

**ENCLOSURE 5**

**EPR-03-07, Rev. 17**  
**Response to Severe Weather**

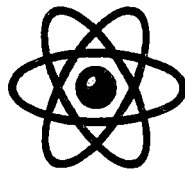
**EMERGENCY  
PREPAREDNESS  
MANUAL**

Procedure Number: EPR-03-07 (EP-HS-028)

Title: RESPONSE TO SEVERE WEATHER

Revision: 17

Effective Date: 11/30/15



BWXT, NOG-L

<p>BWXT NOG-L</p>	<p>Emergency Preparedness Manual</p>	<p>RESPONSE TO SEVERE WEATHER</p>	<p>EPR-03-07 Rev. 17 Date: 11/30/15</p>
-----------------------	--	-----------------------------------	---

1.0 PURPOSE:

To establish emergency response actions for severe weather occurrences, watches and warnings.

2.0 SCOPE:

This procedure applies whenever the National Weather Service issues severe weather watches and warnings for the Campbell County, Virginia area, and during severe ice storms, thunder and electrical storms.

3.0 DEFINITIONS:

- 3.1 Monitors - Personnel stationed at specific facility locations for the purpose of measuring radiation level and/or directing personnel.
- 3.2 Severe Weather – Tornadoes, violent windstorms, thunder Storms and electrical storms.
- 3.3 Tornado – violent weather phenomena characterized by a rotating funnel shaped cloud having a vertex several hundred yards in diameter whirling destructively at speeds of up to 300 miles per hour (MPH).
- 3.4 Violent Windstorm – Storm, not involving a funnel, with sustained wind speeds projected to exceed 70 miles per hour. (This category of windstorm is treated like a tornado for purposes of NOG planning).
- 3.5 Watch – National Weather Service (NWS) term which indicates conditions are favorable for the occurrence of the stated type of severe weather. This predication is normally issued for wide area coverage over a specific period of time.
- 3.6 Warning – NWS term which indicates that the stated type of severe weather is imminent, or possibly, already occurring. Warnings are generally related to small areas (counties or immediate areas).

4.0 RESPONSIBILITIES

- 4.1 The Manager, Environment, Safety, Health and Safeguards or his/her designee, the Emergency Preparedness Officer (EPO), or the Emergency Director (ED) for off shifts is responsible for:
  - 4.1.1 Deciding when a weather event warrants activation of this procedure other than electrical storms, and initiating such activation when needed.
  - 4.1.2 Authorizing deactivation of this procedure.
- 4.2 The Battalion Chief or designee are responsible for:
  - 4.2.1 Assembling and assigning available team members as monitors as applicable.
  - 4.2.2 Coordinating the assignment of monitors to duty positions, as applicable.
  - 4.2.3 Issuing appropriate radiation monitoring instrumentation, vests, and radios, as applicable (refer to Appendix B).
  - 4.2.4 Notifying applicable organizations in accordance with Appendix A.

- 4.3 Radiation Protection Personnel are responsible for:
  - 4.3.1 Ensuring appropriate radiation monitoring equipment is available.
  - 4.3.2 Notifying applicable organizations in accordance with Appendix A.
  - 4.3.3 Manning howler panel in Radiation Control Office in accordance with RP-07-103.
  - 4.3.4 Refer to RP-03-09, Section 4.2, for additional responsibilities, as applicable.
- 4.4 Monitors are responsible for:
  - 4.4.1 Maintaining radio surveillance on channel "IH&S Group Channel-Rad Con" as applicable.
  - 4.4.2 Surveying their assigned area for radiation levels (see Appendix C) as applicable.
  - 4.4.3 Immediately reporting any elevated radiation levels as applicable.
  - 4.4.4 Performing other functions as directed by the Battalion Chief.
- 4.5 BWXT Police is responsible for:
  - 4.5.1 Activation of this procedure in accordance with Appendix A.
  - 4.5.2 Obtaining weather reports by weather radio and/or obtain thunder and electrical storm information from the Lightning Tracking System.
  - 4.5.3 Performing activities and making notifications to applicable organization in accordance with Appendix A.
  - 4.5.4 Activating the Emergency Organization, if necessary.
  - 4.5.5 Monitoring the ALARM performance in accordance with Section 5.2.
- 4.6 Nuclear Materials Control (NMC) is responsible for transferring, securing, and/or otherwise protectively controlling all SNM during severe weather watches and warnings.
- 4.7 Industrial Engineering is responsible for inspecting roof drains and exit doors for blockage by buildup of ice and/or snow as applicable.
- 4.8 LTC Facility Services is responsible for notifying all LTC Employees of pending severe weather via the facility paging system.

5.0 REQUIREMENTS:

- 5.1 BWXT Police shall perform activities and make notifications to applicable organizations in accordance with Appendix A.

