center, contact the Associated Press (AP) in Concord, NH to inform them of the emergency status and pending Media Center activation. Request AP to issue a news media advisory.
- ### 2. ACTIVATION
- a. Enter through the main entrance of the Emergency Operations Facility and sign in with Security.
  - b. Upon entry into the Media Center:
    - sign in on the board
    - obtain the appropriate Media Center badge
  - c. Report to the Media Center Operations Room:
    - Initiate an Emergency Facility Log using form ER 2.0E.

## **EMERGENCY NEWS MANAGER CHECKLIST**

(Continued)

- d. As Media Center Support Staff arrive, brief them on the status of emergency conditions and any statements provided to the media and recorded on the information line.
- e. Decide whether to activate the Media Center. The Emergency News Manager may use discretion to declare the Media Center activated based on a determination that media representatives can be accommodated and inquiries addressed. The following minimum staff should be present to activate the Media Center:
  - (1) Emergency News Manager
  - (2) One (1) Media Center Support Staff
  - (3) One (1) Technical Advisor
- f. When the Media Center is prepared to receive members of the news media, declare the Media Center activated.
  - Notify the Response Manager
  - Notify the Security Coordinator that Media Center is prepared for media arrival
  - Inform AP of the operational status of the Media Center.
- g. Assign Media Center staff to the following functions/locations:
  - Assistant ENM (1)
  - Media Operations Room (2)
  - Media Relations Room (3)
  - Media Briefing Room (2)

Refer to Figure 2, Media Center Assignments, to track assignments.

### **NOTE**

The person designated as assistant may act on behalf of the Emergency News Manager in managing the Media Center operation during periods in which the ENM is briefing the news media or is otherwise unavailable.

- h. Assign one Technical Advisor to serve as the liaison with the EOF to ascertain plant status and Station response information. Assign the second Technical Advisor to remain in the Operations Room to assist with message development and media interface.
- i. Assign the administrative assistant to verify forms, prepare photocopier, and follow Figure 9, Media Center Document Distribution Matrix.

## **EMERGENCY NEWS MANAGER CHECKLIST**

(Continued)

- j. Ensure all designated functions are staffed and EOF Technical Advisors are in place and are prepared to support public information needs.
- k. Initiate strategy session with key staff to develop key message points and briefing outline.
- l. Ensure the briefing outline is reviewed with Media Center Support Staff and, as needed, the Information Line is recorded with updated information.
  - Provide the Information Line password to Media Relations Staff.
- m. Assign a member of the staff to serve as the principal interface for the Response Manager including attendance at Response Manager staff meetings.
- n. Following the development of the briefing outline, ensure that a formal news statement is also developed.
- o. Ensure security protection and access control for the Media Center have been established.

### **NOTE**

If additional security support is necessary, contact the Security Coordinator at the EOF.

- p. As state and federal public information officers arrive at the Media Center, establish contact, brief them on the emergency status and determine the status of state and federal public information response (e.g., news statements issued, status of rumor control, media contacts, EAS messages, Internet homepage information, etc.)
3. **STAFF BRIEFINGS**
- a. Ensure that the Media Center Staff is periodically briefed on the following:
    - emergency status
    - Seabrook Station key message points
    - media briefings
    - media / website monitoring
    - input from state rumor control
    - Emergency Alert System status
    - Public Alert and Notification System status

**EMERGENCY NEWS MANAGER CHECKLIST**  
(Continued)

**NOTE**

Ensure that the Media Center Staff obtains current information as soon as possible and has a clear understanding about material that is authorized for release to the news media.

- b. Ensure that the Response Manager is periodically briefed on emergency public information operations. As emergency conditions require, attend the Response Manager's briefings.
- c. Coordinate key message development and news briefing preparation with state and federal agency public information staff. (Refer to §5.9 of this procedure)

**4. NEWS STATEMENT DISSEMINATION**

- a. Review each news statement for accuracy, obtain concurrence from a Technical Advisor regarding the content, and sign the statement prior to Response Manager review and approval. (Protected: Ref. 6.6)
- b. Coordinate a review of the news statement with state and federal officials, if they are available.
- c. If there are few members of the press in attendance at the Media Center, instruct Support Staff in Media Relations Room to contact the AP Concord Bureau and read the news statement(s).
- d. Ensure news statement is distributed in accordance with Figure 9, Media Center Document Distribution Matrix.

**5. MEDIA BRIEFINGS AND INTERVIEWS**

- a. Establish a press briefing schedule as soon as possible with the state and federal media representatives.
- b. Ensure assigned Support Staff is preparing media briefing outlines containing:
  - \_\_\_\_\_ Status of Seabrook Station's emergency response and corrective actions associated with the plant conditions.
  - \_\_\_\_\_ New information to be announced during the briefing
  - \_\_\_\_\_ Resolution of inconsistencies in media coverage
  - \_\_\_\_\_ Follow-up on inquiries that went unanswered in previous press conference

**EMERGENCY NEWS MANAGER CHECKLIST**  
(Continued)

- \_\_\_\_\_ Input from media relations telephone inquiries obtained from Media Relations Support Staff.
- c. Determine the need for the Media Center Technical Advisor (or other subject matter expert) to participate in the press briefing.
  - d. Coordinate the review of the briefing outline with the Response Manager.
  - e. Ensure content is reviewed with Support Staff and other agency PIOs, if available.
  - f. Ensure that the approved briefing outline is provided to the staff in the Media Relations Room for use at the next media briefing.
  - g. Determine which agency representatives are prepared to participate in the briefing.
  - h. If other agencies are prepared to participate in the briefing, convene a pre-briefing meeting of all participating parties prior to each news briefing. During the meeting, ascertain the following:
    - \_\_\_\_\_ the status of the state's respective responses to the events
    - \_\_\_\_\_ identify new information to be announced during the briefing
    - \_\_\_\_\_ resolve inconsistencies and address concerns
    - \_\_\_\_\_ review reports or status of state rumor control response or any trends in inquiries.
    - \_\_\_\_\_ decide on the order of speakers, briefing length, graphics, and other protocol issues.
  - i. Ensure logistics and graphics are coordinated as required for news briefing with the Media Center Support Staff.
6. STAFFING/EQUIPMENT NEEDS
- a. Direct the EOF Administrative Services Coordinator to obtain additional staffing or equipment as necessary.
  - b. In a protracted response, determine the need for support external to Seabrook Station (e.g., FPL Group, industry experts, etc.) and obtain approval. Obtain support from the Administrative Services Coordinator for arrangements.
7. DEACTIVATION
- a. When the emergency has been terminated and media interest has subsided, obtain approval from the Response Manager to deactivate the Media Center.



**EMERGENCY NEWS MANAGER CHECKLIST**  
(Continued)

- b. Develop news statement addressing the deactivation and providing a follow-up source of information or location following the deactivation.
- c. Ensure a new Information Line message is recorded to reflect the current plant status and deactivation.
- d. Ensure that all emergency response documentation is submitted to the EOF Administrative Services Coordinator.

## MEDIA CENTER SUPPORT STAFF CHECKLIST

### 1. NOTIFICATION

Upon notification that an Alert or higher level emergency has been declared, proceed to the Media Center at the Emergency Operations Facility.

### 2. ACTIVATION

- a. Enter through main entrance of the EOF and sign in with Security.
- b. Upon entry into the Media Center,
  - sign in on board.
  - obtain the appropriate Media Center badge.
- c. Report to the Emergency News Manager, and receive assignment:
  - Assistant to the Emergency News Manager
  - Media Center Operations Room (Go to Section 4)
  - Media Relations Room (Go to Section 5)
  - Media Briefing Room (Go to Section 6)

### 3. ASSISTANT TO THE EMERGENCY NEWS MANAGER

- a. During periods where the Emergency News Manager is unavailable, periodically check with Media Center Staff on the status of their respective functions.
- b. Periodically review the Emergency News Manager checklist to ensure all functions are being performed.
- c. Ensure Media Center Support Staff is briefed on new information and key message points as they are developed.
- d. Ensure the Media Briefing Room is prepared for each news briefing and the appropriate graphics are displayed.

### 4. MEDIA CENTER OPERATIONS ROOM

As directed by the Emergency News Manager, perform the following:

- a. News Statement Writer

## **MEDIA CENTER SUPPORT STAFF CHECKLIST**

(Continued)

- (1) IMPLEMENT Supplemental Material 97-15 instructions for accessing news release and news briefing outline templates on the News Statement personal computer (PC).
  - (2) Using Supplemental Material 97-15, ESTABLISH an electronic file on the News Statement PC for approved news releases and news briefing outlines for the event.
  - (3) In conjunction with the Emergency News Manager, DETERMINE appropriate news statement format / briefing outlines and initiate development on the PC using Figures 5 and 6.
  - (4) OBTAIN technical information from the Media Center Technical Advisor for inclusion in written news statements.
  - (5) WRITE news statements / briefing outlines in accordance with Figures 5 and 6.
  - (6) OBTAIN review and approval of technical content of the written news statement / briefing outlines from the Media Center Technical Advisor.
  - (7) OBTAIN review and approval of the written news statement / briefing outline from the Emergency News Manager.
  - (8) At the direction of the Emergency News Manager, OBTAIN Response Manager approval of the written news statement.
  - (9) PROVIDE approved written news statements to the Media Center Administrative Support staff for copying and distribution.
  - (10) MAINTAIN approved written news statements in the electronic file.
  - (11) ACCESS Associated Press (AP) Wire Service on the internet PC.
  - (12) MONITOR AP wire stories on the event.
  - (13) REVIEW the content of the AP stories and consider distribution of news stories within the Media Center.
  - (14) SUBSTITUTE for the Emergency News Manager at Response Manager conferences and PROVIDE updates on status of official news statements, media center briefings, and areas of media interest.
- b. Media Monitor
- (1) ACTIVATE media monitoring equipment in the Media Center Operations Room using Figure 8.

**MEDIA CENTER SUPPORT STAFF CHECKLIST**  
(Continued)

- (2) Using Supplemental Material 98-05, ACTIVATE Internet PC.
- (3) ACCESS the NRC web site using the internet PC.
- (4) MONITOR press information issued by NRC (or other pertinent state and federal government agency) via the internet PC.
- (5) MONITOR TV and radio coverage of the event in accordance with Figure 8.
- (6) RECORD on tape cassette any TV news coverage of the event.
- (7) DOCUMENT coverage on form ER 3.5D.
- (8) DOCUMENT any discrepancies between TV and radio coverage and written or verbal Seabrook Station news statements.
- (9) IDENTIFY and DOCUMENT any biased, misleading or inaccurate news trends or rumors.
- (10) NOTIFY the Emergency News Manager of discrepancies between reported news and written or verbal Seabrook Station news statements, biased or misleading news coverage, inaccuracies and reported rumors.
- (11) Periodically BRIEF the Emergency News Manager on the overall accuracy and tone of news stories on the event.

**5. MEDIA RELATIONS ROOM**

As directed by the Emergency News Manager, perform the following:

- a. BECOME familiar with status of emergency events and contents of written news statements.
- b. DETERMINE with the Emergency News Manager or designee, information that may be given to news media representatives via the Media Relations telephone line.
- c. UPDATE the Information Line using Figure 3.
- d. STAFF the Media Relations telephones using Figure 4.
- e. MAINTAIN a log of media inquiries using form ER 3.5C.
- f. UPDATE the Employee Information Line using Supplemental Material 98-08, as requested by the EOF staff.

**MEDIA CENTER SUPPORT STAFF CHECKLIST**  
(Continued)

- g. FORWARD requests for media access to emergency response facilities, interviews with Seabrook Station management and other special requests from the media to the Emergency News Manager for disposition.

6. MEDIA BRIEFING ROOM

As directed by the Emergency News Manager, perform the following:

- a. BECOME familiar with the status of emergency events and contents of written news statements.
- b. TAKE CHARGE of the Media Briefing Room operations.
- c. ENSURE all equipment is operable and the briefing room is prepared for receiving media representatives and conducting news briefings using Figure 7.
- d. ENSURE sufficient copies of approved news statements by Seabrook Station, New Hampshire and Massachusetts, including EAS messages, are available for media representatives in the Media Briefing Room.
- e. ENSURE background informational materials (e.g., New Hampshire and Massachusetts public information materials) are available to be provided to the media in response to inquiries.
- f. GREET media representatives arriving at the Media Center in accordance with Figure 7.
- g. ENSURE media representatives receive the most recent approved Seabrook Station news statement.
- h. MAINTAIN presence in the Media Briefing Room between formal news briefings to be point of contact with the media representatives.
- i. ANSWER media inquiries and PROVIDE requested background information when the Emergency News Manager is not present in the Media Briefing Room.
- j. ATTEND formal news briefings by the Seabrook Station Emergency News Manager, New Hampshire spokesperson, and Massachusetts spokesperson.
- k. ENSURE access control to the Media Briefing Room is maintained during news briefings.

**MEDIA CENTER SUPPORT STAFF CHECKLIST**  
(Continued)

- l. During formal news briefings, DOCUMENT any media questions that were not answered, to which answers were deferred pending acquisition of further information or that were answered inconsistently with other official information.
  - m. REVIEW the need for follow-up information or clarification with the Emergency News Manager following the formal news briefing and ensure follow-up with the media representatives in the Media Briefing Room.
7. SPECIAL MEDIA REQUESTS
- Coordinate responses to special media requests with the Emergency News Manager. Requests for emergency response facility or station tours shall be approved by the Response Manager before being granted.
8. DEACTIVATION
- Submit all emergency response documentation to the Emergency News Manager.

## TECHNICAL ADVISOR CHECKLIST

### 1. NOTIFICATION

Upon notification that an Alert or higher level emergency has been declared, proceed to the Media Center at the Emergency Operations Facility.

### 2. ACTIVATION

- a. Enter through main entrance of the EOF and sign in with Security.
- b. Upon entry into the Media Center,
  - sign in on board.
  - obtain the appropriate Media Center badge.
- c. Report to the Emergency News Manager and receive assignment:
  - EOF Liaison (Section 3)
  - Media Center (Section 4)
- d. Obtain the Technical Advisor Emergency Response Position Manual and a copy of the SSER manual.

### 3. EOF LIAISON

- a. Establish contact with the EOF technical staff.
  - Obtain plant status and current MPCs digital time.
  - Refer to Procedure ER 1.1, Classification of Emergencies, for assistance in evaluating plant conditions.
- b. Routinely obtain information from the EOF technical staff and document discussions using form ER 2.0E, Emergency Facility Log.
- c. Brief the Emergency News Manager and Media Center Technical Advisor on plant conditions and related information.

#### NOTE

Information received from the EOF technical staff is gathered for the sole purpose of providing a perspective on, and interpretation of, technical conditions at the plant to the Emergency News Manager. This information may be released to the press only if it further explains existing approved news releases or statements.

**TECHNICAL ADVISOR CHECKLIST**  
(Continued)

**4. MEDIA CENTER**

- a. Assist Emergency News Manager and Media Center Staff with key message development and briefing outlines.
- b. Verify technical accuracy of news statements and briefing outlines.
- c. Provide guidance to the Emergency News Manager on technical interpretations of plant conditions.
- d. Direct the Media Center Support Staff in the selection of appropriate plant system graphics for use in news briefings.
- e. When requested by the Emergency News Manager, participate in news briefings. Refer to Section 5.0 of this procedure for guidance on news briefings and interviews.
- f. Assist Media Center staff in addressing rumors and misinformation.

**5. DEACTIVATION**

Submit all emergency response documentation to the Emergency News Manager.



**SEABROOK STATION  
ADMINISTRATIVE PROCEDURE**

**Assembly Area Operations**

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**ER 3.6**

**Rev. 19**

SORC Review: 03-007 Date: 2-12-03

Effective Date: 2-21-03

<b>EXPIRATION DATE</b> <u>2-21-05</u>
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Procedure Owner:  
S. Perkins-Grew

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## **1.0 OBJECTIVES**

This procedure specifies the actions to be taken at the onsite assembly area.

## **2.0 RESPONSIBILITIES**

### **2.1 Administrative Services Coordinator**

Ensures all immediate ERO positions are filled, develops a shift schedule for 24-hour staffing, and authorizes deactivation of the assembly area. Actions are specified in Procedure ER 3.3, Emergency Operations Facility Operations.

### **2.2 Assembly Area Coordinator (normally filled by a backup Security Coordinator responder)**

Responsible for overall direction of the assembly area and for providing the manpower required to support the immediate needs of the emergency facilities.

### **2.3 Assembly Area Assistants (designated by the Assembly Area Coordinator)**

Identifies available manpower and instructs second-shift personnel on future duty requirements.

### **2.4 Primary, Subject-to-Call and Red Team Secondary Responders**

Immediately report to their emergency response locations upon notification of an ALERT, SITE AREA EMERGENCY (SAE), or GENERAL EMERGENCY (GE). Notification may be accomplished by either Station page announcement, Station evacuation siren, radio pager, or the Community Alert Notification (CAN) System.

### **2.5 White Team and Blue Team Secondary Responders**

Report to the assembly area upon notification of an ALERT, SAE, or GE during normal duty hours or respond to CAN instructions during off-duty hours.

### **2.6 Maintenance Coordinator**

Ensure that the position of Assembly Area Coordinator is filled. Actions are specified in Procedure ER 3.1, Technical Support Center Operations.

## **3.0 PRECAUTIONS**

1. The assembly area is only activated during normal duty hours (0700 -1630). The assembly area consists of several designated rooms in the Inprocessing Center (see Figure 1, Assembly Area Layout).
2. Workers on shift are to report to their emergency response locations if they are initial responders or report to the assembly area if they are backup responders.
3. At the Alert or higher, Emergency New Managers may proceed at their discretion to either the Media Center or the Assembly Area.

#### 4.0 PREREQUISITES

An ALERT, SITE AREA EMERGENCY or GENERAL EMERGENCY has been declared in accordance with ER 1.1, Classification of Emergencies.

#### 5.0 ACTIONS

##### 5.1 Normal Duty Hours (0700 - 1630 Hours)

###### 5.1.1 Assembly Area Coordinator

1. Obtain the Assembly Area Coordinator tote box and other supplies from the equipment and supplies location indicated in Figure 1.
2. Establish a work station at the location shown in Figure 1, Assembly Area Layout.
3. Take "A frame" signs from storage location shown on Figure 1 and position them in the hallway at the locations shown on Figure 1.
4. Obtain the RO-2 survey meter from the storage location.
  - a. Turn the RO-2 meter on.
  - b. Check the meter battery by switching the unit to "Bat 1" and "Bat 2."
  - c. If the unit indicates low battery, notify the Health Physics Control Point to obtain a replacement meter.
  - d. Switch the meter to "zero" and adjust as necessary. If the meter fails to respond properly, notify the Health Physics Control Point to obtain a replacement meter.
  - e. Obtain the source locker key from the Assembly Area Coordinator's tote box.
  - f. Go to the RO-2 check source locker in the Whole Body Count Room. The source locker is a storage cabinet posted with a rad materials label.
  - g. Open the source locker and obtain the gamma source labeled "RO-2 source."
  - h. Switch the RO-2 meter to the 5x scale.
  - i. Place the source under the closed window.
  - j. If the meter responds, return the source to its storage locker, lock the storage locker and return the key to the tote box.
  - k. If the meter fails the response check, notify the Health Physics Control Point to obtain a replacement meter.

1. Keep the RO-2 meter turned on at your work station until the Assembly Area is deactivated.
5. Designate Assembly Area Assistants and brief these individuals on their responsibilities.
6. Designate a Communicator. Instruct this individual to use Form ER 2.0E, Emergency Facility Log, to document all communications.
7. Contact the Maintenance Coordinator at the TSC and determine any immediate manpower needs. (The phone number is in the TSC section of the Emergency Response Telephone Directory.)
8. Obtain from all personnel at the assembly area the names and phone numbers at which they can be reached using the second shift column of Form ER 3.3M, ERO Staff Planning.
9. For personnel being dispatched to onsite facilities:
  - a. inform destination facility of personnel being dispatched,
  - b. using Form ER 2.0E, log name, destination, purpose and time personnel are dispatched from the assembly area,
  - c. instruct personnel to sign in on the destination facility, Form ER 3.3M, ERO Staff Planning, and to inform the assembly area of arrival, and
  - d. remove personnel from the assembly area, Form ER 3.3M, ERO Staff Planning.
10. If not already done, establish communications with the Administrative Services Coordinator at the EOF. (The phone number is in the EOF section of the Emergency Response Telephone Directory.)
11. Provide necessary manpower support as identified by the Administrative Services Coordinator. Personnel in the assembly area shall NOT be released until additional personnel support and second-shift needs have been determined by the Administrative Services Coordinator.

### CAUTION

**Consider the following before completing Step 5.1.1.12: if a radiological release is in progress, personnel in the Assembly Area may be directed, based on wind direction, to the remote monitoring area prior to being sent home. Coordinate with the Health Physics Coordinator in the TSC for instructions to be given.**

**A radiological release may cause the DCA-3090 area monitor mounted on the wall in the corridor to rooms 1 and 2 to alarm. If the area monitor alarms, do the following:**

- 1. Record the area monitor reading.**
  - 2. Record the reading on the RO-2 survey meter with the window open.**
  - 3. Record the reading on the RO-2 survey meter with the window closed.**
  - 4. Report the three readings to the Health Physics Coordinator.**
  - 5. Obtain instructions from the Health Physics Coordinator before dispatching or releasing any personnel from the Assembly Area.**
12. Designate and provide the Assembly Area Assistants with instructions (e.g., report time) to be given to personnel prior to their release from the assembly area using Figure 3, Instructions to Personnel Prior to Release from the Assembly Area.
  13. Hold all personnel until the Administrative Services Coordinator authorizes the deactivation of the assembly area. Release all personnel at the same time.

### NOTE

In the event that the emergency is declared during an outage, an outage management representative will provide you with an accountability listing and contact telephone number listing for outage workers. Transmit this information to the Administrative Services Coordinator.

14. Ensure that all copies of Form ER 3.3M are transmitted (e.g., telecopied) to the Administrative Services Coordinator upon assembly area deactivation.

#### 5.1.2 Assembly Area Assistant

1. Identify each individual by instructing personnel to enter their name and phone number at which they can be reached using the second shift column of Form ER 3.3M, ERO Staff Planning.
2. All extra maintenance personnel should identify their discipline (e.g., mechanic, electrician) along with their name, and phone number on page 1 of Form ER 3.3M.
3. Provide the Assembly Area Coordinator with Form ER 3.3M as soon as all positions have been filled. Continuously update the form as additional personnel report to the assembly area.

4. Use Figure 3 to provide those personnel being released, as identified by the Assembly Area Coordinator, with instructions on reporting responsibilities and egress routes to be taken.

5.1.3 Primary Responders, Subject-to-Call Responders and Red Team Secondary Responders

Immediately report to their ERO duty station when notified.

5.1.4 White Team and Blue Team Secondary Responders

1. Report to the assembly area when notified during day shift (refer to Figure 1).
2. Record names and phone numbers at which they can be reached on Form ER 3.3M as directed by the Assembly Area Assistants.
3. Remain on standby and wait for further direction. This may include supplementing the initial response organization or being sent home.

5.2 **Off-Duty Response (1631 - 0659 Hours)**

5.2.1 Primary Responders, Subject-to-Call Responders and Red Team Secondary Responders

1. Follow the instructions received on the Station Gai-tronics announcement, pager message, or CAN.
2. Report to your respective duty station.

5.2.2 White Team and Blue Team Secondary Responders

1. Follow the instructions received from CAN.

**CAUTION**

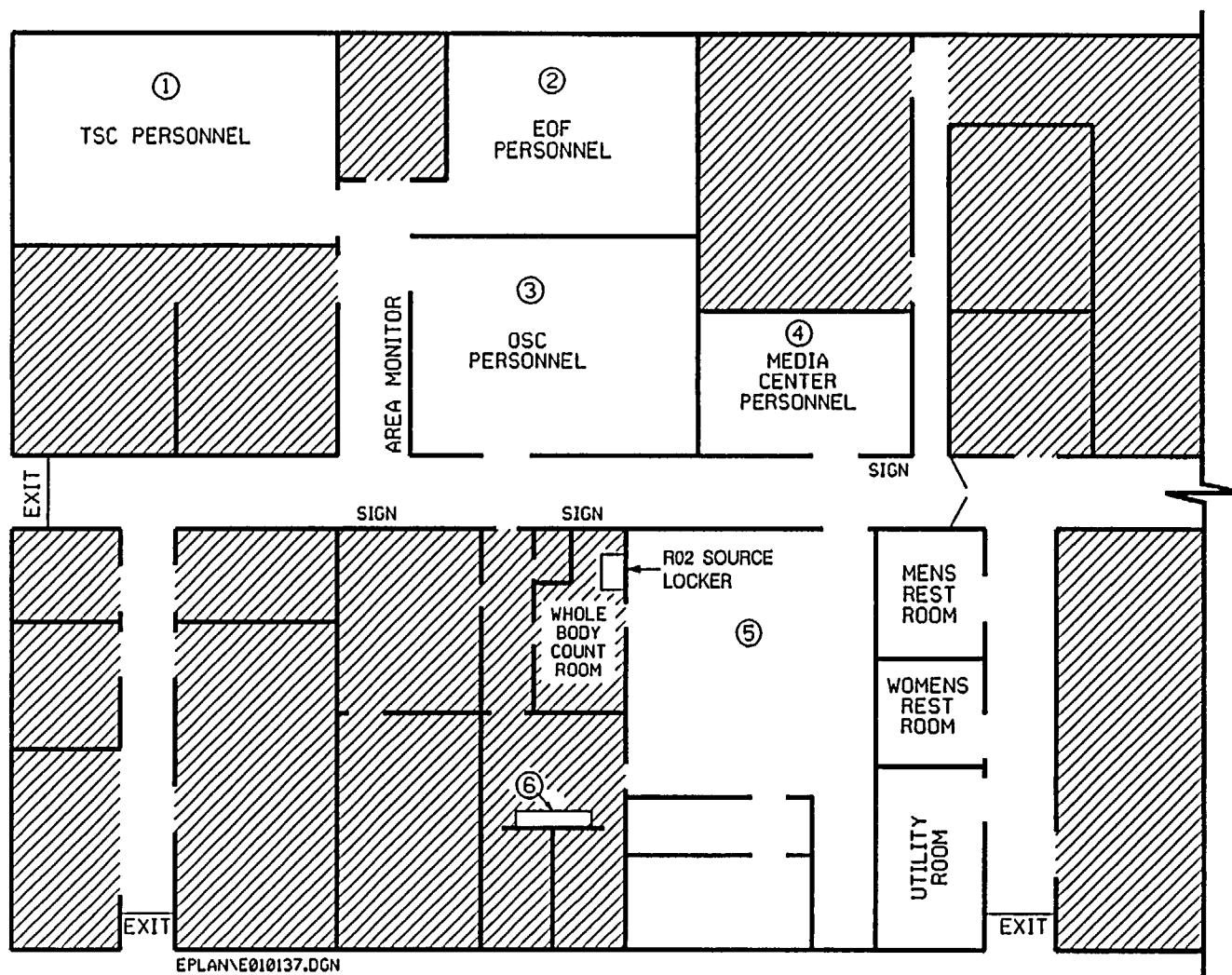
**Personnel reporting following CAN notification must report to the EOF prior to assuming their assignment at the station.**

2. Any responders who must leave their homes prior to being contacted by CAN or the Administrative Services Coordinator should listen to announcements on local radio stations for ERO staffing instructions.
3. Report to the EOF prior to assuming the assigned ERO position when requested to do so by the Administrative Services Coordinator.

6.0 **REFERENCES**

1. ER 1.1, Classification of Emergencies
2. ER 3.1, Technical Support Center Operations
3. ER 3.3, Emergency Operations Facility Operations
4. ER 2.0, Emergency Notification Documentation Forms Procedure

FIGURE 1  
ASSEMBLY AREA LAYOUT



LEGEND

- |          |  |
|----------|--|
| ① ROOM 1 | ⑤ ASSEMBLY AREA COORDINATOR'S WORKSTATION  |
| ② ROOM 2 | ⑥ LOCATION OF ASSEMBLY AREA EQUIPMENT AND SUPPLIES/ALTERNATE COORDINATOR'S WORKSTATION |
| ③ ROOM 3 | ▨ AREAS WHICH MAY BE USED FOR ANY EXCESS PEOPLE BUT NOT A PRIMARY ASSEMBLY AREA        |
| ④ ROOM 4 |  |



**Figure 2**  
**Map to the EOF and Remote Monitoring Area**

**DIRECTIONS**

**EMERGENCY OPERATIONS FACILITY  
AND REMOTE MONITORING AREA**

TAKE I-95 NORTH TO PORTSMOUTH.  
TAKE SPAULDING TURNPIKE (exit 4 ) TO  
GOSLING RD. EXIT (exit 1), TURN RIGHT  
ONTO GOSLING ROAD. PROCEED ¼ MILE  
BEYOND WOODBURY AVENUE.

**FOR EMERGENCY OPERATIONS FACILITY:**

TURN LEFT INTO NEWINGTON STATION, FIRST  
LEFT INTO EOF PARKING LOT.

