UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 3, 2017

The Honorable Fred Upton
Chairman, Subcommittee on Energy
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

Thank you for the opportunity to provide a letter for the record associated with the hearing held by the Subcommittee on Energy on November 2, 2017 on the topic of, "The 2017 Hurricane Season: A Review of Emergency Response and Energy Infrastructure Recovery Efforts."

The U.S. Nuclear Regulatory Commission (NRC) recently demonstrated its response capability during hurricanes Harvey, Irma and Maria. The enclosed documents provide information for the hearing record that summarize how the NRC responds to hurricanes. The first document is a short one-page overview of the NRC's response to hurricanes, and the second document is the NRC's inspection manual chapter that provides the procedures and guidelines for determining the status of offsite emergency preparedness and its impact on continued reactor operations or restart activities following events including a hurricane.

In all cases, the NRC maintains frequent communications with affected licensees and Agreement States, as well as its Federal partners, including the Federal Emergency Management Agency (FEMA). The NRC staff believes its response to hurricanes remains effective and is well aligned with its safety mission. Following each hurricane event, the NRC evaluates whether there are any lessons learned that could enhance the NRC's response to future events. For example, the response to recent hurricanes identified potential improvements related to determining the condition of offsite response capabilities. In addition, the NRC, FEMA, and the nuclear industry are working together to identify how communications during and after hurricane events may be further enhanced in this regard.

We appreciate the opportunity to provide this information for the hearing record. If you have any questions, please feel free to contact me at (301) 415-1776.

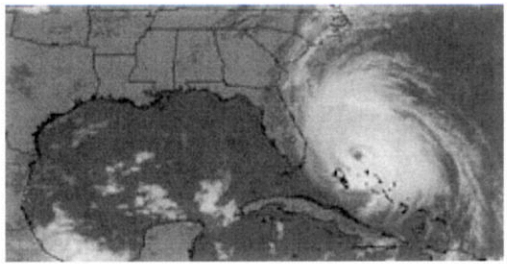
Sincerely,

for, Eugene Dacus, Director
Office of Congressional Affairs

Enclosures:
As stated

cc: Representative Bobby L. Rush

Response to Hurricanes



NRC closely monitors tropical storms and hurricanes as they approach the U.S. mainland. If the projected path of a hurricane shows possible impact on a coastline within about 120 hours, one or more of NRC's four Regional Offices (Region I in King of Prussia, PA; Region II in Atlanta, GA; Region III in Lisle, IL; and Region IV in Arlington, TX) will begin round-the-clock hurricane tracking using the resources of U.S. government (including the National Hurricane Center and National Weather Service) and commercial weather forecasting services.

As the hurricane approaches, each region will provide updates to the Headquarters Operations Center on its preparedness activities underway, including staffing of the Regional Incident Response Center (IRC), its assignment of additional staff to supplement the NRC resident inspectors on site, and the actions underway to ensure continuous communications with all NRC-licensed facilities along the projected path of the storm.

About 48 hours before expected hurricane-force winds, NRC officials will be dispatched to the State Emergency Operations Centers. NRC Regional and Headquarters response personnel will be identified and placed "on-call" to respond to any storm-induced emergency if needed. Normal and backup communications channels will be tested.

About 12 hours before expected hurricane-force winds, NRC will enter one of its response modes (Monitoring or Activation) and begin receiving continuous status updates from all of the nuclear facilities in the hurricane's path. Communications links will be established and maintained with State emergency response officials and other Federal response agencies.

During the hurricane's passage, the NRC will maintain close contact with the licensee staff and with NRC inspection staff on site. If normal communications are lost, backup communications systems will be used.

Following the hurricane's passage, NRC will help assess the extent of damage to the facility and, if necessary, respond to any storm-induced problems. NRC will also work closely with the Federal Emergency Management Agency (FEMA) to determine when the offsite emergency response organizations will be sufficiently recovered from the hurricane response to resume normal (day-to-day) response planning activities.

NRC INSPECTION MANUAL NSIR/DPR/EPD

MANUAL CHAPTER 1601

COMMUNICATION AND COORDINATION PROTOCOL FOR DETERMINING THE STATUS OF OFFSITE EMERGENCY PREPAREDNESS

1601-01 PURPOSE

To provide procedures and guidelines for coordination between the Federal Emergency Management Agency (FEMA) and the appropriate Nuclear Regulatory Commission (NRC) offices for determining the status of offsite emergency preparedness (EP) and its impact on continued reactor operations or restart activities, as appropriate, following a malevolent act, natural disaster (e.g., hurricane, tornado, flood, storm, earthquake) in the vicinity of an NRC-licensed nuclear power reactor, an extended reactor shutdown, or a shutdown caused by electric grid blackouts. In addition to physical impacts to a nuclear power reactor site or its immediate vicinity, this Manual Chapter also addresses situations where staffing challenges exist for States and/or offsite response organizations (OROs) that may impact the ability to effectively implement offsite EP plans and procedures.

1601-02 OBJECTIVES

02.01 Enable coordination between FEMA and NRC in assessing the status of offsite EP capabilities as they relate to FEMA's determination of continued reasonable assurance that appropriate measures can be taken to protect the public health and safety in the event of a radiological emergency at an NRC-licensed nuclear power reactor.

