

April 27, 2018

Eric Loucks, General Manager
National Technical Systems
7800 HWY 20 West
Huntsville, AL 35806

SUBJECT: CLOSURE OF ITAAC-RELATED FINDINGS FOR
NATIONAL TECHNICAL SYSTEMS INSPECTION
REPORT NOs.99900905/2015-201 AND 99900905/2015-202

Dear Mr. Loucks:

On December 15-17, 2014, February 11, 2015, and May 11-14, 2015, the U.S. Nuclear Regulatory Commission (NRC) staff completed inspections at the National Technical Systems (here after referred to as NTS) facility in Huntsville, AL. The purpose of these technically-focused, limited-scope routine inspections was to evaluate NTS's implementation of quality activities associated with the qualification testing of the 8-inch high pressure and low pressure squib valves of the passive core cooling system for the Westinghouse Electric Company's AP1000 reactor design for the Vogtle Electric Generating Plant, Units 3 and 4, currently under construction.

The vendor inspection activities are documented in inspection report (IR) No. 99900905/2015-201, dated March 26, 2015 (Agencywide Document Access and Management System (ADAMS) Accession No. ML15078A3379) and IR No. 99900905/2015-202, dated June 25, 2015 (ADAMS Accession No. ML15152A080) respectively.

Based on the NRC staff review of the inspection findings, the staff identified that Notice of Nonconformance (NON) 99900905/2015-201-01 documented in IR No. 99900905/2015-201, and NON 99900905/2015-202-01 documented in IR No. 99900905/2015-202 were material to the acceptance criteria of inspections, tests, analyses, and acceptance criteria (ITAAC) No. 2.2.03.12a.i (214), from Revision 19 of the certified AP1000 Design Control Document. To close out NON 99900905/2015-201-01 and NON 99900905/2015-202-01, the staff has performed a review of NTS's corrective actions taken to verify the adequacy and effectiveness of corrective actions, the results of which are documented below.

Corrective Actions associated with NON 99900905/2015-201-01

NON 99900905/2015-201-01, documents a finding against Criterion III, "Design Control," and Criterion V, "Instructions, Procedures, and Drawings," of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Processing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," for NTS's failure to take sufficient measures to validate the accuracy of the commercial vendor's irradiation system as applied to the squib valve cartridges sent for irradiation to a commercial facility by NTS. Also, NTS in its procedure NEQ 409, "The Wyle

Third-Party Dedication Process,” failed to provide sufficient guidance on the dedication of commercial-grade services.

In a letter dated April 14, 2015 (ADAMS Accession No. ML15113A338), NTS, in their corrective actions to address the issues identified in NON 99900905/2015-201-01, stated that they issued NTPQ-001, a third-party qualification dedication plan for commercial-grade services that is based on EPRI-5652 and TR-102260 guidance and scheduled a commercial-grade survey of White Sands, a commercial facility, to verify proper implementation of ASTM E668-10 for radiation compliance. Further, NTS stated that they would collect samples of Thermoluminescent dosimeters (TLDs) during the commercial-grade survey and subject the TLD samples to material testing to verify compliance with ASTM E668-10 specification.

The NRC staff reviewed NTS’s corrective actions taken to address the issues identified in NON 99900905/2015-201-01. Based on this review, the NRC staff determined the corrective actions taken by NTS are adequate to address the identified nonconformance. NON 99900905/2015-201-01 is closed and no additional inspection follow-up is required to verify completion/adequacy of the corrective actions.

Corrective Action Associated with NON 99900905/2015-202-01

NON 99900905/2015-202-01, documents a findings against Criterion XI, “Test Control,” and Criterion V, “Instructions, Procedures, and Drawings,” of Appendix B to 10 CFR Part 50 for NTS’s failure to establish a procedure in its test program for verifying that the data acquisition system (DAS) functioned as designed. NTS performed both pre-and post-test verification and validation of the DAS to verify that the DAS software was accurately calculating and reporting those temperature and pressure values that would be used to determine the qualification of the safety-related AP1000 8-inch low pressure squib valves. However, NTS activities to validate the proper function of the DAS, a testing activity affecting quality, were not performed in accordance with written procedures containing the requirements and acceptance limits of the design documents to assure that all prerequisites for the given test had been met.

In a letter dated July 27, 2015 (ADAMS Accession No. ML15229A302), NTS, in their corrective actions to address the issues identified in NON 99900905/2015-202-01, stated that they would develop a formal written procedure with data sheets for the performance of the routine pre-test and post-test verification check (spanning) of the testing equipment and retrain appropriate personnel on the specific Criterion XI, “Test Control,” and Criterion V, “Instructions, Procedures, and Drawings,” of Appendix B to 10 CFR Part 50, to ensure future processes are properly documented no later than August 31, 2015.

The NRC staff reviewed NTS’s corrective actions taken to address the issue identified in NON 99900905/2015-202-01. Based on review, the NRC staff has determined the corrective actions taken by NTS are adequate to address the identified nonconformance. NON 99900905/2015-202-01 is closed and no additional inspection follow-up is required to verify completion/adequacy of the corrective actions.

E. Loucks

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Sincerely,

Kerri. A. Kavanagh, Branch Chief **/RA/**
Quality Assurance Vendor Inspection Branch-2
Division of Construction Inspection
and Operational Programs

Enclosure:
Summary of NRC Inspection of
National Technical Systems Affecting ITAAC

SUBJECT: CLOSURE OF ITAAC RELATED-FINDING FOR NATIONAL TECHNICAL
SYSTEMS INSPECTION REPORT NOs. 99900905/2015-201
AND 99900905/2015-202 Dated: April 27, 2018

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**Summary of NRC Inspection of National Technical Systems
Affecting ITAAC**

1. AFFECTED INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA

The U.S. Nuclear Regulatory Commission (NRC) inspectors identified the following inspections, tests, analyses, and acceptance criteria (ITAAC) related to components being tested by National Technical Systems (here after referred to as NTS) Huntsville facility. For the ITAAC listed below, the NRC staff reviewed NTS's corrective actions in response to Notice of Nonconformance (NON) 99900905/2015-201-01 and NON 99900905/2015-202-01. The ITAAC's design commitments referenced below are for future use by the NRC staff during the ITAAC closure process; the listing of these ITAAC design commitments does not constitute that they have been met and/or are closed. The NRC staff did identified two findings associated with the ITAAC identified below.

Source Document	ITAAC Index No.	ITAAC	Acceptance Criteria
Appendix C from the Combined License for Vogtle Units 3 and 4 and V.C. Summer Units 2 and 3	No. 214	2.2.03.12a.i	i) A test report exists and concludes that each squib valve changes position as indicated in Table 2.2.3-1 under design conditions.

2. FINDINGS AND OBSERVATIONS

Based on a review of additional information, the NRC staff has determined that the corrective actions taken by NTS in response to NON 99900905/2015-201-01 and NON 99900905/2015-202-01, are adequate to address the identified nonconformance. NON 99900905/2015-201-01 and NON 99900905/2015-202-01 are closed and no additional inspection follow-up is required to verify completion/adequacy of the corrective actions.

3. ITEMS OPENED, CLOSED, AND DISCUSSED

Item Number	Status	Type	Description	Applicable ITAAC
99900905/2015-201-01	CLOSED	NON	Criterion III & V	2.2.03.12a.i
99900905/2015-202-01	CLOSED	NON	Criterion XI & V	2.2.03.12a.i