

# **Nuclear Regulatory Commission**

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## **Regulatory Conference**

### **Entergy Operations, Inc.**

### **Waterford Steam Electric Station,**

### **Unit 3**

USNRC Region IV

Friday, July 29, 2022

# Meeting Logistics

- Operation of WebEx and Bridge Line
- Please **MUTE** cellular phones
- Scheduled break (15-minute)
- NRC caucus (Team Meetings)
- Public Question Session
  - Question session between NRC and the public (at close of business portion of meeting; not discussion with the licensee)
  - How to ask questions? -Press \*1 on phone to “raise hand,” then await for the Moderator to acknowledge you

# MEETING AGENDA

Topic	Participants
NRC Opening Remarks and Introductions	John Monninger
Licensee Opening Remarks and Introductions	Entergy Operations (Entergy) / Waterford Steam Electric Station, Unit 3 (Waterford 3)
Regulatory Conference Process	Geoff Miller
Summary of the Issues, White Finding, Violations	Sean Hedger
Performance Deficiency and NRC's Dispositioning Process	Mark Haire
Possible Outcomes and Licensee Appeal Rights	Jeremy Groom
Licensee Presentation	Entergy / Waterford 3 Staff
Questions and Discussion	NRC and Licensee Participants
Break and NRC Caucus (via Teams Meeting)	NRC and Licensee Participants
Questions and Discussion	NRC and Licensee Participants
Licensee Closing Remarks	Entergy / Waterford 3 Staff
NRC Closing Remarks	John Monninger
Public Question and Answer Session	Public Attendees

PROTECTING PEOPLE AND THE ENVIRONMENT

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# NRC Principal Participants

Name	Title
John Monninger	RIV Deputy Administrator
Geoff Miller	RIV DRSS Deputy Director
Jeremy Groom	RIV ACES Team Leader
Mark Haire	DRSS/RCB Chief
Sean Hedger	DRSS/RCB Sr. EP Inspector

# Entergy Operations Inc.

## Opening Remarks / Introductions

Name	Title
Bill Maguire	Chief Operating Officer, Nuclear Operations
John Ferrick	Site Vice President
John Jarrell	Director, Regulatory & Performance Improvement
Stephenie Pyle	Director, Regulatory Compliance
John Giddens	Senior Manager, Fleet Regulatory Assurance
John Lewis	Regulatory Assurance Manager
Billy Steelman	Engineering Systems & Components Manager
Dean Burnett	Director, Emergency Planning
Stephen Smith	Operations Manager, Shift

# Purpose of Regulatory Conference

- The NRC normally provides an opportunity for a licensee to address apparent violations before the NRC takes escalated enforcement action, or makes a final decision on the significance.
- The primary purpose of a Regulatory Conference is to get information from the licensee on the significance of findings evaluated through the Significance Determination Process (SDP), and gain their perspective on the apparent violations.
- The significance assessment determines whether an escalated enforcement action will be considered (i.e., a Notice of Violation associated with a white, yellow, or red SDP finding). Licensee input during this conference is also considered in making a final decision.

# Today's Meeting

- No Final Decision on safety significance or enforcement action will be made today.
- Our NRC Inspection Report provided our *current* understanding and perspective on the issue.
- We Want **Your Perspective**
  - Any additional details NRC should consider
  - Whether findings/violations occurred
  - Perceived significance of the findings/violations
  - Corrective actions implemented and/or Planned Timeline

# Public Meeting Disclaimer

- The public is invited to observe the meeting and will have one or more opportunities to communicate with the NRC after the business portion, but before the meeting is adjourned.



# Summary of the Waterford 3 Wide Range Gas Monitor Issue

- The NRC became aware that the licensee identified calibration and maintenance issues with several of their wide range gas monitors (WRGMs) on January 18, 2022, based on review of entries in their correction action program. It was determined that incorrect calibration and engineering conversion factors for the condenser exhaust WRGM had been in place since January 1, 2011.
- The condenser exhaust WRGM was used by emergency preparedness for implementation of EALs, as well as currently for an input to radiological dose projection modeling software.
- The cumulative effects of the errors on emergency preparedness functions were evaluated for the condenser WRGM.
  - Errors would result in the radiation monitor reading roughly 70% higher than it should if it was reading correctly.
  - Effects - EALs up to and including a General Emergency being classified when not warranted by the emergency conditions. In addition, in the event that a radiological release occurs through the main condenser vent path, the dose projection process for radiological releases would be higher than they should by the same percentage. This does not appear to meet the requirement to provide for a technically adequate estimate of material releases or projected offsite doses.
- Time conditions existed: From January 1, 2011 to February 4, 2022
- With the available information, the NRC determined that the failure to maintain the correct function of the main condenser WRGM equipment was performance deficiency.

