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Waterford 3

W3F1-2013-0050

August 28, 2013

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

SUBJECT: First Six Month Status Report for Implementation of Order EA-12-049,
Commission Order Modifying License With Regard To Requirements for
Mitigation Strategies for Beyond-Design-Basis External Events
Waterford Steam Electric Station, Unit 3 (Waterford 3)
Docket No. 50-382
License No. NPF-38

References:

1. NRC Order Number EA-12-049, "Order to Modify Licenses With Regard To Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012 (ADAMS Accession No. ML12054A736)
2. Waterford Steam Electric Station, Unit 3 letter to NRC, "Overall Integrated Plan in Response to March 12, 2012, Commission Order to Modify Licenses With Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated February 28, 2013 (ADAMS Accession No. ML13063A266)

Dear Sir or Madam:

On March 12, 2012, the NRC issued an order (Reference 1) to Entergy Operations, Inc. (Entergy). Reference 1 was immediately effective and required Waterford Steam Electric Station, Unit 3 (Waterford 3), to develop mitigating strategy provisions for beyond-design-basis external events. In response, Waterford 3 developed and submitted an Overall Integrated Plan (Reference 2) which specified periodic updates during the implementation of the plan.

The purpose of this letter is to provide, as an attachment, the first six month status report for the implementation of Order EA-12-049 with regard to the requirements for mitigation strategies for beyond-design-basis external events for Waterford 3.

There are no new commitments identified in this submittal. Should you have any questions concerning the content of this letter, please contact Bryan Pellegrin, Licensing Manager (acting), at (504) 739-6203.

I declare under penalty of perjury that the foregoing is true and correct. Executed on August 28, 2013.

Sincerely,



DJ/WH

Attachment: Waterford Steam Electric Station, Unit 3, First Six Month Status Report for the Implementation of Order EA-12-049, Order Modifying Licenses with Regard to the Requirements for Mitigation Strategies for Beyond-Design-Basis External Events

cc: Attn: Director, Office of Nuclear Reactor Regulation
U. S. NRC
RidsNrrMailCenter@nrc.gov

Mr. Steven Reynolds, Regional Administrator (acting)
U. S. NRC, Region IV
RidsRgn4MailCenter@nrc.gov

NRC Project Manager for Waterford 3
Kaly.Kalyanam@nrc.gov

NRC Senior Resident Inspector for Waterford 3
Marlone.Davis@nrc.gov

Attachment

W3F1-2013-0050

**Waterford Steam Electric Station, Unit 3,
First Six Month Status Report for the Implementation of Order EA-12-049,
Order Modifying Licenses with Regard to the Requirements for
Mitigation Strategies for Beyond-Design-Basis External Events**

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Mitigation Strategies for Beyond-Design-Basis External Events**

1 Introduction

Waterford Steam Electric Station, Unit 3 (Waterford 3), developed an Overall Integrated Plan (Reference 1 in Section 8) documenting the diverse and flexible strategies (FLEX) in response to Reference 2. This attachment provides a planned update of milestone accomplishments since submittal of the Overall Integrated Plan, including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

2 Milestone Accomplishments

The following milestone(s) have been completed since the development of the Overall Integrated Plan (Reference 1), and are current as of July 30, 2013.

None.

3 Milestone Schedule Status

The following provides an update to the milestone schedule to support the Overall Integrated Plan (Reference 1). This section provides the activity status of each item, and whether the expected completion date has changed. The dates are planning dates subject to change as design and implementation details are developed.

