



FEMA

August 7, 2019

Kathryn Brock
Director, Division of Preparedness and Response
Office of Nuclear Security and Response
U.S. Nuclear Regulatory Commission
Mail Stop T4D22A
Washington, D.C. 20555

RE: Results of the Preliminary Capabilities Assessment (PCA) for the Brunswick Nuclear Plant

Dear Ms. Brock:

On August 5, 2020, the Federal Emergency Management Agency (FEMA) completed its Preliminary Capabilities Assessment (PCA) of the State of North Carolina and local communities within the 10-mile Emergency Planning Zone (EPZ) of the Brunswick Nuclear Plant in the aftermath Hurricane Isaias. The Assessment included the examination of the local offsite response organizations, to include but not limited to, communication capabilities, Emergency Operations Center functionality, and possibly blocked evacuation routes, in order to assess their continued capability to adequately respond to an incident at the plant.

Based on the PCA performed and our review of available information gathered in discussions with the Offsite Response Organizations (OROs), FEMA concludes that offsite radiological emergency preparedness (EP) remains adequate to provide "Reasonable Assurance" and that appropriate measures can be taken to protect the health and safety of the public in a radiological emergency at the Brunswick Nuclear Plant. At this time, FEMA is not initiating actions to conduct a Disaster Initiated Review (DIR) of the nuclear stations 10-mile EPZ's.

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Please contact me at 202-704-4242, if you have any questions or require any further assistance on this matter.

Sincerely,

Michael S. Casey, Ph.D.
Director
Technological Hazards Division

Attachment:

RIV Preliminary Capabilities Assessment (PCA)

cc: Deputy Administrator, Resilience
Assistant Administrator, National Preparedness Directorate
Associate Administrator, Office of Response and Recovery
REP Program Branch Chief
Region IV RAC Chair
FEMA National Watch Center



FEMA

August 6, 2020

MEMORANDUM FOR: Michael Casey, Director
Technological Hazards Division
National Preparedness Directorate
U.S. Department of Homeland Security – FEMA

THROUGH: Craig Fiore, Acting Chief
Radiological Emergency Preparedness Section
Technological Hazards Division
National Preparedness Directorate
U.S. Department of Homeland Security – FEMA

THROUGH: W. Montague Winfield, Director
National Preparedness Division
FEMA Region IV
U.S. Department of Homeland Security – FEMA

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FROM: Randall Hecht, Chief
Technological Hazards Branch
National Preparedness Division
FEMA Region IV
U.S. Department of Homeland Security – FEMA

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SUBJECT: Preliminary Capabilities Assessment – Brunswick Nuclear Plant

Background:

Hurricane Isaias made landfall near Ocean Isle Beach, North Carolina, on August 3, 2020, as a Category 1 hurricane, and proceeded to accelerate up the east coast of the United States. The Brunswick Nuclear Plant, operated by Duke Energy, is located nearby at the City of Southport in southeastern Brunswick County, North Carolina. The 10-mile emergency planning zone encompasses portions of both Brunswick and New Hanover counties, which were impacted by the hurricane. Portions of the counties were under voluntary evacuation and curfew orders; Oak Island is currently under mandatory evacuation due a loss of power, water, and sewer.

The Brunswick Nuclear Plant Unit 1 was at 33% power and performed Mode 4 (cold shutdown) on August 3, 2020, for previously scheduled maintenance (not weather related). Unit 2 remained operating at 100%. The plant declared a Notice of Unusual Event (NOUE) on August 3, 2020, at

2312 for loss of offsite power capability for greater than or equal to 15 minutes. Brunswick Nuclear Plant remained stable and Unit 2 continued to operate at 100% throughout the storm. The NOUE was terminated on August 4, 2020, at 1454 due to restoration of offsite AC power capability.

FEMA RIV, in coordination with NRC Region II and Duke Energy, held discussions with representatives from the State of North Carolina Emergency Management, Brunswick County, New Hanover County, and Brunswick Nuclear Plant. These discussions were held on August 4th and 5th, 2020, to conduct an assessment of the offsite capabilities potentially affected by Hurricane Isaias.

On August 5, 2020, based on the Preliminary Capabilities Assessment (PCA) performed, our review of available information gathered in discussions with State and local government agencies, Region IV has concluded that offsite radiological emergency preparedness remains adequate to provide a reasonable assurance determination and that appropriate measures can be taken to protect the health and safety of the public in the event of a radiological emergency at the Brunswick Nuclear Plant. Region IV is not recommending actions to conduct a Disaster Initiated Review of offsite emergency preparedness within the Brunswick Nuclear Plant 10-mile emergency planning zone. The Regional Administrator is aware of this decision.

FEMA Region IV reviewed the offsite capabilities of the response organizations as it relates to the Brunswick Nuclear Plant. The review of the offsite capabilities is as follows:

Assessment:

1. Emergency Response Facilities

The State of North Carolina and the risk counties of Brunswick and New Hanover activated their emergency operations centers in response to Hurricane Isaias. The State of North Carolina and both risk counties' emergency operations centers remain at level 1, full activation in support of recovery and restoration operations. Due to ongoing response to SARS-CoV-2 pandemic, the state emergency operations center and both risk counties' emergency operations centers were operational and activated prior to the arrival of tropical weather. The State of North Carolina, Brunswick County, and New Hanover County emergency operations centers were not compromised, and all have full communications capabilities and are running on commercial power. The state and risk county emergency operations centers are capable of coordinating emergency response operations in support of the Brunswick Nuclear Plant.