02.02 Identify NRC offices or groups with responsibilities for 1) coordinating with FEMA in assessing the status of offsite EP capabilities, 2) receiving FEMA's determination of continued reasonable assurance, and 3) evaluating the impact of FEMA's determination on NRC decisions regarding licensee restart activities or continued operation.

02.03 Identify FEMA contacts who have oversight responsibilities and information on the status of offsite conditions.

02.04 Establish communication links for coordinating information between the various organizations involved in offsite recovery, plant restart, or both.

02.05 Provide a checklist to facilitate NRC staff's tracking of FEMA's offsite EP assessment activities and NRC actions that FEMA's assessment generates.

1601-03 APPLICABILITY

03.01 This manual chapter is used when a natural disaster or malevolent act occurs at, or in the vicinity of, an NRC-licensed nuclear power reactor, which results in damage or changes to roads, buildings, communications, transportation resources, or other offsite infrastructure that potentially degrades the capabilities of OROs in the 10-mile plume emergency planning zone. This manual chapter may also be used in situations where staffing challenges exist for State or local OROs that may impact the ability to effectively implement offsite EP plans and procedures. This procedure is intended to be used in coordination with FEMA's implementation of their Standard Operating Guide (SOG), entitled "Disaster Initiated Reviews (DIR)," which is used to assess the impact on offsite infrastructure and emergency response capabilities.

03.02 This manual chapter should be implemented consistent with the agreements in the Memorandum of Understanding (MOU) between the NRC and FEMA. In this regard, FEMA Headquarters, Radiological Emergency Preparedness (REP) Branch, will inform NRC promptly if any of the following conditions exist:

- An event occurs that significantly impacts the area around an NRC-licensed nuclear power reactor to an extent that FEMA questions the adequacy of offsite EP response capabilities and functions; or

- A pandemic outbreak, or other events occur or are anticipated that may impact the ability to effectively implement offsite EP plans and procedures.

Note: FEMA's assessment of offsite EP capabilities is not related to the operating status of the nuclear power reactor.

Likewise the NRC Headquarters, through the Office of Nuclear Security and Incident Response (NSIR) / Division of Preparedness and Response (DPR), will inform FEMA Headquarters (REP Branch) promptly if:

- It receives any information from licensees, NRC inspectors, or others that raises serious questions about the continued adequacy of offsite EP; or

- A determination of the status of offsite EP capabilities is needed in support of the restart of an NRC-licensed nuclear power reactor.

03.03 In instances where substantial damage to the nuclear power reactor site has also occurred, reactor restart activities should be coordinated using NRC Inspection Manual Chapter (IMC) 0350, "Oversight of Reactor Facilities In A Shutdown Condition Due To Significant Performance And/Or Operational Concerns" or IMC 0351, "Implementation of the Reactor Oversight Process at Reactor Facilities in an Extended Shutdown Condition for Reasons Other Than Significant Performance Problems." In addition, during an extended reactor shutdown, in accordance with IMC 0350 or IMC 0351, the NRC will request FEMA to perform a review of offsite EP capabilities and issue a statement of Continued Reasonable Assurance, certifying that the applicable State and local government emergency plans can be implemented in a manner to protect public health and safety in the event of a radiological incident at the specific reactor emerging from an extended shutdown.

03.04 Following an event that significantly impacts the area around an NRC-licensed nuclear power reactor, FEMA may conduct a preliminary capabilities assessment (PCA) of offsite EP capabilities in coordination with the applicable NRC Region(s) and the appropriate State and local response organizations to determine the need for a DIR to formally assess continued reasonable assurance. During the PCA, consideration will be given as to whether predetermined backup means are available or measures have been established that can adequately compensate for the impacted offsite capabilities/functions. Based upon the results from the preliminary review/screening, FEMA Headquarters (REP Branch), in consultation with affected FEMA Regional Office(s), will have the sole responsibility for determining the need to initiate a DIR. FEMA Headquarters (REP Branch) will communicate to NRC Headquarters, via email or fax, its decision on the need to conduct a DIR; this communication will include FEMA's characterization of the status of "continued reasonable assurance."

03.05 For the purposes of this manual chapter, a FEMA finding of the failure to maintain continued reasonable assurance will imply that the ability to implement one or more applicable planning standards, as outlined in 44 CFR 350 and 10 CFR 50.47(b) is lost. When a planning standard may only be degraded and/or where identified back-up methods or other measures have been or can be implemented in a timely manner to effectively compensate, the planning standard should not be considered lost.

03.06 This manual chapter applies only to NRC-licensed nuclear power reactors. It does not apply to fuel cycle facilities or research and test reactors that do not require the establishment of formal offsite plans and preparedness.

1601-04 BACKGROUND

04.01 The NRC has primary responsibility for ensuring the adequacy of emergency preparedness for nuclear power reactors. Per the MOU between FEMA and the NRC, contained in Appendix A to Part 44, Section 353 of the Code of Federal Regulations (CFR), FEMA has the lead in assessing the adequacy of offsite EP and to certify that the State and local government emergency plans can and will be implemented in a manner to ensure public health and safety in the event of a radiological emergency at an NRC-licensed nuclear power reactor.

