



# RESPONSE TO FREEDOM OF INFORMATION ACT (FOIA) REQUEST

2017-0670

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RESPONSE TYPE  INTERIM  FINAL

**REQUESTER:**

David Lochbaum

**DATE:**

09/12/2017

**DESCRIPTION OF REQUESTED RECORDS:**

A digital copy of the current revision of Incident Response Procedure 250, "Natural Phenomena." This procedure is cited in NRC Region I hurricane season training slides (ML16116A001).

### PART I. -- INFORMATION RELEASED

You have the right to seek assistance from the NRC's FOIA Public Liaison. Contact information for the NRC's FOIA Public Liaison is available at <https://www.nrc.gov/reading-rm/foia/contact-foia.html>

- Agency records subject to the request are already available on the Public NRC Website, in Public ADAMS or on microfiche in the NRC Public Document Room.
- Agency records subject to the request are enclosed.
- Records subject to the request that contain information originated by or of interest to another Federal agency have been referred to that agency (see comments section) for a disclosure determination and direct response to you.
- We are continuing to process your request.
- See Comments.

### PART I.A -- FEES

#### NO FEES

AMOUNT\*

\*See Comments for details

- You will be billed by NRC for the amount listed.
- You will receive a refund for the amount listed.
- Fees waived.
- Minimum fee threshold not met.
- Due to our delayed response, you will not be charged fees.

### PART I.B -- INFORMATION NOT LOCATED OR WITHHELD FROM DISCLOSURE

- We did not locate any agency records responsive to your request. *Note:* Agencies may treat three discrete categories of law enforcement and national security records as not subject to the FOIA ("exclusions"). 5 U.S.C. 552(c). This is a standard notification given to all requesters; it should not be taken to mean that any excluded records do, or do not, exist.
- We have withheld certain information pursuant to the FOIA exemptions described, and for the reasons stated, in Part II.
- Because this is an interim response to your request, you may not appeal at this time. We will notify you of your right to appeal any of the responses we have issued in response to your request when we issue our final determination.
- You may appeal this final determination within 90 calendar days of the date of this response by sending a letter or e-mail to the FOIA Officer, at U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, or [FOIA.Resource@nrc.gov](mailto:FOIA.Resource@nrc.gov). Please be sure to include on your letter or email that it is a "FOIA Appeal." You have the right to seek dispute resolution services from the NRC's Public Liaison, or the Office of Government Information Services (OGIS). Contact information for OGIS is available at <https://ogis.archives.gov/about-ogis/contact-information.htm>

### PART I.C COMMENTS ( Use attached Comments continuation page if required)

Signature - Freedom of Information Act Officer or Designee

**Stephanie A. Blaney**

Digitally signed by Stephanie A. Blaney  
DN: c=US, o=U.S. Government, ou=U.S. Nuclear Regulatory Commission, ou=NRC-PIV, cn=Stephanie A. Blaney, o=2342.19200300.100.1.1=200001997  
Date: 2017.09.12 11:40:35 -0400

**IRP 240**

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**NATURAL PHENOMENA**

**APPROVED BY:** Jeffrey Grant /RA/

**REVISION: 1**

**EFFECTIVE DATE:** 05/24/17

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## **1.0 PURPOSE**

This procedure establishes a standard protocol to respond to events resulting from natural phenomena. Response activities include assessing the threat posed by the natural phenomenon to NRC and Agreement State licensees, establishing and maintaining situational awareness, augmenting staff resources, and recovering from response activities.

## **2.0 RESPONSIBILITIES**

### **2.1 Regional Hurricane Territory Boundaries**

Region I: North of latitude 38 degrees north, west of longitude 55 degrees west and east of longitude 87 degrees west

Region II: South of latitude 38 degrees north, west of longitude 55 degrees west and east of longitude 87 degrees west

Region IV: West of longitude 87 degrees west

### **2.2 Regional Administrator (RA)**

Manages and administers the regional elements of the NRC Incident Response Program pertaining to severe natural phenomena.