**FOR REMOTE MONITORING AREA:**

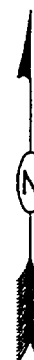
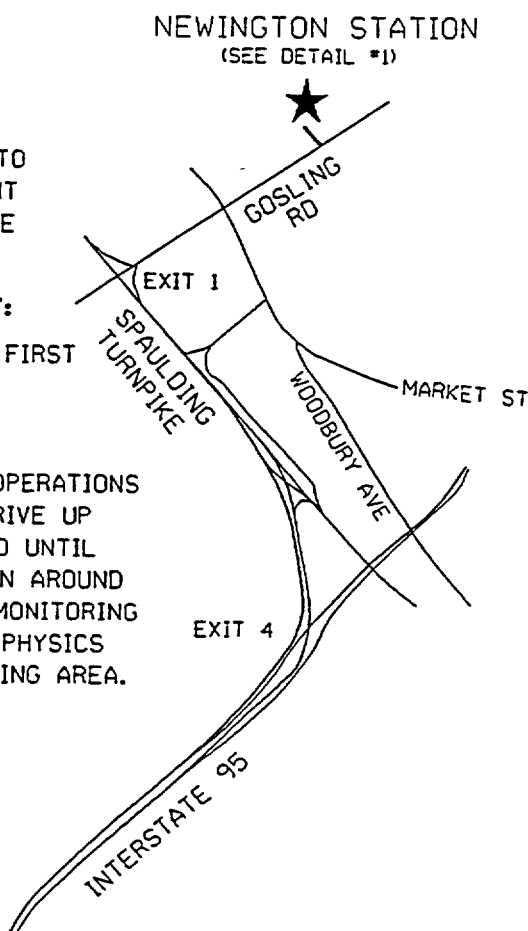
TAKE FIRST RIGHT PAST EMERGENCY OPERATIONS  
FACILITY GOSLING ROAD ENTRANCE. DRIVE UP  
HILL THROUGH PAVED AREA DOWN ROAD UNTIL  
THE OIL TANK FARM IS REACHED. TURN AROUND  
AND RETURN TO THE PAVED VEHICLE MONITORING  
AREA IN SINGLE FILE. AWAIT HEALTH PHYSICS  
INSTRUCTIONS TO ENTER THE MONITORING AREA.

**FROM MASSACHUSETTS:**

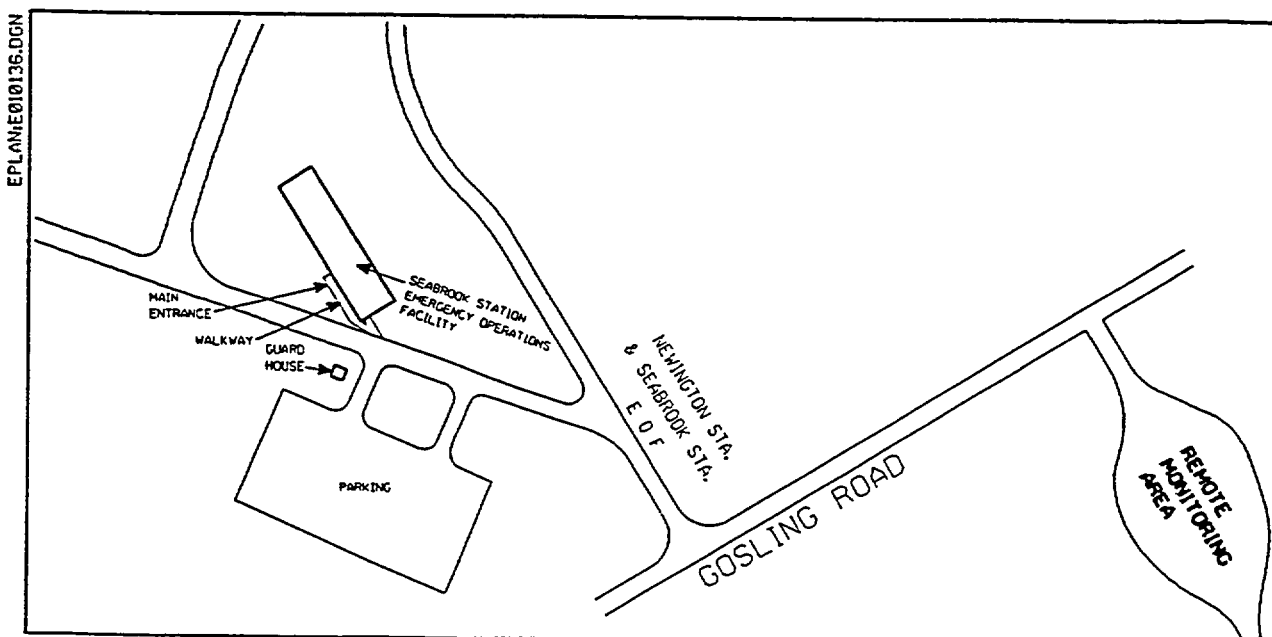
ACCESS I-495 NORTH TO I-95 NORTH.  
THEN PROCEED AS ABOVE.

**FROM MANCHESTER:**

ACCESS ROUTE 101 EAST  
TO I-95 NORTH THEN PROCEED  
AS ABOVE.



**DETAIL #1**



### Figure 3 Instructions to Personnel Prior to Release from the Assembly Area

Provide the following information to all ERO members prior to their release from the assembly area:

1. Go home and "stand by" your telephone.

#### NOTE

Do not call unless it is necessary.

2. Listen to announcements on local radio stations for staffing instructions.
3. If you must be away from your telephone, call (603) 433-1539 and identify how you can be reached. If you cannot get through to this number, call (603)431-1704 and leave a message.
4. If you need information on shift status, call (603) 433-1539 . If you cannot get through to this number, call the Employee Information Line at (603)433-5703.
5. If you live in the EPZ and are evacuated, call the Employee Information Line - (603) 433-5703 - for further instructions. Accommodations will be provided to you for the duration of the emergency or if you are going to some place other than instructed, identify how you can be reached.
6. Personnel assigned to the second shift of the facility marked below, report to the EOF at \_\_\_\_\_ hours. If you need directions to the EOF, refer to Figure 2 of this procedure.  

<input type="checkbox"/> Control Room	<input type="checkbox"/> Technical Support Center
<input type="checkbox"/> Operational Support Center	<input type="checkbox"/> Emergency Operations Facility
<input type="checkbox"/> Media Center	
7. Follow any further instruction when telephoned by either the Administrative Services Coordinator or by CAN.

#### Local Radio Stations

	<u>AM Radio</u>	<u>FM Radio</u>
Massachusetts	1450	92.5 93.7
New Hampshire	1540	97.5

## Figure 4 Summary of Changes

### **Rev. 19:**

*In §5.1, added a step for the Assembly Area Coordinator to obtain a position tote-box (CR 02-12869).*

*In §5.1, identified changed location of RO-2 check source locker key and added direction to ensure that the check source is secured after use (CR 02-15509).*

*In §5.1, removed note referencing assembly of outage personnel in the OSB 2<sup>nd</sup> floor cafeteria.*

*On Figure 1, changed location of the check source locker key.*

### **Rev. 18:**

In §2.0 deleted references to a backup Administrative Services Coordinator or a backup Maintenance Coordinator in role of Assembly Area Coordinator. The Assembly Area Coordinator position will be filled by a backup Security Coordinator.

In §5.1 clarified the Assembly Area Coordinator instructions for locating the RO-2 check source and posting facility signs.

Updated Figure 1, Assembly Area layout.

In Figure 3 identified backup phone numbers in steps 3 and 4.

**SEABROOK STATION**  
**ADMINISTRATIVE PROCEDURE**

**Radiation Protection During Emergency Conditions**

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**ER 4.3**

**Rev. 22**

SORC Review: 03-007 Date: 2-12-03

Effective Date: 2-21-03

<b>EXPIRATION DATE</b> <u>2-21-05</u>
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Procedure Owner:  
S. Perkins-Grew

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## **1.0 OBJECTIVES**

This procedure specifies the onsite radiation protection practices implemented following the activation of the Radiological Emergency Plan.

## **2.0 RESPONSIBILITIES**

### **2.1 Radiological Controls Coordinator (RCC)**

Directs Health Physics activities from the Operational Support Center (OSC) during an emergency. These practices will be implemented to maintain personnel exposure as low as reasonably achievable (ALARA). In an emergency situation some Health Physics practices may be different from the standard. The RCC will use his best judgment in an emergency situation to determine if such practices are included in standard procedures or not.

### **2.2 Health Physics Coordinator (HPC)**

Coordinates Health Physics activities in the Technical Support Center (TSC), including job planning, monitoring TSC radiological conditions, communicating in-plant and near-plant radiological conditions to the Emergency Operations Facility (EOF) and advising the Site Emergency Director. The RCC will perform the functions designated in this procedure for the HPC until that position is filled.

### **2.3 Health Physics Technicians**

Carry out emergency actions as directed by the RCC and outlined in the emergency procedures.

### **2.4 Short Term Emergency Director/Site Emergency Director**

Authorizes emergency dose limits exceeding 4,500 mrem/current year.

## **3.0 PRECAUTIONS**

Onsite radiological conditions following an emergency event may be radically different from those associated with normal station operations and maintenance.

## **4.0 PREREQUISITES**

An Alert, Site Area Emergency, or a General Emergency has been declared in accordance with Procedure ER 1.1, Classification of Emergencies.

## **5.0 ACTIONS**

### **5.1 Operational Support Center Control Activities**

#### **5.1.1 Access Control**

1. The Health Physics control point remains the primary access point to radiologically controlled areas, including those resulting from the emergency event.



2. The Radiological Controls Coordinator (RCC) directs the radiation protection activities at the Health Physics control point.
3. The RCC assists the Operational Support Center Coordinator in implementing emergency response and mitigating actions.
4. The RCC determines the need to alter the normal access controls provided by the radiation work permits and standing radiation work permits. The RCC initiates the use of Emergency Team Briefing/Debriefing Form, ER 3.2F, and the Emergency Exposure Tracking, Figure 5.
5. The RCC directs and assigns Health Physics personnel as appropriate in support of emergency actions.
6. Following an evacuation, the RCC designates a new Radiologically Controlled Area (RCA) access point with acceptable radiological conditions and assigns personnel as appropriate.

#### 5.1.2 Radiation Exposure Control

1. Normal Process
  - a. The issuance and use of TLD dosimetry devices is documented on Figure 5, Emergency Exposure Tracking.
  - b. Dose rate indicating devices or alarming dosimeters shall be used for actions that require entry to unsurveyed areas, areas with dose rates that may rapidly or significantly change and areas where insufficient light prevents viewing pocket dosimeter readings.
  - c. Consult with the Radiological Controls Coordinator on dosimetry requirements for each team to be deployed into the plant.
  - d. If SRPDs are issued to OSC personnel or personnel deployed into the plant, the RCC will instruct personnel to read SRPDs at appropriate frequencies based on prevailing radiological conditions.
  - e. Initiate a Figure 5 form for each team member.
  - f. The requirements of 10 CFR 20.1201 are not applicable for the assignment of emergency exposure extensions.
  - g. The RCC may authorize administrative limits up to 4,500 mrem/current year without approval of the Short Term Emergency Director (STED) or Site Emergency Director (SED).
2. Emergency Doses Above 10 CFR 20.1201 Limits
  - a. Approval for exceeding 4,500 mrem/current year shall be obtained from the STED or SED prior to initiating any action that has the potential to result in such exposure.

- b. The emergency dose limits and the criteria for authorizing their use are contained in Figure 2, Emergency Dose Limits.
  - c. Guidance on emergency occupational dose is listed in Figure 3, Dose Guidance.
  - d. The RCC or HPC initiates Figure 4, Emergency Dose Limit Extension, and confers with the STED or SED to determine appropriate action.
  - e. The STED or SED may issue a blanket emergency dose limit authorization if radiation levels at the Station will cause emergency center personnel to exceed normal limits before protective action is taken in accordance with Figure 1, Emergency Center Protective Action Criteria.
  - f. Radiation exposure incurred from obtaining and analyzing pass samples should not exceed the limits of 10 CFR 20.1201. Refer to Figure 8 for guidance on allowing sampling from the normal sample sink versus using PASS survey team.
3. Emergency Plan Radiation Work Permit (Eplan RWP)
- a. The Eplan RWP is maintained in standby for emergency use.
  - b. The purpose of the EPlan RWP is to track dose and control radiation exposure during declared radiological emergencies.
  - c. The EPlan RWP has multiple tasks for various electronic alarm setpoints.
  - d. The EPlan RWP is issued and on HOLD.
  - e. The RCC will determine when to use the EPlan RWP and to take it off HOLD.
  - f. Use of the EPlan RWP may require modification of MGAC dose limits based on which task is selected by the RCC and the assigned individuals' current accumulated dose.
  - g. Dose alarms for some tasks may require emergency dose limit extensions per ER 4.3, Section 5.1.2, sub-section 2.

#### 5.1.3 Egress Control

- 1. If radiological conditions permit, the Health Physics control point remains the primary RCA egress location.
- 2. Unless directed by the RCC, the following RCA egress controls are used during emergency conditions:
  - a. Whole body frisking,
  - b. Portal monitor checks,

- c. Applicable debriefings, and
  - d. Special dosimetry/equipment return.
3. Based on RCC direction, Health Physics will establish alternate egress control location(s) including contamination monitoring and dose information retrieval.
  4. Contamination monitoring may be hindered by background radiation levels.

#### 5.1.4 Radioactive Material/Contamination Control

1. Under emergency conditions, radioactive material and contamination controls are established at a level commensurate with the urgency and complexity of required actions.
2. The RCC and assigned Health Physics personnel determine controls either at the emergency team briefing or at the worksite.
3. Intentional movement of radioactive material outside the RCA requires approval and/or escort by Health Physics personnel.

#### 5.1.5 Respiratory Protection

1. When selecting appropriate respiratory protection equipment, the RCC evaluates the benefit of respiratory protection versus the radiological hazard and interference with performing the required action.
2. The RCC will consider the criteria in Figure 1 to determine when emergency response personnel should wear a respirator. Respirators and filter canisters for emergency use are located in the OSC. A supply of this equipment is also available in the Security Building should the RCC determine that use of respiratory protection equipment is appropriate for Security personnel stationed or deployed from there.
3. For certain critical missions (e.g., life saving), the RCC may authorize use of a respirator by emergency response personnel who have not qualified for respirator use under the station respiratory protection program. In each case, the RCC will screen the emergency worker using the screening questions in Figure 7. Any "YES" answer to a screening question will preclude use of respirator by the individual emergency worker.

4. The RCC determines the need to dispense potassium iodide (KI) tablets to emergency response personnel based upon a projected or actual thyroid committed dose equivalent (CDE)  $\geq 5$  rem. The thyroid CDE  $\geq 5$  rem threshold is based on the FDA recommended threshold for ingestion of KI by pregnant and lactating women (Ref. 6.17). Consider removing emergency response personnel who meet this description from the ERO.

- A quick method to calculate the thyroid CDE using an RM-14 or equivalent count rate meter is as follows:

Place a frisker probe on the collection face of the cartridge and determine corrected counts per minute (ccpm).

$$\text{Thyroid CDE (rem)} = \frac{(\text{net cpm}) \times (\text{stay time in hrs})}{(\text{vol ft}^3)} \times 5.2\text{E-3} \frac{\text{rem-ft}^3}{\text{cpm-hrs}}$$

5. When KI tablets are issued, thyroid intakes will be estimated by whole body counting.
6. Administering KI after an uptake may limit thyroid CDE depending on time after exposure.
7. Caution emergency response personnel of potential KI side effects if they are allergic to shellfish or iodide. Emergency response personnel who know they have such allergies should be replaced in lieu of directing them to ingest KI.
8. Log any issuance of KI tablets on KI Issue Log, Figure 6.

#### 5.1.6 Use of the Radiation Data Management System

1. The RCC monitors the Radiation Data Management System at the OSC.

#### NOTE

RDMS users should be aware that during elevated radiation conditions, the automatic performance of routine check source tests by the system could be inhibited per Reference 16.

2. As radiation levels change due to emergency conditions, the RCC may authorize new alarm setpoints, inputs required commands and notifies the Control Room of changes.
3. Not all monitor alarm setpoints can be changed at the RDMS console; these monitors will be set by the Control Room.

## **5.2 Protected Area Radiological Surveillance and Control**

### **5.2.1 Security Gatehouse Functions**

1. All personnel exiting the protected area through the Security Gatehouse shall use the portal monitors to check for contamination if background radiation levels permit.
2. If an individual alarms a portal monitor twice, indicating the presence of contamination, Security shall notify the RCC and shall request the individual to remain on the protected-area side of the portal monitor until Health Physics personnel arrive.
3. If site evacuation has been ordered, contaminated individuals may be directed to the Remote Monitoring Area.
4. Security notifies the RCC if the background at the Security Gatehouse is causing spurious portal monitor alarms or if an alarm has occurred on local area monitors.
5. The RCC directs Health Physics personnel to respond to the Gatehouse or forward security command post as necessary.
6. Security notifies the RCC of alternate protected area access and egress points established due to site evacuation.
7. The RCC ensures that appropriate contamination monitoring equipment is assigned to the security location.

### **5.2.2 Assembly Area Monitoring**

1. The RCC assesses the need to monitor personnel at assembly areas and onsite emergency facilities.
2. The RCC assigns Health Physics personnel to monitor the assembly areas for airborne radioactivity and background radiation.
3. Assembled personnel perform self-monitoring for contamination as directed by the RCC.
4. The Health Physics Coordinator advises the Technical Services Coordinator and/or Site Emergency Director of appropriate protective actions for the assembly areas.
5. The Health Physics Coordinator specifies the primary and alternate evacuation routes if such site evacuation is necessary based on actual or potential radiological conditions.
6. The RCC assigns Health Physics personnel to supervise monitoring of station evacuees at the Remote Monitoring Area.

5.2.3 General Radiation/Contamination Surveillance

1. The RCC directs Health Physics personnel to monitor general station areas based on actual and potential radiological releases.
2. The RCC implements increased controls and monitoring as necessary, including placement of area TLDs, frisking stations and step-off pads.

5.3 **In-Plant Surveillance and Control**

5.3.1 Radiation/Contamination Surveys and Posting

1. The routine surveillance requirements of Procedure HD0958.17, Performance of Routine Radiological Surveys, are suspended until the RCC determines Station conditions are stable and general area surveillance is feasible.
2. The RCC establishes the emergency survey requirements based on actual or potential radiological conditions (i.e., refer to Post-Accident Engineering Manual for projected dose rates and guidance).
3. The RCC notifies the Operational Support Center Coordinator and Health Physics Coordinator of abnormal radiation survey results and advises on precautionary measures to control exposure during required entry to affected areas.
4. To the extent feasible, the RCC directs the posting of contamination areas, high radiation areas and isolation of extremely high radiation areas.

5.3.2 Airborne Radioactivity Monitoring, Sampling and Posting

1. Due to the potential for very high airborne activity along with possible high radiation levels, the normal sampling volume used may be reduced.
2. The RCC will develop a program for placement and changeout of low volume air samplers to monitor the possible migration of airborne radioactivity.
3. Battery-powered air samplers are used for grab samples when electrical power is not available.
4. Consider the use of silver zeolite for radioiodine sampling for speed of analysis when noble gas interference is suspected or when the gamma spectroscopy system is unavailable (Protected: Ref. 6.10).

**CAUTION**

**Do not use silver zeolite cartridges in explosive environments.**

#### 5.4 DAC-Hour Accountability

1. The RCC directs the tracking of Derived Air Concentration-hours (DAC-hours) based on the authorized RCA access mode.
2. If necessary, whole body counting will be used to assess accumulated DAC-hours.

#### 5.5 Dose Assessments

##### 5.5.1 External Dosimetry Evaluations

1. The RCC will direct the special processing of an individual's TLD.
2. An EOF Dosimetry Return Card (ER 3.3, Figure 14) shall be completed for dosimetry returned to the EOF. Special requirements for readout or dose notification shall be indicated under the "Comments" section.
3. The dosimetry lab will forward a copy of or transmit all special processed TLD results to the RCC.
4. Emergency doses for individuals in excess of the annual limits of 10 CFR 20.1201(a) are to be subtracted from the current year planned special exposure limits for the individual.

##### 5.5.2 Exposure Tracking

1. Determine initial dose information from the most recent Exposure Status Report, FINIS-RPMS or from YTD Transit Card (ER 3.3, Figure 13), for previous unmonitored workers.

Using FINIS-RPMS to determine the current year to date (WBYTD) exposure for an individual:

RPEWBSUM[SS#, Security Badge (4 digit) or Name]

2. If the use of RWP/SRWP sign-in sheets is not practicable, personnel dose will be tracked using the Emergency Exposure Tracking, Figure 5.
3. The RCC will send the dosimetry of personnel accumulating emergency exposures of 4,500 mrem or greater to the EOF with a completed EOF Dosimetry Return Card (ER 3.3, Figure 14) for TLD processing.

##### 5.5.3 Extremity Monitoring

1. The possibility of high localized areas of radiation in equipment and the reactor coolant increases significantly during many accidents. Extremity monitoring should be strongly considered for any maintenance/sampling evolutions.

2. Used extremity dosimeters along with a zeroed low- and high-range SRPD shall be returned to the Dosimetry Records personnel in the EOF for TLD readout. The location of the extremity dosimeter (e.g., left hand, right hand) shall be identified in the "Comments" section of the EOF Dosimetry Return Card (ER 3.3, Figure 14). (Protected: Ref. 6.11)

#### 5.5.4 Bioassays

The RCC will establish the frequency and type of bioassay monitoring program implemented based on available air sample data, number of personnel exposed/contaminated, and the extent of their exposure/contamination.

#### 5.5.5 Abnormality Evaluations

When relatively large doses are involved, any discrepancy between dosimeter or expected dose and the TLD dose should be investigated immediately and referred to the RCC for final disposition.

### 5.6 **Decontamination**

#### 5.6.1 Offsite

Use procedure ER 4.6, Offsite Monitoring and Decontamination, for monitoring and decontamination of evacuated onsite personnel and emergency responders assigned to offsite facilities.

#### 5.6.2 Personnel

1. During normal operations the goal of personnel decontamination, is the complete removal of the contamination. In an emergency situation this goal may change to reducing contamination levels as quickly as possible to an acceptable level.
2. The RCC will establish the acceptable level for personnel decontamination.

#### 5.6.3 Area and Equipment

The RCC will determine the need and direct the methods to be used for major equipment or area decontamination.

### 5.7 **Medical Emergency**

1. The time needed for proper radiological precautions (i.e., clothing, respiratory, etc.) may not be available in a medical emergency. The Health Physics Technician assigned to the medical emergency will monitor personnel doses as needed.
2. The RCC will supply Health Physics personnel as necessary to assist in maintaining radiological conditions as stable as possible without delaying the treatment/transport of the victim.
3. Health Physics personnel will respond in accordance with Health Physics Department procedures.



## **5.8 RCA Fire**

1. The RCC will direct the radiological actions to be performed for a fire in the RCA.
2. Self-contained breathing apparatus is the only acceptable respiratory protection to be used in the vicinity of a fire.

## **5.9 Post-Accident Sampling**

Radiological considerations for post-accident sampling are taken into account by the following:

1. Design of the PASS panel intended to limit exposure to personnel operating the panel.
2. Sampling techniques prescribed by post-accident sampling and analysis procedures designed to limit personnel exposure and spread of contamination.
3. Pre-deployment briefings by the Chemistry Coordinator and Radiological Controls Coordinator of PASS team personnel per form ER 3.2F, Emergency Team Briefing/Debriefing Form.
4. Figure 8 guidance for allowing use of the normal sample sink versus using a PASS survey team.
5. Figure 9 estimated doses for normal sample sink sampling based on letdown monitor readings and/or PASS survey port readings.
6. Figure 9 guidance for estimating doses to obtain a PASS survey port reading.
7. Figure 10 equations for estimating normal sample panel RCS sample bottle dose rates.
8. Figure 11 decayed dose rate curve for evaluating gamma dose rate decay of RCS samples in archive or RCS activity for future sampling and handling.
9. Figure 12 equations for estimating RCS concentrations based on either letdown monitor or PASS survey port readings.

## **5.10 Communications**

1. Formal communication practices, whether face-to-face, over the radio, or by phone will be employed at all times.
2. Information regarding unusual radiological conditions should be communicated to the OSC for dissemination and use in planning response actions.

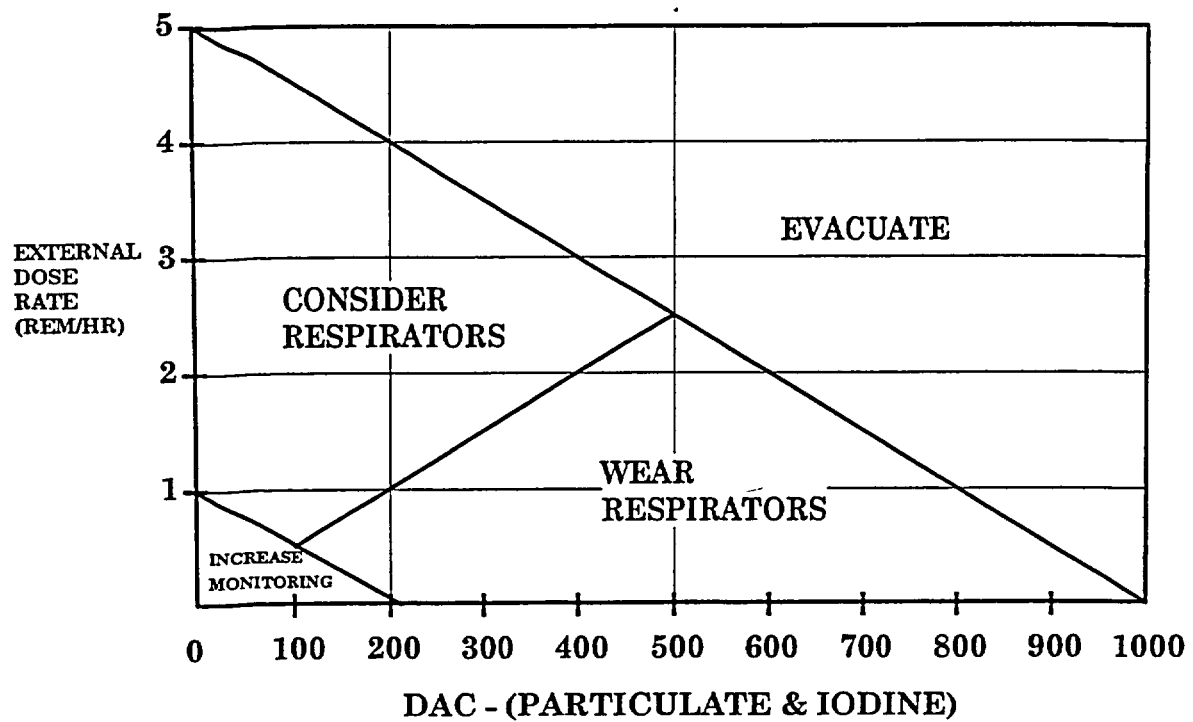
## 6.0 REFERENCES

1. HD0958.01, Air Sampling
2. HD0958.02, Radiation and Contamination Survey Techniques
3. HD0958.13, Generation and Control of Radiation Work Permits
4. HD0958.17, Performance of Routine Radiological Surveys
5. HD0958.19, Evaluation of Dosimetry Abnormalities
6. HD0958.27, Dose Assessment for Skin Contamination
7. RP 5.1, Radiation Exposure Extension Requests
8. Seabrook Station Radiological Emergency Plan (SSREP)
9. USEPA, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, Revised 1991
10. I&E Information Notice 86-43, "Problems with Silver Zeolite Sampling of Airborne Radioiodine"
11. NRC Inspection Report No. 50-443/86-10-10
12. ER 1.1, Classification of Emergencies
13. ER 3.2, Operational Support Center Operations
14. ER 4.6, Offsite Monitoring and Decontamination
15. HPSTID 00-013
16. DCR 92-16, RM-11 Computer Replacement
17. "Guidance, Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies", US Department of Health and Human Services, Food and Drug Administration, Center for Drug Education and Research (CDER), November 2001.

**Figure 1**  
**Protective Action Criteria**  
(Sheet 1 of 2)

1. Center habitability actions shall be as indicated on the next page of this figure.
2. Determine the need to dispense potassium iodide (KI) tablets to emergency response personnel based upon a projected or actual thyroid CDE  $\geq 5$  rem. Administering KI after an uptake may limit thyroid CDE depending on time after exposure.
3. Protective clothing (lab coats, shoe covers, cotton gloves) will be required when indicated by HP survey results.

**Figure 1**  
**Protective Action Criteria**  
(Sheet 2 of 2)



**Figure 2**  
**Emergency Dose Limits**

<b>Dose Limit<sup>a,b</sup> (rem)</b>	<b>Activity</b>	<b>Condition</b>
5	All activities	
10	Protecting valuable property	Lower dose not practicable
25	Lifesaving or protection of large populations	Lower dose not practicable
>25	Lifesaving or protection of large populations	Only on a voluntary basis to persons fully aware of the risks involved

**NOTE**

The above Emergency Dose Limits are to be allowed with STED or SED permission only.

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<sup>a</sup> TEDE to non-pregnant emergency workers.

<sup>b</sup> Emergency dose limits for the lens of the eye and for any other organ (including skin and extremities) are three and ten times listed values, respectively.

**Figure 3**  
**Dose Guidance**

1. Only actions involving lifesaving justify an acute TEDE in excess of 10 rem.
2. Emergency workers may incur a TEDE up to 25 rem for lifesaving or protection of large populations.
3. Volunteers fully aware of the risks involved may incur a TEDE in excess of 25 rem for lifesaving or protection of large populations.

**NOTE**

Emergency Dose Limits are to be allowed with STED or SED permission only.