# Waterford 3

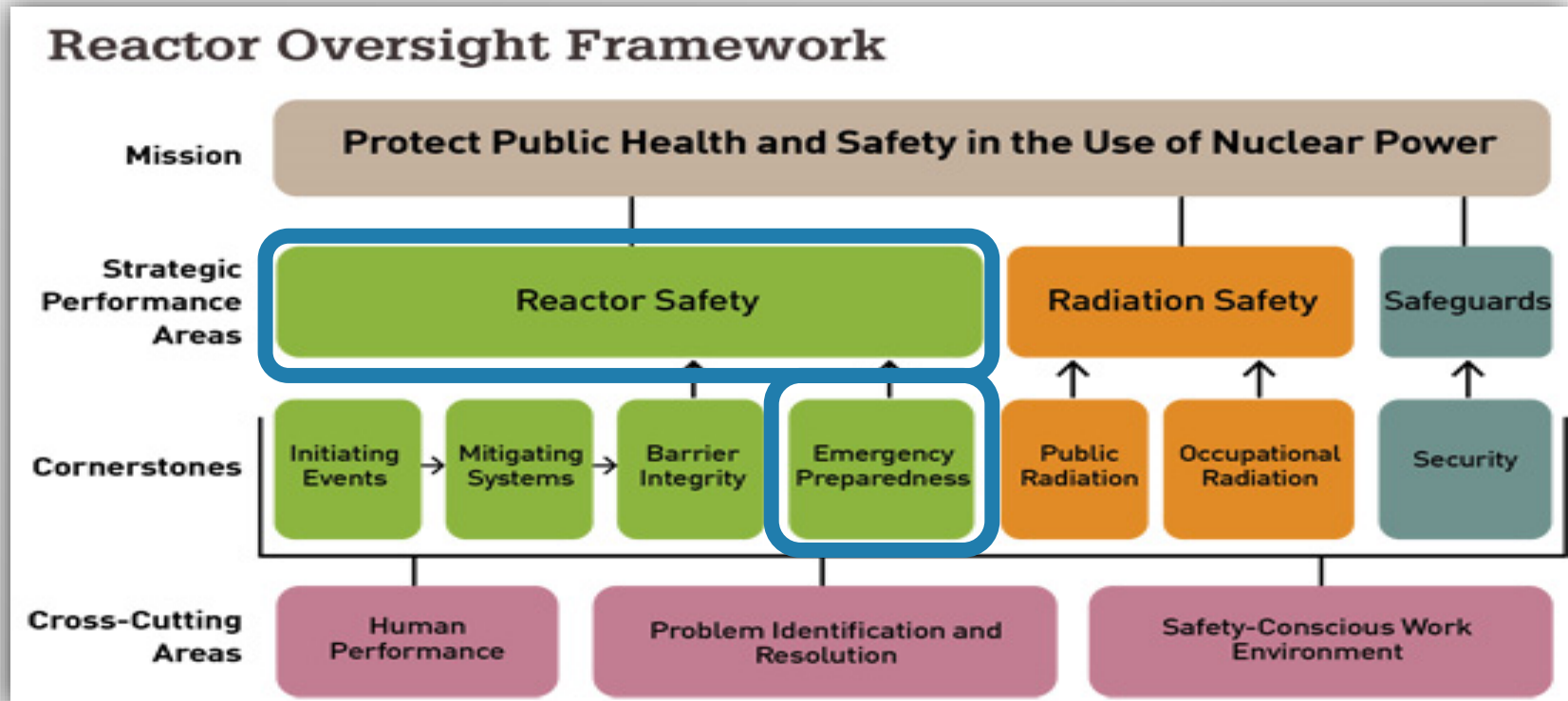
Failure to Maintain Accurate EAL  
Thresholds and Dose Assessment  
Methods

NRC issued a Choice Letter to Waterford 3  
on  
June 11, 2022  
(ML22159A275; EA-22-033)

## **Performance Deficiency**

- Per our understanding, the failure to maintain correct function of the condenser WRGM equipment was a performance deficiency. By not maintaining correct calibration and engineering conversion factors, it resulted in (a) not establishing and maintaining adequate EALs, and (b) the incapability, in some cases, of providing a technically adequate estimate of offsite doses using their dose assessment process. The effects adversely impacted the ability to classify a potential emergency condition associated with effluent releases accurately and in a timely manner, as well as the capability to accurately estimate offsite releases.