5.2 BWXT Police shall monitor ALARM performance in accordance with the table below and post at Central Gate.

Table 5.2.1 Response to ALARM Indicators		
Red on Green on Orange on	<p>BWXT Police shall set the severe weather storm watch by notifying the Battalion Chief or designee and Radiation Control and turn the yellow light on in the plant</p> <p>BWXT Police notify Manager, Operations, Manager, ESH&amp;S or their designees, ED during off-shifts that an electrical storm is in the area</p>	<p>Check the ALARM display to determine the strength of the electrical storm. Provide this information to the appropriate personnel</p>

5.3 NMC and areas notified shall:

- 5.3.1 Reduce all out-of-storage fuel to a minimum to support operations during the period when a tornado and/or violent windstorm WATCH is in effect.
- 5.3.2 Unpackaging/packaging of shipping containers will continue in order to get SNM to a safer storage location.
- 5.3.3 Outside transfers of SNM will not take place without the approval of the Manager of ESH&S or his designee.
- 5.3.4 Place all unencapsulated fuel and key inventory data into storage where possible when a tornado or violent windstorm WARNING is issued. (Fuel may be removed from storage only after the emergency condition has passed).

5.4 The ED shall:

- 5.4.1 Perform activities in accordance with Appendix A.
- 5.4.2 Activate EPR-03-09, "Severe Weather Evacuation Contingency" as applicable.

5.5 Industrial Engineering shall assign personnel to make visual checks of roof drains and emergency exit doors to detect ice covering them during ice storms.

6.0 PROCEDURE:

N/A

7.0 RECORDS:

N/A

8.0 REFERENCES:

- 8.1 SNM-42 Section VIII
- 8.2 EPR-HS-029, "Severe Weather Evacuation Contingency."
- 8.3 RP-07-103, "Maintaining And Testing The CIDAS MkXI Criticality Monitoring System"

9.0 APPENDICES:

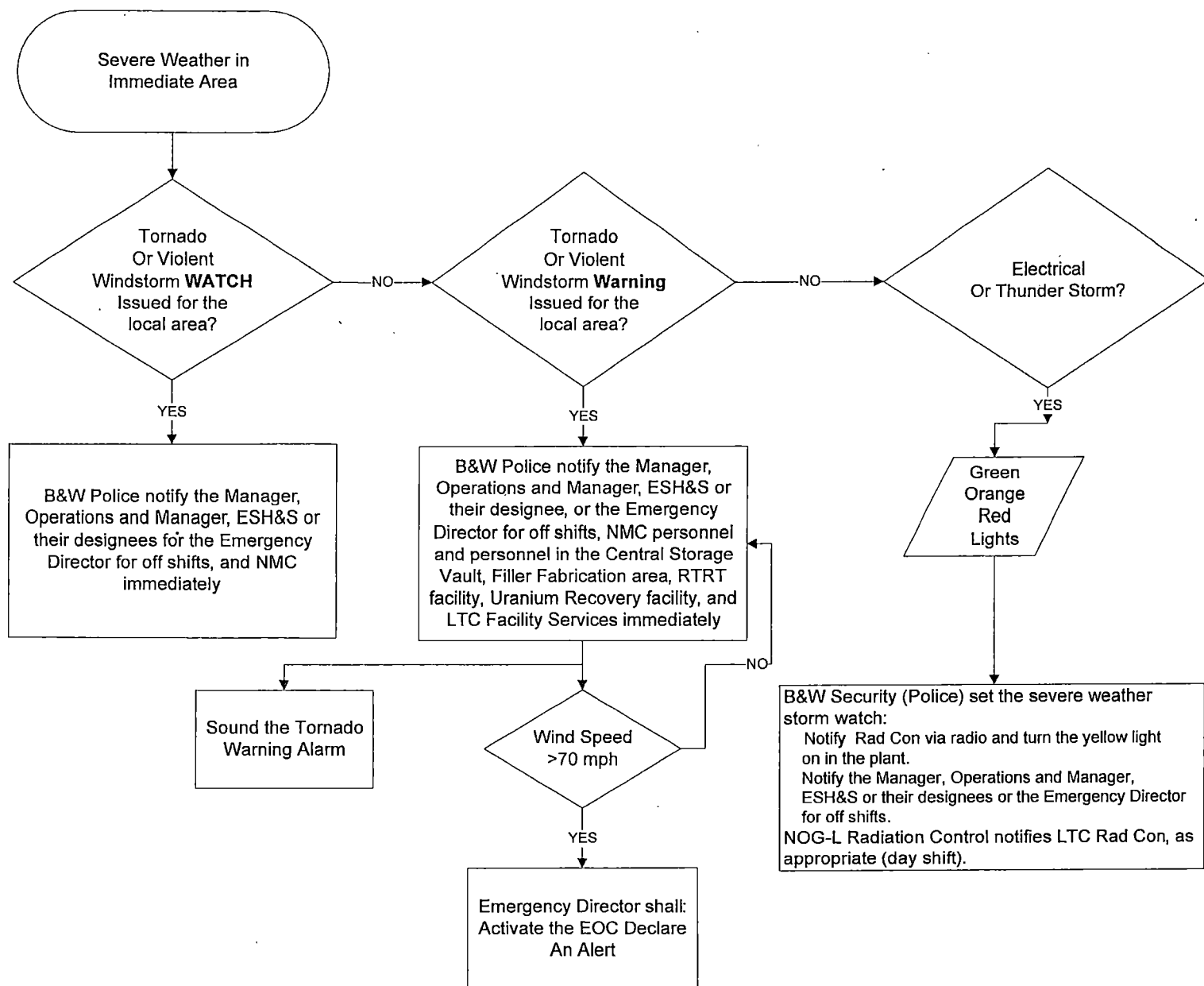
- Appendix A - Notification Flowchart for Severe Weather
- Appendix B - Typical Monitoring Equipment and Locations
- Appendix C - Severe Weather Survey and Instruction Locations