**Figure 4**  
**Emergency Dose Limit Extension**

1) Name \_\_\_\_\_ Age \_\_\_\_\_ 2) Badge Number \_\_\_\_\_  
3) Reason for Dose Extension Request (Be specific): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I understand the consequences of the proposed exposure: (See Note 1)

\_\_\_\_\_  
Employee's Signature

Note 1: The signature of the employee may be authorized by verbal reply.

HEALTH PHYSICS USE

4) Current TEDE: \_\_\_\_\_ YTD - \_\_\_\_\_ mrem.  
5) Individual dose estimate for required work: \_\_\_\_\_ mrem.  
6) Emergency Dose Limit Requested: \_\_\_\_\_ mrem.

SHORT TERM EMERGENCY DIRECTOR/SITE EMERGENCY DIRECTOR

A. Individual Extension

I authorize the above-named individual an emergency dose extension not to exceed \_\_\_\_\_ mrem.

This extension is necessary to perform emergency functions for plant/personnel safety, and is valid only for the task specified above.

\_\_\_\_\_  
Short Term Emergency Director/Site Emergency Director

B. Blanket Extension

All emergency center personnel are authorized a blanket extension, not to exceed \_\_\_\_\_ mrem.

\_\_\_\_\_  
Short Term Emergency Director/Site Emergency

### Figure 5 Emergency Exposure Tracking

DATE \_\_\_\_\_

NAME: \_\_\_\_\_ BADGE #: \_\_\_\_\_

AGE: \_\_\_\_\_ yrs TLD #: \_\_\_\_\_

YTD: \_\_\_\_\_ mrem EXPOSURE LIMIT \_\_\_\_\_ mrem

TASK	RAE	TIME IN	TIME OUT	DOSE IN	DOSE OUT	(mrem) DOSE RECEIVED	(mrem) YTD

#### DOSIMETRY ISSUE

TLD#/SRPD# (IF APPLICABLE)	USE (LOCATION)

TLD#/SRPD# (IF APPLICABLE)	USE (LOCATION)

Note: Complete Form ER 3.3II for dosimetry returned to the EOF for processing.



### Figure 6

#### KI Issue Log

Facility \_\_\_\_\_

[illegible]

**Figure 7**  
**Screening Questions for Emergency,**  
**Unanticipated Respirator Use**

Emergency Worker Name: \_\_\_\_\_

1. Do you have any medical problems or symptoms that may limit your ability to use a respirator?

☐ No ☐ Yes

2. Have you been told by a health care professional that you should not wear a respirator or that you have a medical condition that limits your activity?

☐ No ☐ Yes

3. Will the anticipated work place conditions (e.g., physical work effort, protective clothing, temperature) substantially exceed the physical demands that you normally encounter at work or home?

☐ No ☐ Yes

It is your responsibility to report to your supervisor any problem that may affect your ability to accomplish the assigned work while using a respirator.

Emergency Worker Signature: \_\_\_\_\_ Date: \_\_\_\_\_

RCC Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### Figure 8 Decision Guidance For Use of RCS Normal Sample Path Versus PASS

The following guidance for using the normal sample path with elevated RCS activity is derived from HPSTID 00-013:

Letdown Monitor Reading (mR/hr)  Note 1	PASS Survey Port Reading (R/hr)  Note 2	Recommendation
>200 to 2,000	N/A	Perform ALARA Evaluation, Consider: Extremity monitoring, Limiting sample size to 60 ml, Additional storage and handling precautions, RWP/ED Setpoint changes, etc.
>2,000 to 10,000	>0.48 to 2.4	May still obtain sample at normal sample sink with Health Physics Coordinator (HPC), Rad Controls Coordinator (RCC) or HP Department Manager concurrence prior to obtaining each sample.
Offscale High (> 10,000 mR/hr)	>2.4	Do not use normal sample sink, Archive and decay sample only.

Notes: 1) Normal letdown or RH letdown in service (not RH slipstream, RM-6520 is bypassed during slipstream operation).

2) Determined using RO-7 mid range probe with beta shield installed.

This guidance is based on the calculated dose to obtain and analyze a 60 ml RCS liquid and strip gas sample.

Figure 9

**Estimated Team Dose to Obtain and Analyze an RCS Liquid and Strip Gas Sample from the Normal Sample Sink Based on Letdown Monitor Readings and to Obtain and Analyze an RCS Liquid and Strip Gas Sample Based on PASS Survey Port Readings, and Estimating Team Dose to Obtain a PASS Survey Port Reading**  
(Sheet 1 of 2)

**1. Estimated Team Dose Based on Letdown Monitor Readings**

When evaluating the dispatch of a normal sample team, the team dose (50% WB to HP Technician, 50% WB to Chemistry Technician and 100% extremity to Chemistry Technician) may be estimated using the letdown monitor readings and equations in Chart 1.

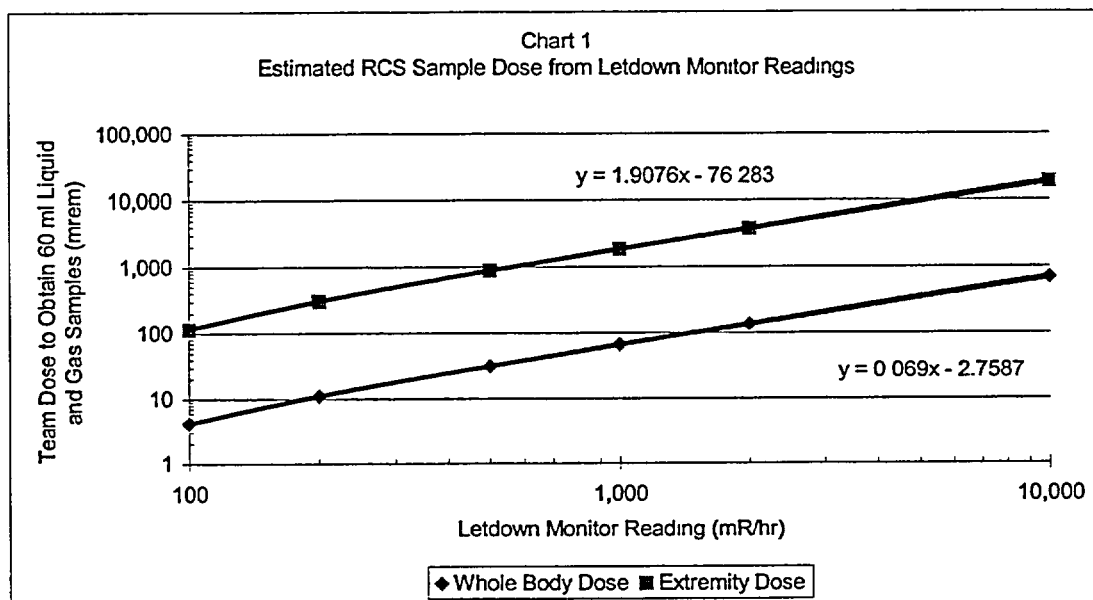
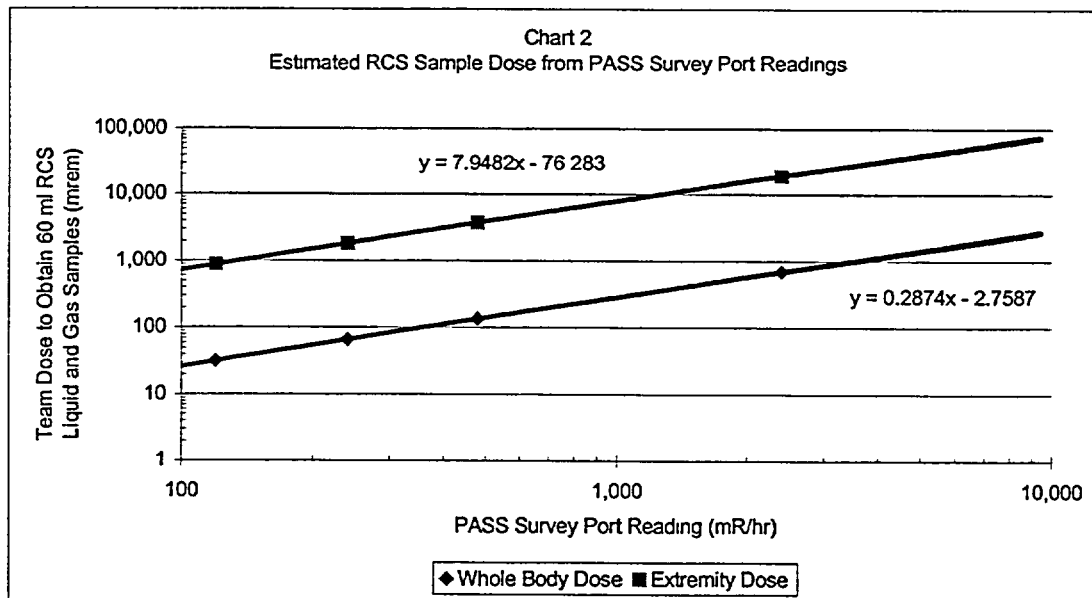


Figure 9

**Estimated Team Dose to Obtain and Analyze an RCS Liquid and Strip Gas Sample from the Normal Sample Sink Based on Letdown Monitor Readings and to Obtain and Analyze an RCS Liquid and Strip Gas Sample Based on PASS Survey Port Readings, and Estimating Team Dose to Obtain a PASS Survey Port Reading**  
(Sheet 2 of 2)

**2. Estimated Team Dose Based on PASS Survey Port Readings**

When evaluating the dispatch of a normal sample team, the team dose (50% WB to HP Technician, 50% WB to Chemistry Technician, and 100% Extremity to Chemistry Technician) may be estimated using the PASS Survey Port curves and equations in Chart 2.



**NOTE:** The PASS Survey Port data is obtained using an RO-7 with mid-range (BM) probe (beta shield cap installed). The PASS Survey Port ratio to the letdown monitor reading is 0.24 (i.e., letdown monitor reading times 0.24 equals PASS Survey Port reading).

**3. Estimating Team Dose to Obtain a PASS Survey Port Reading**

When evaluating the dispatch of a PASS survey team, the team dose (50% WB to HP Technician, 50% WB to Chemistry Technician, and 100% Extremity to HP Technician obtaining the dose rate) may be estimated using the sample room radiation monitor.

- The estimated team whole body dose (mrem) equals 10 times the sample monitor reading (mR/hr).
- The estimated team extremity dose (mrem) equals 20 times the sample room monitor reading (mR/hr).
- The dose rate in front of the open PASS Survey Port may be estimated by using the sample room radiation monitor reading and applying a multiplier of 115 to obtain the estimated extremity dose rate in front of the survey port with the shield plug

**Figure 10**  
**Estimated Normal Sample Panel RCS Sample Bottle Dose Rates**

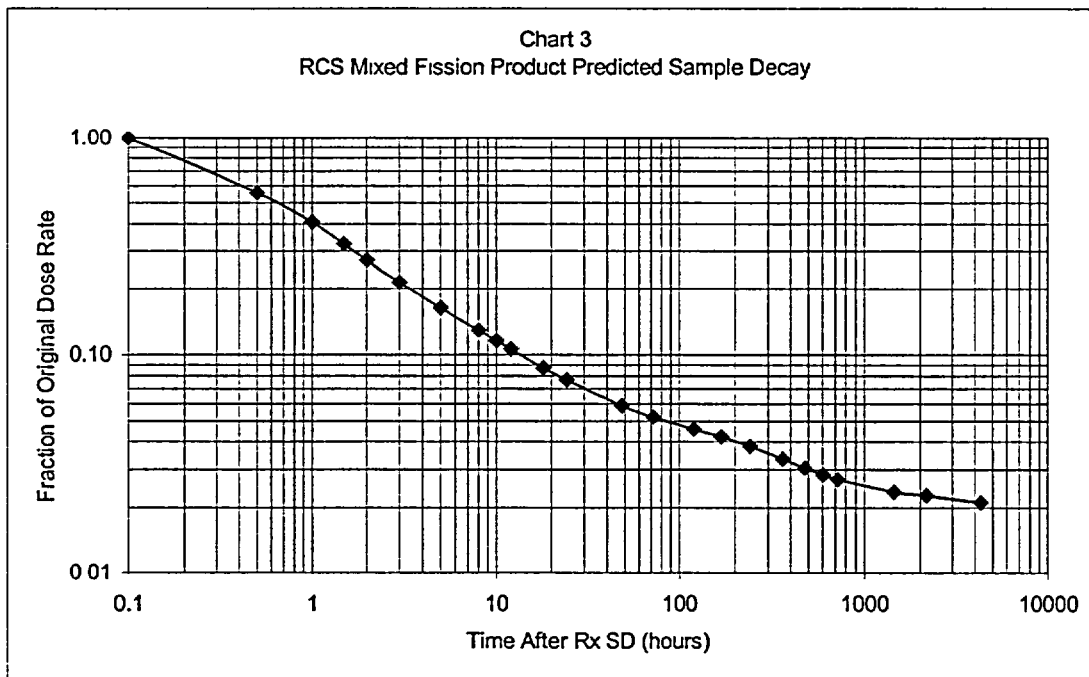
RCS sample bottle dose rates may be estimated using the following ratios:

Letdown Monitor Reading (mR/hr) Multiplied by:	Equals (mR/hr)
6.95	60 ml Sample @ 0.1 cm (True Contact)
0.73	60 ml Sample RO-2 (or equivalent) Contact
0.03	60 ml Sample @ 30 cm
PASS Survey Port Reading (mR/hr) Multiplied by:	
29.4	60 ml Sample @ 0.1 cm (True Contact)
3.08	60 ml Sample RO-2 (or equivalent) Contact
0.11	60 ml Sample @ 30 cm

Note that the RO-2 underestimates the true contact (extremity) dose rate by about a factor of 10 on a 60 ml RCS sample.

**Figure 11**  
**Evaluating Gamma Dose Rate Decay of RCS Samples in Archive or**  
**RCS Activity for Future Sampling and Handling**

Decayed dose rates on RCS samples obtained and held for future analysis or to be obtained following some decay period post reactor (Rx) shutdown may be determined using the plotted data in Chart 3.  $T=0$  is specific to Rx shutdown (SD); therefore, comparisons must be made between the time obtained and the time desired (e.g., the delta between a sample archived at 1 hour post Rx SD and 20 hours post Rx SD is  $0.4/0.08 =$  a factor of 5 lower dose rate). This may also be used to decay a previously obtained Letdown Monitor or PASS Survey Port value or normal sample panel dose estimate when evaluating future RCS sample team activities.



**Figure 12**  
**RCS Activity and Concentration Calculations**  
(Sheet 1 of 2)

1. Activity Calculation based on PASS survey port measurements
  - a. ESTIMATE RCS Activity and DEI-131 concentrations using the following equations:
    - RCS Activity ( $\mu\text{Ci/ml}$ ) = Reported PASS survey port dose rate  
Table 1 Column C value for time after shutdown
    - RCS DEI-131 ( $\mu\text{Ci/ml}$ ) = RCS activity (from above) \* Table 1 Column D value  
for time after shutdown

**Table 1**

A	B	C	D
Time After Shutdown (Days)	Time After Shutdown (Hours)	PASS Survey Port Dose Rate CF (R/hr/ $\mu\text{Ci/ml}$ )	Fraction of Activity from DEI-131
	0	3.34E-03	0.064
	0.5	3.49E-03	0.107
	1	3.23E-03	0.127
	1.5	2.98E-03	0.142
	2	2.78E-03	0.154
	3	2.53E-03	0.170
	5	2.32E-03	0.189
	8	2.22E-03	0.204
	10	2.19E-03	0.211
	12	2.16E-03	0.216
	18	2.12E-03	0.230
1	24	2.10E-03	0.240
2	48	2.09E-03	0.263
3	72	2.07E-03	0.274
5	120	2.03E-03	0.285
7	168	2.02E-03	0.290
10	240	2.06E-03	0.288
15	360	2.25E-03	0.263
20	480	2.50E-03	0.219
25	600	2.74E-03	0.170
30	720	2.93E-03	0.125

All dose rates obtained using RO-7 mid-range probe on 4' extension with beta shield installed and inserted in survey port fully to contact sample line.



**Figure 12**  
**RCS Activity and Concentration Calculations**  
(Sheet 2 of 2)

**1. RCS Activity Calculation based on Letdown Monitor readings**

a. ESTIMATE RCS Activity concentration using the following equation:

- RCS Activity ( $\mu\text{Ci/cc}$ ) = RM6520 monitor value from RDMS screen (mR/hr)  
Table 2 Column C value for time after shutdown
- RCS Activity ( $\mu\text{Ci/cc}$ ) = RCS activity (from above) \* Table 2 Column D value  
for time after shutdown

**Table 2**

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Time After Shutdown (Days)	Time After Shutdown (Hours)	Letdown Monitor Dose Rate CF (mR/hr/ $\mu\text{Ci/ml}$ )	Fraction of Activity from DEI-131
	0	14.148	0.064
	0.5	14.757	0.107
	1	13.669	0.127
	1.5	12.588	0.142
	2	11.751	0.154
	3	10.689	0.170
	5	9.800	0.189
	8	9.383	0.204
	10	9.248	0.211
	12	9.150	0.216
	18	8.972	0.230
1	24	8.899	0.240
2	48	8.853	0.263
3	72	8.765	0.274
5	120	8.575	0.285
7	168	8.526	0.290
10	240	8.716	0.288
15	360	9.524	0.263
20	480	10.588	0.219
25	600	11.589	0.170
30	720	12.374	0.125

This conversion factor assumes a rod gap activity fission product mixture, a letdown monitor background of 40 mR/hr, and time after shutdown is zero.

## Figure 13 Summary of Changes

### Rev. 22:

*In §5.1.5 and in Figure 1, revised threshold for dispensing potassium iodide (KI) to emergency response personnel from thyroid CDE  $\geq 25$  rem to thyroid CDE  $\geq 5$  rem based on FDA guidance.*

*In §5.9, referenced new Figure 12 equations for estimating RCS concentrations based on letdown monitor or PASS survey port readings.*

*In §6.0, referenced FDA guidance on use of potassium iodide as a thyroid blocking agent in radiation emergencies.*

*Added new Figure 12, conversion factors for letdown and PASS panel monitors and RO-7 response data conversion factors.*

### Rev. 21:

Added reference to and instructions for using the Emergency Plan radiation work permit in §5.1.2.

In §5.1.6 added Note after step 1.

In §6.0 added references 15 and 16.

Added new Figures 8, 9, 10 and 11 which provide considerations for taking samples from the normal sample sink versus the PASS survey port and estimated team dose for taking various types of samples and instrument readings.

### Rev. 20:

In §5.1.5 and Figure 7 added instructions and screening criteria for the RCC to qualify essential personnel on a contingency basis to wear a respirator. (CR 00-06605)

### Rev. 19:

This revision was initiated primarily to clarify responsibilities and to be consistent with procedures ER 1.2 and ER 3.1. Added new §2.4 to identify the responsibility, which is may not be delegated, for the Short Term Emergency Director/Site Emergency Director to authorize emergency dose limits. Reflected this change throughout the procedure.

### Rev. 18:

Added §5.1.5.5 regarding side effects of KI.

In Figure 3, step 2, changed "volunteers" to "emergency workers."

**SEABROOK STATION  
ADMINISTRATIVE PROCEDURE**

**Offsite Monitoring and Decontamination**

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**ER 4.6**

**Rev. 14**

SORC Review: 03-007 Date: 2-12-03

Effective Date: 2-21-03

<b>EXPIRATION DATE</b> <u>2-21-05</u>
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Procedure Owner:  
S. Perkins-Grew

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## **1.0 OBJECTIVES**

This procedure provides guidelines for offsite radiological monitoring and decontamination of evacuated onsite personnel and vehicles at the Remote Monitoring Area and Decontamination Facility at Schiller Station.

## **2.0 RESPONSIBILITIES**

Health Physics Technicians who will normally be assigned from the Operational Support Center:

1. Form and supervise qualified monitoring and decontamination teams at the Remote Monitoring Area and Decontamination Facility.
2. Supervise monitoring evacuated onsite personnel and vehicles.
3. Supervise decontamination of evacuated onsite personnel and vehicles.

## **3.0 PRECAUTIONS**

1. Members of the monitoring and decontamination teams should exercise precautions to ensure that they do not become contaminated and that exposure to radioactive material via inhalation, ingestion, and/or absorption is avoided.
2. Personnel involved in vehicle and equipment decontamination should ensure the proper handling of materials used (e. g., plastic wraps, bags, labels, sponges, wipes, etc.).

## **4.0 PREREQUISITES**

A site evacuation has been initiated and site area radiological conditions will potentially result in contamination.

## **5.0 ACTIONS**

Health Physics Technicians

1. Obtain a briefing from the Radiological Controls Coordinator on radiological conditions and requirement for activating the Remote Monitoring Area (RMA).
2. Verify that the Radiological Controls Coordinator has coordinated dispatch of Waste Services personnel or other radiation qualified workers from the Assembly Area to the RMA to support operations.
3. Proceed to the Emergency Operations Facility (EOF).
4. At the Emergency Operations Facility, go to the field monitoring team dispatch bay area to obtain equipment designated for the RMA.
5. In the dispatch bay area obtain the following RMA equipment and supplies:
  - a. RMA Kit 1 - decontamination supplies

- b. RMA Kit 2 - monitoring equipment
  - c. Four (4) portable radios and batteries, two (2) cellular telephones and four (4) talk-about radios. (Ensure batteries are in radios before departure and check cell phone communications with the Radiological Assistant's telephone number.)
  - d. Key to the RMA storage shed
  - e. Mon / Decon totes (4)
  - f. Facility Inventory Checklist listing the RMA equipment and supplies.
  - g. Three RMA road signs to be deployed per Figure 1 en route to the RMA shed.
6. Use the checklist to verify availability of RMA equipment and supplies maintained at the EOF.
7. Insert batteries in the monitoring instruments and perform response/battery checks.
- a. Obtain key to the Rad Material Storage file cabinet from the Security key box – key #9.
  - b. Obtain check source from the Rad Material Storage file cabinet located in the dispatch area.
  - c. After use, return the check source to the Rad Material Storage file cabinet, lock the cabinet and return the key to the Security key box.
8. Check in with the Radiological Assistant, receive a briefing on the status of the emergency, and inform the Radiological Assistant when you will be activating the RMA.
9. Load equipment into a vehicle, verify that you have the key to the RMA storage shed, and proceed to the storage shed (see Figure 1, Remote Monitoring Area Layout).
10. Deploy RMA road signs en route per Figure 1.
11. Open the storage shed and obtain the Facility Inventory Checklist posted on the inside of the door. Use the checklist to identify equipment maintained in the storage shed for setup of the RMA and the decontamination facilities.
12. Obtain the Schiller Station gate key from inside the storage shed. Use the key to open gates identified on Figure 1 as necessary to set up the RMA as shown on Figure 1.
13. Distribute traffic control equipment (cones, signs, and other equipment) per Figure 1.
14. After setting up the RMA, obtain the men's and women's decontamination tote-boxes located in the RMA shed.
15. Transfer appropriate quantities of supplies from RMA kit #1 to each decontamination tote-box.

16. Deploy the men's and women's decontamination tote boxes to the Schiller Station decontamination facilities per Figure 2.
17. Using an E-140 survey meter, measure the background radiation at the RMA location. Report  $\geq 300$  cpm background measurements to the Radiological Assistant.
18. If ample personnel are available, form four teams of two individuals: two teams to monitor vehicles and two teams to monitor personnel.
19. Inform the Radiological Assistant when the RMA is set up and operational.
20. If additional personnel are required to staff the RMA, request the Offsite Monitoring Coordinator, through the Radiological Assistant, to assign extra field monitoring personnel from the EOF, if available, to assist at the RMA.
21. If traffic control assistance is required, request assistance from the Security Coordinator at the EOF through the Radiological Assistant. Available field monitoring team drivers may also be used to assist with traffic control at the RMA.
22. If additional monitoring personnel are still needed, as evacuated onsite personnel arrive, obtain radiation-worker-qualified volunteers to assist in vehicle and personnel monitoring.
23. Brief monitoring team personnel as follows:
  - a. Monitor every vehicle in accordance with Figure 3, Vehicle Monitoring and Decontamination Actions. After about the twentieth vehicle that arrives with no previously identified contamination, monitor every tenth arriving vehicle in accordance with Figure 3. Increase vehicle monitoring frequency if vehicle contamination is found.
  - b. Monitor all personnel for contamination in accordance with Figure 4, Personnel Decontamination Activities.
24. If vehicles are found to be contaminated, decontaminate in accordance with Figure 3.
25. If personnel are found to be contaminated, decontaminate in accordance with Figure 4. Document all personnel contamination in accordance with Health Physics Department procedures.
26. If contamination is detected in the area of a person's mouth or nose indicating potential ingestion or inhalation of radioactive material, contact the Offsite Monitoring Coordinator to schedule follow-up bioassays or whole body counts.
27. If the decontamination facilities are required, request two volunteers from the evacuated onsite personnel to use their personal vehicles to shuttle contaminated personnel to the decontamination facilities and to shuttle decontaminated personnel back to their vehicles. Issue each driver a portable radio and label one vehicle "CONTAMINATED TRANSPORTATION" and one vehicle "CLEAN TRANSPORTATION."

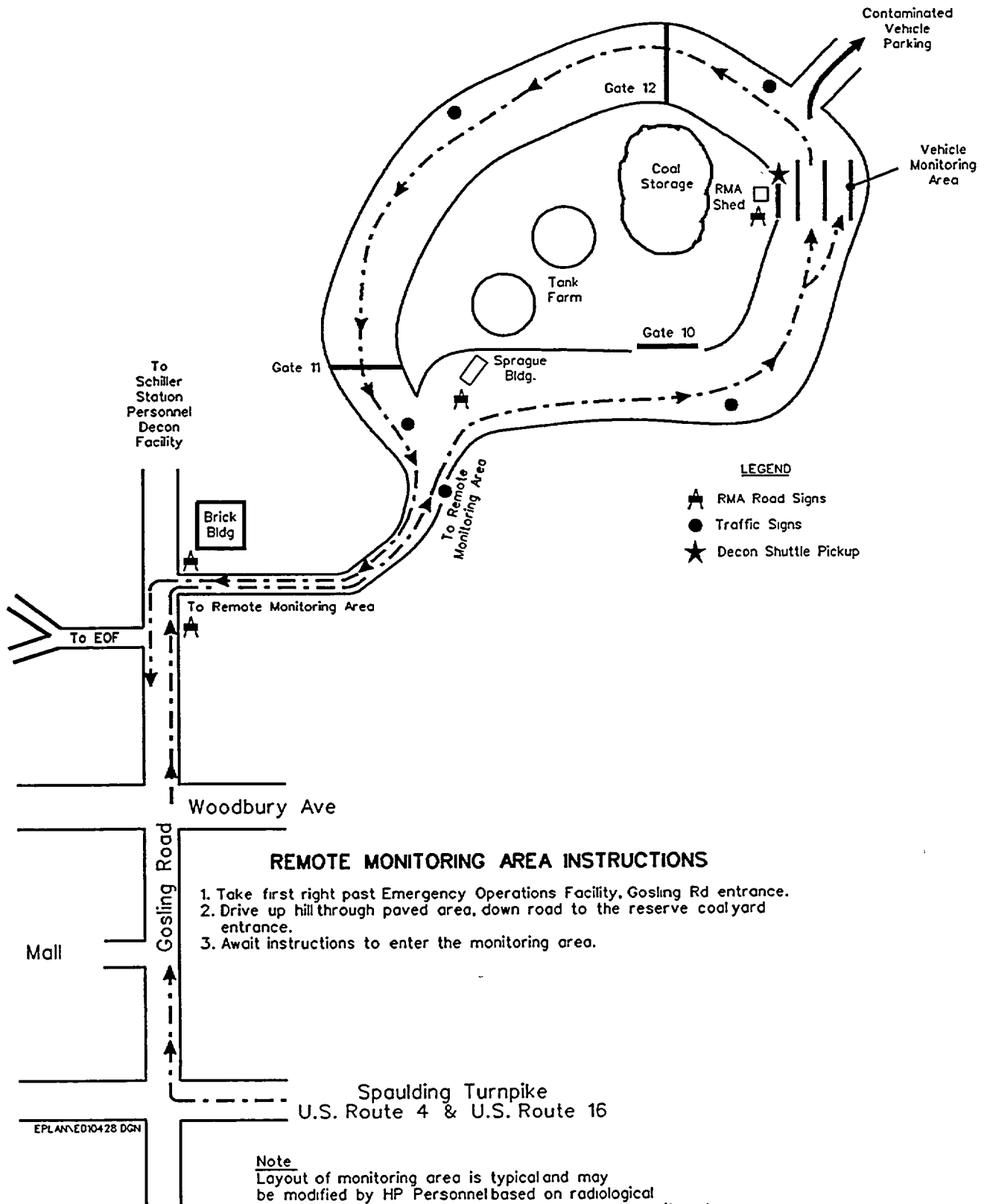
28. Oversee setup of the male and female decontamination areas in accordance with applicable Health Physics Department procedures.
29. If contamination is found and decontamination activities are performed:
  - a. Post all affected areas and restrict access accordingly.
  - b. Warn Schiller Station personnel of the radiation hazard.
30. If personnel cannot be decontaminated, or have potentially contaminated wounds and/or ingestion, immediately contact the Offsite Monitoring Coordinator for direction on how to proceed.
31. Don protective clothing appropriate to the radiological conditions.
32. If additional personnel, equipment, or supplies are required, contact the Radiological Assistant.
33. Periodically inform the Radiological Assistant of the status of RMA operations.
34. When all evacuated personnel have been processed, collect deployed equipment, restore equipment and supplies to the RMA storage shed, and return equipment obtained from the EOF to the EOF.
35. Take all radwaste generated at the RMA and decontamination facilities to the EOF and place in the custody of the Radiological Assistant.