04.02 All agency decisions involving FEMA and NRC must take place between Headquarters offices. It is important to note that FEMA Headquarters management is the sole authority for determining the adequacy of offsite emergency plans and preparedness. The NRC will consider information provided by FEMA Headquarters and pertinent findings from FEMA's DIR in making decisions regarding the restart or continued operation of an affected operating nuclear power reactor. For this reason, direct communication and coordination between the two agencies is essential when events with the potential to impact the offsite emergency response infrastructure occur. These events include, but are not limited to, hurricanes, tornadoes, floods, storms, fires, earthquakes, malevolent acts, electric grid issues, or pandemic outbreak, and extended reactor shutdowns.

04.03 When an NRC-licensed nuclear power reactor has properly shut down in compliance with NRC regulations, there is no requirement for the licensee to obtain any specific authorization to restart unless a "safety limit" has been exceeded. If a licensee wishes to restart the reactor, but the restart would result in the reactor being in a condition that is in non-compliance with NRC requirements or the terms of the operating license, then the licensee may not re-start without prior Commission approval.

Per the NRC's Enforcement Policy, a Notice of Enforcement Discretion (NOED) to continue reactor operation may be warranted if the potential for an unexpected reactor shutdown during severe weather or other natural phenomenon could exacerbate already degraded electrical grid conditions and could have an adverse impact on the overall health and safety of the public.

A licensee is not required by NRC regulations to immediately shut down a reactor due to degraded offsite emergency response infrastructure, but the Commission can order the facility to shutdown if the deficiencies in offsite EP have the potential to cause a radiological public

health and safety concern in the unlikely event of a subsequent radiological release. When determining if a shutdown order is warranted, the Commission considers various factors, including: (1) whether the degraded capabilities in the offsite emergency response infrastructure are significant; (2) the adequacy of interim compensatory measures; and (3) if there are other compelling reasons for continued operation.

1601-05 RESPONSIBILITIES AND AUTHORITIES

The following individuals shall perform the listed actions. It is not necessary for communications to be restricted to those NRC personnel listed in this manual chapter. Reporting information to other NRC personnel should not delay the expected reporting in this manual chapter.

05.01 Branch Chief for Operating Reactor Licensing (ORL), Division of Preparedness and Response (DPR), Office of Nuclear Security and Incident Response (NSIR).

a. Act as the lead point of contact with the FEMA REP Branch Chief (FEMA Headquarters) for the activities within this manual chapter.

b. Coordinate communications between the FEMA REP Branch and the applicable NRC Regional State Liaison Officer (RSLO) regarding FEMA's PCA of offsite EP capabilities, decision to perform a DIR, and expectations for issuance of FEMA's findings.

    1. Obtain from the FEMA REP Branch Chief, as soon as it is available, the results of FEMA's PCA regarding the status of offsite EP, including FEMA's characterization of the status of "continued reasonable assurance," and whether a DIR is being initiated. This may be communicated verbally followed by written documentation via email or fax.

    2. If FEMA Headquarters concludes that a DIR is necessary to formally assess offsite EP capabilities in order to determine continued reasonable assurance, obtain a schedule for the conduct of the review.

    3. Assist in obtaining NRC Regional support for the DIR Team, through the appropriate Regional State Liaison Officer and regional Division of Reactor Safety (DRS) Branch Chief responsible for EP inspection activities.

    4. Obtain from FEMA, verbal status reports and, per the MOU, interim written reports of its findings, as appropriate, and provide information to FEMA on continued reactor operations or restart activities.

        Note: Communications of reactor restart activities may be provided verbally to FEMA Headquarters initially, but per MOU, must be provided in writing as soon as practicable.

c. Participate as the lead EP technical contact during the counterpart conference call (CCC), as defined in section 06.02.

d. Ensure that the designated Office of Nuclear Reactor Regulation (NRR) Project Manager for the affected licensee, NSIR management, and affected regional office(s) are informed of any new developments regarding FEMA's assessment of offsite EP capabilities, decision to perform a DIR, and expectations for issuance of FEMA's findings.

e. Obtain from the FEMA REP Branch Chief, as soon as it is available, the results of FEMA's DIR regarding the status of offsite EP (i.e., whether FEMA finds that "continued reasonable assurance" still exists, and whether offsite EP is adequate to support continued reactor operations or restart, as appropriate. As soon as this information is received, provide it to the applicable NRR Project Manager, RSLO, regional DRS Branch Chief responsible for EP inspection activities, and NSIR management.

FEMA Headquarters may initially provide DIR results via e-mail or fax, prior to the issuance of a formal written statement of findings per the MOU.

f. If it appears that FEMA's DIR will not be complete in time to support a licensee's proposed restart schedule, or if the information received from FEMA is that the state of offsite EP is <u>not</u> adequate to support reactor restart on the schedule proposed by the licensee, perform the following:

1. Obtain a thorough understanding of the significance of the offsite EP issues in question, including:

(a) What offsite EP capabilities are impacted and specifics related to FEMA's assessment.

