



**North  
Atlantic**

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The Northeast Utilities System

September 27, 2002

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NYN-02091

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555-0001

Seabrook Station  
Emergency Response Manual ER5.4, Rev. 23, Chg. 01

Enclosed, please find ER5.4, Rev. 23, Chg. 01 to the Seabrook Station Emergency Response Manual (SSER). This revision constitutes a non-intent change to an implementing procedure in accordance with criteria in North Atlantic's administrative programs. The Seabrook Station Radiological Emergency Plan (SSREP) continues to meet the standards of 10 CFR 50.47(b) and 10 CFR 50, Appendix E. These changes are submitted per the requirements of 10 CFR 50, Appendix E, and 10 CFR 50.4. The Resident Inspector copies are provided directly through the North Atlantic records management system.

Should you have any questions regarding the enclosed revisions, please contact Ms. Susan H. Perkins-Grew, Manager – Emergency Preparedness at (603) 773-7278.

Very truly yours,

NORTH ATLANTIC ENERGY SERVICE CORP.

  
\_\_\_\_\_  
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cc (with enclosures):

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A045

DATE: 09/19/02 CONTROLLED DOCUMENT

TRANSMITTAL NO: C165-T-000244 PAGE: 1

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**SEABROOK STATION  
ADMINISTRATIVE PROCEDURE**

**Protective Action Recommendations**

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**ER 5.4**

**Rev. 23 Chg. 01**

SORC Review: N/A (Non-intent) Date: N/A

Effective Date: 9-20-02

**EXPIRATION DATE** 9-20-04

Procedure Owner:  
S. Perkins-Grew

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ER 5.4A Plume Exposure Protective Action Recommendation (PAR) Worksheet	23/01