## 6.0 REFERENCES

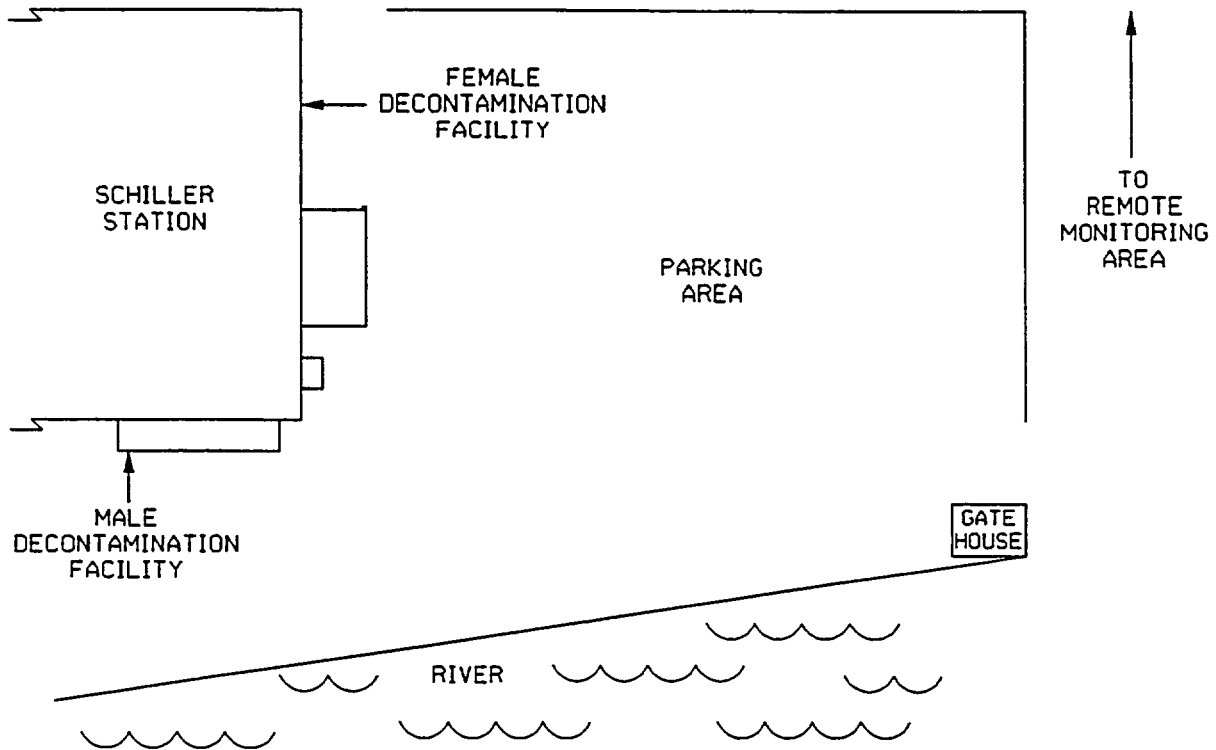
1. HD0958.02, Radiation and Contamination Survey Techniques
2. HD0958.03, Personnel Survey and Decontamination Techniques
3. Radiation Protection Manual (SSRP)
4. HD0958.32, Release of Material from the RCA



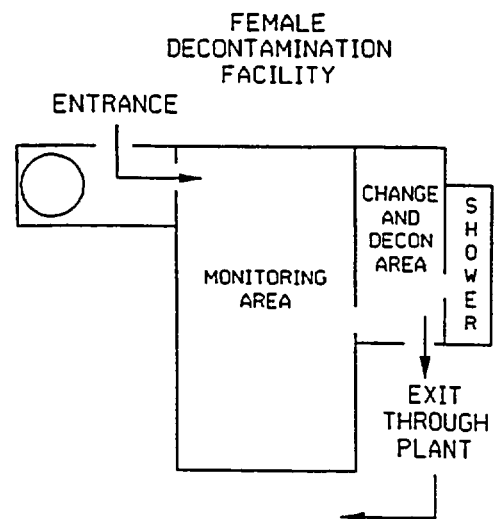
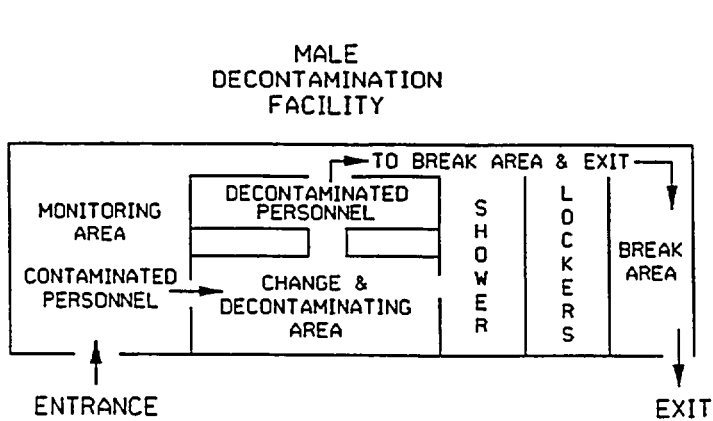
**FIGURE 1**  
**REMOTE MONITORING AREA LAYOUT**



**Figure 2**  
**Schiller Station Decontamination Facility Layout**



EPLAN:E010290.DGN



**Figure 3**  
**Vehicle Monitoring and Decontamination Actions**  
(Sheet 1 of 2)

Vehicle Monitoring

1. Direct waiting vehicles to the monitoring point. Personnel should remain inside the vehicle. Monitor every vehicle. After about the twentieth vehicle that arrives with no identifiable contamination, monitor about every tenth arriving vehicle.
2. Perform appropriate fixed and loose contamination surveys on vehicles. Pay particular attention to horizontal surfaces, wheel wells, front grill, air filter and door handles as appropriate.
3. Record readings for all contaminated areas on the Vehicle Radiological Survey Maps.
4. If vehicle survey results indicate contamination levels greater than release limits as established in procedure HD0958.32, Release of Material from the RCA, direct the personnel inside the vehicle to drive to the contaminated parking area, park the vehicle (leaving keys in the vehicle), and walk to the personnel monitoring area.
5. If survey results indicate contamination levels of less than release limits as established in Health Physics Department procedures, direct vehicles to leave the area after personnel have been monitored for contamination.

Vehicle Decontamination

1. Post the perimeter of the area.
2. As time permits, decontaminate contaminated surfaces of vehicles using standard decontamination techniques (masslin, detergent and water, etc.).

**NOTE**

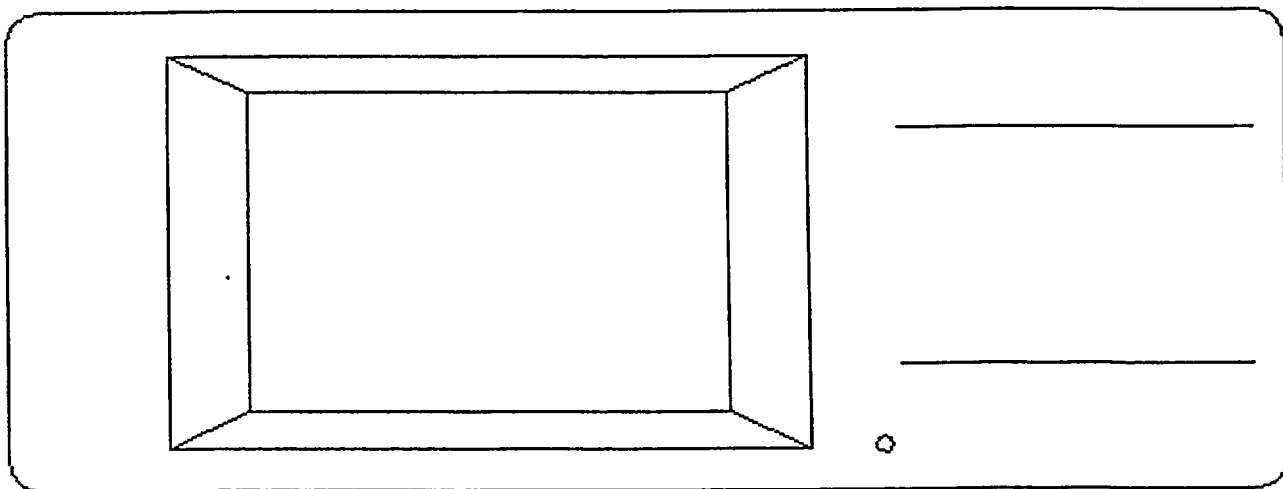
If contamination is extensive, it may be necessary to impound vehicles for decontamination and disposition at a later time.

3. Continue monitoring/decontamination steps until contamination levels are less than release limits as established in procedure HD0958.32, Release of Material from the RCA.

**Figure 3**  
**Vehicle Monitoring and Decontamination Actions**  
(Sheet 2 of 2)

Vehicle Radiological Survey Maps

Date/Time: \_\_\_\_\_ Surveyed By: \_\_\_\_\_  
Vehicle Name/Type: \_\_\_\_\_ Survey Instrument: \_\_\_\_\_  
License No: \_\_\_\_\_ Serial No: \_\_\_\_\_



**Figure 4**  
**Personnel Decontamination Activities**

1. If evacuated onsite personnel monitoring results indicate contamination levels less than the limits established in procedure HD0958.03, Personnel Survey and Decontamination Techniques, release personnel to their homes.
2. If personnel are found to be contaminated perform the following:
  - a. Limit the spread of contamination (by using shoe covers, gloves, etc.).
  - b. Instruct contaminated individuals to go to the personnel decontamination shuttle boarding area and await the arrival of transportation to the Schiller Station Decontamination Facility.
  - c. Survey inside vehicle for contamination. Attention should be given to the driver's side (seat, steering wheel, foot pedals, etc.).
3. Once at the facility, the driver should direct personnel to the male or female decontamination areas as needed.
4. Decontaminate personnel as directed in the applicable steps of Health Physics Department procedures.
5. Continue monitoring/decontamination steps until contamination levels are less than the limits established in Health Physics Department procedures. If these levels cannot be achieved, contact the Radiological Assistant.
6. As necessary, survey decontamination facility for contamination and decontaminate as necessary.
7. Bag and label all radioactive material and personal clothing found to be contaminated for transport back to Seabrook Station.
8. When decontamination facilities are no longer required, release the areas as clear of radioactive material using the applicable steps of Health Physics Department procedures.
9. Periodically survey shuttle vehicles for contamination and decontaminate as necessary.

## Figure 5 Summary of Changes

### *Rev. 14:*

*In §5.5, added references to two additional portable radios, two cell phones and four talk about radios for use by offsite monitoring and decontamination personnel.*

*In §5.7, added instructions for source checking the monitoring instruments and for ensuring the check source is secured after use.*

*On Figure 1, corrected location of the remote monitoring area storage shed.*

*On Figure 3, corrected inconsistency in vehicle monitoring instructions.*

### *Rev. 13:*

In §5.0 added new steps 5g, 10, 14, 15 and 16. Renumbered subsequent steps.

In Figure 1 identified new location for Remote Monitoring Area storage shed.

### *Rev. 12:*

In §1.0, deleted Emergency Operations Facility.

In §2.0 deleted Waste Services Personnel. In step 1 deleted the reference to the EOF. In steps 2 and 3 added "supervise."

In §3.0, deleted old steps 2 and 3. Renumbered subsequent step. Updated examples of materials.

In §4.0, deleted step 2.

Revised §5.0, Health Physics Technician actions.

Revised Figure 1, Remote Monitoring Area Layout.

Updated Figure 3, Vehicle Monitoring and Decontamination Actions.

**SEABROOK STATION  
ADMINISTRATIVE PROCEDURE**

**Site Perimeter and Offsite Monitoring  
and Environmental Sampling**

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**ER 5.2**

Rev. 29

SORC Review: 03-007 Date: 2-12-03

Effective Date: 2-21-03

<b>EXPIRATION DATE</b> <u>2-21-05</u>
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Procedure Owner:  
S. Perkins-Grew

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## **1.0 OBJECTIVES**

This procedure specifies the emergency response actions to accomplish site-perimeter and offsite radiological monitoring and environmental sampling.

## **2.0 RESPONSIBILITIES**

### **2.1 Offsite Monitoring and Sampling Personnel**

Perform emergency environmental sampling and monitoring as directed by the Offsite Monitoring Coordinator.

## **3.0 PRECAUTIONS**

Monitor exposure by frequently reading pocket dosimeters during monitoring and sampling actions.

## **4.0 PREREQUISITES**

None

## **5.0 ACTIONS**

### **5.1 Offsite Monitoring and Sampling Personnel**

#### **5.1.1 Pre-deployment Actions**

1. Ensure you have signed in on the EOF personnel roster.
2. Obtain an Offsite Monitoring Team emergency materials tote box from the dispatch area.
3. Obtain your position badge from the tote box and place Protected Area badge over your position badge.
4. Report to the Offsite Monitoring Coordinator at the EOF for team assignments.
5. Obtain the Nextel phone corresponding to the team number from the dispatch area.
6. Obtain a mobile field team radio from the dispatch area.
7. Complete the checklist steps listed in form ER 5.2A, Offsite Monitoring and Sampling Team Pre-deployment Checklist. Exact inventory of consumable supplies in kit is not necessary. Assess adequacy of stock on hand.

- Additional sampling equipment and specific pre-deployment actions may be necessary depending on the samples requested by the Offsite Monitoring Coordinator.
  - Ensure you have sufficient forms to complete assigned tasks. If uncertain about number of forms required, confirm requirements with the Offsite Monitoring Coordinator.
8. Obtain maps from the dispatch area bookcase.
  9. Check with the Offsite Monitoring Coordinator to determine if and when rental vehicles will be available for use. If rental vehicles are unavailable initially, coordinate use of team personal vehicles until rental vehicles are available.
  10. Proceed to vehicle with kit, emergency materials tote-box, forms, maps and communications.
  11. Place all survey equipment and other emergency materials in survey vehicle.
  12. When the pre-deployment checklist has been completed and personnel are ready to be dispatched, contact the Offsite Monitoring Coordinator to receive a pre-deployment briefing. Complete form ER 5.2B during the briefing.
  13. With the Offsite Monitoring Coordinator, establish codes for radio reports to the field of changes to emergency classification and radiological release status (e.g., X = Site Area Emergency; Z = Release in Progress). Record the codes and updated status reports in a blank space on form ER 5.2B.

#### 5.1.2 Monitoring Actions En Route to Survey Locations

1. While en route to the assigned survey location, monitor the radiation levels.
2. When requested by the Offsite Monitoring Coordinator, report any readings and locations.
3. When the assigned survey area has been reached, determine the sample location using Global Positioning System (GPS) unit.
4. Record the sample location on the Field Survey/Air Sample Data Form, Form ER 5.2D, using longitude/latitude.
5. Complete the appropriate steps in §5.1.3 as directed by the Offsite Monitoring Coordinator.

5.1.3 Monitoring and Sampling Actions at the Assigned Locations (Protected: Ref. 6.4)

1. Beta-Gamma Dose Rate Survey
  - a. Immediately report dose rates equal to or greater than 500 mR/hr to the Offsite Monitoring Coordinator.
  - b. At each location, survey for the following and record readings on form ER 5.2D:
    - (1) gamma radiation levels at waist level,
    - (2) beta and gamma radiation levels at waist level, and
    - (3) the highest beta and gamma radiation level indicated by a square meter scan about two inches above the ground.
  - c. If no further samples were requested, report the results to the EOF.
2. Air Sampling Using Portable Air Sampler
  - a. Connect the portable air sampler to the vehicle battery.
    - (1) Leave the engine running,
    - (2) Match the RED clamp to the positive terminal,
    - (3) Attach the BLACK clamp to a ground (i.e., engine block).
  - b. Check the air sampler head for proper loading of silver zeolite cartridge and paper filter.
  - c. Air samples should be taken in open areas away from trees, buildings, and shielded from weather conditions.
  - d. Unless otherwise directed, obtain a minimum 7 cubic feet (196 liters) sample. Record start and stop times and flow rate (use the calibration flow rate from the attached sticker) on form ER 5.2D, Field Survey/Air Sample Data Form.
  - e. After the sample is collected, measure background count rate using the E-140 W/HP 210 probe. If the background is >300 CPM, move to an area of lower background; record on form ER 5.2D.
  - f. Remove the sampler head and separate the filter holder from the cartridge holder.

- g. Using the filter holder as the counting geometry, count the filter and record the results on form ER 5.2D.
- h. Count the silver zeolite cartridge (on contact) and record results on form ER 5.2D.
- i. Place the samples in a labeled plastic bag(s) for storage (label by location and time).
- j. Report the results to the EOF. Read the information from form ER 5.2D using the letter designation of each entry. Do not relay any units over the radio.
- k. Remain in low background area and wait for further instructions. Inform the EOF in the event radiological conditions warrant changing your location.
- l. A projected thyroid dose may be estimated from the measured I-131 concentration through the field analysis of silver zeolite cartridges by using the formula located at the bottom of form ER 5.2D.

#### 5.1.4 Return to the EOF

- 1. When directed to return to the EOF by the Offsite Monitoring Coordinator, park the vehicle in the vehicle monitoring area.
- 2. Notify the Communicator by radio of your arrival at the EOF.
- 3. Dispose of all radioactive waste in drum provided inside the vehicle monitoring area.
- 4. Monitor hands, head and feet for contamination. If contaminated, report to the Radiological Assistant.
- 5. Deliver sample bags and data sheets to the Radiological Assistant.
- 6. Return to your vehicle and monitor the inside and outside for contamination. Survey for smearable and fixed contamination inside and out paying close attention to the air filter and radiator.
- 7. Document vehicle survey in accordance with Procedure ER 4.6, Offsite Monitoring and Decontamination, documenting all contamination levels greater than 1,000 dpm/100cm<sup>2</sup> beta gamma smearable and 100 cpm/probe area beta gamma fixed.
- 8. Remove remaining protective clothing and step into the personal monitoring area at the Radiological Assistant control point.

9. Perform a whole body frisk at the Radiological Assistant control point.
10. Use Procedure ER 4.6 to document and report all personnel contamination greater than 100 cpm/probe area above background beta gamma to the Radiological Assistant.
11. For dosimetry processing report to the dosimetry records workstation with thermoluminescent dosimeters (TLD) and self-reading pocket dosimeters (SRPD).
12. Await further assignments. While waiting, assist the Radiological Assistant, as necessary, recheck your survey kit and prepare it for further use. When ready for redeployment report to the dosimetry records workstation for current-quarter exposure update and issue of dosimetry.
13. If directed to deactivate, submit documentation to the Monitoring Team Coordinator.

#### 5.1.5 Subsequent Sampling Actions

1. Air Sampling Using Installed Environmental Air Samplers
  - a. Obtain Health Physics Department procedure HX0956.01. The equipment necessary to complete the procedure is listed in the procedure and provided at the EOF.
  - b. Obtain necessary equipment from the Environmental Sampling Locker prior to leaving EOF. Also obtain a small step ladder.
  - c. Obtain keys to the installed environmental air samples from the environmental sampling locker. The keys are labeled with the applicable locations.
  - d. Proceed as directed by the Offsite Monitoring Coordinator to the location from which environmental air samples are to be obtained.
  - e. Complete the steps for obtaining the sample in HX0956.01.
  - f. Report any problems encountered to the Offsite Monitoring Coordinator.
  - g. When samples have been collected, labeled, and packaged, complete form ER 5.2E and forward the samples to the Radiological Assistant at the EOF.

2. Smear Sampling

- a. When requested by the Offsite Monitoring Coordinator, obtain a smear sample of approximately 100cm<sup>2</sup> in the sampling area.
- b. Count the smear using an E140 or equivalent count rate meter.
- c. Record the results on form ER 5.2D. Report the results to the EOF.
- d. Place the smear in a labeled envelope for possible further analysis at the EOF.

3. Grass Sampling

- a. Obtain Health Physics Department procedure HX0956.04. The equipment necessary to complete the procedure for sampling grasses is listed in the procedure and provided at the EOF.
- b. Obtain necessary equipment from the environmental sampling locker prior to leaving EOF.
- c. Select a sufficient number of plastic bags to accommodate the numbers of locations and the media specified by the Offsite Monitoring Coordinator.
- d. Using an indelible marker, identify each bag with the name of the sample location, sample date, sample volume, and the appropriate sample submission code determined in accordance with Figure 3.
- e. Proceed as directed by the Offsite Monitoring Coordinator to the location from which grass samples are to be obtained.
- f. Complete the steps for obtaining grass samples in HX0956.04 and collect the amount indicated in step 5.i.
- g. Report any problems encountered to the Offsite Monitoring Coordinator.
- h. When samples have been collected, labeled and form ER 5.2E completed, forward the samples to the Radiological Assistant at the EOF.

i. Sample Table

<u>TYPE</u>	<u>RECOMMENDED AMOUNT</u>	<u>NOTES</u>
Grasses	5 lbs.	Stake off 2 meter by 2 meter plot in an open area. Cut grass approximately one inch above ground level. Gamma and I-131 analysis may be required.

Exact weighing of sample material should be performed at the EOF.

4. Water Sampling

- a. Obtain Health Physics Department procedure HD0956.03. The equipment necessary to complete the procedure is listed in the procedure and provided at the EOF.
- b. Obtain necessary equipment from the environmental sampling locker prior to leaving EOF.
- c. Obtain one-gallon sample containers as needed to accommodate the number of locations specified by the Offsite Monitoring Coordinator.
- d. Using an indelible marker, identify each container with the name of the sample location, sample date, sample volume, collector's initials, and the appropriate sample submission code determined in accordance with Figure 3.
- e. Proceed as directed by the Offsite Monitoring Coordinator to the location from which water samples are to be obtained.
- f. Complete the steps for obtaining water samples in HD0956.03.
- g. If samples from more than one sample point are mixed together, ensure composite sample is checked on form ER 5.2E.
- h. Report any problems encountered to the Offsite Monitoring Coordinator.
- i. When samples have been collected, labeled, and packaged, complete form ER 5.2E and forward the samples to the Radiological Assistant at the EOF.

5. Snow Sampling

- a. Obtain a meter stick, scoop and plastic bag for snow sampling.
- b. At sampling locations specified by the Offsite Monitoring Coordinator, stake off a one meter square plot in an open area.
- c. Using a scoop, obtain a one inch deep sample from the surface of the entire 1 meter by 1 meter area (avoid any debris such as leaves, twigs, and soil in the sample).
- d. Place snow in a plastic bag for transport to the preparation area. Mark the bag indicating the sample location, date, time, and other relevant information.
- e. After allowing the snow to melt, transfer the water into a one-gallon container. Using an indelible marker, identify each container with the name of the sample location, sample date, sample volume, collector's initials, and the appropriate sample submission code determined in accordance with Figure 3.
- f. Complete form ER 5.2E, identify as snow, and forward the samples to the Radiological Assistant.

6. Soil Sampling

- a. Choose an open area that is free of manmade or environmental disturbances such as mining, erosion or flooding. The area should be easily sampled, free of large stones, trees and other heavy vegetation.
- b. Select a sample container capable of holding the volume of soil collected.
- c. Label the sample container using a waterproof marker indicating the sample location, date, time, and any other relevant information.
- d. Mark off a 20 inch by 20 inch area. Remove vegetation, stones larger than a half inch in diameter, and other debris from the area.
- e. Remove the dirt outlined with a sampling scoop to a depth of approximately 1 inch.
- f. Transfer the dirt to the sample container, weigh sample, and seal securely.
- g. Label samples (location, date, time). Complete form ER 5.2E and forward the samples to the Radiological Assistant.



## 6.0 REFERENCES

1. SS# 25564, Establishing Efficiencies for Field Calculations of Radioactive Activity on Air Sample Cartridges, June 16, 1986
2. ER 2.0, Emergency Notification Documentation Forms Procedure
3. ER 4.6, Offsite Monitoring and Decontamination
4. NRC Inspection Report 50-443/90-85
5. NRC Inspection Report 50-443/95-04
6. HX0956.01, Radiological Environmental Sampling of Air Particulates and Radioiodine
7. HX0956.02, Radiological Monitoring of Direct Radiation
8. HD0956.03, Radiological Environmental Sampling of Ground Water
9. HX0956.04, Radiological Environmental Sampling of Food Crops and Vegetation

**Figure 1**  
**Analysis Matrix**

Minimum Analysis for each sample type.

	Air Particulate	Silver Zeolite	Water	Food Crops	Broadleaf Vegetation	Milk
Gross B	X		X			
Tritium(H)			X			
Sr-89, 90						
I-129/131		X			X	X
Gamma (G)	X	X	X	X	X	X

**Figure 2**  
**Environmental Lab Sample Submission**  
**Form Instructions**  
(Sheet 1 of 2)

Complete form ER 5.2E as follows:

1. Client Name, Purchase Order/ Contract No., Date of Shipment, Shipping Method, Requested Turnaround Time.
2. Name/Address of Client Representative - Fill in name, address, telephone number, telefax number of person(s) who should receive results.
3. CLIENT CODE - Enter the letter "S" for Seabrook.
4. MEDIA CODE - Enter the two-letter code from Figure 3 that corresponds to the sample type.
5. LOCATION CODE - The location code identifies the type of EPZ area that was sampled and the sampling coordinates. Determine the code as follows:
  - a. EPZ Area - Enter either "T" or "F" to correspond to the Ten-Mile EPZ area or the Fifty-Mile EPZ area from which the sample collection locations were determined.
  - b. Sampling Grid Coordinates - Provide the latitude and longitude in Location and Sample Type Description and/or Comments.
6. WEEK NO. - Enter the week of the year in which the sample was collected. The first week of every year (whether or not it is a full week) will be Week No. 1.
7. YEAR - Enter the last two digits of the year.
8. DESEL LSN - Leave blank - will be assigned at the laboratory.
9. STATION AND SAMPLE TYPE DESCRIPTION AND COMMENTS - Provide as much descriptive information as available, on the location and/or type of sample.
10. COLLECTION PERIOD - Enter the start and stop times for all sample collections. "M", "D," "YR" and "HR" correspond to "month," "day," "year" and "hour," respectively.

NOTE

Accurate information for the "Collection Period" is required as to the duration of the collection and for the exact time of sampling for grab samples or multiple grab samples that are field composited so the proper correction can be made for decay of activity from the collection time, or midpoint of the collection period, to the time of analysis.

**Figure 2**  
**Environmental Lab Sample Submission**  
**Form Instructions**  
(Sheet 2 of 2)

11. **TOTAL SAMPLE AMOUNT SHIPPED** - The volume or weight of the sample is needed to ensure adequate sample size and to calculate the correct activity by unit volume in the case of charcoal filters and air particulate. All specified samples should be followed by the appropriate units (e.g., L, Kg, etc.)
12. **REPORTING UNITS** - Specify reporting units requested. Results for environmental bioassay samples are routinely specified in units of pico Curies (pCi) per weight or volumes. Results for 10 CFR 50/61 samples are routinely specified in units of microCuries ( $\mu$ Ci) per weight or volume.
13. **RADIOLOGICAL ANALYSES** - Gamma (G) is the minimum analysis that should be performed. Mark other columns as appropriate per Figure 1.
14. **QUARTERLY COMPOSITE** - For water samples only, check the "Composite" or "Grab" block as applicable.
15. **CHAIN-OF-CUSTODY** - Self-explanatory.
16. **FIELD TREATMENT/COMMENTS** - Document sample preparation provided. Preparation includes addition of acids or stabilizers such as sodium bisulfite or preservatives such as formaldehyde and methimazole. Indicate if a sample has been frozen and sectioned. If no field treatment was performed, write in "None."

### **Figure 3**

### **Environmental Sample Type Codes**

#### **AIR**

AP Air Particulate  
CF Charcoal Filter (Silver Zeolite)

#### **CONTAMINATION ASSESSMENT**

SM Smear or wipe samples

#### **WATER**

WP Precipitation, Rain or Snow  
WF Fresh Water, Lakes or Ponds  
WR River Water  
WE Estuary Water  
WS Seawater  
WG Ground Water

#### **TERRESTRIAL**

TM Milk  
TF Edible Food Crop, except green leafy vegetables (identify - edible) (e.g., cranberry, beans)  
TG Non-edible Mixed Vegetation (e.g., grass)  
TV Edible Green Leafy Vegetable (e.g., lettuce)  
TJ Juices from TV samples, if any  
TC Cattle Feed (identify - pellets, silage)  
TS Soil - Specify exact depth(s) Gamma  
TB Biological Organisms (identify)  
TZ Special Terrestrial Sample (identify)  
ZZ Miscellaneous

**Figure 4**  
**Summary of Changes**  
(Sheet 1 of 2)

**Rev. 29:**

*In §5.1, added instructions on location of offsite monitoring team materials, use of both the NEXTEL telephones and mobile radio units, obtaining and securing monitoring instrument check sources and use of rental vehicles or, if necessary, personal vehicles (CR 02-15509).*

*In §5.1, deleted instructions and procedure references for TLD collection and analysis, milk sampling and food crop sampling (CR 02-02164).*

*On form ER 5.2A, added references to additional supplies for use by offsite monitoring teams.*

*On form ER 5.2B, listed cellular telephone numbers and EOF contact numbers for offsite monitoring teams and identified codes use to communicate changing conditions (CR 02-01613).*

*On forms ER 5.2C and ER 5.2D, clarified form entries for longitude/latitude numbers and for monitoring instrument readings.*

**Rev. 28:**

In §5.1 consolidated initial predeployment actions for Offsite Field Monitoring Teams to eliminate redundancy.

