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August 13, 2009

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Subject: Duke Energy Carolinas, LLC (Duke)
Catawba Nuclear Station, Units 1 and 2
Docket Numbers 50-413 and 50-414
Technical Specifications (TS) and/or Bases Sections:
3.3.2, Engineered Safety Feature Actuation System
(ESFAS) Instrumentation
3.3.3, Post Accident Monitoring (PAM) Instrumentation
3.5.4, Refueling Water Storage Tank (RWST)
3.6.6, Containment Spray System
License Amendment Request for Emergency Core Cooling
System (ECCS) Water Management Initiative

References: Letters from Duke to NRC, same subject, dated
September 2, 2008, June 18, 2009, and July 8, 2009

The September 2, 2008 reference letter requested a license amendment pursuant to 10 CFR 50.90 to revise the Unit 1 and Unit 2 TS and associated Bases to allow manual operation of the Containment Spray System and to revise the upper and lower limits on the RWST. The June 18, 2009 and July 8, 2009 reference letters responded to two sets of Requests for Additional Information (RAIs) and supplemented the September 2, 2008 original submittal.

On July 9, 2009, the NRC electronically transmitted additional RAIs. The purpose of this letter is to formally respond to these RAIs.

The attachment to this letter contains our RAI response. The format of the response is to restate each RAI question, followed by our response.

There are no regulatory commitments contained in this letter or its attachment.

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NRK

U.S. Nuclear Regulatory Commission

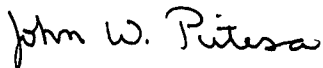
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Pursuant to 10 CFR 50.91, a copy of this letter and its attachment is being sent to the designated official of the State of South Carolina.

If you have any questions or require additional information, please contact L.J. Rudy at (803) 701-3084.

Very truly yours,

A handwritten signature in cursive script that reads "John W. Pitesa".

John W. Pitesa

LJR/s

Attachment

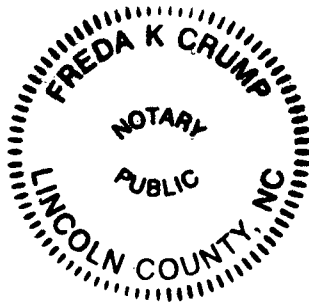
John W. Pitesa affirms that he is the person who subscribed his name to the foregoing statement, and that all the matters and facts set forth herein are true and correct to the best of his knowledge.

John W. Pitesa
John W. Pitesa, Vice President

Subscribed and sworn to me: August 13, 2009
Date

Freda K. Crump
Notary Public

My commission expires: August 17, 2011
Date



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xc (with attachment):

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Division of Waste Management
South Carolina Department of Health and Environmental Control
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Attachment

Response to NRC Request for Additional Information

On July 9, 2009, a conference call was held between NRC and Duke representatives concerning the ECCS Water Management LAR submittal. Following the call, the NRC electronically transmitted the following RAIs:

1. Provide the discussion on how the licensee is meeting the guidance provided in RIS 2006-17 in meeting the instrument setpoint calculation. Provide the calculated value of as left tolerance band and provide the calculated values for allowable value, NTSP, TLU, AL, AFT, and ALT in terms of percentage of level as well as in inches.

Duke Response:

The summary calculation provided to the NRC in Duke's June 18, 2009 response to the following RAI describes how Catawba is meeting the guidance provided by RIS 2006-17:

"In LAR Attachment 1, Page 6, second paragraph, the last sentence states that the calculation of the RWST low level setpoint is based on the current setpoint methodology. However, no setpoint calculation was provided. Provide the summary calculation for RWST low level setpoint, RWST low-low level setpoint, and RWST minimum water volume available. This summary calculation should include the setpoint, allowable value, acceptable as found and as left values, and the analytical and/or design limit for these setpoint."

The parameters which are used to derive the As-Found and As-Left Tolerance were noted in the June 18, 2009 letter, Attachment 1, pages 18 and 19. The As-Found and As-Left Tolerances will be applied around the Nominal Trip Setpoint (e.g., As-Found Tolerance will be 95 inches +/- 2.49 inches).

As requested, please refer to the table below for the calculated values for Allowable Value, Nominal Trip Setpoint, Total Loop Uncertainty, Analytical Limit, As-Found Tolerance, and As-Left Tolerance. Note, the Total Loop Uncertainty stated below is for normal conditions alone and does not include seismic effects. The value is also different from the value stated in the summary calculation provided for the RAI described above due to a typographical error while composing that summary calculation.

Parameter	Inches	Percent Span
RWST Low Level Setpoint	95 inches	19.63%
RWST Low Level Allowable Value	91.9 inches	18.99%
RWST Low Level Analytical Limit	74.03 inches	15.30%
RWST Level Total Loop Uncertainty	8.51 inches (original RAI response indicated 8.2 inches)	1.76%
RWST Low Level As-Found Tolerance	+/- 2.49 inches	+/- 0.515%
RWST Low Level As-Left Tolerance	*	*

* Current calibration setting tolerance is more conservative than calculated As-Left Tolerance (ALT) and will be used instead. Calculated ALT is +/- 1.77 inches (+/- 0.365% span) and the ALT defined in the procedure will be less than or equal to the calculated ALT.

2. Provide how the operability and accuracy of narrow band level transmitter is assured as this instrument is used as a basis for justifying the manual operation of containment spray pump. Discuss how instrument surveillance will determine the accuracy of the instrument and provide the basis for surveillance interval. Also discuss the steps taken when this instrument is inoperable and justify these steps.