10.0 ATTACHMENTS

N/A

11.0 REVISION HISTORY LOG:

Revision Number	Change Number or Reason	Paragraph(s) Affected	Description of Change
10	CR-1015125	4.5.5, 5.3.1, 5.3.2, 5.3.3, 5.3.4	Revised to include steps to be taken by NMC during a tornado and/or violent windstorm watch and one paragraph for clarification.
11	CR-1026756	5.5, 5.2, 9.0	Installed new version of lighting racking system.
12	CR-1029778	All 4.2  4.4.1  5.4.2 and 8.2  Appendix A	Company Name changed to BWXT Emergency Team Captain changed to Battalion Chief  Radio channel changed to Z2 Rad Con  Changed procedure to EPR-03-09  Changed E-team Captain to Battalion Chief and NOD to NOG-L
13	CR-1034169	4.3.4	Insert new paragraph
14	CR-1035268	App B	Update 2 <sup>nd</sup> column
15	CR-1037846	4.4.1	Revise radio channel name due to new radio system.
16	CR-1041850	4.3.3; 9.0	Update alarm system references
17	CR-1044961	All	Update company name



## TYPICAL MONITORING EQUIPMENT AND LOCATIONS

<u>LOCATION</u>	<u>INSTRUMENT(S) GENERALLY AVAILABLE</u>
Gate 1 Emergency Equipment Cabinet	2 Ion Chambers
Radiation Control Office *	6 Ion Chambers
LTC Health Physics Lab	2 Ion Chambers
CHA Change Room *	3 Ion Chambers
Extraction Laboratory	1 Ion Chamber

\* These instruments are used in day-to-day activities and may be found in other plant areas. Radiation Control personnel will have a general knowledge of location.



SEVERE WEATHER AND INSTRUCTION LOCATIONS			
INSTRUCTION (X) SURVEY (*) LOCATIONS	FIRST SHIFT	SECOND SHIFT	THIRD SHIFT
Cafeteria	X*	X*	
1T Mezz. East	X	X	
1 T Downstairs at Double Door Exit	X*	X*	X*
Bay 5/1T Mezz. At bottom of ramp	X*	X*	
1T Exit near Computer Room	X	X	X
Main Entrance	X*	X*	X*
2T Mezz. West	X	X	
Gate 3/Shipping & Receiving	X	X	X
Check Point 6	X*	X*	X*
Waste Treatment	X*	X*	X*
LTC: CHA	X*		
LTC: RCL	X*		
LTC: Extraction Laboratory	X*		
LTC: Bldg. C Main Side Exits	X		
LTC: Main Entrance Bldg. B	X*		
LTC: Side Entrance Bldg. B	X*		
X – INSTRUCTION LOCATIONS: Positions in the facility where monitors will be pre-staged to direct evacuating personnel			
* - SURVEY LOCATIONS: Those positions at which it is desirable to have monitors perform radiation survey.			

# Tornado Shelter Listing

When the alarm sounds, you are to **move to an interior hallway (away from windows)** on the first floor of the plant and take cover. In the open bay areas of NOG-L, it is important for employees to move to an area designed to withstand tornado-type winds. The **Severe Weather Shelter Area** sign identifies designated areas listed below:

- Bay 5 under the Engineering Offices
- Bay 9 under Production Control Offices
- Bay 15 under the RTRT Offices
- BC Bay under the Maintenance Storage Areas
- Interior Offices under Bay 1T
- Bay 4 under the Cafeteria/Dining Area
- Bay 8 CDC Area
- Bay 1A under the Cold Met Lab
- Bay 8A-10A under the Engineering Offices
- Bay 14A under the Recovery Change Room and Break Area
- Underneath Bay 12A mezzanine
- Bay 17 under the office mezzanine
- 1<sup>st</sup> floor of the Bay 5A component storage mezzanine
- Bay 5A Break Area
- Waste Treatment and Recycle Area Locker Rooms
- Underneath the Bay 7AA Mezzanine
- Under the mezzanine in Buildings MM1 and MM2
- Under MFP Maintenance Mezzanine
- Underneath the Element Assembly Supervisor's Office
- Bay 11 corridor leading to shipping and receiving
- Security Supervisor Offices in Vault 1
- Bay 1 Radcon Counting Area
- Filter Plant – First Floor Sand Filter Tank Room