### **2.3 Director of the Division of Nuclear Materials Safety (DNMS)**

Prior to, during, and after natural disasters, is responsible to determine the control and security status of radioactive materials at affected:

- 1) Independent spent fuel storage installations (ISFSIs) not co-located with an operating power reactor plant.
- 2) Research and Test Reactors (with assistance from Nuclear Reactor Regulation, Research and Test Reactors Branch).
- 3) Decommissioned facilities.
- 4) Radioactive materials licensees in non-agreement states authorized to possess International Atomic Energy Agency (IAEA) Code of Conduct Category 1 and 2 radioactive sources.
- 5) Agreement State Radiation Control Program officials with authorized International Atomic Energy Agency (IAEA) Code of Conduct Category 1 and 2 radioactive sources in their state.

## **2.4 Director of the Division of Fuel Facility Inspection (DFFI)**

Prior to, during and after natural disasters, is responsible to determine the control and security status of radioactive materials at all affected fuel cycle facilities.

## **2.5 Director of the Division of Reactor Projects (DRP)**

Prior to, during and after natural disasters, is responsible to determine the status of operating power reactor plants, including independent spent fuel storage installations (ISFSIs) co-located with the plants.

## **2.6 Headquarters and Regional Emergency Response Coordinators**

Coordinate the overall actions in the procedure to assess situational threats to NRC regulated activities and communicate that assessment to internal and external stakeholders, annually complete Appendix A, "Emergency Response Office and Equipment Readiness Review."

## **2.7 Director of the Division of Preparedness and Response (DPR)**

Coordinate with the Federal Emergency Management Agency (FEMA) on the process for assessment of the impact of natural phenomena on offsite radiological emergency preparedness and response for power reactor facilities in accordance with Inspection Manual Chapter (IMC) 1601.

## **3.0 GENERAL NOTES**

- 1) **Procedure Entry Instructions:** Enter this procedure when the regional/headquarters emergency response coordinator receives credible information from NRC staff, the National Weather Service, licensee event reports, news media, United States Geological Survey, or other equivalent, reliable, authoritative sources that a natural phenomenon event has the potential to adversely affect NRC regulated operations at a licensee's facility.

Although this procedure is designed for any type of natural phenomenon, it is expected to be used most often for hurricanes based on their frequency and impact. Hurricane's therefore have standard entry criteria of Category 1 force winds (74 mph sustained) at a site. Based upon the error margins with storm forecasting and past experience, it may be appropriate to monitor activities at a site where strong tropical storm force winds (58 mph sustained) are forecasted. Experience has shown no need to monitor sites with sustained winds forecasted to stay below 58 mph.

- 2) **Procedure Exit Instructions:** This procedure may be exited at any time if it is determined that the natural phenomenon will not adversely affect NRC regulated operations at a licensee's facility.
- 3) All responders should maintain sufficient safety margin to avoid hazardous situations and mitigate potential fatigue issues with sufficient rest and sleep.

- 4) For rapidly developing natural phenomena, response personnel shall complete all their appropriate response actions up to the current time.
- 5) If Region II is projected to be impacted by a hurricane while unable to staff their Incident Response Center, Region IV would take the lead for responding to the hurricane for Region II.
- 6) Large Natural Phenomena can cause sufficient infrastructure damage to impact a licensee even if the natural phenomena does not directly impact the licensee (e.g., electrical grid instability, upstream cooling water impacts, etc.). Consider broad impacts when evaluating actions.
- 7) Use this general guidance when assigning roles and responsibilities to emergency response personnel. Be thorough but flexible. Each natural phenomena (tropical storms, hurricanes, seasonal river flooding, earthquake, fires, and tornados) will have its own timeline and activities. Therefore, steps in this procedure may not apply or may be performed out of order. Be judicious when expending NRC resources. For example, many of the actions listed under the 96 to 72-hour timeframe should be planned but not implemented until close to 72 hours.
- 8) Modify the forms in this procedure to best suit the phenomena at hand. Discuss these procedure changes during operational communication and coordination conference meetings.