In §5.1.5 added instructions to use pertinent Health Physics Department procedures for collecting environmental samples.

In §6.0 added HP Department procedures as references.

In Figure 1 revised sample analysis matrix to show minimum analysis to be requested for each sample type and to conform to revised DE&S environmental sample submission form.

In Figure 2 revised the instructions for completing the environmental lab sample submission form.

On form ER 5.2A revised the checklist to add instructions for obtaining an RO-2 survey meter, clarified instructions for source checking instruments, specified respiratory protection equipment, referenced environmental sampling procedures and equipment, and added instructions to obtain a cell phone and provide the cell phone number to the Offsite Monitoring Communicator.

On form ER 5.2B added line for Administrative Dose Extension.

On form ER 5.2D deleted "MCA Disk #" because it is an obsolete reference. Revised form ER 5.2E in its entirety and renamed it.

**Figure 4**  
**Summary of Changes**  
(Sheet 2 of 2)

Rev. 27:

In §5.1.1, step 7, changed mapbook to maps.

In §5.1.2 deleted old step 3 and added new steps 3 and 4 regarding determining sample location.

In §5.1.3 added step protection.

In §5.1.4, step 8, changed “perform a whole body frisk” to “step into the portal monitor.” Added step 9 regarding whole body frisk.

In §6.0 added references 4 and 5.

In Figure 2 updated step 4 with new information on identifying sample station codes.

On form ER 5.2A deleted step 1.b to insert batteries in survey meters. In step 3.c changed “ten- and/or fifty-mile EPZ grid map books” to “maps.” Added step 3.d regarding GPS unit.

On forms ER 5.2C and D changed titles of the forms, added lines to record latitude and longitude, and deleted lines to record edge locations.

# OFFSITE MONITORING AND SAMPLING PERSONNEL PREDEPLOYMENT CHECKLIST

Monitoring and Sampling Team Number \_\_\_\_\_ Date \_\_\_\_\_

## NOTE

Check that the kit is lead sealed. If the seal is broken, inventory the kit using the Emergency Operations Facility Radiological Emergency Supplies Inventory Checklist for Offsite Monitoring Team Kits.

1.0 Obtain the following equipment from the dispatch area store room.

### PORTABLE AIR SAMPLER

INITIALS

- a. Record serial number here: \_\_\_\_\_
- b. Install a silver zeolite cartridge and particulate filter (rough side out) in the filter head. \_\_\_\_\_
- c. Ensure the sampler is operational. \_\_\_\_\_

## NOTE

The sources needed to check the survey meters are kept in the file cabinet next to the Radiation Assistant's work area. To open the file, key 9 from the Security Desk key box is needed. It is imperative that each source removed from the cabinet is immediately returned to the cabinet following use.

### E-140 OR EQUIVALENT COUNT RATE METER

- a. Record serial number here: \_\_\_\_\_
- b. Battery check - SAT/UNSAT (circle one) \_\_\_\_\_
- c. Instrument Source check - SAT/UNSAT (circle one) \_\_\_\_\_
- d. If case is opened to replace batteries, ensure the speaker wire is re-connected to the speaker contact on the meter circuit board. (Protected: Ref. 6.5) \_\_\_\_\_

### R02 OR EQUIVALENT BETA-GAMMA INSTRUMENT

- a. Record serial number here: \_\_\_\_\_
- b. Battery check - SAT/UNSAT (circle one) \_\_\_\_\_
- c. Instrument Source check - SAT/UNSAT (circle one) \_\_\_\_\_

### R02-A OR EQUIVALENT BETA-GAMMA INSTRUMENT

- a. Record serial number here: \_\_\_\_\_
- b. Battery check - SAT/UNSAT (circle one) \_\_\_\_\_
- c. Instrument Source check - SAT/UNSAT (circle one) \_\_\_\_\_



**OFFSITE MONITORING AND SAMPLING PERSONNEL PREDEPLOYMENT CHECKLIST**  
(Continued)

**2.0    COMMUNICATIONS CHECK**

Install mobile field radio in vehicle in accordance with SM 97-09  
and perform a radio check as follows:

- a.    In a normal voice say "EOF, THIS IS ERO (team #) \_\_\_\_\_  
REQUESTING A RADIO CHECK. DO YOU READ ME OVER?" \_\_\_\_\_
- b.    Acknowledge EOF response by saying "EOF, THIS IS ERO  
(team #)\_\_\_\_\_, RADIO IS OPERATIONAL OUT." \_\_\_\_\_

Check the operability of both primary and backup NEXTEL phones per SM 02-03. \_\_\_\_\_

**3.0    MISCELLANEOUS**

- a.    Obtain respirator mask and two canisters. \_\_\_\_\_
- b.    Obtain environmental sampling procedures and equipment as  
directed by the Offsite Monitoring Coordinator. \_\_\_\_\_
- c.    Obtain maps as directed by Offsite Monitoring Coordinator. \_\_\_\_\_
- d.    Check operability of the Global Positioning System (GPS) unit in the kit. \_\_\_\_\_
- e.    Obtain dosimetry and exposure status from Dosimetry  
Records personnel, and record current RAE. \_\_\_\_\_  
Leader \_\_\_\_\_ mrem    Driver \_\_\_\_\_ mrem
- f.    Check dosimeter charger in kit. \_\_\_\_\_
- g.    Select supply of whirl-packs and RAM bags in addition to kit supplies. \_\_\_\_\_
- h.    Select protective clothing supplies that meet the physical needs of the  
team. \_\_\_\_\_
- i.    Obtain a "drill" A-frame sign and road hazard kit. \_\_\_\_\_

## OFFSITE MONITORING AND SAMPLING PERSONNEL BRIEFING FORM

Monitoring/Sampling Team Number: \_\_\_\_\_ Time: \_\_\_\_\_ Date \_\_\_\_\_

Leader (Name): \_\_\_\_\_ Driver (Name): \_\_\_\_\_

1. Plant Status: \_\_\_\_\_
2. Radiological Release: \_\_\_\_\_ in progress \_\_\_\_\_ expected \_\_\_\_\_ terminated
3. Source of Release: \_\_\_\_\_
4. Current Wind Direction from \_\_\_\_\_ (degrees)
5. Current Wind Speed: \_\_\_\_\_ mph
6. Projected dose rates at survey locations (when available):

Location	Dose Rate	
	<u>TEDE</u>	<u>CDE</u>
_____	_____ mrem/hr	_____ mrem/hr
_____	_____ mrem/hr	_____ mrem/hr
_____	_____ mrem/hr	_____ mrem/hr

7. Instructions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

8. Current RAE: Leader \_\_\_\_\_ mrem Driver \_\_\_\_\_ mrem  
Administrative Dose Extension: ☐ yes ☐ no (Leader); ☐ yes ☐ no (Driver)  
Revised RAE: Leader \_\_\_\_\_ mrem Driver \_\_\_\_\_ mrem  
\_\_\_\_\_ mrem \_\_\_\_\_ mrem

### NOTE

In the event of radio failure, refer to page 3 of SM 02-03 for other monitoring team cell phone numbers and EOF contact.

### NOTE

The following codes will be used by the Offsite Monitoring Communicator to report changed conditions to the monitoring teams.

X-Ray = Site Area Emergency

Zulu = Release in Progress

Whiskey = General Emergency

ER 5.2B

Rev. 29

Page 1 of 1

**SEABROOK STATION ERO**  
**FIELD TEAM SURVEY/AIR SAMPLE DATA FORM**

DATE \_\_\_\_\_ TIME \_\_\_\_\_

**REPORT LETTERED ITEMS ONLY**

Team (A) \_\_\_\_\_ Location of Sample \_\_\_\_\_  
Latitude (B) N \_\_\_\_\_  
Longitude (C) WO \_\_\_\_\_

**SURVEY METER DOSE RATES**

**AIR SAMPLE DATA**

**CLOSED WINDOW**

Waist Level mR/hr (D) \_\_\_\_\_  
2 Inch Level mR/hr (E) \_\_\_\_\_

**OPEN WINDOW**

Waist Level mR/hr (F) \_\_\_\_\_  
2 Inch Level mR/hr (G) \_\_\_\_\_

**FRISKER COUNT RATES**

Waist Level cpm (H) \_\_\_\_\_  
2 Inch Level cpm (I) \_\_\_\_\_

Stop Time (hh:mm) (J) \_\_\_\_\_  
Start Time (hh:mm) \_\_\_\_\_  
Total Run Time \_\_\_\_\_  
Sample Flow Rate (cfm) \_\_\_\_\_  
Sample Volume (K) \_\_\_\_\_  
Background (cpm) (L) \_\_\_\_\_  
Filter Paper (Gross cpm) (M) \_\_\_\_\_  
SZ Cartridge (Gross cpm) (N) \_\_\_\_\_

Direct Reading Dosimeter (mR) \_\_\_\_\_  
Driver (O) \_\_\_\_\_  
Leader (P) \_\_\_\_\_

Optional, Smear Sample (cpm) (Q) \_\_\_\_\_

Projected Adult Thyroid CDE dose estimation: \_\_\_\_\_

$\frac{\boxed{\text{Gross cpm (N)}} - \boxed{\text{Bkg. (L)}}}{\boxed{\text{Volume (K)}}} \times \frac{6.4\text{E-9}}{1} = \text{_____ } \mu\text{Ci/cc} \times 1.25\text{E+6} = \text{_____ Rem/hr}$

**COMPLETED BY LABORATORY PERSONNEL**

Analysis Performed By: \_\_\_\_\_  
Date/Time Analyzed: \_\_\_\_\_

\_\_\_\_\_ Cartridge Spectrum File# \_\_\_\_\_

\_\_\_\_\_ Filter Spectrum File# \_\_\_\_\_

Particulate Filter Activity: \_\_\_\_\_  $\mu\text{Ci/cc}$  Total

Iodine Cartridge Activity: \_\_\_\_\_  $\mu\text{Ci/cc}$  Total

**SAMPLE ANALYSIS DATA ATTACHED**

Remarks: \_\_\_\_\_

# SEABROOK STATION ERO

## EOF SURVEY/AIR SAMPLE CALCULATION WORKSHEET

DATE \_\_\_\_\_ TIME \_\_\_\_\_

Team (A) \_\_\_\_\_

Location of Sample

Latitude (B) N \_\_\_\_\_

Longitude (C) WO \_\_\_\_\_

### SURVEY METER DOSE RATES

### AIR SAMPLE DATA

#### **CLOSED WINDOW**

Waist Level mR/hr (D) \_\_\_\_\_

2 Inch Level mR/hr (E) \_\_\_\_\_

Stop Time (hh:mm) (J) \_\_\_\_\_

#### **OPEN WINDOW**

Waist Level mR/hr (F) \_\_\_\_\_

2 Inch Level mR/hr (G) \_\_\_\_\_

Sample Volume (K) \_\_\_\_\_

Background (cpm) (L) \_\_\_\_\_

Filter Paper (Gross cpm) (M) \_\_\_\_\_

SZ Cartridge (Gross cpm) (N) \_\_\_\_\_

### **FRISKER COUNT RATES**

Waist Level cpm (H) \_\_\_\_\_

2 Inch Level cpm (I) \_\_\_\_\_

Direct Reading Dosimeter (mR)

Driver (O) \_\_\_\_\_

Leader (P) \_\_\_\_\_

Optional, Smear Sample (cpm) (Q) \_\_\_\_\_

### AIR SAMPLE CALCULATIONS

#### **PARTICULATE**

$$\boxed{\text{Gross cpm (M)}} - \boxed{\text{Background (L)}} = \text{NCPM} \times \frac{1.6\text{E-}10}{\boxed{\text{Volume (K)}}} = \text{ } \mu\text{Ci/cc}$$

#### **IODINE** (Adult Thyroid CDE Rate)

$$\boxed{\text{Gross cpm (N)}} - \boxed{\text{Bkg. (L)}} = \text{NCPM} \times \frac{6.4\text{E-}9}{\boxed{\text{Volume (K)}}} = \text{ } \mu\text{Ci/cc} \times 1.25\text{E+}6 = \text{ } \text{Rem/hr.}$$

Approximate Distance and Direction from Plant: \_\_\_\_\_ miles \_\_\_\_\_ degrees.

#### **NOTE**

Air concentrations of radioiodine can be rapidly approximated for 7-cubic foot air sample by using the ratio 100 cpm/1E-7  $\mu\text{Ci/cc}$  I-131.



**SEABROOK STATION  
ADMINISTRATIVE PROCEDURE**

**Operation of the METPAC System**

---

**ER 5.3**

**Rev. 19**

SORC Review: 03-007 Date: 2-12-03

Effective Date: 2-21-03

<b>EXPIRATION DATE</b> <u>2-21-05</u>
---------------------------------------

Procedure Owner:  
S. Perkins-Grew

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## 1.0 OBJECTIVES

This procedure provides instructions for the operation of METPAC, a software package developed to produce dispersion and offsite dose estimates during an accidental release of radioactive material.

## 2.0 RESPONSIBILITIES

### 2.1 METPAC Operator

Operates the METPAC system.

## 3.0 PRECAUTIONS

1. Periodically check on the quarter-hour for significant changes in meteorological conditions.
2. Do not terminate the program in the middle of a run; this may crash the program. Return to Screen One and select Q to terminate.
3. The dose rate projections produced by this procedure represent a best estimate. If projections from in-plant parameters are significantly different from those measured in the environment, it may be due to inaccuracies in meteorological modeling and/or release rate estimates. The results obtained from this procedure should be carefully analyzed since they may form the basis for protective action recommendations to the public.
4. The existence of a seabreeze can significantly affect plume transport and diffusion as predicted by METPAC. Seabreeze effects occur primarily from April through September during the daylight hours. Necessary conditions include sunny days when the sun warms the ground and the ground surface air temperatures rise significantly above the ocean and bay water temperatures.

A shift of onsite wind direction from offshore to onshore (onshore being defined as winds from 22E clockwise to 173E) occurring sometime during daylight hours can be indicative of a seabreeze front passing the site. Existence of a seabreeze front inland from the site can be confirmed by comparing onsite wind data with wind data from inland stations (e.g., Concord NWS).

If an inland seabreeze front exists, the plume will rise several hundred feet above ground upon reaching the front and be directed back towards the shoreline. As a result, there will be (i) little dose inland from the seabreeze front, and (ii) a low dose elsewhere between the seabreeze front and the shoreline where the plume passes several hundred feet overhead in the return flow.

5. When the containment failure model is executed in "batch execution" mode and produces a release duration of less than one hour, a thyroid shelter protection factor of 0.5 should be manually applied to the total thyroid dose. (Protected: Ref. 6.3)



6. If steam line pressure is indicated as less than 50 psig, enter 50 psig as the steam line pressure.
7. All times must be entered in 24-hour-clock notation.
8. All items must have proper values. No error checking is done until after the user has completed the input screen. If there are errors with the input, the terminal will beep, a message will appear above the input screen and the cursor will automatically move to the input location that is in error. The correction values must be inputted followed by a (CR). Once the value has been corrected, the program will continue error processing.
9. In the event that the Wide Range Gas Monitor (WRGM) is inoperable and the WRGM Backup Monitor has been activated, initiate Figure 4, WRGM Backup Monitor Data Calculation Sheet, and input the Effective WRGM Stack Concentration and Release Rate from this form as the STACK CONCENTRATION and STACK RELEASE RATE on the Radiological Data Screen.
10. Data entry limitations can be recognized by use of the "Prompt" selection.
11. Refer to the Technical Description of the SB METPAC System for isotopic breakdown of LOCA types.
12. The two-phase flow release pathway from a Main Steam Line (MSL) incorporates correction factors for the calculation of TEDE and thyroid CDE. (Protected: Ref. 6.12)
13. Monitor response entries will calculate offsite dose rate conditions based on an assumed mixture of noble gas and iodine concentrations. (Protected: Ref. 6.9)
14. METPAC assumes a default release duration of 4 hours.

#### 4.0 PREREQUISITES

For purposes of requiring offsite dose assessment (i.e., a METPAC run), a release is defined as follows:

1. Wide Range Gas Monitor (WRGM) High Alarm (RM-6528-4),
2. Main Steam Line Monitor High Alarm with an OPEN ASDV or SRV on the affected main steam line,
3. The results of effluent analysis or site boundary monitoring indicate a dose rate greater than or equal to 0.06 mrem/hr.

## 5.0 ACTIONS

### 5.1 METPAC Operator

1. Turn on the METPAC Operator's computer and printer. Each piece of hardware can be turned on manually or all units can be powered through a master switch on the multiple outlet strip in which the units are plugged. The system should display a menu screen with 3 alternative programs:
  - METPAC
  - INGEST - (The METPAC Operator's computer will operate INGEST)
  - ODPS
2. Turn on the Dose Assessment Specialist's computer and printer. The Dose Assessment Specialist's METPAC system may be used either to review postulated worst case release scenarios or to provide a backup to the METPAC Operator's system.
3. At the prompts, type in METPAC on either system followed by a carriage return (CR). The system should begin executing the METPAC program and current analysis conditions will be outputted on the screen at this time. Refer to Figure 2 for information on special keys used by METPAC.
4. If the METPAC system does not execute, the user may reload the system with the backup diskettes which are available in the Dose Assessment Area, as follows:
  - a. Turn on the system.
  - b. After entry of date and time, load the METPAC reload disk 1 into drive A.
  - c. Type: A:Reload (CR).
  - d. Follow any further instructions as specified on the screen (usually for loading other disks).

This procedure should return METPAC to its original state. Any analysis previously performed will be lost.

5. Obtain a logger trend printout with data needed to run METPAC from the Technical Assistant. In the event that a logger trend printout is not available, obtain this information from the Technical Assistant or Health Physics Coordinator (in the TSC) as necessary, and record the data on the METPAC Input Data Log, Figure 7.
6. If the system is functioning properly, the Main Menu screen should appear. Select one of the following six options by moving the cursor key up or down to the option to be selected. For more information on METPAC Options refer to Figure 1, Options.

1 - START NEW ACCIDENT

2 - CONTINUE ACCIDENT

3 - ELIMINATE LAST 1/4 HOUR ANALYSIS

4 - OBTAIN OUTPUT

5 - BATCH EXECUTION

Q - QUIT

7. Upon selecting option 1 (START NEW ACCIDENT), the user will be prompted to keep previous data. The user should enter Y to initiate a new accident analysis. Entering N will return the user to the Main Menu screen to select another option.
8. Refer to specific screen entry instructions in Figure 8, METPAC Data Entry Screen Guidance. Enter the appropriate parameters for the various screens by using the information on the logger trend or Figure 7, METPAC Input Data Log. A listing of all METPAC function keys is presented in Figure 9, METPAC Function Key Listing.
9. Depress the EXIT function key (F10) to start the next quarter-hour analysis. This will clear the screen and display the first input screen.
10. After completing each dose projection run, obtain the "Tracking Report" printout. Verify the METEOROLOGY data on the Tracking Report against the Logger Trend or Figure 7 input data. Ensure that LOWER Wind Speed, Wind Direction and Delta Temperature values were used, except in the case of a Stack Release when UPPER Wind Speed, Wind Direction and Delta Temperature values must be used. Turn over results to the Dose Assessment Specialist (DAS) for review and validation. If the DAS is not available, report information to the EOF Coordinator. (Protected: Ref. 6.13)
11. If time permits, the METPAC Operator should try to generate a hardcopy of one projected map per fifteen-minute period and should not go beyond 30 minutes without a graphic printout. The map hardcopy is generated by depressing function key F9.
12. The Status Board Report should be used for status board updates. The Status Board Report is generated by depressing function key F1, followed by function key F4. If the system cannot access the Status Board Report (function keys F1, F4), fill out a Radiological Status Board Update Form, available in Procedure ER 3.3, Emergency Operations Facility Operations. Make necessary changes and direct the information to be posted on the status board by the Dose Assessment Personnel.
13. Ensure copies of the latest printouts are made and delivered, or are placed appropriately for pickup.
14. Maintain a file of printouts and logger trends. Maintain completed METPAC Input Data Logs (Figure 7) if used in place of logger trends.

15. Continue to obtain updates on plant radiological release and meteorological information using the logger trend printout, or Figure 7 if necessary. When possible, make time-advance projection(s) by advancing through the input screens. This assumes the meteorological and radiological data have not changed. Use Option 3 (eliminate last 1/4 hour of accident) when more than one projection has been made and current data becomes available. Option 2 (CONTINUE ACCIDENT) and the edit mode should be used to change the first projection time of analysis to that of the latest data. This procedure minimizes the amount of new data that must be input.
16. When appropriate, return to the main menu and select "QUIT" to exit METPAC program.
17. Turn in all data sheets and printouts from METPAC to the Dose Assessment Specialist.

## 6.0 REFERENCES

1. Technical Description of the SBMETPAC system
2. ER 5.7, Offsite Dose Projection System
3. YAEC memorandum SBP-89-273, dated 4/7/89, METPAC Software Problem.
4. ER 3.3, Emergency Operations Facility Operations
5. ER 2.0, Emergency Notification Documentation Forms Procedure
6. ER 5.4, Protective Action Recommendations
7. NRC Inspection Report No. 50-443/85-32-20
8. NRC Inspection Report No. 50-443/85-32-24
9. NRC Inspection Report No. 50-443/86-10-07
10. YAEC SBC-362 WRGM Input Correction Factors
11. YAEC Memorandum SBP-88-197, dated 3/22/88
12. Primary Technical Data Book
13. SEP#20000030, Response to A/R#00004326 from CR#007882

**Figure 1**  
**Options**  
(Sheet 1 of 2)

**1- Start New Accident**

The program will verify that the user wishes to choose this option. A "Y" should be typed. This will destroy the previous data base.

**2- Continue Accident**

Continues the analysis of the accident. This allows the user to update the release based on the next 15-minute radiological and meteorological data. The operator can also start up a new release pathway under this option.

**3- Eliminate Last 1/4 Hour Accident**

Selecting this option will result in a change in the "END TIME OF ANALYSIS" displayed on the Main Menu Screen (i.e., the end time of analysis is reduced by 15 minutes). This option will eliminate the last 15-minute data base record from the data base file.

**4- Obtain Output**

Selecting this option allows the user to view a plume plot or obtain a report generated for a previous time step. The user must enter the time period of interest. Valid times are between the start time of analysis and the end time of analysis. If the user does not wish to execute this option, press (CR). If valid times are entered, followed by a (CR), the program will display the plume plot for the time period of interest. After the plume plot is displayed, the user can obtain any desired METPAC report.

**5- Batch Execution**

The program clears the screen and asks the user to enter a batch option. The valid options are: (1) Project using current analysis with persistent meteorological and radiological data; (2) Project using current analysis with user-input meteorological and radiological data; (3) Project using new data; or (4) Perform containment failure/stack venting projection. The user has to enter in the option number, press (CR), then input appropriate data. The batch options allow the analysis of 1 through 32 quarter hours (8 hours total).

**Q- Quit**

To exit from METPAC, the user should type "Q" and (CR). The program will terminate without losing any data files.

**Figure 1**  
**Options**  
(Sheet 2 of 2)

EDITING DATA

To edit a mistake in a previous quarter hour data record, the user should proceed through the Main Menu screen as if continuing an accident.

When the Date Screen is presented, the user should enter the quarter hour that the error occurred in the time of analysis input line.

The user may change any previously entered value on the RAD and MET screens by moving the cursor to the error location and typing the corrected value.

After all editing has been completed, move the cursor to "RUN" and press (CR).

Repeat this action to correct the error(s) in each subsequent quarter hour in which the error(s) occurred.

Also, "RUN" any subsequent quarter hours that do not require editing in their proper sequence to update the calculation.

Do not use the next quarter hour option to attempt to correct errors.

## Figure 2 Special Keys

PrtSc	When the Print Screen key is pressed along with the Shift key, a copy of the information displayed is printed on the printer. If the information on the display is alpha/numeric characters, such as a program listing, Print Screen will duplicate this information on the printer. If the information is a graphic representation, it can only be reproduced on a printer that supports graphic printing.
Backspace	When pressed, the Backspace key erases the last character typed and moves the previously typed characters one position to the right.
CAPS LOCK	The Caps Lock key when pressed once, locks the characters A through Z in the uppercase position. You can get lowercase characters while Caps Lock is on by pressing the Shift key. Press the Caps Lock key again and uppercase mode for characters A through Z released.
Enter or Return	This is the Carriage Return key or the Enter key. Its use is defined by the programming language or application you are using.
CTRL C	If (CTRL) is depressed along with the C key, the METPAC program will come to a complete stop.

**Figure 3**  
**LOCA Type/Stability Classification**

LOCA Type Classification Table:

RELEASE PATH	REACTOR TRIP TIME	
	LESS THAN 100 HOURS	GREATER THAN 100 HOURS
STACK	3	1
CONTAINMENT	3	3
UNMONITORED	3	3

Stability Classification Table:

Stability Classification	Pasquill Classes	Upper Delta-t	Lower Delta-t
Extremely Unstable	A=1	$\leq -1.74$	$\leq -1.12$
Moderately Unstable	B=2	$\geq -1.73$ to $\leq -1.55$	$\geq -1.11$ to $\leq -1.0$
Slightly Unstable	C=3	$\geq -1.54$ to $\leq -1.37$	$\geq -0.99$ to $\leq -0.89$
Neutral	D=4	$\geq -1.36$ to $\leq -0.46$	$\geq -0.88$ to $\leq -0.30$
Slightly Stable	E=5	$\geq -0.45$ to $\leq +1.36$	$\geq -0.29$ to $\leq +0.88$
Moderately Stable	F=6	$\geq +1.37$ to $\leq +3.64$	$\geq +0.89$ to $\leq +2.34$
Extremely Stable	G=7	$\geq +3.65$	$\geq +2.34$

**NOTE**

The Backup Met Tower displays the Pasquill Class (A-G) in numeric format (1-7) rather than the delta temperature in degrees F. To obtain the proper delta temperature, choose the appropriate upper or lower delta temperature value corresponding to the Pasquill Class letter (A-G).



### Figure 4 WRGM Backup Monitor Data Calculation Sheet

This figure is to be used to calculate the "Effective" WRGM Stack Concentration and "Effective" WRGM Stack Release Rate from the output of the WRGM Backup Monitor (WBM).

1. Obtain the WBM reading from the Technical Support Center:

**A = WBM reading = \_\_\_\_\_ mR/hr**

2. Determine the Time After Shutdown (TAS) and obtain the WBM Correction Factor (WBMCF) from the table below:

<u>TAS in hours</u>	<u>WBMCF</u>
=1	0.175
2	0.183
5	0.223
7	0.252
10	0.294
20	0.437
50	1.10
70	1.71
100	2.13
200	2.26
500	2.27
700	2.25
1000	2.18

If TAS does not match listed TAS hours, round down  
(e.g., if TAS = 8, use TAS 7 WBMCF 0.252)

**B = WBM Correction Factor (WBMCF) = \_\_\_\_\_  $\frac{\mu\text{Ci/cc}}{\text{mR/hr}}$**

3. Obtain the Stack Flow Rate from Logger Trend, Main Plant Computer Data Point RM-6528-4 "PF PLANT VENT DISCH FLOW" or Figure 5, Plant Vent Stack Flow Summarization, and convert to cc/sec as necessary:

**C = Stack Flow Rate = \_\_\_\_\_ CFM x  $472 \frac{\text{cc/Sec}}{\text{CFM}}$  = \_\_\_\_\_ cc/sec**

4. Calculate the Effective WRGM Stack Concentration and Release Rate:

**D = Effective WRGM Stack Concentration = A x B = \_\_\_\_\_  $\mu\text{Ci/cc}$**

**E = Effective WRGM Stack Release Rate = C x D = \_\_\_\_\_  $\mu\text{Ci/sec}$**

### Figure 5 Plant Vent Stack Flow Summarization

The following list represents the operating fans and respective flow rates for the various modes of plant operation. All flows are in CFM.

If a fan is shut down, assume a total stack flow reduction of 50% of the shutdown fan flow value. For example, if WAH-FN-13A is shut down, normal conditions stack flow would be  $276,160 - (151,620/2)(.5) = 238,255$  CFM. Only the fans listed below should be considered when calculating flow reductions. Smaller support fans not listed below (e.g., WAH-FN-125) should not be considered in a flow reduction calculation.