2. Communications

Primary and secondary communication systems are operable and functioning. No irregularities were noted in the primary or secondary means of communication among Duke Energy, the state, and the risk counties.

3. Emergency Response Organizations

State and county emergency management, law enforcement, fire, and emergency medical services organizations are available and capable of providing services to ensure a safe and secure environment. The multi-agency organization responsible for performing waterway warning of the Cape Fear River is available and capable of performing all necessary tasks. Law enforcement agencies are capable of establishing traffic and access control points if necessary. Fire service and other emergency workers are capable of establishing designated emergency worker and vehicle decontamination stations to perform radiological monitoring and decontamination of emergency workers and vehicles. The State of North Carolina has identified Lincoln and Catawba County trained emergency workers as backup for activities in Brunswick and New Hanover Counties if necessary.

4. Public Alert and Notification

The prompt alert and notification system for the 10-mile emergency planning zone consists of a fixed siren system and the broadcast of emergency alert system messages. This system has 38 pole mounted sirens placed strategically throughout the emergency planning zone with 32 in Brunswick County and six in New Hanover County. The prompt alert and notification system of the 10-mile emergency planning zone is operable. As of this assessment, 35 sirens are operable on primary alternating current power with direct current backup. Two sirens, B-07 and B-08, are operable on direct current backup and one siren sustained damage during the storm; all three sirens are located in Brunswick County. Duke Energy has implemented a maintenance plan to recharge those siren batteries every four days to ensure operability. This compensatory measure is within technical specifications of the siren batteries.

The siren that is not operational, siren B-03 at Caswell Beach located on Oak Island, currently has no estimated repair date; however, Duke Energy is working closely with the vendor. This siren outage affects less than .1% of the emergency planning zone population. Oak Island is currently under a mandatory evacuation due a loss of power, water, and sewer, and minimal population is on the island. Brunswick County has the resources to conduct backup route alerting if needed. Due to the posture of emergency response vehicles on the island staged to assist with evacuation and support equipped with the capability to announce emergency information by public address system, backup route alerting could be conducted promptly. The state's joint information system is capable of making emergency public information and instructions relative to the Brunswick Nuclear Plant in a timely manner.

5. Access and Functional Needs and Transportation Resources

The state and risk counties maintain enough transportation assets to fulfill requirements. Movement of transportation dependent populations to include disabled, access/functional needs, and schools remain unencumbered. There is no degradation of this capability.

6. Evacuation Routes

The state and risk counties maintain satisfactory law enforcement assets to perform the duties required of them. Primary evacuation routes inside of the 10-mile emergency planning zone are passable. County emergency management officials and State of North Carolina Department of Transportation staff closely monitor and coordinate all road conditions. The state and risk counties implemented numerous traffic and access control points relative to Hurricane Isaias response. Seven secondary roads were identified as impacted; however, none of the roads identified are on any evacuation route. Additional time to travel upon identified alternate routes were estimated to be less than 15 minutes. State and county assets to perform public messaging are in place, to include using roadside unit display messages with changeable messages, public communication networks, and social media.

7. Accident Assessment

The North Carolina Department of Health and Human Services, Division of Health Service Regulation, Radiation Protection Section has the staff, equipment, and resources available to provide independent radiological dose assessment and provide recommendations to decision makers on protective actions for the health and safety of the public. The section can deploy the state's radiological field monitoring teams to monitor and assess a radiological plume. Additionally, the risk counties ability to monitor and decontaminate the public and emergency workers remain intact.

8. Support Services

The risk counties have the available resources to staff and operate reception and congregate care centers in accordance with their plans and procedures. Sufficient shelter space is available for each county to support the Brunswick Nuclear Plant 10-mile emergency planning zone. Brunswick County activated two shelters to support their displaced populace; however, none of the shelters activated would be used in the event of an incident at Brunswick Nuclear Plant. Although the two shelters are currently on standby, there are resources available to support an incident at the plant.

Dosher Memorial Hospital and the New Hanover Regional Medical Center Main Campus are operational and capable to provide treatment to radiological contaminated injured individuals in accordance with plans and procedures. The supporting county emergency medical services have not been degraded and are capable to respond, care, and transport a radiological contaminated injured individual.

9. Population Shifts

There has been no significant population shift due to the incident.

10. Supporting Documentation

All supporting documentation gathered will be retained on file at FEMA Region IV.

Conclusion:

All community lifelines relevant to Hurricane Isaias remain stable. The State of North Carolina and affected counties surrounding the Brunswick Nuclear Plant have the ability to implement their radiological emergency plans and procedures as written. FEMA Region IV concludes that offsite radiological emergency preparedness remains adequate to provide a reasonable assurance determination. A formal Disaster Initiated Review is not recommended.