#### **4.0 INSTRUCTIONS**

##### **4.1 120 – 96 Hours Prior to Licensee Impact**

- 1) Resident Inspectors:
  - a. If a natural phenomenon is predicted to cause the licensee to enter their Abnormal Operation Procedure for Severe Weather or equivalent procedure due to an initiating event with significant potential to affect public safety (e.g., Emergency Action Level declaration or plant power maneuvering), the Resident Inspector shall notify their respective Branch Chief, who will then notify the Regional ERCs.
- 2) Emergency Response Coordinators
  - a. Monitor the natural phenomenon; tracking its strength, location, and path. Tools for monitoring weather events are available in Appendix D.
  - b. With support from DNMS/DRP, determine if there are potentially impacted licensees.
  - c. If the phenomenon is forecasted to affect licensee(s), then inform (typically via email) regional management, other potentially impacted regions, DNMS point-of- contact (POC), DFFI POC, State Liaison Officer(s)

(SLOs), Public Affairs Office (PAO), HQ NRR project managers for affected sites, and Nuclear Security and Incident Response (NSIR) Division of Preparedness and Response concerning the natural phenomena. Note the high level of uncertainty for storms beyond 72 hours.

- d. If after making the notification above it is determined that the phenomenon will not affect the licensee(s), then issue a closure notification to the same individuals informing them that no impact is expected and the region will exit this procedure.

#### 4.2 96 – 72 Hours Prior to Licensee Impact

##### 1) Emergency Response Coordinators

- a. With support from DNMS/DRP, determine the potentially impacted licensees and agreement states.
- b. Email regional staff about the entry into the Natural Phenomena Procedure with a description of the impacted area and warning for personal safety.
- c. Maintain overall status of Regional response actions.
- d. Brief region management, Headquarters Response Manager-on-Call (MOC) / Monitoring Team Leader (MTL) on phenomenon's status. Appendix C provides a standard briefing agenda. Briefings should typically be once per day, but more often if conditions change or if there is greater than normal variability. Prior to 72 hours, briefings via email are acceptable unless management requests or conditions warrant a meeting.
- e. Verify IRC equipment is available and operating properly. As applicable:
  - i. Telephones (conventional, cellular, satellite)
  - ii. Computers and IT systems
  - iii. Back up emergency power (normal periodic testing may be sufficient based on the likelihood of the storm impacting the region)
  - iv. Emergency response kits
- f. Coordinate with divisional representatives to develop a roster of responders (IRC, sites, EOCs, etc.) and provide the roster to the affected event inspectors, the Headquarters MOC, and the IRC when staffed.
- g. Coordinate responder dispatch per IRP 0232, Responder Dispatch. Avoid dispatching staff if the staff would arrive during dangerous conditions (e.g., high winds, road ice, flooding) or due to evacuation orders such as contra flow routing on highways.

- 2) Director/Branch Chiefs (Division of Reactor Projects (DRP) / Division of Reactor Safety (DRS) / Division of Fuel Facilities Inspection (DFFI)
  - a. Identify staff to backfill for Resident Inspectors. Appropriate onsite coverage will vary depending on the natural phenomena and the site location. Factors include the probability of a plant impact and the anticipated ability to access the site after the impact. It may be appropriate to have no coverage with a local resident able to rapidly respond, one responder if relief can be provided in a reasonable time after the impact, or two responders if there is a potential that no relief could be provided for an extended period of time.
  - b. For fuel cycle facilities without residents, evaluate the need to send an inspector.
- 3) Division of Nuclear Materials Safety (DNMS)
  - a. Determine potentially impacted licensees and agreement states and provide the information to the ERCs.
  - b. Identify staff (if necessary) to dispatch to monitor licensees' responses.
- 4) Headquarters Monitoring Team Leader (MTL) / Manager-On-Call (MOC)
  - a. Notify the NSIR DPR Branch Chief (BC) responsible for implementing the NRC-FEMA Disaster Initiated Review (DIR) process and request the BC be available in the Headquarters Operations Center (HOC) if and when the HOC is stood up.
  - b. Establish a watch bill for HOC response personnel.
  - c. Consider supplementing the HOO watch bill with additional HOOs during the key hours of the storm impact.
  - d. Participate in Region Event Response Status Briefings.
  - e. Verify that the Region and HOOs are prepared to coordinate DHS Sitrep input requests. Establish when/how the HOOs request the input, what information will be requested, etc.
  - f. Request the NSIR DPR Branch Chief responsible for implementing the NRC-FEMA DIR process conduct just-in-time training for NSIR staff and management and NRR project managers responsible for the facilities most likely to be impacted.
- 5) State Liaison Officers
  - a. Contact the appropriate Federal Emergency Management Agency (FEMA) Region(s) and state emergency management agencies to understand their