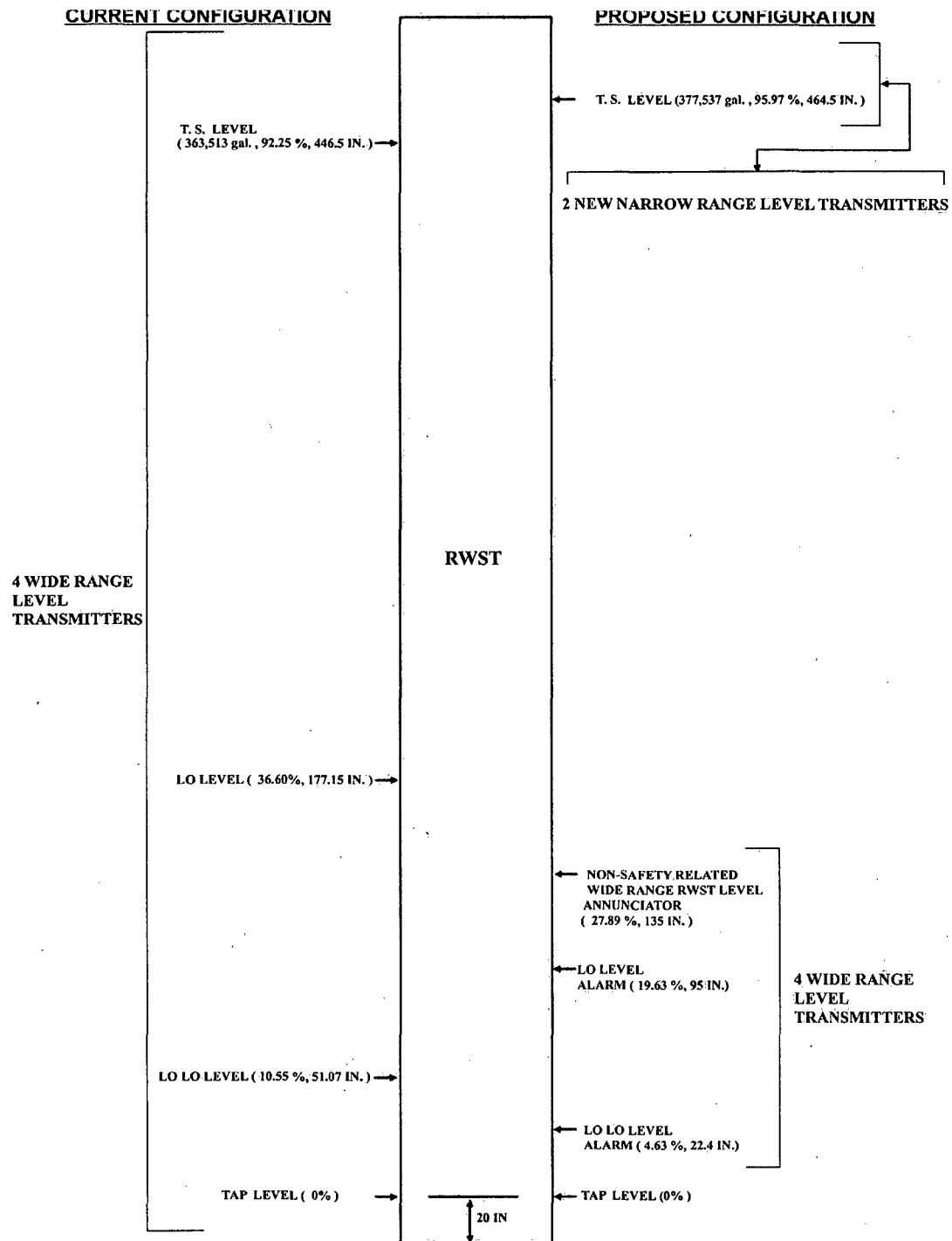
Duke Response:

The new narrow range RWST level instruments are not used as the basis for justifying manual operation of the containment spray pumps. Instead, they are used as the basis for increasing the minimum RWST inventory required by TS Surveillance Requirement (SR) 3.5.4.2. An increase in RWST volume without the new narrow range level instruments is not feasible due to the high uncertainty associated with the existing wide range level instruments. The new narrow range RWST level instruments' only function is to perform verification of RWST volume per TS requirements once per 7 days (i.e., no manual or automatic accident mitigation actions are initiated from this instrumentation). The purpose of this SR is to confirm that initial conditions assumed in the safety analysis calculations are met by maintaining a minimum amount of RWST inventory.

The new narrow range RWST level instruments are designated to fall within the scope of Catawba Site Directive 2.3.2, "Control of Process Instrumentation Used as Test and Measurement Equipment". This directive specifies the manner by which process instrumentation that is used to satisfy acceptance criteria on regulatory-required tests will be controlled. Such controls will ensure that required accuracies are periodically checked and adjustments are made. The directive also specifies the manner by which out-of-tolerance information will be distributed, controlled, and evaluated.

In addition, having two completely independent instrument loops provides additional assurance of the instrument accuracy and availability. In the event that one instrument fails, or is out of service, the second instrument can be used to meet the SR. In the unlikely event that both instruments are out of service, local measurements can be obtained to satisfy the SR. This is justifiable, since no automatic or manual actions are initiated from the narrow range instruments and the frequency of the SR is every 7 days (i.e., continuous monitoring of RWST level is not required).

3. In addition to these two questions, Duke indicated that a figure provided in the June 18, 2009 RAI response would be revised to show values in both inches and percent. The revised figure follows.



NOTE: ADDITIONAL ALARMS ARE PROVIDED TO ENSURE THE T.S. LEVEL IS MAINTAINED