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Waterford 3

10 CFR 26.719

W3F1-2010-0038

April 29, 2010

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Subject: Blind Sample Supplemental Investigation Report
Waterford Steam Electric Station, Unit 3 (Waterford 3)
Docket No. 50-382
License No. NPF-38

Reference: Entergy letter dated March 15, 2010, "Blind Sample Investigation Report" (W3F1-2010-0024), ADAMS Accession Number ML100750561.

Dear Sir or Madam:

On March 15, 2010, Waterford 3 submitted a Blind Sample Investigation Report (W3F1-2010-0024) associated with unexpected blind sample results in accordance with the 30 day reporting requirement of 10 CFR 26.719(c)(1). The report concluded that the exact cause of the discrepancy could not be determined at that time. Entergy committed to performing a supplemental investigation to determine if the exact cause could be determined and provide a follow-up report documenting the results of the supplemental investigation by April 30, 2010. Entergy is herein submitting the results of the follow-up supplemental investigation.

On December 29, 2009, a discrepancy in blind sample validity results was identified, in that some of the PCP related blind sample results were returned unexpectedly as invalid. The cause was associated with gas chromatography/mass spectrometry (GC/MS) interference while testing samples with PCP. After several investigation efforts could not identify and correct the specific cause, the Waterford 3 primary laboratory (Quest) cooperated with Entergy and agreed to continue with a follow-up investigation.

Waterford 3 received the result of the investigation from the primary confirmatory laboratory. The investigation revealed that they were able to identify and separate the interfering substance in the blind samples which were received from the vendor. To eliminate the interference of the substance, the confirmatory laboratory developed and tested a new procedure which was incorporated into their standard operating procedure which was put into place on April 12, 2010.

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Waterford 3 purchased PCP blind samples again from the same vendor as before and submitted to the primary confirmatory laboratory for testing. As of April 29, 2010, the primary laboratory identified presence of interfering substance in the samples (2) and yet the new procedure separated the PCP so that the analysis was completed successfully and both specimens reported as positive.

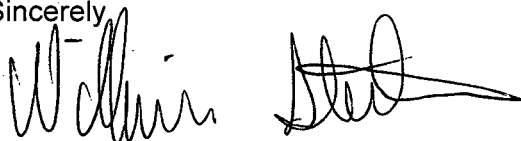
The laboratory company's director of standards stated that all Quest laboratories will begin their validation of this new procedure. The new procedure is expected to be in use within 30 days by all Quest labs, including Waterford 3's secondary confirmatory laboratory.

Any further sample errors, associated with this reported condition or otherwise, will be subject to the 10 CFR 26.719 reporting requirements.

There are no new commitments contained in this submittal.

If you have any questions or require additional information, please contact William Steelman, acting Licensing Manager at (504) 739-6685.

Sincerely

Two handwritten signatures are present. The first signature is written in cursive and appears to be 'William Steelman'. The second signature is also in cursive and is more stylized, possibly belonging to another official.

WJS/JDW

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