response plans and establish an ongoing liaison protocol.

#### 4.3 72 – 48 Hours Prior to Licensee Impact

- 1) Resident Inspectors/Fuel Cycle Facility Project Inspectors/Event Responders
  - a. Verify the operability of cellular telephones, satellite telephones, and batteries.
  - b. Complete your on-site and personal protection preparations (family, home, vehicle, etc.)
  - c. Notify the cognizant Branch Chief of NRC employee plans to evacuate the area with emergency contact information.
  - d. Arrange for plant access badging for NRC designated Event Responders.
  - e. Ensure management has assigned sufficient on-site inspector staff for the duration of the phenomena.
  - f. Verify that licensee's event preparation activities are progressing appropriately.
  - g. Discuss site preparations with Control Room and licensee management. Ensure that licensee management is aware of the FEMA Disaster Initiated Review (DIR) and Preliminary Capabilities Assessment (PCA) requirements in MC 1601 (SLOs can answer questions if needed).
  - h. Provide initial site status report to ERCs using Appendix B as a reference.
- 2) Emergency Response Coordinators
  - a. Brief regional management and the Headquarters MOC when significant changes occur. Use Appendices B and C as guides.
  - b. Maintain contact phone numbers for onsite and evacuated NRC employees and family members for agency and employee / family use.
- 3) Director/Branch Chiefs (Division of Reactor Projects (DRP) / Division of Reactor Safety (DRS) / Division of Nuclear Materials Safety (DNMS) / Division of Fuel Facilities Inspection (DFFI)
  - a. All Branch Chiefs shall:
    - i. Identify NRC staff that live, work, are on official travel, or are scheduled to travel in the potentially affected area. For impacted individuals, determine if they are capable to respond (if needed) and any appropriate actions to ensure their safety.

- b. DRP / DFFI Branch Chiefs shall coordinate with Resident Inspectors / Project Inspectors to:
  - i. Provide initial site status report to ERCs using Appendix B as a reference.
  - ii. Verify the residents have adequate on-site and personal protection preparations (family, home, vehicle, etc.)
- c. DNMS Branch Chiefs shall evaluate each of the following potentially impacted sites using Appendix B as a reference:
  - i. Site under decommissioning
  - ii. Independent spent fuel storage installation (ISFSI) not co-located with an operating power reactor plant
  - iii. Research and test reactor (solicit assistance from Nuclear Reactor Regulation (NRR) Research and Test Reactors Branch Chief(s) to contact licensees)
  - iv. Facility authorized to possess special nuclear material; and
  - v. Licensees in non-agreement states with International Atomic Energy Agency Code of Conduct Category 1 and 2 radioactive sources

4) Headquarters Monitoring Team Leader (MTL) / Manager-On-Call (MOC)

- a. Verify the status of the DHS National Operations Center (NOC), provide an NRC desk officer if requested by the Department of Homeland Security (DHS).
- b. Maintain periodic communications with the Region.
- c. All HQ Emergency Response Coordinators and potentially affected NRR Project Managers informed about HQ and regional actions and plant status.

**4.4 48 – 12 Hours Prior to Licensee Impact**

1) Regional Administrator

- a. Determine if proactively entering Monitoring is appropriate. If so, inform the appropriate office director, NSIR MOC, and ERC.