(b) What compensatory measures, if any, are (or could be) available to offset damage to key offsite infrastructure or EP program capabilities that are not fully functional; and

(c) Projected timeframe for restoration of damaged infrastructure and/or when adequate compensatory measures will be in place and how compensatory measures or backup means will be tracked and controlled to prevent their discontinuation.

g. If the nuclear power reactor is operating and FEMA determines that continued reasonable assurance no longer exists, based on the loss of one or more planning standards, coordinate with FEMA to identify the following:

- Which planning standard(s) is(are) lost;
- Affected State and/or local government entity;
- Capabilities/functions impacted that resulted in loss of planning standard(s);
- Why efforts have been unsuccessful to implement identified backup means or compensatory measures; and
- Projected timeframe for restoration of damaged infrastructure and/or when adequate compensatory measures will be in place to meet affected planning standard(s).

Note: The loss of a planning standard means that a key offsite EP capability/function cannot be performed and no identified backup means or compensatory measure has or is likely to be implemented for an extended period. This loss may be due to the inability to confirm adequate staffing of key ORO functions, or to significant damage to offsite infrastructure (evacuation roads, emergency facilities and equipment, etc.).

h. Discuss results of the assessment activities described in paragraph 05.01(g) above with NSIR management, and in coordination with the NRR Project Manager, the NRR Executive Team, regional management, and, as deemed appropriate, representatives from the Offices of the General Counsel (OGC), Public Affairs (OPA), and Congressional Affairs (OCA) to determine appropriate follow-up actions with the licensee, FEMA, and others. Contact the Headquarters Operations Officer (HOO) to arrange a conference bridge, in order to facilitate timely communication with appropriate parties, or conduct discussions as part of the periodic CCC.

i. If a lack of communications capabilities between the various OROs is preventing the completion of a timely assessment regarding the status of offsite EP, offer the services of NRC telecommunications resources to the parties so that an effective conference call to exchange information can be held. Examples of resources to consider in accomplishing this conference include the following:

1. NRC Headquarters Operations Center conference system;

2. Regional Office bridge network; and

3. Resident inspector and regional satellite telephone equipment.

05.02 NRR Deputy Division Directors for the Affected Sites.

a. Participate in the CCC.

b. Communicate with the NRR Executive Team important developments in the reactor restart process, and NRC Regional and licensee activities in support of FEMA's assessment of offsite EP capabilities and infrastructure.

05.03 NRR Project Managers for the Affected Sites.

a. Organize and facilitate the CCC (as defined in section 06.02).

b. Keep the NSIR ORL Branch Chief informed of any new developments regarding proposed reactor restart schedules and activities.

c. Obtain from the NSIR ORL Branch Chief, as soon as it is available, the results of FEMA's DIR (i.e., whether offsite EP is adequate to support reactor restart or continued operation. As soon as this information is received, provide it to the NRR Executive Team and regional DRP Branch Chief for the affected site.

05.04 Regional State Liaison Officers (RSLOs) and/or NRC Regional Assistance Committee (RAC) Representatives.

a. Interface with respective FEMA Regional RAC Chair, or REP staff as appropriate, to support FEMA's PCA of offsite EP capabilities and infrastructure, and provide status of reactor restart activities and licensee-related input that may have a bearing on FEMA's determination as to whether a DIR is warranted.

Note: For a natural disaster with advance notice (i.e., hurricane), consider having pre-planning meetings or conference calls with the FEMA Region and affected State and local response organizations, as warranted, to discuss post-event disaster review coordination and identification of potential compensatory measures.

b. Participate in the FEMA-led DIR, as necessary and appropriate to the representative's skills.

Note: Consider obtaining a portable satellite telephone unit from the Regional Emergency Response Coordinator to facilitate the communication responsibilities of this paragraph in the event of degraded communication infrastructure in the affected area.

c. Obtain information regarding important developments in the onsite recovery and restart process to support the FEMA-led DIR.

d. Determine, through communication with State and local counterparts, the status of evacuation routes to and from the reactor site.

e. Provide periodic updates to Regional management and the NSIR ORL Branch Chief on activities associated with FEMA's review of offsite EP capabilities and infrastructure.

f. Participate in the CCC, as necessary.

g. Provide, as appropriate, initial status update information, periodic updates, and final status update to the respective State counterpart(s).

h. Assists NRC Regional OPA, if requested, with establishing OPA communications with respective State Public Information Officer (PIO) counterparts

05.05 Regional Division of Reactor Projects (DRP) Branch Chiefs.

a. Participate in the CCC, as necessary.

b. Communicate important developments in the restart process to senior regional management in coordination with the RSLO.

c. Establish a dialogue with licensee management to determine the proposed schedule for reactor restart, or the status of continued operations and assessments of risks involved. Inform the licensee whether any offsite EP assessments are scheduled, or ongoing, so that licensee management may factor these into their plans.

d. When informing licensee management of any offsite EP assessments (e.g. PCA), enjoin them to ensure any licensee resources supporting the assessments have an appropriate scope of responsibilities, experience, and knowledge.

e. Apprise the NSIR ORL Branch Chief of projected reactor restart schedule, activities, status of continued operations, and any changes that may occur.

f. Assign a resource to conduct a technical briefing, as necessary, to prepare a Communication Plan and to support Regional OPA external communications staff.

05.06 Regional Division of Reactor Safety (DRS) Branch Chiefs (responsible for EP inspection activities).

a. Participate in the CCC.

b. Communicate status of emergency preparedness assessment activities with senior regional management and the NSIR ORL Branch Chief.

c. Establish a dialogue with licensee EP management to determine the status of ongoing actions to restore EP infrastructure.

d. Once informed by the NSIR ORL Branch Chief of FEMA's DIR results, provide this information to senior regional management.