## 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.

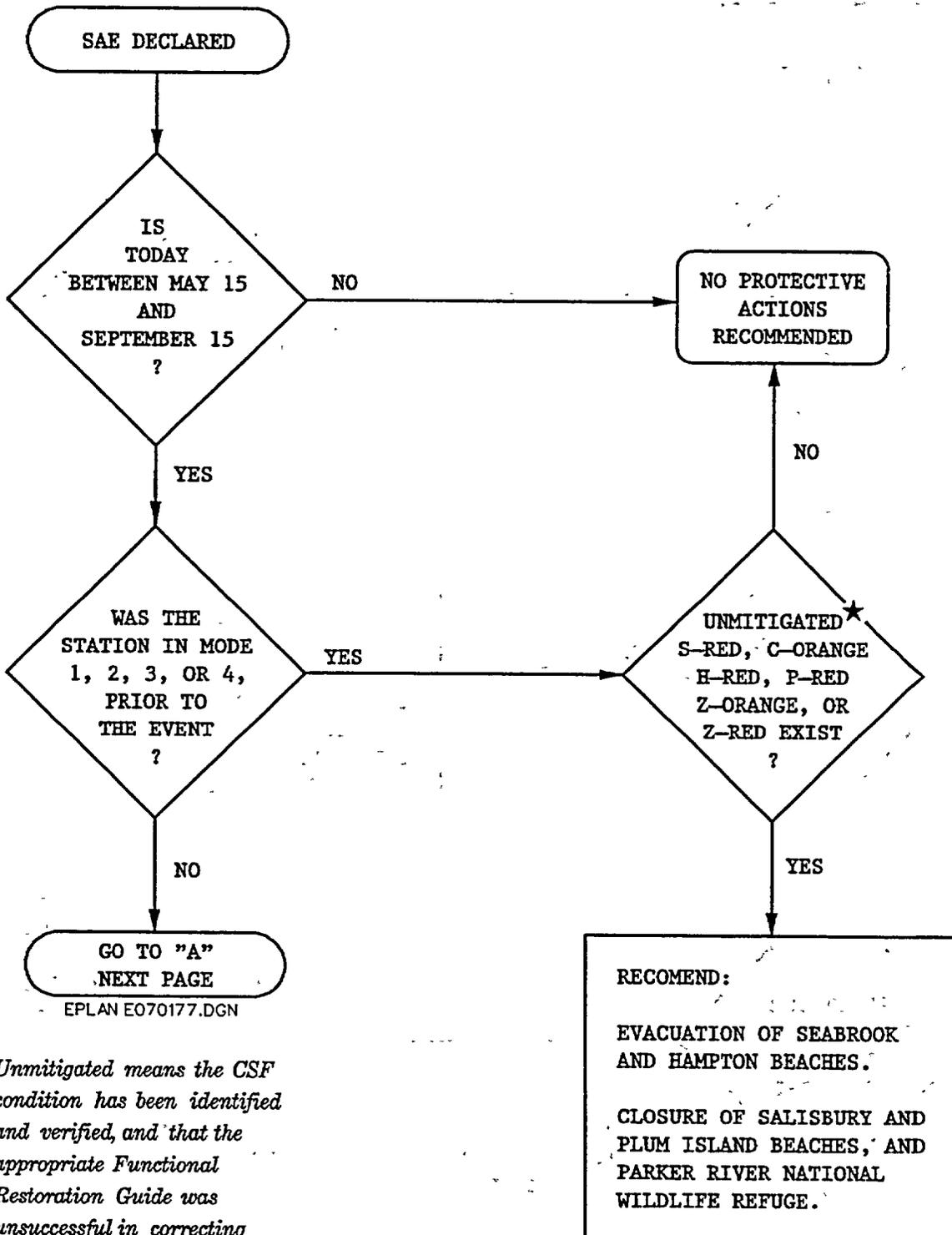
## 5.0 ACTIONS

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

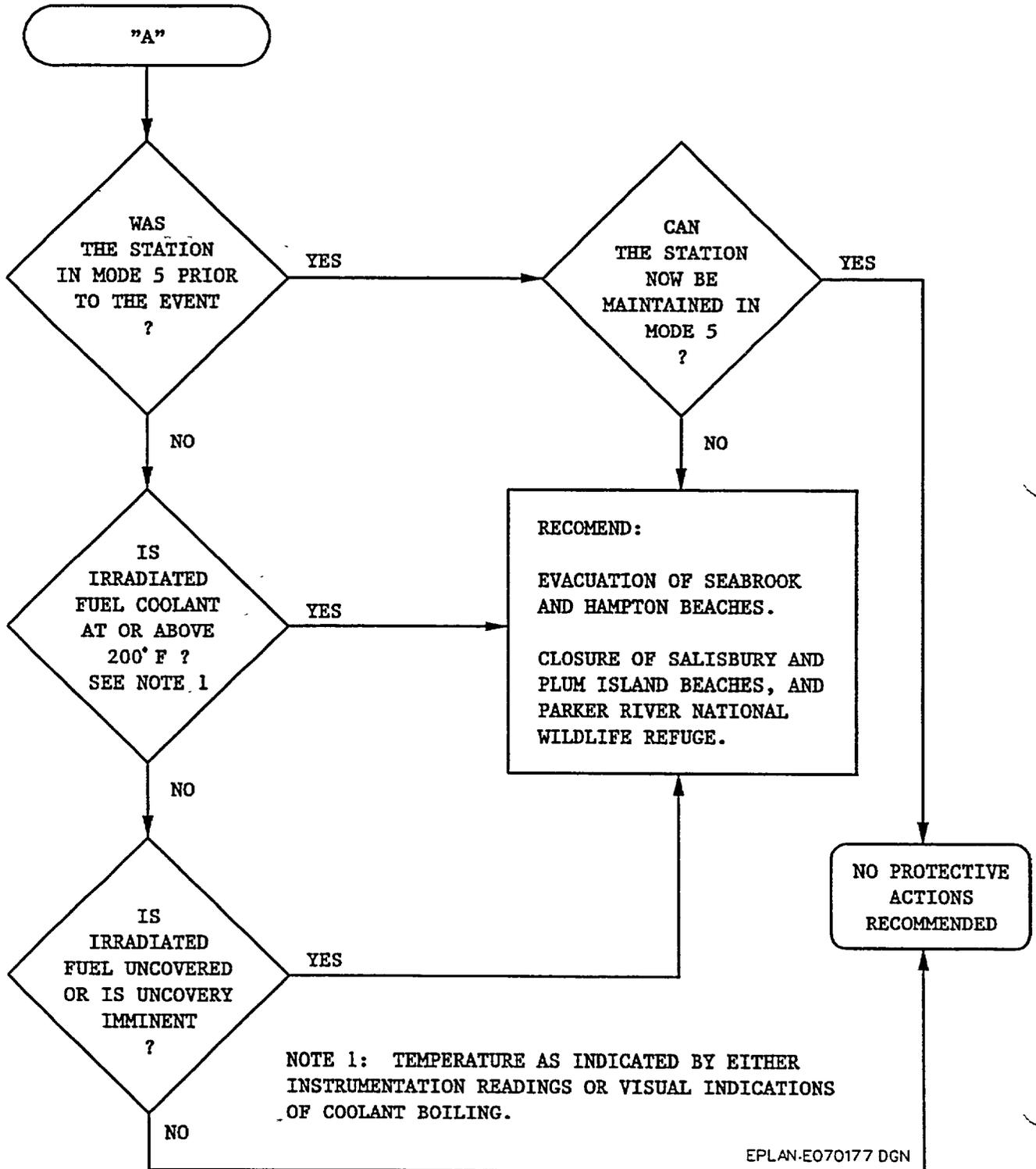
1. NUREG/BR-0150, Response Technical Manual
2. EPA-400, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents
3. ER 2.0, Emergency Notification Documentation Forms
4. ER 3.1, Technical Support Center Operations
5. ER 3.3, Emergency Operations Facility Operations
6. ER 5.3, Operation 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**



★ *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**  
(Continued)



## Figure 2 Summary of Changes

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.

		PAR GROUP B (Evacuate 5 Mile Radius and 10 Miles Downwind-Shelter All Others)					
		WIND DIRECTION FROM (Degrees)					
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.

		PAR GROUP A (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.