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Submit Overall Integrated Plan	Feb 2013	Complete	N/A
Submit 6 Month Updates:			
Update 1	Aug 2013	Complete	N/A
Update 2	Feb 2014	Not Started	No Change
Update 3	Aug 2014	Not Started	No Change
Update 4	Feb 2015	Not Started	No Change
Update 5	Aug 2015	Not Started	No Change
Perform Staffing Analysis	Nov 2015	Not Started	No Change

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Modifications:			
Engineering and Implementation			
N-1 Walkdowns	May 2014	Not Started	No Change
Design Engineering	Oct 2014	Not Started	No Change
Implementation Outage	Nov 2015	Not Started	No Change
On-site FLEX Equipment			
Purchase	Dec 2014	Not Started	No Change
Procure	Sept 2015	Not Started	No Change
Off-site FLEX Equipment			
Develop Strategies with RRC	Dec 2013	Not Started	No Change
Install Off-Site Delivery Station (if Necessary)	Nov 2015	Not Started	No Change
Procedures			
Create Waterford FSGs	Nov 2015	Not Started	No Change
Create Maintenance Procedures	Nov 2015	Not Started	No Change
Training			
Develop Training Plan	May 2015	Not Started	No Change
Implement Training	Nov 2015	Not Started	No Change
Submit Completion Report	Nov 2015	Not Started	Feb 2016*

* This date corresponds to the last 6 month update and provides time to compile the report following the completion of the Fall 2015 Implementation Outage.

4 Changes to Compliance Method

There are no changes to the compliance method as documented in the Overall Integrated Plan (Reference 1).

5 Need for Relief/Relaxation and Basis for the Relief/Relaxation

Waterford 3 expects to comply with the order implementation date and no relief/relaxation is required at this time.

6 Open Items from Overall Integrated Plan and Draft Safety Evaluation

Overall Integrated Plan Open Item	Status
<p>OI1. The suction path from the TDEFWP to the WCTs would be through a non-running ACCWS pump post-ELAP. It is expected that both the TDEFWP and the currently sized EFW FLEX pump (primary strategy) will have sufficient capability and/or NPSH to do so. However, this will need to be confirmed more fully as the detailed design of the primary strategy for maintaining core cooling and heat removal evolves (with SGs available).</p>	Not Started
<p>OI2. An analysis will be needed to demonstrate that containment pressure and temperature will stay at acceptable levels throughout the ELAP event and that no containment spray system will be required as part of FLEX.</p>	Not Started
<p>OI3. At this stage of the conceptual design, the chemistry effects of alternate cooling source (ACS) use on secondary wetted components are unknown.</p>	Not Started
<p>OI4. It is currently unclear if and how long gravity feed from the RWSP can be maintained during Modes 5 and 6 in Phase 1. If this time is sufficiently short, Waterford 3 may choose to pre-stage requisite FLEX equipment in Modes 5 and 6.</p>	Not Started
<p>OI5. It is expected that only the component cooling water system and dry cooling towers will need to be made operational to reject the heat load generated post-ELAP in Phase 3. However, this must be investigated more fully to confirm such. Notably, only 60% of the dry cooling tower fan motors are currently missile protected and none of the wet cooling tower (WCT) fan motors are missile protected. If more than 60% of dry cooling tower (DCT) capacity is needed to support Phase 3, DCT and/or WCT fan motors may need to be missile protected. Currently available information follows:</p> <p>The DCT one train heat removal in an accident would be 113.38 Mbtu/hr (Reference 50, Pg 18). Given that 60% of the DCT is missile protected, its assumed that that 40% of the heat removal capability is lost. 38 hours after shutdown, decay heat is less than 68 Mbtu/hr (ANS 79 decay heat curve) and less than the heat removal capacity of the DCTs. As the event proceeds, the required heat removal will decrease. Until this point in the event, Phase 1 and 2 FLEX strategies will be capable of removing decay heat. Final system operating details for the CCW and DCT (i.e., number of pumps and fans to operate) still need to be determined.</p>	Not Started

7 Potential Draft Safety Evaluation Impacts

The NRC has not yet issued draft safety evaluations for Waterford 3; therefore, there are no potential impacts to the Draft Safety Evaluation identified at this time.

8 References

The following references support the updates to the Overall Integrated Plan described in this Attachment.

1. Waterford Steam Electric Station, Unit 3 letter to NRC, "Overall Integrated Plan in Response to March 12, 2012, Commission Order to Modify Licenses With Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated February 28, 2013 (ADAMS Accession No. ML13063A266)
2. NRC Order Number EA-12-049, "Order to Modify Licenses With Regard To Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012 (ADAMS Accession No. ML12054A736).