2) Resident Inspectors/Fuel Cycle Facility Project Inspectors/Event Responders

- a. Perform a turnover briefing and site familiarization between Resident Inspectors and Event Responders. For materials licensees, obtain the

briefing and site familiarization from the licensee.

- b. Confirm briefing schedule with the regional ERCs.
- c. Coordinate with regional ERCs about requesting ERDS activation at power plants.
- d. Plan shift rotations and estimated time for offsite residents to relieve onsite residents. Provide the rotation schedule to the Regional ERC to avoid contacting offsite responders who may be resting prior to responding.
- e. Establish a work/rest schedule.

3) Emergency Response Coordinators

- a. Coordinate with Residents to request ERDS activation at sites that are expecting impact from the event.
- b. Provide recommendation to the Regional Administrator for timing of entering Monitoring and staffing the IRC.
- c. Staff IRC prior to impact. Experience during major hurricanes has shown that staffing the IRC approximately 12 hours before impact provided adequate time to prepare.
- d. Aid the Base Team Manager in establishing a briefing schedule with onsite event inspectors. Based on experience, the briefing schedule should be no more often than every 4 hours to allow onsite inspectors time to collect information and to monitor site activities.

4) Headquarters Monitoring Team Leader (MTL) / Manager-On-Call (MOC)

- a. Consult with the RA about entering the Monitoring Mode, if there has been no discussion during this timeframe.
- b. Determine Headquarters Operations Center (HOC) staffing based on desired support from the region, the severity, intensity, and potential site impact.

**4.5 12 – 0 Hours Prior to Licensee Impact**

1) Resident Inspectors/Fuel Cycle Facility Project Inspectors/Event Responders

- a. Tour the Control Room and site when appropriate and safe to do so.
- b. Brief the Region on plant status:
  - i. Operational mode

- ii. Inoperable equipment
- iii. Weather (wind speed, expected onsite impact, impact time, expected storm surge onsite)
- iv. Protected area boundary and security systems
- v. Site buildings, tanks and sumps
- vi. Electrical infrastructure
- vii. Ultimate Heat Sink
- viii. Site damage
- ix. Off-site damage (accessibility, offsite notification ability)
- x. NRC staff personnel safety concerns

2) Headquarters Monitoring Team Leader (MTL) / Manager-On-Call (MOC)

- a. Maintains periodic communications or provide event response information to:
  - i. Department of Homeland Security / Federal Emergency Management Agency (DHS/FEMA) headquarters - DHS Situation Reports (SITREPS) and DHS On-the-Spot Reports (SPOTREPS). NOTE that this step is usually performed by the HOOs. Work with the HOOs to determine who will provide periodic reports to DHS.
- b. Ensure HQ Emergency Response Coordinators are kept informed about the event response and the potential to activate response teams if the event worsens.
- c. Ensure periodic reports about facility status are developed, approved and sent to the International Atomic Energy Agency (IAEA) Incident and Emergency Centre (IEC) via the IAEA's Unified System for Incidents and Emergencies (USIE).

4.6 Recovery

1) Resident Inspectors/Fuel Cycle Facility Project Inspectors/Event Responders

- a. Review licensee recovery activities, consider:
  - i. Availability of adequate licensee on-site staffing for plant repair
  - ii. Duration of repair activities