05.07 Resident Inspectors.

a. Participate in the CCC, as necessary.

b. Communicate important developments in the reactor restart process and the assessment of onsite EP elements that link to offsite EP and emergency sirens (if maintained by the licensee) with the regional DRP Branch Chief.

c. The following information should be relayed as soon as it is known:

1. Licensee's expected commencement of heatup and/or rod withdrawal, if the reactor is shut down; and

2. General condition of the licensee's facility and EP infrastructure that may impact ORO response capabilities, with a particular focus on the status of the following, based on discussions with licensee personnel: (Obtaining this information does not require an independent inspection to verify the status.)

Note: The RSLO is the primary NRC staff member who is responsible for obtaining information regarding the offsite infrastructure and for keeping the appropriate NRC staff informed. The RSLO serves as the lead interface with FEMA at the regional/local level. Therefore, it is not appropriate for other NRC staff to contact offsite agencies to determine this information or to request that licensees obtain a status of offsite infrastructure.

(a) Means of communication between the licensee and the offsite authorities;

(b) Status of licensee's emergency response facilities;

(c) Licensee's ability to staff the required emergency response organization positions;

(d) Status of environmental monitoring capabilities;

(e) Site meteorological conditions;

(f) Status of emergency sirens, if maintained by the licensee; and

(g) Status/Condition of structures, systems, and components needed for Emergency Action Level classifications.

05.08 NRC Operations Center - Headquarters Operations Officer (HOO) and Headquarters Emergency Response Officer (HERO).

a. Relay any incoming information from any source (i.e., licensee, NRC employee, other Federal agency employee) that may affect the restart process or continued reactor operation following a natural disaster, malevolent act, or other circumstance described in this procedure to the NSIR ORL Branch Chief.

b. Help with coordination, including the setting up of conference bridges, as requested, to facilitate timely communication with appropriate NRC Headquarters and Regional management.

05.09 NRR Executive Team (Office Director, Deputy Director, Division Directors).

a. Participate in the reactor restart or continued operation decision-making activities, as appropriate, along with NSIR senior management and senior regional management.

b. Evaluate the need to either issue a confirmatory action letter, or to recommend to the Commission issuance of an order to the licensee to:

1. Ensure that the reactor restart does not occur under degraded offsite conditions, and the reactor is maintained in a condition of minimal risk.

2. Shut down an operating nuclear power reactor if FEMA's DIR determines that continued reasonable assurance no longer exists and the following criteria are met:

- Deficiencies in offsite EP capabilities are significant (e.g., where that loss constitutes the inability to successfully implement measures to protect the public),
- Appropriate compensatory measures cannot be implemented within a reasonable timeframe, and

- There are no compelling reasons for continued operation (e.g., reactor shutdown during severe weather or other natural phenomenon could exacerbate already degraded electrical grid conditions and could have an adverse impact on the overall health and safety of the public).

c. Ensure that OGC, OPA, and OCA are involved in Agency reactor restart or continued operation decisions where FEMA's assessment of offsite EP indicates continued reasonable assurance is challenged.

d. Ensure that the Office of the Executive Director for Operations (EDO) and Commission are kept apprised, as appropriate, on restart or continued operation decisions involving FEMA's assessment of offsite EP capabilities and infrastructure. Seek EDO and/or Commission approval for any matters requiring EDO and/or Commission action.

e. Determine whether the affected reactor is subject to the restart provisions of NRC Inspection Manual Chapter 0350, "Oversight of Reactor Facilities In A Shutdown Condition Due To Significant Performance And/Or Operational Concerns" or NRC Inspection Manual Chapter 0351, "Implementation of the Reactor Oversight Process at Reactor Facilities in an Extended Shutdown Condition for Reasons Other Than Significant Performance Problems."

05.10 NSIR Senior Management (Office Director, Deputy Director, Division Directors).

Participate in any reactor restart or continued operation decision-making activities along with the NRR Executive Team and senior regional management, as appropriate.

05.11 Senior Regional Management (Regional Administrator, Deputy Regional Administrator, Division Directors).

a. Participate in the reactor restart or continued operation decision-making activities along with NSIR senior management and the NRR Executive Team.

b. Coordinate with the NRR Executive Team and NSIR senior management on proposed recommendations to the Commission regarding the need for the NRC to issue an order or confirmatory action letter to the licensee on decisions related to restart or shutdown of an operating nuclear power reactor based on FEMA's determination of continued reasonable assurance of offsite EP capabilities:

1. Ensure that the restart does not occur under degraded offsite conditions, and the reactor is maintained in a condition of minimal risk.

2. Shut down an operating nuclear power reactor if FEMA's DIR determines that continued reasonable assurance no longer exists due to the loss of one or more planning standards, where that loss constitutes the inability to successfully implement measures to protect the public and appropriate compensatory measures cannot be implemented within a reasonable timeframe.

c. Determine whether the affected reactor is subject to the restart provisions of IMC 0350 or IMC 0351.

d. The NRC Region shall inform the licensee of the restart decision or issues regarding continued operation.