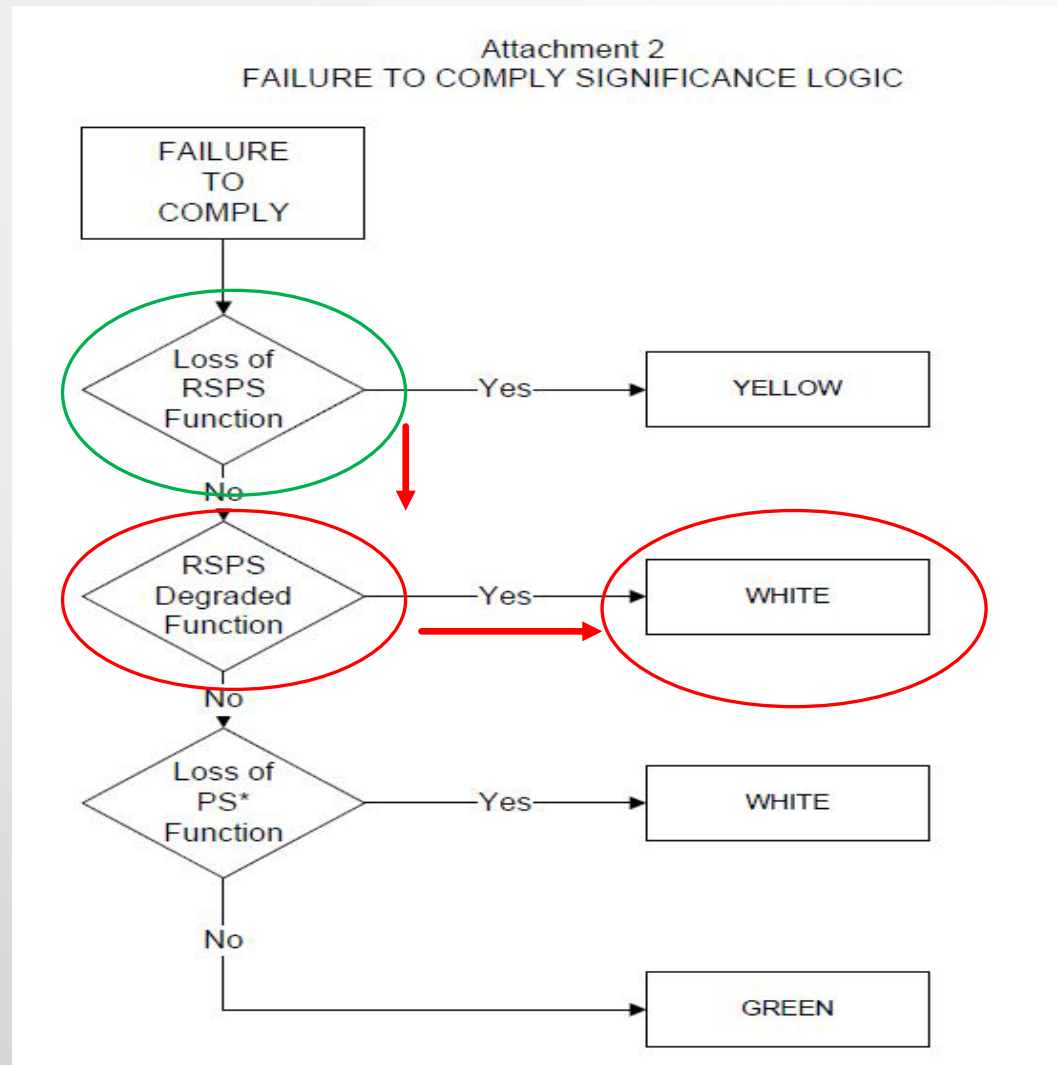
# Reactor Oversight Process: Significance Determination Process



## Inspection Findings



# IMC o609, Appendix B: Emergency Preparedness Significance Determination Process



# Significance Examples – Emergency Action Levels

PLANNING STANDARD FUNCTION(s)	LOSS of RSPS FUNCTION Yellow Finding	DEGRADED RSPS FUNCTION White Finding	Green Finding
<p>(b)(4) Continued</p> <p>A standard scheme of emergency classification and action levels is in use.</p>		<p>The EAL classification process* would result in an over classification that would lead to OROs implementing, by procedure (i.e., a non-discretionary action), unnecessary protective actions for the public. (In making this determination, consider only those public protective actions that would be triggered by an ORO receiving notification of a particular emergency classification (e.g., "when the plant reports this then do this"). This condition should also be considered met if the licensee would make a PAR to the OROs because of the overclassification.)</p> <p><i>*EAL classification process includes facility procedures; training; ERO staffing; system, instrumentation, or equipment; or other resources or capabilities necessary to complete a classification or declaration.</i></p>	<p>The EAL classification process* would result in an over-classification causing an unnecessary emergency declaration.</p> <p>Annual EAL review is not conducted with State and local governmental authorities.</p>

(b)(4)

Table 5.4-1 (Continued) – Significance Examples §50.47(b)(4)



