

February 10, 2016

MEMORANDUM TO: Michael Cheok, Director
Division of Construction Inspection
and Operational Programs
Office of New Reactors

FROM: Richard P. McIntyre, Acting Branch Chief */RA/*
Quality and Vendor Inspection Branch 2
Division of Construction Inspection
and Operational Programs
Office of New Reactors

SUBJECT: TRIP REPORT BY THE NUCLEAR REGULATORY
COMMISSION STAFF OF THE NUPIC JOINT UTILITY TEAM
AUDIT AT ANVIL INTERNATIONAL, INC.

On January 11-15, 2016, Richard P. McIntyre, Jonathan Ortega and Aixa Belen of the Office of New Reactors (NRO), Division of Construction Inspection and Operational Programs, observed the performance of a Nuclear Procurement Issues Committee (NUPIC) joint utility audit of Anvil International, Inc., in North Kingstown, RI. Entergy led the audit, with participation from Omaha Public Power District, Public Service Enterprise Group Nuclear, Wolf Creek Nuclear, Luminant, and Pacific Gas and Electric Company using the 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: Richard P. McIntyre, NRO/DCIP/QVIB2
(301) 415-3215

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ADAMS ACCESSION NO.: ML16029A209 **NRO-002**

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DATE	02/01/16	02/01/16	02/10/16

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NUCLEAR PROCUREMENT ISSUES COMMITTEE AUDIT
OBSERVATION TRIP REPORT

Vendor Audited: Anvil International, Inc.
160 Frenchtown Road,
North Kingstown, RI 02852

Lead Licensee: Entergy

Lead Contact: Richard Scannell

Nuclear Industry Activity: Anvil International, Inc. (hereafter referred to as Anvil), is a manufacturer of pipe fittings, pipe hangers, and piping support systems to the domestic and international nuclear utility market. Anvil International, Inc., provides full capability machining and fabrication services for the nuclear power industry, to the Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50 Appendix B, the American Society of Mechanical Engineers (ASME) NQA-1 Standards, ASME Section III NS certificate of accreditation and ASME Section III NPT certificate of authorization. Activities include metal cutting, hot and cold forming, precision machining, rod threading and bending, nondestructive examination, welding to ASME Section IX, shot blasting and painting.

Observation Dates: January 11-15, 2016

Observers: Jonathan Ortega NRO/DCIP/QVIB2
Aixa Belen NRO/DCIP/QVIB2

Management Representation: Richard P. McIntyre NRO/DCIP/QVIB2

Approved by: Michael Cheok, Director
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 audit conducted on January 11-15, 2015, at the Anvil facility located in North Kingstown, RI.

Background/Purpose

The Nuclear Procurement Issues Committee (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 NUPIC audit team followed the NUPIC audit process and plans to provide the results to NUPIC members that procure parts and services from Anvil.

This audit was performed using the NUPIC audit checklist. The purpose of the audit was to evaluate the implementation and effectiveness of Anvil Quality Assurance (QA) Program. The audit also included an assessment of the effectiveness of corrective actions that Anvil had taken to previous findings in selected areas identified during the 2013 NUPIC audit led by Wolf Creek Nuclear Operating Group. This eight person audit team was led by Entergy and included representatives from Omaha Public Power District (OPPD), Public Service Enterprise Group (PSEG) Nuclear, Wolf Creek Nuclear (WCN), Luminant, and Pacific Gas and Electric (PGE) Company.

The purpose of the NRC staff's observation of this 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 43005, "NRC Oversight of Third-Party Organizations Implementing Quality Assurance Requirements," during the observation.

Discussion

Anvil 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 Anvil 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: design control, commercial-grade dedication (CGD), procurement, special processes, software QA, audit, records, document control, organization, training, measuring and test equipment (M&TE), material control, corrective action, nonconforming items and 10 CFR Part 21. In addition, a technical specialist assisted the NUPIC audit team on the review of CGD, special processes and design control. The NUPIC audit team also asked questions related to Safety Culture during audit activities on the shop floor. The NUPIC audit team conducted daily team meetings to discuss their observations and findings.

During the exit meeting, the NUPIC audit team presented thirteen potential findings to Anvil management, including areas such as order entry, design change, CGD, software QA, procurement, special processes, M&TE, inspection, audits and corrective action. The NUPIC audit team identified that previously corrected audit finding has recurred related to the exceedance of supplier audit frequency. The audit team determined that this repeat condition reflects that the corrective actions taken in response to the previous NUPIC finding has not been effective in resolving the condition.

With the exception of the audit findings identified, the NUPIC audit team determined that Anvil was effectively implementing its QA program for the program elements that were audited. In addition, the NUPIC audit team concluded that the findings had no impact on product quality.

Conclusions

For the audit observation, the three NRC staff members each verified a sample of the audit checklist review areas. The NRC staff observed the NUPIC audit team members perform their portions of the audit. Specifically, the NRC staff observed NUPIC’s review and evaluation processes for the implementation of Anvil’s QA program for ensuring licensee procurement requirements, design requirements, ASME Section III code requirements, and associated design specifications were adequately incorporated into the qualification and commercial-grade dedications.

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 program requirements. The NRC staff observed shop manufacturing activities such as welding, NDE, inspections and CGD acceptance activities. 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 Anvil and the NUPIC audit team, as well as access to the same records reviewed by them. 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.

The NRC concluded that the NUPIC checklist was effectively implemented and resulted in appropriate performance-based findings. 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. The NRC inspectors also noted that NUPIC performed a technically focus audit instead of focusing more on the programmatic implementation.

List of Participants

Name	Title	Affiliation	Entrance	Exit
Richard Scannell	Team Leader	Entergy	X	X
Bunny Crocker	Auditor	Entergy	X	X
Robert Bunz	Auditor	OPPD	X	X
Robert Carvel	Auditor	PGE	X	X
Kevin Schoolcraft	Auditor	WCN	X	X
Randy McGaughy	Auditor	Luminant	X	X
John Lesh	Auditor	PSEG Nuclear	X	X
Henry Stanley	Technical Specialist	Entergy	X	X