1601-06 REQUIREMENTS

06.01 The restart authorization or continued operation decision, as applicable, will be made jointly by the NRR Executive Team, NSIR senior management, and Regional Administrator. NRR will have the lead in briefing the EDO and the Commission on the decision and will request any actions necessary on the part of the EDO and/or Commission. The Regional Administrator will inform the licensee of the restart or continued operation decision.

06.02 The CCC is an internal NRC conference call and is the primary means for information sharing during the restart or continued operation decision process. The NRR Project Manager for the affected site will conduct a conference call at least daily (unless it is agreed upon by the CCC participants that less frequent calls are acceptable given the nature of the status of the situation) while the actions of this manual chapter are on-going and will notify all stakeholders (identified in this manual chapter) of the schedule and logistics for the call. During the call, the NSIR ORL Branch Chief will lead the discussion of new and updated information on FEMA's DIR activities and will subsequently ensure that FEMA Headquarters is notified of any relevant information resulting from the CCC.

06.03 NRC parties should focus on informative and timely communications. It is not necessary to continuously maintain open circuits with other offices or agencies; important information and developments should be relayed to designated contacts as quickly as possible. The NRR Executive Team, NSIR senior management, and the Regional Administrator need to be reliably informed via the CCCs so that they can communicate with the licensee for a safe restart or continued operation.

Note: Prompt communication of findings, FEMA's statement of continued reasonable assurance, and restart or continued operation decisions are of the utmost importance and may necessitate late night conference calls.

06.04 If, at any time, NRC staff receives new or updated information, it should be passed on to the NSIR ORL Branch Chief. The NSIR ORL Branch Chief will inform the NRR Project Manager for the affected site, who shall pass that information on to the appropriate stakeholders; or, if applicable, the NRR Project Manager will schedule a CCC to allow dissemination of the information.

06.05 If reaffirmation of adequate offsite emergency preparedness is not forthcoming before the licensee plans to restart the reactor or if FEMA determines that continued reasonable assurance no longer exists, then the NSIR ORL Branch Chief will inform, via the CCCs, the NRR Executive Team, NSIR senior management, and the Regional Administrator of this fact as soon as possible. These officials will evaluate the need for the NRC to issue an order or confirmatory action letter to the licensee. This will ensure that the restart or continued operation does not occur under degraded offsite conditions and that the reactor is maintained in a condition of minimal risk. An order or confirmatory action letter to a licensee directing shutdown should include conditions necessary for restart. These senior officials will also

determine whether the affected reactor is subject to the restart provisions of IMC 0350 or IMC 0351.

06.06 NRC shall strive to ensure that all decisions regarding emergency preparedness reviews are carried out consistently across regional boundaries, both during one initiating event and from one event to another. Additionally, if an emergency preparedness assessment is necessary for more than one reactor site simultaneously, the NRC should prioritize reviews per this manual chapter on situational information.

1601-07 REFERENCES

IMC 0350, "Oversight of Reactor Facilities In A Shutdown Condition Due To Significant Performance And/Or Operational Concerns."

IMC 0351, "Implementation of the Reactor Oversight Process at Reactor Facilities in an Extended Shutdown Condition for Reasons Other Than Significant Performance Problems."

Memorandum of Understanding Between Federal Emergency Management Agency and Nuclear Regulatory Commission (Appendix A to 44 CFR 353)

FEMA Standard Operating Guide (SOG) "Disaster Initiated Review"

END

Appendix A – Emergency Preparedness Restart Status Checklist

Appendix B – Emergency Preparedness Continued Operation Status Checklist

Attachment 1 – Revision History for IMC 1601

APPENDIX A – EMERGENCY PREPAREDNESS RESTART STATUS CHECKLIST

Initiating Action:

1. After consulting with FEMA, if any of the following events affect the 10-mile emergency planning zone surrounding a nuclear power reactor that has shut down, this checklist should be considered: hurricanes, tornados, flooding, high winds, large fires, blizzards, ice storms, seismic activity, malevolent acts, electric grid blackouts, or any other events that challenge offsite emergency preparedness capability. Also, for extended reactor shutdowns, this checklist should be considered (see section 03.03).

2. If the licensee declares any of its Emergency Classes specified in the licensee's approved Emergency Plan as a result of any of these events (i.e. if the event is perceived as challenging offsite EP capability), this checklist should be implemented.

3. Contact from FEMA regarding the status of offsite preparedness may also warrant implementation of this checklist.

This checklist should be initiated immediately when informed by FEMA that a DIR is being considered to assess impact on offsite infrastructure and EP capabilities.

Notes:
***ALL agency decisions involving FEMA and the NRC must take place between Headquarters offices.

***Written reports may be necessary per the MOU to document agency reports and decisions; however, verbal communication is appropriate and acceptable for all agency interactions.