# Significance Examples – Dose Assessment Examples

PLANNING STANDARD FUNCTION(s)	LOSS of RSPS FUNCTION Yellow Finding	DEGRADED RSPS FUNCTION White Finding	Green Finding
<p>(b)(9)</p> <p>Methods, systems, and equipment for assessment of radioactive releases are in use.</p>	<p>The dose projection process is incapable* of providing technically adequate estimates of radioactive material releases to the environment or projected offsite doses in any case.</p> <p>Equipment or systems necessary for dose projection are not functional for longer than 24 hours from the TIME OF DISCOVERY, to the extent that the licensee has no capability for immediate dose projection.</p>	<p>The field monitoring function (at least dose rate measurement and iodine presence determination) is unavailable for more than 72 hours from the TIME OF DISCOVERY and no COMPENSATORY MEASURES were implemented**.</p> <p>The dose projection process is incapable* of providing technically adequate estimates of radioactive material releases to the environment or projected offsite doses in some cases.</p> <p>Equipment or systems necessary for dose projection are not functional for longer than 24 hours from the TIME OF DISCOVERY, to the extent that the licensee has no capability for immediate dose projection in facility emergency response centers as committed to in the E-plan.</p> <p><i>*Because of a systematic deficiency in input data, calculational methodology and assumptions, user procedures, user training, etc. Systematic deficiencies do not include normal uncertainties inherent to the dose assessment process or end user errors.</i></p> <p><i>**In the event of major disruptive events (e.g., hurricane, fire, explosion, loss of power) or planned outage, COMPENSATORY MEASURES are acceptable while repair activities proceed with high priority.</i></p>	<p>The field monitoring function in accordance with the E-plan is unavailable for more than 72 hours from the TIME OF DISCOVERY, and no COMPENSATORY MEASURES were implemented**.</p> <p>The dose projection process is incapable* of providing technically adequate estimates of radioactive material releases to the environment or projected offsite doses beyond 10 miles but less than 50 miles</p> <p>Equipment or systems necessary for dose projection are not functional for longer than 24 hours from the TIME OF DISCOVERY and no COMPENSATORY MEASURES were implemented or corrective actions are inadequate or delayed.</p>

(b)(9)

Table 5.9-1 – Significance Examples §50.47(b)(9)

# Apparent Violation

- 10 CFR 50.54(q)(2) requires, in part, that a holder of a license under 10 CFR Part 50 shall follow and maintain the effectiveness of an emergency plan that meets the requirements in 10 CFR Part 50, Appendix E, and the planning standards of 10 CFR 50.47(b).
- 10 CFR 50.47(b)(4) requires, in part, that a standard emergency classification and action level scheme is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.
- 10 CFR 50.47(b)(9) requires, in part, that adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.
- Contrary to the above, from January 1, 2011, to February 4, 2022, the licensee failed to follow and maintain the effectiveness of an emergency plan which met the requirements in 10 CFR Part 50 Appendix E and the planning standards of 10 CFR 50.47(b). Specifically, the licensee failed to maintain a standard emergency classification scheme as required by 10 CFR 50.47(b)(4) because PRM-IRE-0002 had errors in its output that could result in an over-classification up to a General Emergency, resulting in unnecessary public protective actions. Also, the licensee failed to use adequate methods, systems, and equipment for assessing and monitoring actual and potential offsite consequences of a radiological emergency as required by 10 CFR 50.47(b)(9), because those same errors would result in inaccurate dose assessments for a radiological release through the main condenser exhaust path.



# Possible Outcomes

- The NRC determines there is no violation resulting in no enforcement action.
- The NRC determines the apparent violations are of very low safety significance resulting in non-escalated enforcement (Green Non-Cited Violation).
- The NRC determines the apparent violations are of low to moderate safety significance resulting in escalated enforcement (a White Finding and an associated Notice of Violation).

# Licensee's Appeal Rights

- A licensee has the right to challenge any NRC determination/action that may be presented.
- Instructions for challenging a NRC enforcement action are included in our transmittal letter and the action itself.



# **Entergy Operations/Waterford 3 Presentation Agenda (Insert When Provided)**

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# **NRC and Entergy/Waterford 3 Staff Q&A Session**



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# **NRC Regulatory Conference with Entergy Operation's Waterford 3**



***NRC Caucus in Session***  
**... Returning Shortly**

# Conference Closing Remarks

- Entergy / Waterford 3's Closing Remarks
- NRC's Closing Remarks
  - Next Steps / Expectations
- Conclusion of the business portion of today's Regulatory Conference
- The platform is now **OPEN** to questions from our public attendees ... PLEASE press \*1 on your phone and await the Moderator to announce you.

# **Any Questions from the Public Attendees?**

**(Please press \*1 on your phone to identify  
yourself and await the Moderator)**



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