#### NORMAL

CAP-FN-10	4,000
FAH-FN-124	34,000
PAH-FN-7A, B &/OR C	43,340
PAH-FN-8A OR B	43,200
WAH-FN-13A AND B	<u>151,620</u>
<b>TOTAL CFM</b>	<b>276,160</b>

#### "A" ISOLATION, EAH ON RECIRC

CAP-FN-10	4,000
FAH-FN-124	34,000
PAH-FN-7A, B &/OR C	43,340
PAH-FN-8A OR B	19,800
WAH-FN-13A AND B	151,620
EAH-FN-4A OR B	<u>4,000</u>
<b>TOTAL CFM</b>	<b>256,760</b>

#### PRE-ENTRY PURGE

CAP-FN-10	15,000
FAH-FN-124	34,000
PAH-FN-7A, B &/OR C	43,340
PAH-FN-8A OR B	43,200
WAH-FN-13A AND B	<u>151,620</u>
<b>TOTAL CFM</b>	<b>287,160</b>

#### REFUELING PURGE

CAP-FN-10	4,000
FAH-FN-124	34,000
PAH-FN-7A, B &/OR C	43,340
PAH-FN-8A OR B	3,200
WAH-FN-13A AND B	151,620
CAP-FN-35	<u>40,000</u>
<b>TOTAL CFM</b>	<b>316,160</b>

#### REFUELING

CAP-FN-10	4,000
FAH-FN-11A OR B	16,000
PAH-FN-7A, B &/OR C	43,340
PAH-FN-8A OR B	43,200
WAH-FN-13A AND B	<u>151,620</u>
<b>TOTAL CFM</b>	<b>258,160</b>

Assume a minimum default value (due to the stack chimney effect) of 57,568 CFM if

- 1) no fans are running, or
- 2) the total flowrate from a plant fan alignment is less than 57,568 CFM.

#### **NOTE**

The above information was taken from the Primary Technical Data Book, located in the Control Room.

**Figure 6**  
**METPAC Isotopic Sample Input Data Log**

This input is for a \_\_\_\_ Stack (WRGM) \_\_\_\_ Containment Atmosphere sample.

The sample start time was \_\_\_\_\_. The sample end time was \_\_\_\_\_.  
date/time date/time

**ISOTOPIC SAMPLE RESULTS**

I-131 _____ $\mu\text{Ci/cc}$	Cs-134 _____ $\mu\text{Ci/cc}$
I-132 _____ $\mu\text{Ci/cc}$	Cs-136 _____ $\mu\text{Ci/cc}$
I-133 _____ $\mu\text{Ci/cc}$	Cs-137 _____ $\mu\text{Ci/cc}$
I-134 _____ $\mu\text{Ci/cc}$	Ba-140 _____ $\mu\text{Ci/cc}$
I-135 _____ $\mu\text{Ci/cc}$	La-140 _____ $\mu\text{Ci/cc}$
Kr-83m _____ $\mu\text{Ci/cc}$	Sr-91 _____ $\mu\text{Ci/cc}$
Kr-85m _____ $\mu\text{Ci/cc}$	Sr-92 _____ $\mu\text{Ci/cc}$
Kr-85 _____ $\mu\text{Ci/cc}$	Y-91 _____ $\mu\text{Ci/cc}$
Kr-87 _____ $\mu\text{Ci/cc}$	Y-93 _____ $\mu\text{Ci/cc}$
Kr-88 _____ $\mu\text{Ci/cc}$	Zr-95 _____ $\mu\text{Ci/cc}$
Kr-89 _____ $\mu\text{Ci/cc}$	Nb-95 _____ $\mu\text{Ci/cc}$
Xe-131m _____ $\mu\text{Ci/cc}$	Nb-97 _____ $\mu\text{Ci/cc}$
Xe-133m _____ $\mu\text{Ci/cc}$	Ru-103 _____ $\mu\text{Ci/cc}$
Xe-133 _____ $\mu\text{Ci/cc}$	Ce-143 _____ $\mu\text{Ci/cc}$
Xe-135m _____ $\mu\text{Ci/cc}$	Np-239 _____ $\mu\text{Ci/cc}$
Xe-135 _____ $\mu\text{Ci/cc}$	Ru-106 _____ $\mu\text{Ci/cc}$
Xe-137 _____ $\mu\text{Ci/cc}$	Te-132 _____ $\mu\text{Ci/cc}$
Xe-138 _____ $\mu\text{Ci/cc}$	Ce-144 _____ $\mu\text{Ci/cc}$

TIME: \_\_\_\_\_ DATE: \_\_\_\_\_ INITIALS: \_\_\_\_\_

**Figure 7**  
**METPAC Input Data Log**  
(Sheet 1 of 2)

COMPLETED BY \_\_\_\_\_

	MO/DA/YR	HR:MN
SHUTDOWN	_____	_____
UNMONITORED RELEASE	_____	_____
STEAM LINE	_____	_____
CONTAINMENT RELEASE	_____	_____
STACK RELEASE	_____	_____
ESTIMATED END OF RELEASE	_____	_____

**15 MINUTE METEOROLOGICAL AVERAGES**

Lower Wind Speed (mph):	_____
Upper Wind Speed (mph):	_____ (Stack release only)
Lower Wind Direction (deg from):	_____
Upper Wind Direction (deg from):	_____ (Stack release only)
Lower Delta Temperature (deg F):	_____
Upper Delta Temperature (deg F):	_____ (Stack release only)
Precipitation (in/qtr hr):	_____
Solar Radiation (Ly/min):	_____

**UNMONITORED RELEASE**

Field Team Dose Rate (mR/hr):	_____
Iodine-131 Con ( $\mu$ Ci/cc):	_____
Field Team Location (mile):	_____
Field Team Sector (1=N; 2=NNE; 3=NE, etc.):	_____
Estimated Flow Rate (cc/Sec):	_____

**Figure 7**  
**METPAC Input Data Log**  
(Sheet 2 of 2)

**STEAM LINE RELEASE**

Steamline Dose Rate (mr/hr): \_\_\_\_\_  
Steamline Pathway : \_\_\_\_\_ SRV=1 \_\_\_\_\_ ASD=2 \_\_\_\_\_ 2-Phased  
Steamline Pressure (psig): \_\_\_\_\_

**CONTAINMENT RELEASE**

Containment Dose Rate (R/hr): \_\_\_\_\_  
Containment Pressure (psig): \_\_\_\_\_  
Estimated Hole Diameter (ft): \_\_\_\_\_  
Stack Venting (8" hole): \_\_\_\_\_ YES \_\_\_\_\_ NO

**STACK RELEASE**

WRGM Concentration ( $\mu\text{Ci/cc}$ ): \_\_\_\_\_  
WRGM Release Rate ( $\mu\text{Ci/sec}$ ): \_\_\_\_\_

**MISCELLANEOUS RELEASE INPUTS**

Isotopics ( $\mu\text{Ci/cc}$ ): \_\_\_\_\_ YES \_\_\_\_\_ NO  
LOCA Type (1 or 3): \_\_\_\_\_  
Monitored vs Isotopics (0-Mon/1-Thy/2-EDE): \_\_\_\_\_

All parameters are available on the Dose Assessment Status screen of the MPCs.

Solar radiation measurements can be accessed through the logger trend printout. If instrumentation is **not** available, use default solar radiation values in Figure 10.

**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 1 of 16)

**CURRENT ACCIDENT CONDITION input**

**Melpac.bat** METPAC VERSION 5.4 SEADROOK STATION  
CURRENT ACCIDENT CONDITION

	START	OF	END	OF
	MO/DA/YR	HR:MN	MO/DA/YR	HR:MN
SHUTDOWN	-1/-1/-1	-1:-1	-1/-1/-1	-1:-1
ANALYSIS	-1/-1/-1	-1:-1	-1/-1/-1	-1:-1

PLEASE ENTER DATE AND TIME OF SHUTDOWN AND DATE AND TIME OF RELEASE

	MO/DA/YR	HR:MN
SHUTDOWN	-1/-1/-1	-1:-1
UNMONITORED RELEASE	-1/-1/-1	-1:-1
STEAMLINE RELEASE	-1/-1/-1	-1:-1
CONTAINMENT RELEASE	-1/-1/-1	-1:-1
STACK RELEASE	-1/-1/-1	-1:-1

MAIN MENU    RAD SCREEN    MET SCREEN

Where:

**SHUTDOWN** = Enter date and time of the reactor trip.

**UNMONITORED RELEASE** = Enter date and time of release initiation. Use this analysis option if there is a loss of radiological monitoring capabilities with a suspected release in progress. This is assumed to be a ground level release.

**STEAMLINE RELEASE** = Enter date and time of release initiation. Use this analysis option if there is a main steam line radiation monitor high alarm with an open Atmospheric Steam Dump Valve or Safety Relief Valve on the affected steam line. This is assumed to be a ground level release.

**CONTAINMENT RELEASE** = Enter date and time of release initiation. Use this analysis option if containment enclosure is not at negative pressure, or if either of the containment enclosure/outside atmosphere differential pressure monitors (EAH-PDI-5782 or 5789) reads zero. This is assumed to be a ground level release.

**STACK RELEASE** = Enter date and time of release initiation. Use this analysis option if there is a Wide Range Gas Monitor high alarm (RM-6528-4).

**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 2 of 16)

**RAD SCREEN input for UNMONITORED RELEASE pathway**

The screenshot shows a terminal window titled 'Metpac.bat'. The screen displays the following information:

```
SHUTDOWN: DATE 10/10/00 TIME 10:00 UNMONITORED
ANALYSIS: DATE 10/10/00 TIME 10:30 METPAC VERSION 5.4 SEABROOK STATION

UNMONITORED:
METHOD: 0
MET <0-FIELD/1-COMBO/2-ISOTOPIC>
0- DOSE RATE: -1.000E+00 nR/hr
0- LOCATION: -1.00 nile
0- SECTOR: -1 <1=N/2=NNE/...>
0- I131 CONC: -1.000E+00 uCi/cc
0- LOCATION: -1.00 nile
0- SECTOR: -1 <1=N/2=NNE/...>

2- ISOTOPICS: N Y/N
2- EST FLOW RATE: -1.000E+00 cc/sec
```

At the bottom of the screen, there are three labels: 'DATE SCREEN', 'METPAC SCREEN' (which is highlighted with a box), and 'PROMPT'.

Where:

**DOSE RATE** = Enter a measured dose rate in the field.

**LOCATION** = Enter the estimated miles from the release point where the measured DOSE RATE was taken.

**SECTOR** = Enter the approximate direction of the DOSE RATE measurement LOCATION from the release point.

N - 1; NNE - 2; NE - 3; ENE - 4; E - 5; ESE - 6; SE - 7; SSE - 8; S - 9; SSW - 10; SW - 11;  
WSW - 12; W - 13; WNW - 14; NW - 15; and NNW - 16

**I131 CONC** = Enter the measured I131 concentration in the field.

**LOCATION** = Enter the estimated miles from the release point where the measured I131 CONC was taken.

**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 3 of 16)

**SECTOR** = Enter the approximate direction of the I131 CONC measurement LOCATION from the release point.

N - 1; NNE - 2; NE - 3; ENE - 4; E - 5; ESE - 6; SE - 7; SSE - 8; S - 9; SSW - 10; SW - 11;  
WSW - 12; W - 13; WNW - 14; NW - 15; and NNW - 16

**ISOTOPICS** = Entering "N" will cause METPAC to use a predetermined radionuclide mix. Entering "Y" will take the user to another screen to input a known or estimated radionuclide mix.

**NOTE**

Obtain Dose Assessment Specialist guidance for which to use. If ISOTOPICS are used ("Y" is entered), enter estimated radionuclide mix from METPAC Isotopic Sample Input Data Log, Figure 6.

**EST FLOW RATE** = Enter the estimated flow rate at the release point. The following conversion may be useful.

$$\underline{\hspace{2cm}} \text{ ft}^3/\text{min} \times \underline{471.9456} = \underline{\hspace{2cm}} \text{ cc/sec}$$



**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 4 of 16)

**MET SCREEN input for UNMONITORED RELEASE pathway**

Metpac.bat			
SHUTDOWN: DATE 10/10/00		TIME 10:00	UNMONITORED
ANALYSIS: DATE 10/10/00		TIME 10:30	METPAC VERSION 5.4
		MET DATA	SEABROOK STATION
LOWER	:	WIND SPEED	-1.00 MPH
	:	WIND DIRECTION	-1.00 DEG FROM
	:	DELTA TEMPERATURE	-100.00 DEG F
PRECIPITATION	:		-1.00 INCH/QTR HR
SOLAR RADIATION	:		-1.00 ly/nin
RELEASE CONDITION <0=STOPPED/1=CONTINUING>		ESTIMATED END OF RELEASE	
UNMONITORED :	1	MM/DD/YY	HR:MM
		10/10/ 0	14:30
LOCATYPE :	3 1 OR 3		
DATE SCREEN	RAD SCREEN	RUN	PROMPT

Where:

**LOWER WIND SPEED** = Enter the most recent 15 minute average value of lower wind speed.

**LOWER WIND DIRECTION** = Enter the most recent 15 minute average value of lower wind direction.

**LOWER DELTA TEMPERATURE** = Enter the most recent 15 minute average value of lower delta temperature.

**PRECIPITATION** = Enter the most recent 15 minute average value of precipitation.

**SOLAR RADIATION** = Enter the most recent 15 minute average value of solar radiation.

**ESTIMATED END OF RELEASE** = Enter the date and time when the release is expected to terminate, or has actually terminated. Note that this field is accessed by using the right arrow key from the SOLAR RADIATION field or the left arrow key from the RELEASE CONDITION field. Obtain entry values from the Dose Assessment Coordinator.

**RELEASE CONDITION** = Enter "0" if the release is stopped or "1" if it is continuing.

**LOCA TYPE** = Enter "3".

Position the cursor on the prompt "RUN" and press (CR). The program will begin execution of the dispersion and dose program. (Protected: Ref. 6.8)

**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 5 of 16)

**RAD SCREEN input for STEAMLINE RELEASE pathway**

The screenshot shows a terminal window titled "Metpac.bat". The screen displays the following information:

```
SHUTDOWN: DATE 10/10/00 TIME 10:00 STEAMLINE  
ANALYSIS: DATE 10/10/00 TIME 10:30 MEIPAC VERSION 5.4 SEABROOK STATION
```

Below this, the "STEAMLINE:" section contains the following data:

```
DOSE RATE: -1.000E+00 nR/hr  
PRESSURE: -1.00 psig  
PATHWAY: 1  
(1-SRU/2-ARU/3-TWO-PHASED)
```

The "ISOTOPICS:" section contains the following data:

```
ISOTOPICS: N Y/N  
MON US ISO 0  
(0-MON/1-THY/2-EDE)
```

At the bottom of the screen, there are three labels: "DATE SCREEN", "METPAC SCREEN" (which is underlined), and "PROMPT".

Where:

**DOSE RATE** = Enter the value of the main steam line radiation monitor associated with the steam line having the open Atmospheric Steam Dump Valve or Safety Relief Valve.

**PRESSURE** = Enter the pressure in the ruptured generator. If the generator pressure is indicated less than 50 psig, enter 50 psig.

**PATHWAY** = Enter "1" if release is through a Safety Relief Valve, "2" if release is through an Atmospheric Steam Dump Valve, or "3" if both a steam AND liquid release is occurring through either valve.

**ISOTOPICS** = Entering "N" will cause METPAC to use a predetermined radionuclide mix. Entering "Y" will take the user to another screen to input a known or estimated radionuclide mix.

**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 6 of 16)

**NOTE**

Obtain Dose Assessment Specialist guidance for which to use. If ISOTOPICS are used ("Y" is entered), enter estimated radionuclide mix from METPAC Isotopic Sample Input Data Log, Figure 6.

**MON VS ISO =**      Entering "0" will cause METPAC to use predetermined radionuclide mix for calculating TEDE and thyroid CDE, OR  
                             "1" will cause METPAC to use predetermined noble gas mixture for calculating TEDE and inputted known or estimated radionuclide mix (from above) for calculating thyroid CDE, OR  
                             "2" will cause METPAC to use inputted known or estimated radionuclide mix to calculate TEDE and thyroid CDE.

**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 7 of 16)

**MET SCREEN input for STEAMLINE RELEASE pathway**

The screenshot shows a terminal window titled "Metpac.bat". The screen displays the following information:

```
SHUTDOWN: DATE 10/10/00 TIME 10:00 STEAMLINE
ANALYSIS: DATE 10/10/00 TIME 10:30 METPAC VERSION 5.4 SEABROOK STATION
MET DATA

LOWER      : WIND SPEED          -1.00 MPH
            : WIND DIRECTION      -1.00 DEG FROM
            : DELTA TEMPERATURE  -100.00 DEG F

PRECIPITATION : -1.00 INCH/QTR HR
SOLAR RADIATION : -1.00 ly/nin

RELEASE CONDITION <0=STOPPED/1=CONTINUING>
STEAMLINE   : 1

ESTIMATED END OF RELEASE
MM/DD/YY   HR:MM
10/10/ 0   14:30

DATE SCREEN  RAD SCREEN  RUN  PROMPT
```

Where:

**LOWER WIND SPEED** = Enter the most recent 15 minute average value of lower wind speed.

**LOWER WIND DIRECTION** = Enter the most recent 15 minute average value of lower wind direction.

**LOWER DELTA TEMPERATURE** = Enter the most recent 15 minute average value of lower delta temperature.

**PRECIPITATION** = Enter the most recent 15 minute average value of precipitation.

**SOLAR RADIATION** = Enter the most recent 15 minute average value of solar radiation.

**ESTIMATED END OF RELEASE** = Enter the date and time when the release is expected to terminate, or has actually terminated. Note that this field is accessed by using the right arrow key from the SOLAR RADIATION field or the left arrow key from the RELEASE CONDITION field. Obtain entry values from the Dose Assessment Specialist.

**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 8 of 16)

**RELEASE CONDITION** = Enter "0" if the release is stopped or "1" if it is continuing.

Position the cursor on the prompt "RUN" and press (CR). The program will begin execution of the dispersion and dose program. (Protected: Ref. 6.8)

**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 9 of 16)

**RAD SCREEN input for CONTAINMENT RELEASE pathway**

The screenshot shows a terminal window titled "Melpac.bat". The top section displays "SHUTDOWN: DATE 10/10/00 TIME 10:00" and "CONTAINMENT METPAC VERSION 5.4 SEABROOK STATION". Below this, "ANALYSIS: DATE 10/10/00 TIME 10:30" is shown. The main area contains a "CONTAINMENT:" section with fields for "DOSE RATE" (value: -1.000E+00 R/hr), "PRESSURE:" (value: -1.00 psig), "ISOTOPICS:" (value: N Y/N), and "MON US ISO:" (value: 0). At the bottom, "EST HOLE DIA.:" is set to -1.00 feet. Navigation options "DATE SCREEN" and "PRESS SCREEN" are visible at the bottom left.

```

Melpac.bat
SHUTDOWN: DATE 10/10/00 TIME 10:00 CONTAINMENT
ANALYSIS: DATE 10/10/00 TIME 10:30 METPAC VERSION 5.4 SEABROOK STATION

CONTAINMENT:
DOSE RATE      -1.000E+00 R/hr
PRESSURE:      -1.00 psig
ISOTOPICS:      N Y/N
MON US ISO:      0
EST HOLE DIA.:  -1.00 feet

DATE SCREEN    PRESS SCREEN
```

Where:

**DOSE RATE** = Enter the measured or estimated value of the containment dose rate.

**PRESSURE** = Enter the containment pressure.

**ISOTOPICS** = Entering "N" will cause METPAC to use a predetermined radionuclide mix. Entering "Y" will take the user to another screen to input a known or estimated radionuclide mix.

**NOTE**

Obtain Dose Assessment Specialist guidance for which to use. If ISOTOPICS are used ("Y" is entered), enter estimated radionuclide mix from METPAC Isotopic Sample Input Data Log, Figure 6.

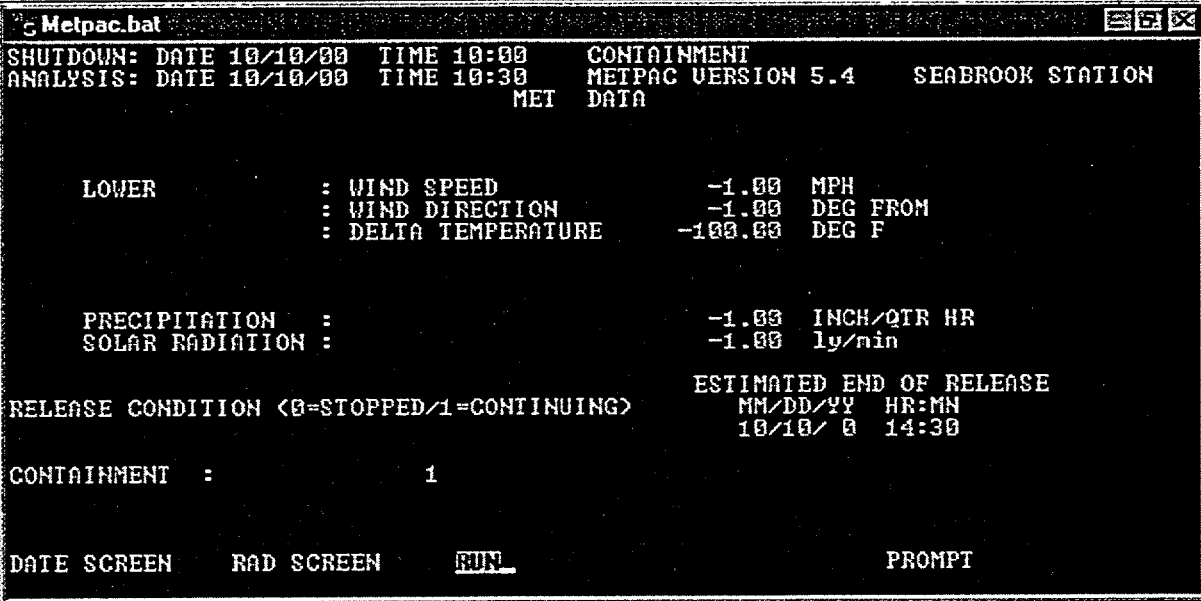
**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 10 of 16)

**MON VS ISO =**      Entering "0" will cause METPAC to use predetermined radionuclide mix for calculating TEDE and thyroid CDE, OR  
                             "1" will cause METPAC to use predetermined noble gas mixture for calculating TEDE and inputted known or estimated radionuclide mix (from above) for calculating thyroid CDE, OR  
                             "2" will cause METPAC to use inputted known or estimated radionuclide mix to calculate TEDE and thyroid CDE.

**EST HOLE DIAMETER =** Enter the estimated diameter of the release point from containment.  
Entering "-1" will cause METPAC to use the assumed design basis containment leak rate.

**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 11 of 16)

**MET SCREEN input for CONTAINMENT RELEASE pathway**



The screenshot shows a terminal window titled "Metpac.bat". The screen displays the following information:

```
SHUTDOWN: DATE 10/10/00 TIME 10:00 CONTAINMENT
ANALYSIS: DATE 10/10/00 TIME 10:30 METPAC VERSION 5.4 SEABROOK STATION
                                         MET DATA

      LOWER      : WIND SPEED          -1.00 MPH
                  : WIND DIRECTION     -1.00 DEG FROM
                  : DELTA TEMPERATURE  -100.00 DEG F

      PRECIPITATION :          -1.00 INCH/QTR HR
      SOLAR RADIATION :          -1.00 ly/min

      RELEASE CONDITION <0=STOPPED/1=CONTINUING>
                                         ESTIMATED END OF RELEASE
                                         MM/DD/YY HR:MN
                                         10/10/ 0 14:30

      CONTAINMENT :          1

      DATE SCREEN   RAD SCREEN   RUN   PROMPT
```

Where:

**LOWER WIND SPEED** = Enter the most recent 15 minute average value of lower wind speed.

**LOWER WIND DIRECTION** = Enter the most recent 15 minute average value of lower wind direction.

**LOWER DELTA TEMPERATURE** = Enter the most recent 15 minute average value of lower delta temperature.

**PRECIPITATION** = Enter the most recent 15 minute average value of precipitation.

**SOLAR RADIATION** = Enter the most recent 15 minute average value of solar radiation.

**ESTIMATED END OF RELEASE** = Enter the date and time when the release is expected to terminate, or has actually terminated. Note that this field is accessed by using the right arrow key from the SOLAR RADIATION field or the left arrow key from the RELEASE CONDITION field. Obtain entry values from the Dose Assessment Coordinator.



**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 12 of 16)

**RELEASE CONDITION** = Enter "0" if the release is stopped or "1" if it is continuing.

Position the cursor on the prompt "RUN" and press (CR). The program will begin execution of the dispersion and dose program. (Protected: Ref. 6.8)

**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 13 of 16)

**RAD SCREEN input for STACK RELEASE pathway**

```
Metpac.bat
SHUTDOWN: DATE 10/10/00 TIME 10:00 STACK
ANALYSIS: DATE 10/10/00 TIME 10:30 METPAC VERSION 5.4 SEABROOK STATION

STACK:
CONCENTRATION: -1.000E+00 uCi/cc
RELEASE RATE: -1.000E+00 uCi/sec
ISOTOPICS: N Y/N
MON US ISO: 0
              <0-MON/1-THY/2-EDE>

DATE SCREEN  METPAC SCREEN  PROMPT
```

Where:

**CONCENTRATION** = Enter the indicated release concentration from the Wide Range Gas Monitor.

**RELEASE RATE** = Enter the indicated release rate from the Wide Range Gas Monitor.

**ISOTOPICS** = Entering "N" will cause METPAC to use a predetermined radionuclide mix. Entering "Y" will take the user to another screen to input a known or estimated radionuclide mix.

**NOTE**

Obtain Dose Assessment Specialist guidance for which to use. If ISOTOPICS are used ("Y" is entered), enter estimated radionuclide mix from METPAC Isotopic Sample Input Data Log, Figure 6.

**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 14 of 16)

**MON VS ISO =**      Entering "0" will cause METPAC to use predetermined radionuclide mix for calculating TEDE and thyroid CDE, OR  
                             "1" will cause METPAC to use predetermined noble gas mixture for calculating TEDE and inputted known or estimated radionuclide mix (from above) for calculating thyroid CDE, OR  
                             "2" will cause METPAC to use inputted known or estimated radionuclide mix to calculate TEDE and thyroid CDE.

# **Figure 8** **METPAC Data Entry Screen Guidance** (Sheet 15 of 16)

**MET SCREEN input for STACK RELEASE pathway**

```

Metpac.bat
SHUTDOWN: DATE 10/10/00 TIME 10:00 STACK
ANALYSIS: DATE 10/10/00 TIME 10:30 METPAC VERSION 5.4 SEABROOK STATION
MET DATA
UPPER      : WIND SPEED      -1.00 MPH
           : WIND DIRECTION  -1.00 DEG FROM
           : DELTA TEMPERATURE -100.00 DEG F

PRECIPITATION : -1.00 INCH/QTR HR
SOLAR RADIATION : -1.00 ly/min

RELEASE CONDITION <0=STOPPED/1=CONTINUING> ESTIMATED END OF RELEASE
MM/DD/YY HR:MN
10/10/00 14:30

STACK      : 1
LOCATYPE   : 3 1 OR 3

DATE SCREEN RAD SCREEN RUN PROMPT
  
```

Where:

**UPPER WIND SPEED** = Enter the most recent 15 minute average value of upper wind speed.

**UPPER WIND DIRECTION** = Enter the most recent 15 minute average value of upper wind direction.

**UPPER DELTA TEMPERATURE** = Enter the most recent 15 minute average value of upper delta temperature.

**PRECIPITATION** = Enter the most recent 15 minute average value of precipitation.

**SOLAR RADIATION** = Enter the most recent 15 minute average value of solar radiation.

**ESTIMATED END OF RELEASE** = Enter the date and time when the release is expected to terminate, or has actually terminated. Note that this field is accessed by using the right arrow key from the SOLAR RADIATION field or the left arrow key from the RELEASE CONDITION field. Obtain entry values from the Dose Assessment Coordinator.

**RELEASE CONDITION** = Enter "0" if the release is stopped or "1" if it is continuing.

**Figure 8**  
**METPAC Data Entry Screen Guidance**  
(Sheet 16 of 16)

**LOCA TYPE** = Enter "3" if the reactor SHUTDOWN time occurred less than or equal to 100 hours from the current ANALYSIS time. Enter "1" if the reactor SHUTDOWN time occurred greater than 100 hours from the current ANALYSIS time.

