

November 10, 2015

MEMORANDUM TO: Edward H. Roach, Chief  
Mechanical Vendor Inspection Branch  
Division of Construction Inspection  
and Operational Programs  
Office of New Reactors

FROM: Yamir Diaz-Castillo, Reactor Operations Engineer */RA/*  
Mechanical Vendor Inspection Branch  
Division of Construction Inspection  
and Operational Programs  
Office of New Reactors

SUBJECT: TRIP REPORT BY THE NUCLEAR REGULATORY  
COMMISSION STAFF OF THE JOINT UTILITY TEAM LIMITED  
SCOPE AUDIT AT IHI SOUTHWEST TECHNOLOGIES, INC.

On October 19 - 23, 2015, Yamir Diaz-Castillo and Jermaine Heath of the Office of New Reactors (NRO), Division of Construction Inspection and Operational Programs, observed the performance of a joint utility limited scope audit of IHI Southwest Technologies Inc., in San Antonio, TX. Duke Energy led the audit, with participation from Duke Energy, Exelon, and Comisión Federal de Electricidad Laguna Verde, using the Nuclear Procurement Issues Committee (NUPIC) checklist. The purpose of the staff's observation was to assess the NUPIC quality assurance audit process used for suppliers of components to the nuclear industry. The trip report of the staff's observations, including a list of persons contacted, is enclosed.

Enclosure:  
As stated

CONTACT: Yamir Diaz-Castillo, NRO/DCIP/MVIB  
(301) 415-2228

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<b>DATE</b>	11/09/15	11/09/15	11/10/15

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**NUCLEAR PROCUREMENT ISSUES COMMITTEE (NUPIC) LIMITED SCOPE AUDIT  
OBSERVATION TRIP REPORT**

Vendor Audited: IHI Southwest Technologies, Inc.  
6766 Culebra Road  
San Antonio, TX 78238-4700

Lead Licensee: Duke Energy

Lead Contact: Greg Dunkle

Nuclear Industry Activity: IHI Southwest Technologies, Inc. (ISwT), supplies nondestructive examination (NDE) and calibration services to the domestic and international nuclear utility market (and its suppliers) in the United States, Asia, Canada, and Europe.

Observation Dates: October 19 - 23, 2015

Observers: Yamir Diaz-Castillo NRO/DCIP/MVIB  
Jermaine Heath NRO/DCIP/QVIB

Approved by: Edward H. Roach, Chief  
Mechanical Vendor Inspection Branch  
Division of Construction Inspection  
and Operational Programs  
Office of New Reactors

**Subject**

This trip report documents observations made by members of the Nuclear Regulatory Commission's (NRC) Office of New Reactors (NRO), Division of Construction Inspection and Operational Programs (DCIP), during a joint utility limited scope audit conducted on October 19 - 23, 2015, at the ISwT facility located in San Antonio, TX.

**Background/Purpose**

NUPIC was formed in 1989, by a partnership involving all domestic and several international nuclear utilities. The NUPIC program evaluates suppliers furnishing safety-related components and services and commercial-grade items to nuclear utilities. The audit team followed the NUPIC audit process and plans to provide the results to NUPIC members that procure parts and services from ISwT.

This was a limited scope audit which was performed using the NUPIC audit checklist. The purpose of the audit was to evaluate the implementation and effectiveness of specific areas of the ISwT Quality Assurance (QA) Program including Commercial Grade Dedication (CGD), Procurement, Internal Audit, and Corrective Action. The audit also included an assessment of the effectiveness of corrective actions that ISwT had taken to previous findings in selected areas identified during the 2014 NUPIC audit led by Exelon. The six person audit team was led by Duke Energy and included representatives from Exelon and CFE Laguna Verde.

The purpose of the NRC staff's observation of this limited scope audit was to ensure the NUPIC audit process continues to meet the requirements of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities." The NRC staff implemented Inspection Procedure (IP) 43005, "NRC Oversight of Third-Party Organizations Implementing Quality Assurance Requirements," during the observation.

