

U.S. Nuclear Regulato 34th ANNUAL REGU INFORMATION COI

Emergency Response During COVID-19 Lessons from Hurricane Ida

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Session Goals

- organizations in the future

Session Agenda

- Panelist Introductions \bullet
- Outline of Hurricane Ida Events
- Photos of Impacts at Waterford Steam Electric Station •
- Panel Discussion
- Audience Q&A Period

Discuss noteworthy aspects of the response to Hurricane Ida, including unique features introduced by the COVID-19 public health emergency Share lessons learned from the event that may be valuable to other





Introductions

Chair: Scott Morris, NRC Region IV, Regional Administrator

Panelists:

- Ryan Lantz, NRC Region IV, Director, Division of Reactor Safety
- Rebecca Richardson, NRC NSIR, Branch Chief, Intel Liaison & Threat Assessment
- John Overly, Waterford Steam Electric Station, Emergency Preparedness Manager
- Oscar Martinez, FEMA Region 6, Regional Assistance Committee Chair
- Linda Gee, FEMA Region 6 Senior Site Specialist and Louisiana State Lead







Ida: Major Storm Impacting Louisiana Coast

Vei		andunop		
o Springs	United States of America	saint Louis	Charleston Charleston	
<u>}</u>		Li- MAR	Wed Sep1 4AM 30mph Cat 0 1000mb	
Ar	Tulsa Oklahoma City	Nashville Memphis	Tue Aug31 4PM 25mph Cat 0 999mb	
	Dallas	Tue Aug3	Atlanta 30mph Cat 0 998mb gton	
·	Dallas	Shreveport Jackson Montgome	ery Savannah	Hamilton
\sim	Austin	Mon Aug30 4AN	A 60mph Cat 0 990mb Tallahassee	
5	San Antonio Hou	ston New Orleans Sun Aug29 4PM	M 130mph Cat 4 938mb	
a /		Sun Aug29	7AM 150mph Cat 4 933mb	
	Laredo	Sat A	Tampa ug28 10PM 105mph Cat 2 964mb	
24	2/2	1 A	Freeport	
	Monterrey Matamoros	1 i i i i i i i i i i i i i i i i i i i	Miami	
125	22 F	-	- Sat Aug28 10AM 85mph Cat 1.984mb	
Me	xico			
Allan	Ling Tampico		La Fri ^c Aug27 10PM 80mph Cat 1 989mb	
275	an Luis Potosi Tampico		Cuba	
Guadalaja	ra El Ba	Mérida Cancun	Fri Aug27 10AM 65mph Cat 0 996mb	
Colima	Ciudad de México	Campeche	Caymen Is	
Collina	- ALA	140	Thu Aug26 10PM 40mph Cat 0 1006mb	-2.5
	1000	Belmonan	Jamaica	Sint Maa
	Acapulco Oaxaca	Tuxtla Gutiérrez	□— Thu Aug26 10AM 35mph Cat 0 1005mb	Antigua

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Potentially Affected Region IV Plants:

Waterford, River Bend, Grand Gulf

Intensifying Trend in Forecasts:

- Wednesday (8/25/21):
- Thursday:
- Friday:
- Saturday:
- Sunday AM:
- Actual Sunday PM Landfall:



CAT 1, 80 mph CAT 2, 100 mph CAT 3, 125 mph CAT 4, 130 mph CAT 4, 145 mph CAT 4, 150 mph





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- o 8/29 @ 0800 (SUN): WF3 commences reactor shutdown
- 8/29 @ 1031: WF3 is shutdown, main generator offline
- 8/29 @ 1155: Ida landfall @ Southeast Tip of LA, CAT 4, 150 mph



Waterford (WF3): Timeline of Events (CST)

• 8/28 @ 2200 (SAT): 1st Forecast of Hurricane Force Winds at WF3

 8/29 @ 1812: Ida reaches WF3, Loss of Offsite Power, NOUE* On-site diesels running properly, providing electricity

*NOUE = Notice of Unusual Event





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Waterford (WF3): Timeline of Events (CST) (Cont)

- o 8/29 @ 1849: WF3 officially notifies NRC of NOUE
- 8/29 @ 1912: NRC enters Activation Mode
- 8/29 @ 2300: Hurricane force winds subsided
- o 8/31 @ 2345 (TUES): WF3 exits NOUE after restoring offsite power
- o 9/1 @ 0937 (WED): NRC exits Activation Mode









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- The nuclear plant itself did not suffer any impacts to safety-related equipment.

• The impacts were limited primarily to structures that are not essential to plant operations, such as siding and insulation.

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• The photo to the upper right shows damage to the housing of the low-level rad waste building, which contains nonsafety-related equipment outside of the protected area.

• The photo to the lower right shows damage to the weir wall of the intake structure.

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• Outside of the protected area, there was significant damage to support and services buildings.

• The photos show damage associated with water intrusion and fallen ceiling tiles in the main support building, where the NRC resident inspectors work.

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 With respect to the plant's return to normal operation, the most impactful damage was to electrical power infrastructure.

 The photo shows downed power lines on a road heading into the plant.

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Questions for Panelist Discussion:

(1) <u>Differences</u>: What made this response different from a typical hurricane response?

(2) Surprises: What aspects of the experience most surprised you?

organizations?

(3) Insights: What insights gained from the response would be useful to other





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Audience Q&A

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