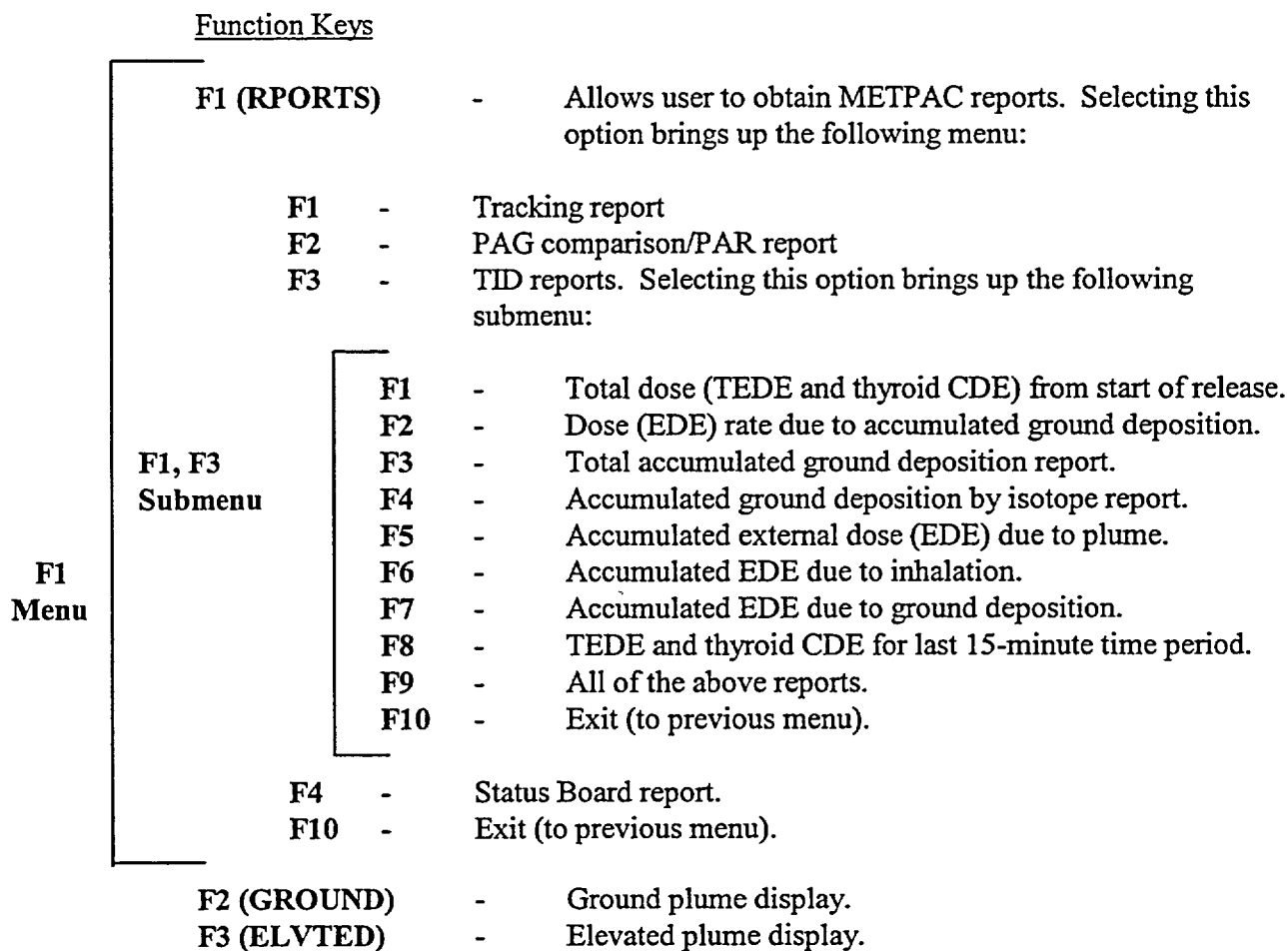
**NOTE**

If the Wide Range Gas Monitor (WRGM) is inoperable and the WRGM Backup Monitor has been activated, enter LOCA 3 for all times after shutdown.

Position the cursor on the prompt "RUN" and press (CR). The program will begin execution of the dispersion and dose program. (Protected: Ref. 6.8)

# **Figure 9** **METPAC Function Key Listing** (Sheet 1 of 3)

As desired, select functions and capabilities as follows:



**Figure 9**  
**METPAC Function Key Listing**  
(Sheet 2 of 3)

**F6 (MODIFY)** - Modify plume plot. Selecting this option brings up the following menu:

**F6 Menu**

- |           |   |   |
|-----------|---|---|
| <b>F1</b> | - | Draws/removes 5 and 10 mile radius circles and 16 direction sectors.  |
| <b>F2</b> | - | Draws/removes evacuation roads.   |
| <b>F3</b> | - | Draws/removes points of interest; use keyboard letter corresponding with point of interest; to exit, press (CR).  |
| <b>F4</b> | - | Draws/removes town names.   |
| <b>F5</b> | - | Zooms in on an area of the map. To specify the area of interest, the user positions the cursor using the mouse in the upper left-hand corner of the area of interest, depresses the mouse key, and moves the cursor diagonally to the lower right-hand corner of the area of interest. The system will box the area of interest. The user then moves the cursor using the mouse to the accompanying menu and positions the cursor on either <u>A</u> CCEPT or <u>R</u> EJECT and depresses the mouse key. If ACCEPT, the map will be redrawn on the area of interest. |
| <b>F6</b> | - | Changes legend.   |
| <b>F7</b> | - | Draws/removes TID plot.   |
| <b>F8</b> | - | Allows user to obtain a dose or dose rate for a location of interest on the map. To select the location of interest, the user positions the cursor using the mouse. To exit, position the cursor on the F10 (EXIT) display on the monitor.  |

**NOTE**

This feature works for the plume plot (F6), TID plot (F7) and ground deposition plot (F9).

- |            |   |   |
|------------|---|---|
| <b>F9</b>  | - | Draws/removes the ground deposition plot. |
| <b>F10</b> | - | Exit (to previous menu).                  |

**Figure 9**  
**METPAC Function Key Listing**  
(Sheet 3 of 3)

**F7 (SUMMARY)** - Summary table for plume points. Selecting this feature brings up the following menu:

<b>F7 Menu</b>	<b>F1</b>	-	Allows user to obtain METPAC reports (See F1 above).
	<b>F2</b>	-	Summary table for ground level release.
	<b>F3</b>	-	Summary table for elevated release.
	<b>F7</b>	-	Returns user to previous plot.
	<b>F10</b>	-	Exit (to Main Menu screen).

**F8 (DOSE)** - Allows user to obtain a dose or dose rate for a location of interest on the map (see F8 above).

**F9 (PRINT)** - Makes a hard copy of the graphic screen.

**F10 (EXIT)** - Exit (to Main Menu screen).

**Spacebar** - allows user to switch from plume display based on TEDE to a plume display based on thyroid CDE.



**Figure 10**  
**Default Solar Radiation Values (Langley/Min)**

Condition	Spring	Summer	Fall	Winter
Sunny	0.8 - 1.2	1.0 - 1.4	0.8 - 1.0	0.5 - 0.8
Overcast	0.05 - 0.1	0.05 - 0.2	0.05 - 0.2	0.05 - 0.1

## Figure 11 Summary of Changes

**Rev. 19:**

*On Figure 1, revised instructions for editing METPAC data to advise users to run the program after each quarter hour edit.*

**Rev. 18:**

Throughout the procedure changed Wide Range Gas Monitor (WRGM) high alarm from 1CC225 to RM-6528-4.

**Rev. 18 Chg. 01:**

In Figure 3 corrected the stability classification table delta-t value symbols to agree with Figure 2 of ER 5.7.

**Rev. 17:**

In §6.0 added reference 13.

In §5.1, step 10, added instructions for the METPAC Operator for verification of meteorology input data following each dose projection run. Protected the step.

**Rev. 16:**

Performed biennial review of the procedure.

In §3.0 revised step 11, added step protection to step 12, and added steps 13 and 14.

In §5.1, step 1, changed IPT to INGEST. In step 8, added references to Figures 8 and 9. Deleted Note and steps 9 through 12. Relocated the description of Function Keys to Figure 9.

In Figure 7 added reference to Figure 10.

Added Figure 8, METPAC Data Entry Screen Guidance. Renumbered old Figure 8.

Added Figure 10, Default Solar Radiation Values (Langley/Min).

**Rev. 15:**

In §3.0 and §6.0, deleted references to YAEC.

Added Figure 8, Summary of Changes, to comply with MNPR requirements.

**SEABROOK STATION  
ADMINISTRATIVE PROCEDURE**

**Protective Action Recommendations**

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**ER 5.4**

Rev. 24

SORC Review: 03-007 Date: 2-12-03

Effective Date: 2-21-03

**EXPIRATION DATE** 2-21-05

Procedure Owner:  
S. Perkins-Grew

## Contents and Revision Status

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## **1.0 OBJECTIVES**

This procedure provides guidance for determining Protective Action Recommendations (PARs) to be made to offsite authorities for the plume exposure pathway.

## **2.0 RESPONSIBILITIES**

### **2.1 Response Manager**

Authorizes PARs from the Emergency Operations Facility (EOF).

### **2.2 Site Emergency Director**

Authorizes PARs prior to activation of the Emergency Operations Facility (EOF).

### **2.3 EOF Coordinator**

Implements this procedure for the evaluation of radiological and plant data, determines PARs and provides recommendations to the Response Manager at the EOF.

### **2.4 Health Physics Coordinator**

Implements this procedure for the evaluation of radiological and plant data, determines PARs and provides recommendations to the Site Emergency Director prior to activation of the EOF.

## **3.0 PRECAUTIONS**

1. Notification of Protective Action Recommendations to state authorities shall be initiated within 15 minutes of determination.
2. Protective Action Recommendations should be reviewed against protective actions actually implemented prior to re-issuing an updated recommendation.
3. The Site Emergency Director should transfer his responsibility under this procedure to the Response Manager as soon as the EOF activation is complete.
4. The Health Physics Coordinator should ensure that all actions taken in accordance with this procedure are reported to the EOF Coordinator upon EOF activation.

## **4.0 PREREQUISITES**

1. A Site Area Emergency or General Emergency has been declared.
2. The Technical Support Center (TSC) is activated.

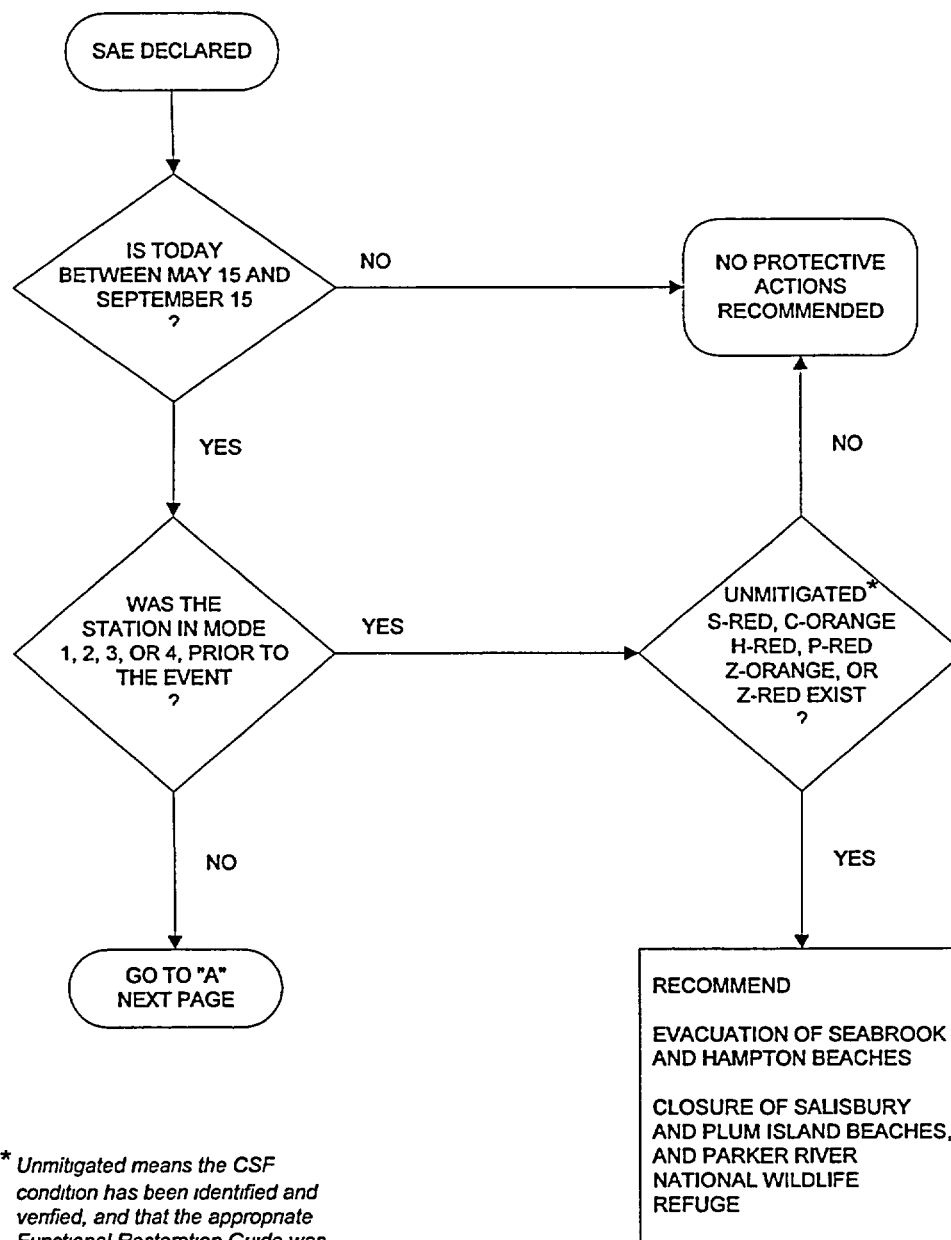
## **5.0 ACTIONS**

Actions are specified in appropriate position checklists contained in Procedure ER 3.1, Technical Support Center Operations, and Procedure ER 3.3, Emergency Operations Facility Operations.

## 6.0 REFERENCES

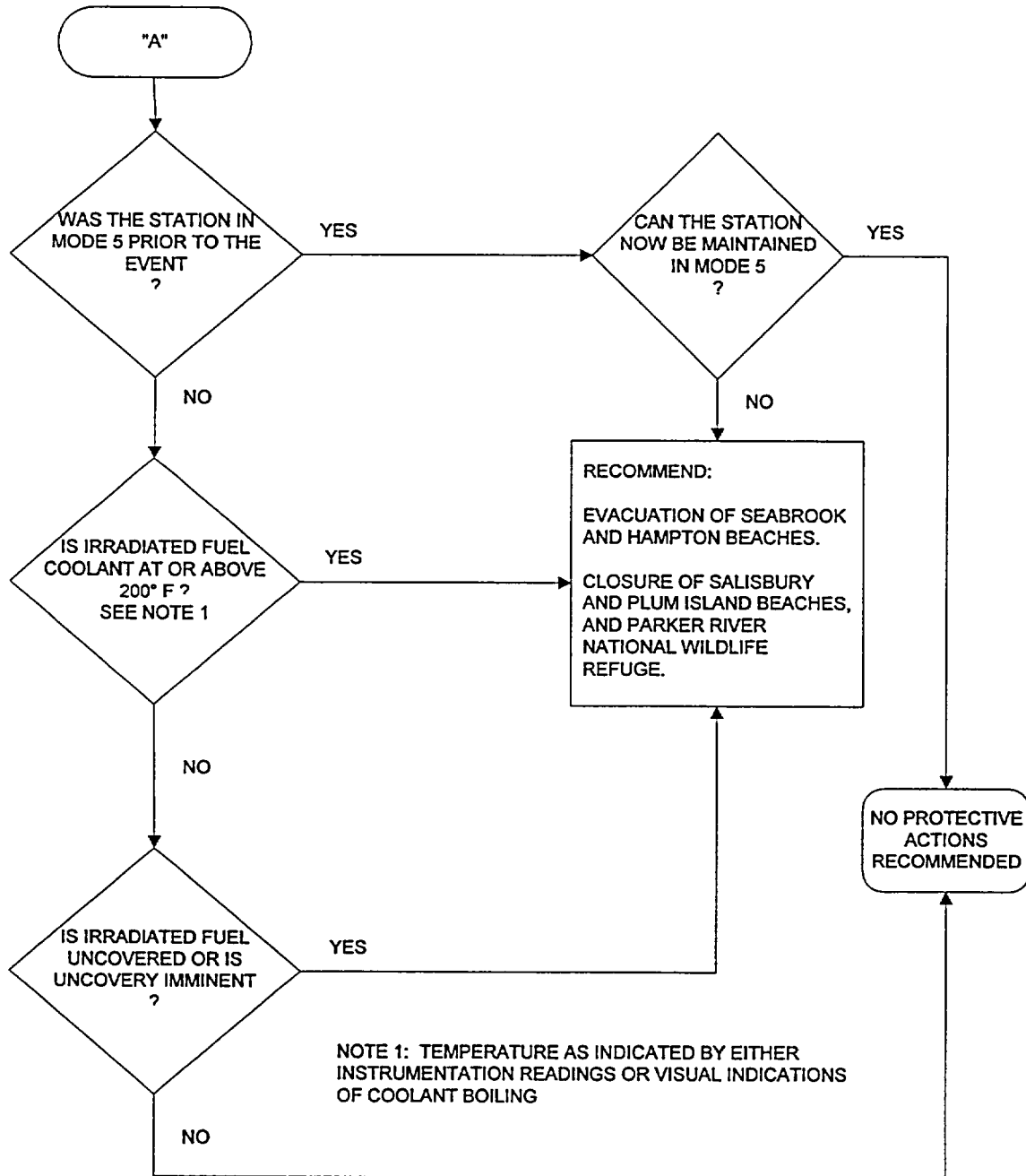
1. NUREG/BR-0150, Response Technical Manual
2. EPA-400, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents
3. ER 2.0, Emergency Notification Documentation Forms
4. ER 3.1, Technical Support Center Operations
5. ER 3.3, Emergency Operations Facility Operations
6. ER 5.3, Operation of the METPAC System
7. ER 5.7, Offsite Dose Projection System
8. Evacuation Time Estimate Handbook for the Seabrook Station Emergency Planning Zone

**Figure 1**  
**Site Area Emergency Protective Action Flowchart**  
(Sheet 1 of 2)



\* Unmitigated means the CSF condition has been identified and verified, and that the appropriate Functional Restoration Guide was unsuccessful in correcting the condition

**Figure 1**  
**Site Area Emergency Protective Action Flowchart**  
(Sheet 2 of 2)





## Figure 2 Summary of Changes

**Rev. 24:**

*Corrected typographical error on Figure 1.*

**Rev. 23:**

On form ER 5.2A incorporated recommendations for New Hampshire and Massachusetts beaches into the PAR Group A and B charts. This will facilitate completing the protective action recommendation portion of form ER 2.0B. Clarified "other conditions" statement in steps 5 and 10.

**Rev. 23 Chg. 01:**

Administrative Modification: Performed a biennial review of the procedure and no changes were warranted other than to change the procedure owner.

**Rev. 22:**

Administrative Modification: Converted procedure from WordPerfect to MS Word.

Added Figure 2, Summary of Changes, in accordance with the Manuals and Procedures Administration Manual (MNPR).

Performed a biennial review of the procedure and no changes were warranted.

**Plume Exposure  
Protective Action Recommendation (PAR) Worksheet**

PAR Assessment By: \_\_\_\_\_

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Time: \_\_\_\_\_ am/pm

**UNUSUAL EVENT**

1. Recommend no protective actions.
2. Document the PAR on form ER 2.0B and return to your appropriate checklist in ER 3.1 or ER 3.3 for further actions.

**ALERT**

1. Recommend no protective actions.
2. Document the PAR on form ER 2.0B and return to your appropriate checklist in ER 3.1 or ER 3.3 for further actions.

**SITE AREA EMERGENCY**

1. Determine PARs based on Figure 1, Site Area Emergency Protective Action Flowchart.
2. Document the PAR on form ER 2.0B and return to your appropriate checklist in ER 3.1 or ER 3.3 for further actions.

**GENERAL EMERGENCY**

STARTS ON NEXT PAGE

**Plume Exposure  
Protective Action Recommendation (PAR) Worksheet**  
(Continued)

**GENERAL EMERGENCY**

1. Does a verified **Core Cooling** Critical Safety Function Status Tree RED path exist?

\_\_\_\_\_ Yes                      - Go to Step 5 (Page 3 of 4 of this form)  
\_\_\_\_\_ No                        - Go to Step 2  
\_\_\_\_\_ Not Known            - Go to Step 2

2. Does a verified **Containment** Critical Safety Function Status Tree RED path exist?

\_\_\_\_\_ Yes                      - Go to Step 5 (Page 3 of 4 of this form)  
\_\_\_\_\_ No                        - Go to Step 3  
\_\_\_\_\_ Not Known            - Go to Step 3

3. Is the projected Total Effective Dose Equivalent (TEDE) at 5 miles downwind greater than or equal to 1,000 mrem (see Note below)?

\_\_\_\_\_ Yes                      - Go to Step 5 (Page 3 of 4 of this form)  
\_\_\_\_\_ No                        - Go to Step 4  
\_\_\_\_\_ Not Known            - Go to Step 4

4. Is the projected Adult Thyroid Committed Dose Equivalent (CDE) at 5 miles downwind greater than or equal to 5,000 mrem (see Note below)?

\_\_\_\_\_ Yes                      - Go to Step 5 (Page 3 of 4 of this form)  
\_\_\_\_\_ No                        - Go to Step 10 (Page 4 of 4 of this form)  
\_\_\_\_\_ Not Known            - Go to Step 10 (Page 4 of 4 of this form)

**NOTE**

If METPAC is being used for dose projections, this question should be answered by reviewing the METPAC "PAGS" report.

**Plume Exposure**  
**Protective Action Recommendation (PAR) Worksheet**  
(Continued)

5. If a release is in progress from the plant vent, enter the current upper wind direction. For other release pathways or non-release conditions, enter the current lower wind direction - FROM \_\_\_\_\_ degrees.
6. Identify the appropriate PAR GROUP B column based on the above wind direction to determine the towns to be evacuated and sheltered, and the beaches to be evacuated and closed.

		<b>PAR GROUP B</b> <b>(Evacuate 5 Mile Radius and 10 Miles Downwind-Shelter All Others)</b> <b>WIND DIRECTION FROM (Degrees)</b>					
ERPA	TOWN	303-33.9	34-100.9	101-122.9	123-191.4	191.5-258.9	259-302.9
A	Seabrook Hampton Falls	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate
C	Kensington South Hampton	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate
D	Hampton North Hampton	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate
F	Brentwood East Kingston Exeter Newfields Newton Kingston	Shelter Shelter Shelter Shelter Shelter Shelter	Evacuate Evacuate Evacuate Evacuate Evacuate Evacuate	Evacuate Evacuate Evacuate Evacuate Evacuate Evacuate	Evacuate Evacuate Evacuate Evacuate Evacuate Evacuate	Shelter Shelter Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter Shelter Shelter
G	Greenland Stratham Rye New Castle Portsmouth	Shelter Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter Shelter	Evacuate Evacuate Evacuate Evacuate Evacuate	Evacuate Evacuate Evacuate Evacuate Evacuate	Shelter Shelter Shelter Shelter Shelter
New Hampshire Beaches		Evacuate	Evacuate	Evacuate	Evacuate	Evacuate	Evacuate
B	Amesbury Salisbury	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate
E	Merrimac Newburyport Newbury West Newbury	Evacuate Evacuate Evacuate Evacuate	Evacuate Evacuate Evacuate Evacuate	Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter
Massachusetts Beaches		Close	Close	Close	Close	Close	Close

7. Check off the evacuated and sheltered towns on form ER 2.0B, Block 3.
8. New Hampshire and Massachusetts beaches should be checked off as evacuated and closed, respectively.
9. **STOP!** - Monitor and reevaluate PARs as conditions change. Return to your appropriate checklist in ER 3.1 or ER 3.3 for further actions.

**Plume Exposure**  
**Protective Action Recommendation (PAR) Worksheet**  
(Continued)

10. If a release is in progress from the plant vent, enter the current upper wind direction.  
For other release pathways or non-release conditions, enter the current lower wind direction -  
FROM \_\_\_\_\_ degrees.
11. Identify the appropriate PAR GROUP A column based on the above wind direction to determine the towns to be evacuated and sheltered, and the beaches to be evacuated and closed.

		<b>PAR GROUP A</b> (Evacuate 2 Mile Radius and 5 Miles Downwind-Shelter All Others)					
		WIND DIRECTION FROM (Degrees)					
ERPA	TOWN	303-33.9	34-100.9	101-122.9	123-167.9	168-281.4	281.5-302.9
A	Seabrook Hampton Falls	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate
C	Kensington South Hampton	Shelter Shelter	Evacuate Evacuate	Evacuate Evacuate	Evacuate Evacuate	Shelter Shelter	Shelter Shelter
D	Hampton North Hampton	Shelter Shelter	Shelter Shelter	Shelter Shelter	Evacuate Evacuate	Evacuate Evacuate	Shelter Shelter
F	Brentwood East Kingston Exeter Newfields Newton Kingston	Shelter Shelter Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter Shelter Shelter
G	Greenland Stratham Rye New Castle Portsmouth	Shelter Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter Shelter
New Hampshire Beaches		Evacuate	Evacuate	Evacuate	Evacuate	Evacuate	Evacuate
B	Amesbury Salisbury	Evacuate Evacuate	Evacuate Evacuate	Shelter Shelter	Shelter Shelter	Shelter Shelter	Shelter Shelter
E	Merrimac Newburyport Newbury West Newbury	Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter	Shelter Shelter Shelter Shelter
Massachusetts Beaches		Close	Close	Close	Close	Close	Close

12. Check off the evacuated and sheltered towns on form ER 2.0B, Block 3.
13. New Hampshire and Massachusetts beaches should be checked off as evacuated and closed, respectively.
14. **STOP!** - Monitor and reevaluate PARs as conditions change. Return to your appropriate checklist in ER 3.1 or ER 3.3 for further actions.

**SEABROOK STATION  
ADMINISTRATIVE PROCEDURE**

**Offsite Dose Projection System**

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**ER 5.7**

**Rev. 23**

SORC Review: 03-007 Date: 2-12-03

Effective Date: 2-21-03

<b>EXPIRATION DATE</b> <u>2-21-05</u>
---------------------------------------

Procedure Owner:  
S. Perkins-Grew

## Contents and Revision Status

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## **1.0 OBJECTIVES**

This procedure provides instruction for operation of the Offsite Dose Projection System (ODPS). This software program projects the Total Effective Dose Equivalent (TEDE) and adult thyroid Committed Dose Equivalent (CDE) dose rates and doses at the site boundary, and 2, 5 and 10 miles. It also assists in the determination of the emergency classification level and protective action recommendations.

## **2.0 RESPONSIBILITIES**

### **2.1 Shift Manager/Short Term Emergency Director**

Performs or directs operation of the ODPS in the Control Room.

### **2.2 Work Control Supervisor**

Operates ODPS at the direction of the Shift Manager/Short Term Emergency Director.

### **2.3 Health Physics Coordinator**

Operates ODPS in the Technical Support Center (TSC).

## **3.0 PRECAUTIONS**

1. The program can be exited at only two locations. The first appears at the end of input data entry; the second appears at the end of an ODPS execution. To exit, type -1 followed by the enter key.
2. Operation of this program requires meteorological data from the onsite meteorological monitoring system.
3. Monitor response entries will calculate offsite dose rate conditions based on an assumed mixture of noble gas and iodine concentrations. (Protected: Ref. 6.9)
4. ODPS may be run from the following Main Plant Computer System (MPCS) terminals in either the Control Room or TSC.
  - a. Shift Technical Advisor (STA) work station
  - b. Shift Manager work station
  - c. The TSC terminal at the Health Physics Coordinator's work station.
5. In the event that the MPCS terminals become inoperable, backup laptop computers with ODPS are maintained in the Control Room and in the TSC.
6. When available, the meteorological data used for ODPS run should be the 15 minute average values.



7. The step-by-step program operating instructions contained in this procedure are for reference purposes as needed by the ODPS Operator.
8. All items must have proper values within a defined range. Error checking is done as each value is entered. Entry of an invalid value causes a message to appear at the bottom of the screen. The program will continue when an acceptable input value is entered.
9. In order to obtain data from the MPCCS, a file containing the data must be available. The data in this file will be read and used for displaying input values which the operator will have the option of changing. Any changed values will be displayed in bold type.

#### 4.0 PREREQUISITES

A release of radioactive material has occurred as indicated by one of the following:

1. Wide Range Gas Monitor (WRGM) high alarm (RM-6528-4),
2. Main Steam Line Monitor high alarm with an OPEN Atmospheric Steam Dump Valve (ASDV) or safety relief valve (SRV) on the affected line,
3. The results of effluent analysis or site boundary monitoring indicate a dose rate greater than or equal to 0.06 mrem/hr.

#### 5.0 ACTIONS

##### 5.1 ODPS Operator

1. If running ODPS on the MPCCS from the STA console, press the ODPS key then proceed to step 4. If running ODPS on a MPCCS terminal, proceed to step 3. If running ODPS on the laptop computer, proceed to step 2.
2. Set up laptop computer:
  - a. Obtain the laptop computer (stored in Control Room).
  - b. Connect the AC power cord to the computer and AC outlet.
  - c. If normal AC power is unavailable, locate an Uninterruptable Power Supply (UPS) outlet.
  - d. If a printer is available and its use desired, refer to Figure 5 for setup instructions.
  - e. Turn on laptop computer. The ODPS program will start running.
  - f. Proceed to step 4.
3. If running ODPS on another MPCCS terminal, perform the following steps:
  - a. Select "Cancel" (this will return screen to main menu).
  - b. From the main menu screen, select "BOP."

- c. From the BOP menu screen, select "EMERGENCY RESPONSE."
  - d. From the Emergency Response menu screen, select "ODPS."
4. The computer will display the date check prompt:
- Current date is DAY MM-DD-YYYY  
Enter new date (mm-dd-yy):
- a. If date is correct, press the enter key and the program moves to time check prompt. If date is incorrect, input current date using mm-dd-yy format then press the enter key. The program responds with the time check prompt:

Current time is HH:MM:SS  
Enter new time:

  - b. If time is correct, press the enter key. If time is incorrect, input current time using 24-hour clock format, hh:mm:ss, then press the enter key.

**NOTE**

If running on a non-STA work station and depending upon the computer Disk Operating System, the date and time checks performed in steps a and b, above, may be repeated. If so, perform steps a and b again, and then proceed to step 5.

5. Obtain data needed to run ODPS from logger trend printouts, the main plant computer system, or other plant indicators.

**NOTE**

RDMS group trend 14, EPLAN MONITORS, may be used as a ready source of ODPS input data.