## **Discussion**

ISwT provided its QA manual and other implementing procedures to the NUPIC audit team. The NUPIC audit team reviewed the implementation of the requirements of Appendix B to 10 CFR Part 50 in the QA program and supporting implementing procedures, evaluated the documentation associated with the activities that had been performed, and discussed the activities with ISwT personnel. The NUPIC audit team observed work practices to verify activities were in accordance with applicable procedures.

The quality areas reviewed during the audit included the following: CGD, Procurement, Internal Audit, and Corrective Action. In addition, two technical specialists were included on the NUPIC audit team to assist on the review of CGD and NDE. The NUPIC audit team conducted daily team meetings to discuss observations and findings.

The previous nine NUPIC audit findings identified by the 2014 audit led by Exelon were reviewed in detail during this audit. At the time of the audit, three of the nine findings were still open with corrective actions still in progress. At the end of the audit, the NUPIC audit team was able to close one, while the other two remain open. For the remaining six findings that were closed by Exelon, the NUPIC audit team verified that the corrective actions were effectively implemented.

At the exit meeting, the audit team presented three potential findings to ISwT management in the areas of CGD, Procurement, and Audits. The first finding was in the area of CGD. The NUPIC audit team identified that ISwT failed to identify the critical characteristics and acceptance criteria for functional testing performed by the Electric Power Research Institute (EPRI) as part of the Ultravision software dedication process and failed to meet two of the conditions from NEI 14-05A, "Guidelines for the Use of Accreditation in Lieu of Commercial Grade Surveys for Procurement of Laboratory Calibration and Test Services," Revision 0. The second finding was in the area of Procurement. The NUPIC audit team identified that ISwT issued a purchase order to EPRI for testing services as part of the dedication process but failed to do a survey of EPRI and place them on the Approved Suppliers' List. The third finding was in the area of Audits. The NUPIC audit team identified that ISwT failed to issue audit reports within the timeliness requirements.

With the exception of the audit findings identified above, the NUPIC audit team determined that ISwT was effectively implementing its QA program for the program elements that were audited.

## **Conclusions**

For the audit observation, the two NRC staff members each verified a sample of the audit checklist review areas. The NRC staff observed NUPIC's review and evaluation processes for the implementation of ISwT's QA program for ensuring design requirements, and for ensuring associated design specifications were adequately incorporated into the qualification,

engineering, and dedication processes. The NRC staff observed all of the NUPIC audit team members perform in part, or in whole, their portion of the audit.

The NRC staff observed all of the NUPIC audit team members perform in part, or in whole, their portion of the audit. The NRC staff found that the NUPIC audit team adequately addressed the specific areas of the checklist on which the NRC staff focused their review. In addition, The NUPIC technical specialist's review appeared thorough.

The NRC staff observed the daily team meetings to verify that the NUPIC audit team was adequately addressing issues and effectively verifying the implementation of QA requirements. The NRC staff concluded that the NUPIC checklist was effectively implemented by the audit team and resulted in appropriate performance-based findings. The NRC staff noted that the NUPIC audit team engaged the NRC throughout the audit, and when requested, provided clarification on regulatory positions. The NRC also had access to all interactions between ISwT and the audit team, as well as access to the same records reviewed by the audit team. In addition, the NUPIC audit team was technically capable and effectively engaged the vendor; asking the right questions and challenging the vendor as required. Furthermore, the NUPIC audit team was effective at communicating with each other.

**List of Participants**

<b>Name</b>	<b>Title</b>	<b>Affiliation</b>	<b>Entrance</b>	<b>Exit</b>
Greg Dunkle	Lead Auditor	Duke Energy	X	X
Loren Ernst	Auditor	Duke Energy	X	X
Guillermo Aguirre	Auditor	CFE Laguna Verde	X	X
James Wingfield	Auditor	Exelon	X	X
Jeff Bennett	Technical Specialist	Duke Energy		X
Jacob Denny	Technical Specialist	Duke Energy	X	X