Required Action	***Responsible Party***	***Date Completed***
1. Determine whether this checklist shall be implemented for a given event.	NSIR ORL	
2. Refer to IMC 1601 for complete list of communications requirements.	All NRC stakeholders	
3. Maintain continuous and frequent contact with the relevant FEMA Region(s) to gain an understanding of the infrastructure as being reported to FEMA from the offsite agencies (e.g., SIT REP reports).	RSLO	
4. Initiate contact with the NSIR EPD to discuss offsite preparedness.	RSLO	
5. Notify the NRR Project Manager for the affected sites.	NSIR ORL	

Required Action	*Responsible Party*	*Date Completed*
6. Participate, along with the licensee, in FEMA's Regional PCA discussions for understanding offsite preparedness. Make contact with the relevant NSIR EPD, RA, DRS Branch Chief to discuss the results of the PCA discussions.	RSLO	
7. Initiate dialogue with licensee to determine current reactor status, restart plan (if applicable), and status of licensee communications with FEMA regarding offsite EP (if known). Perform an assessment of onsite EP to inform the restart decision process. Report results to NSIR EPD.	NRC Region / DRS and Resident Inspectors	
8. Initiate dialogue with FEMA HQ / REP to inform them of current status/restart plan for affected reactor (estimated restart date/time, including heatup if the reactor is in cold shutdown), and to discuss the results of the PCA and known offsite EP issues that the NRC and FEMA are aware of. If FEMA determines no DIR review is necessary, cease checklist activities; otherwise move to steps 9 thru 21.	NSIR ORL	
Steps 9 thru 21 should be conducted if FEMA initiates a DIR		
9. Obtain from FEMA HQ a schedule for the DIR review.	NSIR ORL	
10. Conduct a CCC to inform NRC stakeholders of FEMA's decision to conduct a DIR and its schedule.	NRR PM	
11. Notify the licensee that FEMA will be conducting a DIR.	NRC Region	
12. Provide FEMA the regional contact (RSLO) for participating in the DIR.	NSIR ORL	
13. Participate in the FEMA DIR Review Team of the offsite infrastructure assessment. Provide frequent updates to the NRC Region and NSIR ORL. Maintain awareness of plant situation.	RSLO	
14. Process and coordinate any additional assistance requested by FEMA	NSIR ORL	

Required Action	*Responsible Party*	*Date Completed*
The following actions should be concurrent while the DIR is being conducted and as the event continues to affect the site.		
15. Frequently conduct plant update status and restart counterpart conference calls (CCC), as needed.	NRR PM	
16. Communicate important highlights from the CCC to FEMA HQ / REP and RSLO participating on the DIR Review Team.	NSIR ORL	
17. Obtain from FEMA the interim reports of its findings regarding offsite preparedness and continued reasonable assurance.	NSIR ORL	
18. Conduct a CCC to inform NRC stakeholders of the results of FEMA's DIR.	NRR PM	
19. Determine appropriate action (i.e. restart, order, CAL) based upon FEMA HQ input, review findings and status of onsite preparedness.	NRR Executive Team / NSIR senior management / Regional Administrator	
20. Inform FEMA HQ of the NRC's decision and, if appropriate, licensee schedule for restart of the affected reactor(s). NRC updates FEMA HQ regarding changes, as necessary.	NSIR ORL	
21. If reactor is not permitted to restart due to EP issues, return to step 14. Continue CCCs and information exchanges until issues are resolved.	NSIR ORL/NRR PM	
22. NRC Region informs licensee of restart decision.	Regional Administrator	
Assessment Complete		

APPENDIX B – EMERGENCY EMERGENCY PREPAREDNESS CONTINUED OPERATION STATUS CHECKLIST

Initiating Action:

1. After consulting with FEMA, if any of the following events affect the 10-mile emergency planning zone surrounding a nuclear power reactor that continues to operate, this checklist should be considered: hurricanes, tornados, flooding, high winds, large fires, blizzards, ice storms, seismic activity, malevolent acts, electric grid blackouts, or any other events that challenge offsite emergency preparedness capability.

2. If the licensee declares any of its Emergency Classes specified in the licensee's approved Emergency Plan as a result of any of these events, this checklist should be implemented.

3. Contact from FEMA regarding the status of offsite preparedness may also warrant implementation of this checklist.

This checklist should be initiated immediately when informed by FEMA that a DIR is being considered to assess impact on offsite infrastructure and EP capabilities.

Notes:
***ALL agency decisions involving FEMA and the NRC must take place between Headquarters offices.

***Written reports may be necessary per the MOU to document agency reports and decisions; however, verbal communication is appropriate and acceptable for all agency interactions.

Required Action	***Responsible Party***	***Date Completed***
1. Determine whether this checklist shall be implemented for a given event.	NSIR ORL	
2. Refer to IMC 1601 for complete list of communications requirements.	All NRC stakeholders	
3. Maintain contact with the relevant FEMA Region(s) to gain an understanding of the infrastructure as being reported to FEMA from the offsite agencies (e.g., SIT REP reports).	RSLO	
4. Initiate contact with the NSIR ORL to discuss offsite preparedness.	RSLO	
5. Notify the NRR Project Manager for the affected sites.	NSIR ORL	