- iii. Emergency preparedness capabilities
    - iv. Readiness for plant restart.
  - b. Brief region management on licensee response / recovery operations.
  - c. Coordinate with the Region ERC to:
    - i. Report planned return to the region (for event responders)
    - ii. Return response equipment
    - iii. Forward records of site response related activities.
- 2) Director/Branch Chiefs (Division of Reactor Projects (DRP) / Division of Reactor Safety (DRS) / Division of Nuclear Materials Safety (DNMS) / Division of Fuel Facilities Inspection (DFFI)
  - a. Transition oversight from Monitoring (IRC) to Normal (DRP/DNMS Branch)
  - b. Identify tasks that will transition to routine inspection process.
  - c. Develop process to permit NRC staff to return to normal work locations.
  - d. Evaluate the need for a reactive inspection.
- 3) Headquarters Monitoring Team Leader (MTL) / Manager-On-Call (MOC)
  - a. Confirm that DHS Headquarters and FEMA Headquarters understands the:
    - i. Scope of NRC's response activities
    - ii. Status of shut down plants and their plans to restart
    - iii. Status of the local infrastructure to support protective action implementation.
  - b. Obtain briefing from State Liaison Officers to understand FEMA's plans to:
    - i. Dispatch a damage assessment team to affected sites
    - ii. Preparations / logistics to coordinate damage assessment
    - iii. Evaluate the readiness of shutdown plants for restart.
  - c. Ensure the IAEA IEC is kept informed about the status of the US nuclear fleet, protective actions taken, and other important response and recovery information.

- d. Keep HQ ERCs and NRR project managers continually informed about response efforts, plant status, and the implementation of the NRC-FEMA DIR process at affected plant sites.

4) State Liaison Officers

- a. Contact the affected FEMA Regional Response Coordination Center to coordinate FEMA's damage assessment and logistics with NRC's assessment.

**5.0 REFERENCES**

- 1) NRC Inspection Manual Chapter, IMC 1601, "Communication and Coordination Protocol for Determining the Status of Offsite Emergency Preparedness Following a Natural Disaster, Malevolent Act, or Extended Plant Shutdown"
- 2) Task Force Report 2005 Hurricane Season Lessons Learned Final Report (ADAMS #ML060900005)

## APPENDIX A - Emergency Response Equipment Verification

### 1.0 Annual Regional Review

**Annually by May 31, the Regional Emergency Response Coordinator will notify regional management that the Region is prepared for hurricane season.**

Preparation is determined by performing the following steps:

- 1) Update the hurricane computer evacuation program (HURREVAC) to at least the most recent season release. Minor midseason updates are at the discretion of the ERC.
- 2) Verify that the Natural Phenomena Response Requirements Matrix for each regional facility is current.
- 3) Verify the operability of regional iridium satellite telephones.
- 4) Verify that emergency response equipment and supplies are available in Resident Inspector Offices at reactor facilities vulnerable to hurricanes. The list below can be adjusted based upon Senior Resident Inspector input at each site.
  - a. Suitable bedding for two people, such as,
    - i. Air mattresses with electrical / battery powered pump or aluminum folding cots
    - ii. Sleeping bags
    - iii. Sleeping bag liners
    - iv. Blankets
    - v. Pillows
    - vi. Sheet and pillowcase sets
  - b. Additional items:
    - i. Three duffle bags
    - ii. Three rain suits
    - iii. Three pairs of rain boots
    - iv. Battery powered lanterns and extra batteries / chargers
- 5) Conduct Hurricane / Natural Phenomena Response Training for appropriate Regional personnel.

### 2.0 Annual Headquarters Review

**Annually by May 31, the Headquarters Coordination Branch Chief will notify Division of Preparedness and Response management that headquarters is prepared for the hurricane season.** Preparation is determined by performing the following steps:

- 1) Verify that the following Weather Information Sources in Operations Center

computers have been updated to the current version:

- a. HURREVAC Hurricane Evacuation Tracking Program
  - b. StormGeo TropicsWatch
  - c. WeatherBug Professional Streamer
  - d. Google Earth
- 2) Verify that the Natural Phenomena Response Requirements Matrix for each plant in Operations Center computers is current
  - 3) Verify the operability of headquarters satellite telephones
  - 4) Verify telephone access capability using the Government Emergency Telecommunications Service (GETS) System
  - 5) Verify that Headquarters responders have completed Hurricane Response Refresher Training
  - 6) Inform Division of Preparedness and Response management by May 30th that headquarters is ready for Hurricane Season.



**APPENDIX B - Pre-Impact Assessment Information**

Licensee:

Form Submitted:   
(Date/Time)

Location:

Event:

Licensee POC:   
(Name/Title/Phone)

NRC POC:   
(Name/Title/Phone)

Licensee's expected impact:  
(ex: max. 35mph winds,  
flooding cresting at 5', etc.)

