



REGIS T. REPKO
Vice President
McGuire Nuclear Station

Duke Energy
MG01VP / 12700 Hagers Ferry Rd.
Huntersville, NC 28078

980-875-4111
980-875-4809 fax
regis.repko@duke-energy.com

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U.S. Nuclear Regulatory Commission
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Subject: Duke Energy Carolinas, LLC
McGuire Nuclear Station, Units 1 and 2
Docket Nos. 50-369 and 50-370

Supplemental Response to Request for Additional Information regarding a revision to Commitment in response to Notice of Violation EA-08-220 (NRC Inspection Report Nos. 05000369/2008009 and 05000370/2008009)

By letter dated December 7, 2009, McGuire responded to an NRC request for additional information dated November 6, 2009.

Enclosure 1 of the December 7, 2009 submittal addressed the request for information regarding compensatory and other measures in place to assure operability of the Nuclear Service Water System (NSWS) in case of a macro-fouling condition and provided justification for why those measures were deemed adequate. Enclosure 2 provided a discussion of the schedule of activities to be completed and why these measures represented the first available opportunity to restore compliance.

Please find attached a supplemental response to modification 2 - Pipe from Strainer Backwash to Groundwater Drainage System (WZ) Sump and modification 3 - Backwash pump discharging to the RN system Return Header as documented in Enclosure 2 of the December 7, 2009 submittal.

This submittal contains no new regulatory commitments.

Please direct any questions you may have in this matter to Kay L. Crane at (980) 875-4306.


Regis T. Repko

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July 28, 2011
Nuclear Regulatory Commission
Page 2

V. M. McCree
Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
Marquis One Tower
245 Peachtree Center Ave., NE, Suite 1200
Atlanta, GA 30303-1257

John Zeiler
NRC Senior Resident Inspector
McGuire Nuclear Station

J. H. Thompson, Project Manager
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Mail Stop O-8 G9A
Rockville, MD 20852-2738

Enclosure 2 of the December 7, 2009 letter stated in part:

“To address the operable but degraded non conforming condition McGuire is in the process of developing three modifications for the Nuclear Service Water System (NSWS). The three modifications are described as follows:

- The first modification includes the addition of an assured air source to the backwash inlet valves to allow the NSWS Strainers to automatically back wash for at least 8 hours into a loss of Instrument air (VI) event. This will remove the time critical operator actions required to operate the back wash supply inlet valve during the potential loss of VI event.
- The second modification re-routes the backwash return piping to provide a less restrictive flow path for backwash return to the Ground Water (WZ) sump via manual operator actions.
- The third modification installs a new Nuclear Safety Related back wash discharge pump to the NSWS Return Header for each train of the NSWS. This phase ensures there will be no depletion of the SNSWP by routing the discharge back to the backwash source of water.”

1- Assured Air to Strainer Backwash Inlet AOV completion in August 2010

These modifications have been fully implemented.

2 - Pipe from Strainer Backwash to WZ Sump completion in July 2011

Enclosure 2 of the December 7, 2009 letter stated in part:

“The scope of this Engineering Change includes flow modeling (to validate debris transport), piping support/stress analysis and design/fabrication of a basket to capture debris from the strainer backwash outlet.”

The following status/change is provided:

The portion of the modification to generate a flow model, perform piping support/stress analysis, and re-route the discharge piping to the groundwater sump has been completed on all four trains of the NSWS. Operational control of this flow path for all four trains has been accepted by Operations.

The portion of the modification related to the design/fabrication of a basket to capture debris from the strainer backwash outlet has not been completed. The design and fabrication of the basket will be completed within the final phase (Modification #3) of the Backwash Discharge Pump installation which is scheduled for completion by December, 2012.

3 - Backwash pump discharging to the RN System Return Header completion in December 2012

Enclosure 2 of the December 7, 2009 letter included the following as part of the scope of the third modification:

“Delete the NSWWS backwash return Air Operated Valve (1/2RN-22A, -26B) and inappropriate backwash to WZ Sump piping, while maintaining the flow path for mimicking NSWWS to the auxiliary feed water system flow for NSWWS flow balance. Delete Safety Injection signal to these valves. Also, remove the air operators and install manual hand wheels for 1/2RN-23/27.”

During final design development the following changes were identified:

- Removing the air operators and installing manual hand wheels for 1/2RN 23/27 is not required. By removing 1/2 RN-22A, -26B, the flow path from the Condenser Circulating Water (RC) discharge to the NSWWS strainers will no longer exist. Therefore modification of the air operators on 1/2RN 23/27 is no longer required for returning the strainer operation to its current licensing basis requirements.
- An interaction was identified between the 1A and 2A NSWWS backwash pump discharge flow path and the Standby Shutdown Facility (SSF) make-up to the Auxiliary Feedwater (CA) pump. For all plant conditions except for a Unit 1 Appendix R fire while operating from the SSF, the backwash discharge pump will discharge to the NSWWS return header. For this unique Unit 1 Appendix R event, the train 1A and 2A backwash discharge pumps will return to the RC discharge header. The flow path to the RC discharge header can potentially result in SNSWP depletion during the 72 hour Appendix R event. A preliminary assessment concluded the possible SNWSP impact is acceptable.