Required Action	Responsible Party	Date Completed
6. Participate along with the licensee, in FEMA's Regional PCA discussions for understanding offsite preparedness. Make contact with the relevant NSIR ORL, RA, DRS Branch Chief to discuss the results of the PCA discussions.	RSLO	
7. Initiate continuing dialogue with licensee to determine current reactor status and status of licensee communications with FEMA regarding offsite EP (if known). Perform an assessment of onsite EP to inform the restart decision process. Report results to NSIR ORL.	NRC Region / DRS and Resident Inspectors	
8. Initiate dialogue with FEMA HQ / REP to inform them of current status of the affected reactor and to discuss the results of the PCA and known offsite EP issues that the NRC and FEMA are aware of. If FEMA determines no DIR review is necessary, cease checklist activities; otherwise move to steps 9 thru 24.	NSIR ORL	
Steps 9 thru 24 should be conducted if FEMA initiates a DIR		
9. Obtain from FEMA HQ a schedule for the DIR review.	NSIR ORL	
10. Conduct a CCC to inform NRC stakeholders of FEMA's decision to conduct a DIR and the schedule.	NRR PM	
11. Notify the licensee that FEMA will be conducting a DIR and its schedule.	NRC Region	
12. Provide FEMA the regional contact (RSLO) for participating in the DIR.	NSIR ORL	
13. Participate in the FEMA DIR Review Team of the offsite infrastructure assessment. Provide frequent updates to the NRC Region and NSIR ORL.	RSLO	
14. Process and coordinate any additional assistance requested by FEMA	NSIR ORL	
The following actions should be conducted concurrent with the DIR and as the event continues to affect the site.		

Required Action	Responsible Party	Date Completed
15. Frequently conduct plant update status and restart counterpart conference calls (CCC), as needed.	NRR PM	
16. Communicate important highlights from the CCC to FEMA HQ / REP and RSLO participating on the DIR Review Team.	NSIR ORL	
17. Obtain from FEMA the interim reports of its findings regarding offsite preparedness and continued reasonable assurance.	NSIR ORL	
18. If interim reports from FEMA indicate that a deficiency(ies) exist or the ability to effectively implement a planning standard is lost (per sections 03.05 and 05.01.g) and/or that continued reasonable assurance no longer exists, while awaiting the formal FEMA letter, interface with FEMA to get a detailed understanding of : • Identified deficiencies • Whether identified deficiencies prevent or significantly degrade the effective and timely implementation of a protective action decision • Potential restoration and/or compensatory measures being considered • Expected timeframe for completing restoration activities or implementation of compensatory measures	NSIR ORL	
19. Conduct a CCC to inform NRC stakeholders of the results of FEMA's DIR.	NRR PM	
20. Upon receipt of the formal FEMA letter indicating that a deficiency(ies) exist and/or that continued reasonable assurance no longer exists, review letter and engage FEMA to: • Further assess the basis for withdrawal of continued reasonable assurance and impact on key response functions and capabilities • Determine if and when the deficiency(ies) can be compensated for, mitigated, or resolved	NSIR ORL	

Required Action	Responsible Party	Date Completed
21. Formulate a recommended course of action to the Commission, including, but not limited to the following options: • Recommend shutdown if: 1. Deficiencies in offsite EP capabilities are significant (e.g., where that loss constitutes the inability to successfully implement measures to protect the public); 2. Appropriate compensatory measures cannot be implemented within a reasonable timeframe; and 3. No compelling reasons for continued operation (e.g., reactor shutdown during severe weather or other natural phenomenon could exacerbate already degraded electrical grid conditions and could have an adverse impact on the overall health and safety of the public). • Recommend continued reactor operation if either: 1. The issue(s) can be resolved in a very short timeframe (i.e. hours or a few days); or 2. The issue does not impact the ability to timely and effectively implement measure to protect the public. • If continued reactor operation is allowed, criteria should be pre-determined for which a reactor shutdown would be required, should the situation degrade further. • Recommend reactor shutdown if the deficiency(ies) preventing or significantly degrading the ability to timely and effectively implement protective action decisions cannot be compensated for, mitigated, or resolved in a timely manner.	NSIR ORL/NSIR Management/NRR Executive Team/Regional Administrator	

Required Action	***Responsible Party***	***Date Completed***
22. In support of the recommended course of action: • Coordinate briefings for the EDO and Commission • Secure appropriate approvals for the determined course of action	NRR	
23. NRC informs FEMA HQ of the NRC's decision. NRC updates FEMA HQ regarding changes, as necessary. If reactor is required to shut down due to EP issues, continue CCCs and enter Appendix A of this IMC. If reactor is allowed to continue operation, maintain CCCs and regular communication with FEMA to monitor compensation for, mitigation of, or resolution of the deficiency(ies).	NSIR ORL	
24. NRC Region informs licensee of continued operation decision.	Regional Administrator	
Assessment Complete		

ATTACHMENT 1 – REVISION HISTORY FOR IMC 1601

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment and Feedback Resolution Accession Number
N/A	6/24/03	N/A		
N/A	07/07/05	Revised to improve internal and external communication and coordination when determining the status of offsite emergency preparedness in support of reactor restart. This manual chapter's scope has been expanded to not only include natural disasters, but also malevolent acts or extended reactor shutdowns. It also includes a new Appendix A checklist for tracking completion of manual chapter activities. IMC 1601 is also being revised to reflect the organizational change of emergency preparedness staff from NRR to NSIR.	N/A	N/A
N/A	09/16/11 CN 11-017	Editorial Changes. Updated to maintain alignment with FEMA DIR SOP and improve coordination and communication	N/A	ML110250098
N/A	ML121200174 07/17/12 CN 12-015	Updated to maintain alignment with Final FEMA DIR SOG and to include considerations and actions for reactors that are still operating.	N/A	ML12150A209