- a. If a downloaded MPCS data file is available or logger trend printouts are used, it is not necessary to enter run input data on form ER 5.7B, ODPS Worksheet. (If needed, refer to Logger Trend Instructions, which are listed in Figure 4.)
- b. If both downloaded MPCS data files and logger trend printouts are unavailable, enter run input data on form ER 5.7B. (If needed, refer to Dose Assessment Data Points, which are listed in Figure 1.)

6. Enter input data at the various prompts listed below and follow each entry with the enter key.
7. IS THE PLANT ALREADY IN A G.E.? (Y/N) Enter based on the emergency classification in effect at the time of the ODPS run.
8. TIME AFTER SHUTDOWN (HRS) Input the time duration between the reactor shutdown or trip to the time of analysis. Use hours and decimal fractions of hours (0-1000 hours).

### CAUTION

**If a release is indicated through more than one of the following pathways, run the program once for each pathway and use the most conservative PAR result (e.g., if PAR Group A is indicated for one run and PAR Group B is indicated by another run, use PAR Group B).**

9. RELEASE PATH (STACK=1, STEAM=2, CONT=3, UNMON=4) Depending on the release path, input the number that corresponds to a stack release (1), main steam line release (2), containment release (3), or unmonitored release (4).
  - a. Use the Stack Release Path if there is a WRGM high alarm (RM-6528-4).
  - b. Use the Steam Release Path if there is a Main Steam Line monitor high alarm with an open ASDV or SRV on the affected line.
  - c. Use the Containment Release Path if containment enclosure is not at negative pressure. Run this path if either of the containment enclosure/outside atmosphere differential pressure monitors (EAH-PDI-5782 or 5789) reads zero.
  - d. Use the Unmonitored Release Path if there is a loss of radiological monitoring capabilities with a suspected release in progress. This is assumed to be a ground level release.
10. Depending upon the selected release pathway, proceed to the following step:
  - STACK - step 11
  - MAIN STEAM LINE - step 12
  - CONTAINMENT - step 13
  - UNMONITORED - step 14
11. For Input 1, STACK release;
  - a. If the WRGM Backup Monitor has been activated, initiate form ER 5.7A, WRGM Backup Monitor Data Calculation Sheet. Input the effective WRGM stack concentration and release rate into steps (b) and (c) below.

- b. WRGM CONCENTRATION ( $\mu\text{Ci/cc}$ ) (RM-6528-1, 2 or 3) Input the stack monitor source concentration in microcuries/cc (0 to  $1.0\text{E}+7$   $\mu\text{Ci/cc}$ ).
  - c. WRGM RELEASE RATE ( $\mu\text{Ci/sec}$ ) (RM-6528-4) Input the stack monitor release rate in microcuries/second (0 to  $1.0\text{E}+15$   $\mu\text{Ci/sec}$ ).
  - d. ESTIMATED RELEASE DURATION (HRS) A default value of 4 hours is displayed. This value may be used or another value entered based upon STED or SED judgment. Input range is from 0.25 to 100 hours.
  - e. UPPER WIND SPEED (MPH) (CO784) Input wind velocity from the upper level (209'EL) of the meteorological tower in miles/hour. Input range is 0.5 to 100 mph.
  - f. UPPER WIND DIRECTION (DEG FROM) (CO786) Input wind direction from the upper level (209'EL) of the meteorological tower in degrees. Input range is 0 to 360 degrees.
  - g. UPPER DELTA TEMPERATURE (DEG F) (CO788) Input the delta temperature from the upper level (209'EL) of the meteorological tower temperature sensors in degrees F. Input range is  $-10^{\circ}\text{F}$  to  $+18^{\circ}\text{F}$ .
  - h. PRECIPITATION (INCHES/QTR HR) (CO797) Input the precipitation rate in inches per quarter hour. Input range is 0 to 1.
  - i. SOLAR RADIATION (LY/MIN) (CO798) Input Solar Radiation readings from the meteorological tower in langley/min. Input range is 0 to 2. If instrumentation is **not** available, use default solar radiation values in Figure 6.
  - j. Go to procedure step 15.
12. For Input 2, STEAM release;
- a. RUPTURED STEAM GENERATOR (A, B, C OR D) Enter known or suspected ruptured generator.
  - b. STEAMLINE DOSE RATE (mr/hr) (RM-6481-1 or 2, or RM-6482-1 or 2) Input the main steam line monitor reading, (0 to  $1.0\text{E}+7$  mr/hr).
  - c. STEAMLINE PATHWAY (SRV=1, ASD=2) Input the main steam line release pathway, safety relief valve (1), or atmospheric steam dump valve (2).  
  
If SRV=1 is chosen: (AO778, AO779, AO780, AO781) STEAMLINE PRESSURE (PSIG) Input the main steam line pressure in pounds per square inch gauge (0 to 1,300 psig).
  - d. ESTIMATED RELEASE DURATION (HRS) A default value of 1 hour is displayed. This value may be used or another value entered based upon STED or SED judgment. Input range is from 0.25 to 100 hours.

- e. LOWER WIND SPEED (MPH) (CO783) Input wind velocity from the lower level (150'EL) of the meteorological tower in miles/hour. Input range is 0.5 to 100 mph.
  - f. LOWER WIND DIRECTION (DEG FROM) (CO785) Input wind direction from the lower level (150'EL) of the meteorological tower in degrees. Input range is 0 to 360 degrees.
  - g. LOWER DELTA TEMPERATURE (DEG F) (CO787) Input the delta temperature from the lower level (150'EL) of the meteorological tower temperature sensors in degrees F. Input range is -10°F to +18°F.
  - h. PRECIPITATION (INCHES/QTR HR) (C0797) Input the precipitation rate in inches per quarter hour. Input range is 0 to 1.
  - i. SOLAR RADIATION (LY/MIN) (CO798) Input Solar Radiation readings from the meteorological tower in langleys/min. Input range is 0 to 2. If instrumentation is **not** available, use default solar radiation values in Figure 6.
  - j. Go to procedure step 15.
13. For input 3, CONT release;
- a. CONTAINMENT DOSE RATE (R/hr) (RM-6576A or B) Input the containment post LOCA monitor reading, R/hr (0 to 1.0E+7 R/hr).
  - b. CONTAINMENT PRESSURE (PSIG) (AO500, AO501, AO502) Input the containment pressure monitor reading, pounds per square inch gauge (0 to 160 PSIG).
  - c. ESTIMATED RELEASE DURATION (HRS) A default value of 4 hours is displayed. This value may be used or another value entered based upon STED or SED judgment. Input range is from 0.25 to 100 hours.
  - d. LOWER WIND SPEED (MPH) (CO783) Input wind velocity from the lower level (150'EL) of the meteorological tower in miles/hour. Input range is 0.5 to 100 mph.
  - e. LOWER WIND DIRECTION (DEG FROM) (CO785) Input wind direction from the lower level (150'EL) of the meteorological tower in degrees. Input range is 0 to 360 degrees.
  - f. LOWER DELTA TEMPERATURE (DEG F) (CO787) Input the delta temperature from the lower level (150'EL) of the meteorological tower temperature sensors in degrees F. Input range is -10°F to +18°F.
  - g. PRECIPITATION (INCHES/QTR HR) (C0797) Input the precipitation rate in inches per quarter hour. Input range is 0 to 1.

- h. SOLAR RADIATION (LY/MIN) (CO798) Input Solar Radiation readings from the meteorological tower in langley/min. Input range is 0 to 2. If instrumentation is **not** available, use default solar radiation values in Figure 6.
  - i. Go to procedure step 15.
- 14. For input 4, UNMON release;
  - a. SITE BOUNDARY DOSE RATE (mr/hr) Input the field monitoring team plume centerline dose rate (0 to 1.0E+7 mr/hr).
  - b. ESTIMATED RELEASE DURATION (HRS) A default value of 4 hours is displayed. This value may be used or another value entered based upon STED or SED judgment. Input range is from 0.25 to 100 hours.
  - c. LOWER WIND SPEED (MPH) (CO783) Input wind velocity from the lower level (150'EL) of the meteorological tower in miles/hour. Input range is 0.5 to 100 mph.
  - d. LOWER WIND DIRECTION (DEG FROM) (CO786) Input wind direction from the lower level (150'EL) of the meteorological tower in degrees. Input range is 0 to 360 degrees.
  - e. LOWER DELTA TEMPERATURE (DEG F) (CO787) Input the delta temperature from the lower level (150'EL) of the meteorological tower temperature sensors in degrees F. Input range is -10°F to +18°F.
  - f. PRECIPITATION (INCHES/QTR HR) (CO797) Input the precipitation rate in inches per quarter hour. Input range is 0 to 1.
  - g. SOLAR RADIATION (LY/MIN) (CO798) Input Solar Radiation readings from the meteorological tower in langley/min. Input range is 0 to 2. If instrumentation is **not** available, use default solar radiation values in Figure 6.
- 15. Program Run and Results
  - a. The program will begin execution of the dispersion and dose program. (Protected: Ref. 6.10)
  - b. As projection information becomes available, review output for errors.
  - c. Enter run results on form ER 5.7B, OR if a printer is being used, attach printed report to form ER 5.7B or to the logger trend printout.
  - d. Provide run results to the STED or SED for review.
  - e. Inform the STED or SED immediately if the emergency classification level determined by ODPS is higher than the current emergency classification level or if the PAR determination has changed.

- f. Maintain an input/output documentation file (e.g., form ER 5.7B, ODPS Worksheets, logger trends, program printouts, etc.).
- g. Continue to obtain updates on plant radiological release and meteorological information using the logger trend printout, or main plant computer data points, if necessary.
- h. When appropriate, exit ODPS program.
- i. Telecopy any Logger Trends and/or ODPS Worksheets to the Dose Assessment Specialist once the Emergency Operations Facility is operational, if required.

## 6.0 REFERENCES

- 1. Toshiba T3200 User Manual
- 2. Offsite Dose Projection System User Manual
- 3. ER 1.1, Classification of Emergencies
- 4. ER 2.0, Emergency Notification Documentation Forms Procedure
- 5. ER 5.4, Protective Action Recommendations
- 6. NRC Inspection Report No. 50-443/86-18-25 (Entire Document)
- 7. NRC Inspection Report No. 50-443/85-32-04
- 8. NRC Inspection Report No. 50-443/85-32-14(d)
- 9. NRC Inspection Report No. 50-443/85-32-14(h)
- 10. NRC Inspection Report No. 50-443/85-32-24
- 11. NRC Inspection Report No. 50-443/85-32-20
- 12. NRC Inspection Report No. 50-443/86-18-07
- 13. Primary Technical Data Book

**Figure 1**  
**Dose Assessment Data Points**

<u>MPC POINTS/ RDMS CHANNEL #</u>	<u>DESCRIPTION</u>	<u>UNITS/MEASURE</u>
C3000	Time after Shutdown	hr/min
C0784	Upper Wind Speed	mph
C0786	Upper Wind Direction (from)	deg
C0783	Lower Wind Speed	mph
C0785	Lower Wind Direction (from)	deg
C0787	Lower Delta Temp El 150/43	F
C0788	Upper Delta Temp El 209/43	F
C0797	Precipitation	in/qtr hr
C0798	Solar Radiation	Langley/min.
A3778	Contm Encl./Outside Atmos DP	(-) In. Wc.
C0726	Contm Avg Press (Band)	psig
C1000	Contm Dose Rate (Have)	R/hr
AM104	Lo Range Personnel Hatch	mr/hr
AM105	Hi Range Personnel Hatch	mr/hr
RM-6528-1, 2 or 3	WRGM Concentration	μCi/cc
RM-6528-4	Plant Discharge Rate	μCi/sec
RM-6481-1	Main Steam Line Loop 1	mr/hr
RM-6482-1	Main Steam Line Loop 2	mr/hr
RM-6482-2	Main Steam Line Loop 3	mr/hr
RM-6481-2	Main Steam Line Loop 4	mr/hr
D5214	ASDV A	Open/Closed
D5215	ASDV B	Open/Closed
D5216	ASDV C	Open/Closed
D5217	ASDV D	Open/Closed
C3145	SG A Avg Pressure Band	psig
C3146	SG B Avg Pressure Band	psig
C3147	SG C Avg Pressure Band	psig
C3148	SG D Avg Pressure Band	psig



**Figure 2**  
**Stability Classification**

Stability Classification Table:

Stability Classification	Pasquill Classes	Upper Delta-t	Lower Delta-t
Extremely Unstable	A=1	$\leq -1.74$	$\leq -1.12$
Moderately Unstable	B=2	$\geq -1.73$ to $\leq -1.55$	$\geq -1.11$ to $\leq -1.0$
Slightly Unstable	C=3	$\geq -1.54$ to $\leq -1.37$	$\geq -0.99$ to $\leq -0.89$
Neutral	D=4	$\geq -1.36$ to $\leq -0.46$	$\geq -0.88$ to $\leq -0.30$
Slightly Stable	E=5	$\geq -0.45$ to $\leq +1.36$	$\geq -0.29$ to $\leq +0.88$
Moderately Stable	F=6	$\geq +1.37$ to $\leq +3.64$	$\geq +0.89$ to $\leq +2.34$
Extremely Stable	G=7	$\geq +3.65$	$\geq +2.34$

NOTE - The Backup Met Tower displays the Pasquill Class (A-G) in numeric format (1-7) rather than the delta temperature in degrees F. To obtain the proper delta temperature for input into ODPS, choose the appropriate upper or lower delta temperature value corresponding to the Pasquill Class letter (A-G).

### Figure 3 Plant Vent Stack Flow Summarization

The following list represents the operating fans and respective flow rates for the various modes of plant operation. All flows are in CFM.

If a fan is shut down, assume a total stack flow reduction of 50% of the shutdown fan flow value. For example, if WAH-FN-13A is shut down, normal conditions stack flow would be 276,160- $(151,620/2)(.5)=238,255$  CFM. Only the fans listed below should be considered when calculating flow reductions. Smaller support fans not listed below (e.g., WAH-FN-125) should **not** be considered in a flow reduction calculation.

#### Normal

CAP-FN-10	4,000
FAH-FN-124	34,000
PAH-FN-7A, B &/or C	43,340
PAH-FN-8A or B	43,200
WAH-FN-13A and B	<u>151,620</u>

TOTAL CFM 276,160

#### Pre-Entry Purge

CAP-FN-10	15,000
FAH-FN-124	34,000
PAH-FN-7A, B &/or C	43,340
PAH-FN-8A or B	43,200
WAH-FN-13A and B	<u>151,620</u>

TOTAL CFM 287,160

#### Refueling

CAP-FN-10	4,000
FAH-FN-11A or B	16,000
PAH-FN-7A, B &/or C	43,340
PAH-FN-8A or B	43,200
WAH-FN-13A and B	<u>151,620</u>

TOTAL CFM 258,160

#### "A" Isolation, EAH on Recirc

CAP-FN-10	4,000
FAH-FN-124	34,000
PAH-FN-7A, B &/or C	43,340
PAH-FN-8A or B	19,800
WAH-FN-13A and B	151,620
EAH-FN-4A or B	<u>4,000</u>

TOTAL CFM 256,760

#### Refueling Purge

CAP-FN-10	4,000
FAH-FN-124	34,000
PAH-FN-7A, B &/or C	43,340
PAH-FN-8A or B	43,200
WAH-FN-13A and B	151,620
CAP-FN-35	<u>40,000</u>

TOTAL CFM 316,160

Assume a minimum default value (due to the stack chimney effect) of 57,568 CFM if

- 1) no fans are running, or
- 2) the total flowrate from a plant fan alignment is less than 57,568 CFM.

#### NOTE

The above information was taken from the Primary Technical Data Book, located in the Control Room.

### **Figure 4**

### **Logger Trend Instructions**

The main plant computer logger trend is a printed report of selected plant parameters to support accident assessment, including offsite dose projections. Once enabled, the logger trend report will print out every quarter hour until the report is disabled. The logger trend may run in the background, that is, continue printing while using the main plant computer terminal to look at other parameters.

Using a main plant computer keyboard, initiate the logger trend as follows:

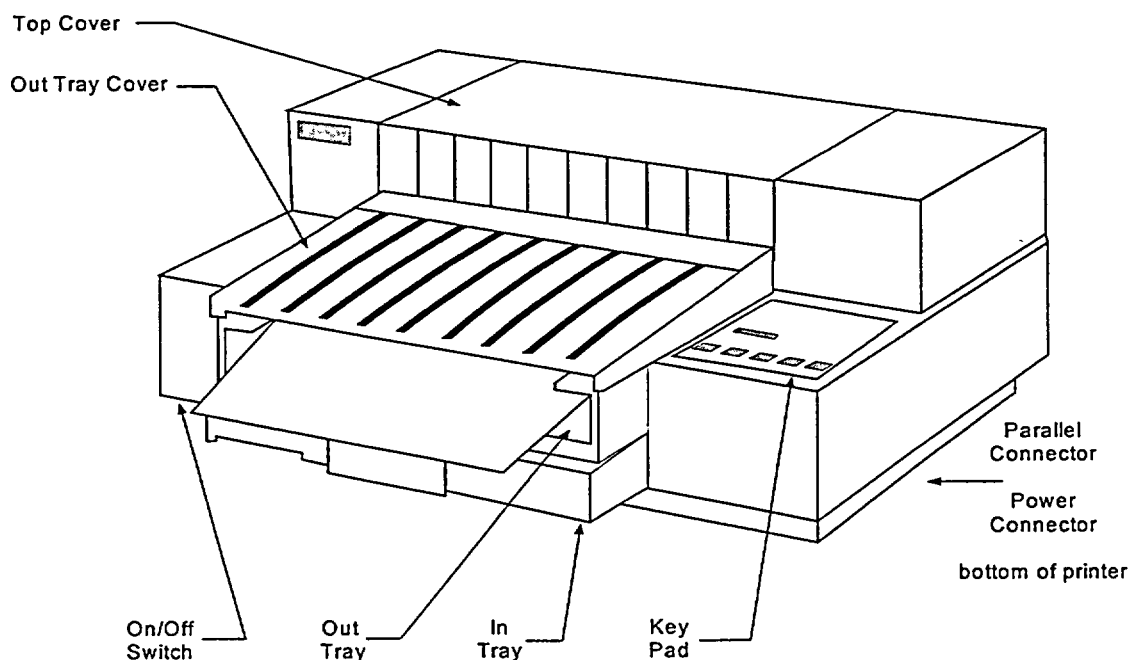
1. From the main menu screen, select "LOGS."
2. From the LOGS menu screen, select "FREE FORMAT."
3. Push F1 function key (ACTIVATE).
4. Enter number corresponding to TSC LOG or EOF LOG.

Using a main plant computer keyboard, disable the logger trend as follows:

1. From the main menu screen, select "LOGS."
2. From the LOGS menu screen, select "FREE FORMAT."
3. Push F3 function key (DEACTIVATE).
4. Enter number corresponding to TSC LOG or EOF LOG.

**Figure 5**  
**ODPS Printer Setup**  
(Sheet 1 of 3)

**Hewlett-Packard Deskjet Series**



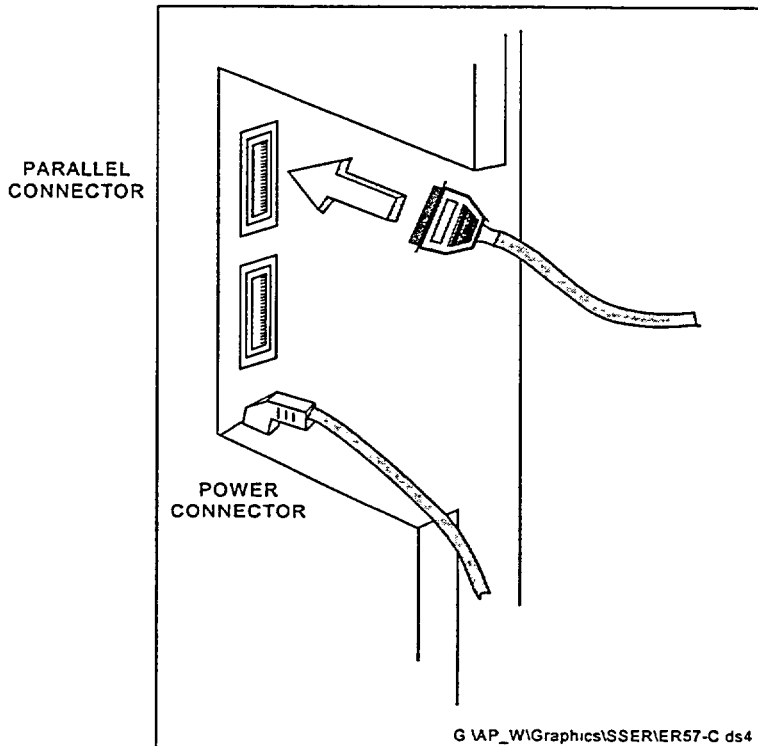
G:\Word\AP\_W\Graphics\SSER\ER050715 ds4

To connect the power module to the printer:

1. Be sure the printer is turned OFF.
2. Remove the out tray cover and set it aside.
3. With the printer facing you, carefully tilt the printer on its left side and rotate it so that its underside faces you.
4. Plug the power module into the power connector on the bottom of the printer, and route the power cord toward the rear of the printer.
5. Plug the other end of the power module into a grounded 3-prong electrical outlet.
6. To avoid a problem to your computer or disc drive caused by magnetic influences emitted by the power module, place the power module on the floor, or at least 1" (2.54 cm) away from your computer.

All Deskjet printers have both RS-232-C and Parallel interface connectors as standard equipment. The interface connectors are located on the bottom of the printer next to the power connector. Do not connect more than one interface cable to the printer.

**Figure 5**  
**ODPS Printer Setup**  
(Sheet 2 of 3)



To connect the interface cable:

1. With the printer underside still facing you, connect one end of the Parallel interface cable to the connector (also called a port) labeled Parallel.
2. Snap the clips on the sides of the printer's connector over the cable connector to secure the interface cable to the printer.
3. Route the cable toward the rear of the printer.
4. Connect the other end of the interface cable to the back of the computer (Parallel port). Select PRINTER on the A, B, PRINTER switch located next to the connector port.
5. Tip the printer back down, making sure that the printer is not sitting on top of the cable or the power cord.
6. Replace the tray cover on the OUT tray.

The ON/OFF switch is located on the printer's base, lower left front corner. To turn the printer ON, press the right end of the switch. When the printer is turned ON all keypad lights will briefly flash, then the ON LINE and COUR 10/20 lights will stay ON, and the print carriage will "home." Make sure the printer is turned OFF before connecting the power module or interface connectors.

**Figure 5**  
**ODPS Printer Setup**  
(Sheet 3 of 3)

To install the ink cartridge:

1. Open the printer's top cover.
2. Open the print cartridge container. Grasp the print cartridge by the green arrow and remove it from its container. Take care not to touch the copper "ribbon" located on the lower front and bottom (nose) of the print cartridge or set the cartridge down so that the copper "ribbon" comes in contact with any surface.
3. Gently remove the tape from the nose of the print cartridge.
4. Hold the print cartridge by the green arrow located on the cartridge top, and set the cartridge in the cradle with the green arrow on the cartridge top pointing to the green dot on the top of the cradle.
5. Place your thumb on the cartridge top and your forefinger on the cradle and squeeze your thumb and forefinger together, snapping the cartridge into place.
6. Close the printer's top cover and turn on the printer.
7. Press the PRIME key once to activate the new print cartridge.

**Figure 6**  
**Default Solar Radiation Values (Langley/Min)**

Condition	Spring	Summer	Fall	Winter
Sunny	0.8 - 1.2	1.0 - 1.4	0.8 - 1.0	0.5 - 0.8
Overcast	0.05 - 0.1	0.05 - 0.2	0.05 - 0.2	0.05 - 0.1

## Figure 7 Summary of Changes

**Rev. 23:**

*Document biennial review.*

**Rev. 22:**

In §3.0 indicated that ODPS is available in the TSC only on the MPCS terminal at the Health Physics Coordinator's work station and on a backup laptop computer in the TSC. (CR 01-02031)

**Rev. 21:**

Throughout the procedure updated references to computer points as a result of the Main Plant Computer upgrade.

**Rev. 20:**

Added Figure 6, Default Solar Radiation Values, and references to it throughout the procedure.

**Rev. 19:**

Administrative Modification:

Converted the procedure from WordPerfect to MS Word.

Created graphics for Figure 5 and form ER 5.7B.

Added Figure 6, Summary of Changes, in accordance with the Manuals and Procedures Administration Manual (MNPR).

Performed a biennial review of the procedure. No changes were warranted.



## WRGM Backup Monitor Data Calculation Sheet

This form is to be used to calculate the "Effective" WRGM Stack Concentration and "Effective" WRGM Stack Release Rate from the output of the WRGM Backup Monitor (WBM).

1. Obtain the WBM reading from the Technical Support Center:

$$A = \text{WBM reading} = \underline{\hspace{2cm}} \text{ mrem/hr}$$

2. Determine the Time After Shutdown (TAS) and obtain the WBM Correction Factor (WBMCF) from the table below:

<u>TAS in hours</u>	<u>WBMCF</u>
---------------------	--------------

≤ 1	0.175
-----	-------

2	0.183
---	-------

5	0.223
---	-------

7	0.252
---	-------

10	0.294
----	-------

20	0.437
----	-------

50	1.10
----	------

70	1.71
----	------

100	2.13
-----	------

200	2.26
-----	------

500	2.27
-----	------

700	2.25
-----	------

1000	2.18
------	------

If TAS does not match listed TAS hours, round down (e.g., if TAS = 8, use TAS 7 WBMCF 0.252).

$$B = \text{WBM Correction Factor (WBMCF)} = \underline{\hspace{2cm}} \frac{\mu\text{Ci/cc}}{\text{mrem/hr}}$$

3. Obtain the Stack Flow Rate from Logger Trend, Main Plant Computer Data Point 1CC 225 PF "PF PLANT VENT DISCH FLOW" or Figure 3, Plant Vent Stack Flow Summarization, and convert to cc/sec as necessary:

$$C = \text{Stack Flow Rate} = \underline{\hspace{2cm}} \text{ CFM} \times 472 \frac{\text{cc/Sec}}{\text{CFM}} = \underline{\hspace{2cm}} \text{ cc/sec}$$

4. Calculate the Effective WRGM Stack Concentration and Release Rate:

$$D = \text{Effective WRGM Stack Concentration} = A \times B = \underline{\hspace{2cm}} \mu\text{Ci/cc}$$

$$E = \text{Effective WRGM Stack Release Rate} = C \times D = \underline{\hspace{2cm}} \mu\text{Ci/sec}$$

# ODPS Worksheet

Name: \_\_\_\_\_

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

PLANT ALREADY IN G.E. ? (Y / N) ☐ TIME AFTER SHUTDOWN (0 TO 1000 HRS)  RELEASE RATE (1 TO 4)  ENTER

- 1 - STACK
- 2 - STEAM
- 3 - CONTAINMENT
- 4 - UNMONITORED

NOTE: FOR MULTIPLE RELEASE PATHS RUN OOPS FOR EACH PATH AND USE THE MOST CONSERVATIVE RESULT

IF 1 ENTER

IF 2 ENTER

IF 3 ENTER

IF 4 ENTER

WRGM CONCENTRATION (0 TO 1 0E+7  $\mu$ C/CC)

RUPTURED STEAM GENERATOR (A, B, C, D)

CONTAINMENT DOSE RATE (0 TO 1 0E+7 R / HR)

SITE BOUNDARY (0 TO 1 0E+7 MR / HR)

WRGM RELEASE RATE (0 TO 1 0E+15  $\mu$ C/SEC)

STEAM LINE DOSE RATE (0 TO 1 0E - 7 MR/HR)

CONTAINMENT PRESSURE (0 TO 160 PSIG)

STEAM LINE PATHWAY (1 - SRV OR 2 - ASD)

IF 2 SKIP STEP

STEAM LINE PRESSURE (0 TO 1300 PSIG)

EST. RELEASE DURATION (DEFAULT VALUE SHOWN)

INPUT UPPER MET DATA FOR STACK RELEASE ALL OTHER RELEASE PATHS USE LOWER MET DATA IF AVAILABLE USE 15 MINUTE AVERAGE VALUES

WIND SPEED (0 TO 100 MPH)

WIND DIRECTION (0 TO 360 DEG FROM)

DELTA TEMPERATURE (-10 TO -18 DEG F)

SOLAR RADIATION (0 TO 2 LY / MIN)

PRECIPITATION (0 TO 1 IN / QTR HR)

PRINT REPORT AND ATTACH TO THIS FORM OR ENTER RUN RESULTS BELOW

DISTANCE (MILES)	TEDE RATE (MREM / HR)	TEDE (MREM)	CDE THYROID RATE (MREM / HR)	CDE THYROID (MREM)
SITE BOUNDARY				
2 00				
5 00				
10 00				

DATA FOR ENTRY ON FORM ER 2 0C

NOBLE GAS RELEASE RATE ( $\mu$ C/SEC) \_\_\_\_\_ IODINE I-131 D.E. RELEASE RATE ( $\mu$ C/SEC) \_\_\_\_\_

EMERGENCY CLASSIFICATION = \_\_\_\_\_ NONE \_\_\_\_\_ UNUSUAL EVENT \_\_\_\_\_ ALERT \_\_\_\_\_ SITE AREA EMERGENCY \_\_\_\_\_ GENERAL EMERGENCY

PAR \_\_\_\_\_ NO OFFSITE DOSE PARS \_\_\_\_\_ PAR GROUP A \_\_\_\_\_ PAR GROUP B \_\_\_\_\_

NOTE 1 - Default values in Figure 6

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ER 5.7B

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