Licensee's precautionary actions:

- testing communications
- site walkdowns
- activating emergency response facilities
- augmenting onsite ERO staff
- etc.

NRC plans for oversight:  
Include names, titles, and phone numbers for responders

- pre-staged onsite
- individual(s) to respond
- POC to followup with licensee afterwards
- etc.

Changes to the Natural Phenomena Response Requirements Matrix:  
(template next page)

## APPENDIX C – Management Briefing Agenda

- A. Regional Emergency Response Coordinator
  - i. History of event, present projection, location strength of the natural phenomena
  - ii. Event map, information from Internet, Weather Channel, etc.
  - iii. Status of:
    - Response preparations, limitations and challenges
    - Coordination with NRC Headquarters/Regions
    - Region(s) Watch Bill
    - Personnel Safety
  
- B. DRP
  - i. Identify affected site(s)
  - ii. Response Status - site preparations and unique site challenges
  - iii. Status of onsite staffing:
    - Identify on-site Inspectors
    - Individuals for relief coverage
  
- C. DRS
  - i. Recommend individuals for relief coverage
  - ii. All traveling inspectors verified to be aware of the storm and taking precautions with travel.
  
- D. DNMS
  - i. Provide status of materials licensees
  - ii. All traveling inspectors verified to be aware of the storm and taking precautions with travel.
  
- E. DFFI
  - i. Provide status of fuel cycle facilities
  
- F. DRMA
  - i. Summarize travel / logistics arrangements
  
- G. Regional State Liaison Officer
  - i. Summarize communications with Federal, State and local agencies
  - ii. Discuss potential need for DIRs and IMC 1601.
  
- H. Regional Public Information Officer
  - i. Summarize Regional or Headquarters Public Affairs arrangements
  
- I. Headquarters (NSIR MTL/MOC)
  - i. Provide status of HQ actions

## APPENDIX D – Weather Tools

The following are some tools and websites that are available for monitoring weather events:

- 1) HURREVAC Hurricane Evacuation Tracking Program
  - a. This tool is available from <http://www.hurrevac.com/>
  - b. The following is a link that includes training material for Hurrevac. Under "Other Printed Resources" there is a just-in-time training document that can be used as a quick refresher: <http://www.hurrevac.com/guides.htm>
- 2) StormGeo TropicsWatch <http://customers.stormgeo.com/portal/login>  
(ERCs have user name and password for website)
  - a. StormGeo sends tropical storm advisory e-mails to ERCs and selected NRC managers. It provides daily and weekly tropical storm updates. For storms that will impact licensees, detailed wind profiles are provided for each impacted site. The wind forecasts are often overly conservative for sites.
- 3) Weather Underground: <http://www.wunderground.com/>
  - a. This site has extensive information for tropical storms and hurricanes.
  - b. There is a blog, currently maintained by Dr. Jeff Masters with detailed storm predictions and analysis.
  - c. The Severe Weather link provides updated storm model graphs and forecast maps.
- 4) National Weather Service <http://www.weather.gov/>
  - a. This site is the source of much of the information that is used on commercial weather sites.
  - b. Site specific forecasts:
    - i. For accurate site specific forecasts, enter the city and state of the location, then click on the resulting map to focus the forecast to the exact site.
    - ii. The hourly weather forecast graph is available by clicking on the graph towards the bottom right after selecting a location. The hourly weather forecast graph provides accurate temperature, wind direction, wind speed, precipitation probability, and rain amount. It is not very accurate for snow accumulation.
  - c. Storm Surge Information
    - i. Storm surge graphical:  
[http://www.opc.ncep.noaa.gov/et\\_surge/et\\_surge\\_info.shtml](http://www.opc.ncep.noaa.gov/et_surge/et_surge_info.shtml)
    - ii. Local tides with storm surge for Mid-Atlantic, other areas are similarly available: <http://www.weather.gov/phi/tides>