

April 30, 2008

MEMORANDUM TO: Patrick L. Hiland, Director
Division of Engineering
Office of Nuclear Reactor Regulation

THRU: Dale F. Thatcher, Chief **/RA/**
Quality and Vendor Branch
Division of Engineering
Office of Nuclear Reactor Regulation

FROM: Victor E. Hall, Vendor Inspector **/RA/**
Division of Engineering
Office of Nuclear Reactor Regulation

SUBJECT: TRIP REPORT BY DIVISION OF ENGINEERING STAFF OF THE
JOINT UTILITY TEAM AUDIT AT RTP CORPORATION AUDIT,
POMPANO BEACH, FL

On March 25-28, 2008, Victor Hall of the Division of Engineering (DE) observed the performance of a joint utility audit of RTP Corporation (RTP), in Pompano Beach, FL. Florida Power and Light led the audit, with participation from Constellation Energy, and Exelon Generation Company, 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 the persons contacted during the trip is enclosed. The DE staff also performed a limited scope inspection of RTP's compliance with 10 CFR Part 21, "Reporting of Defects and Noncompliance." The results of the staff's inspection of RTP's implementation of 10 CFR Part 21 requirements are documented in NRC Inspection Report 99901372/2008-201 (ADAMS Accession # ML081210694).

Enclosure: As stated

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(301) 415-2915

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OFFICE	EQVB/DE/NRR	BC:EQVB/DE/NRR
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DATE	4/30/2008	4/30/2008

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NRC TRIP REPORT

Subject

This trip report documents observations by members of the Nuclear Regulatory Commission (NRC) Office of Nuclear Reactor Regulation (NRR), Division of Engineering (DE) of a joint utility audit team during its Quality Assurance audit conducted on March 25-28, 2008, at RTP Corporation (RTP).

Dates of Audit and Organization Visited

March 25-28, 2008
RTP Corporation in Pompano Beach, FL

Author, Title and Agency Affiliation

Victor Hall, Vendor Inspector
Operations Engineer
Quality and Vendor Branch (EQVB)
Division of Engineering
Office of Nuclear Reactor Regulation

Sensitivity

There were no documents removed from the facility during the conduct of the inspection and audit. This document is publicly available (ADAMS Accession # ML081210694).

Background/Purpose

This trip report documents the staff assessment of a joint utility audit conducted at RTP Corporation on March 25-28, 2008. The five-person audit team was led by representatives from Florida Power and Light (FP&L), and included a representative each from Constellation Energy, and Exelon Generation Company. The team performed an audit of the RTP Corporation facility in Pompano Beach, FL, using the Nuclear Procurement Issues Committee (NUPIC) checklist. The staff chose to observe this joint-utility audit based on RTP's performance during the previous NUPIC audit.

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 RTP.

The purpose of the staff's observation of this audit was to ensure the NUPIC audit process remains an acceptable alternative to the NRC vendor inspection program. The staff implemented Inspection Procedure (IP) 43005, "NRC Oversight of Third-Party Organizations Implementing Quality Assurance Requirements." The staff continues to rely on the

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effectiveness of the NUPIC audit process for evaluating the implementation of quality assurance (QA) programs of suppliers to the nuclear industry.

RTP provides data acquisition systems, as used in Quality Safety Parameter Display Systems (QSPDS) found in the plant computer, to the nuclear industry. RTP is the original equipment manufacturer for the products they sell. All products produced by RTP are manufactured in accordance with RTP's Appendix B 10 CFR Part 50 Quality Assurance (QA) program, but are considered commercial-grade. RTP buys commercial-grade parts such as discrete electronic components and installs them into circuit boards. All circuit boards are inspected to design drawings, and are visually examined for acceptable manufacturing. For nuclear orders, the assemblies are dedicated by RTP in accordance with Electric Power and Research Institute (EPRI) guidance. RTP's procedures call for the dedication process to assign unique serial numbers, and test each component to demonstrate acceptability of the parts. The testing is intended to provide reasonable assurance that the circuit boards will be able to perform to the utility's procurement specifications.

In addition, the staff implemented NRC IP 36100, "Inspection of 10 CFR Parts 21 and 50.55(e) Programs for Reporting Defects and Noncompliance." The staff identified two potential violations: 1) RTP failed to adopt appropriate procedures to identify and evaluate Part 21 deviations; and 2) RTP does not have adequate controls for the preparation and maintenance of Part 21 records. The results of the staff's inspection of RTP's implementation of 10 CFR Part 21 requirements are documented in NRC Inspection Report 99901372/2008-201 (ADAMS Accession # ML081210694).

Discussion

The NUPIC audit scope was to determine the acceptability and verify the effective implementation of RTP's QA program in accordance with the requirements of Appendix B to 10 CFR Part 50 (Appendix B). The audit team used the NUPIC audit checklist, which is divided into the 18 criteria of Appendix B for this audit. This checklist was supplemented by other recognized consensus standards relevant to the supplier being audited. The NUPIC audit checklist can be downloaded from the NUPIC web site: www.nupic.com.

The audit team used the performance-based NUPIC audit checklist to assess the adequacy and effectiveness of the RTP quality programs. The audit checklist delineated the activities to be examined within each section and how to use the referenced data sheets to record the objective evidence reviewed for each section. The review included an analysis of RTP's order entry process, an examination of design (including commercial grade item dedication), software, QA, procurement controls associated with specific utility orders, and shop observation of assembly, soldering, tests and inspection activities. The audit team also completed a review of calibration records of measuring and test equipment, handling, storage, and shipping activities.

The audit team's technical specialist used the Performance Based Supplemental Audit (PBSA) to review: 1) the evaluation of equivalent components, 2) commercial grade dedication, 3) control of repair activities, 4) final testing, and 5) testing and verification of physical and chemical characteristics of components (i.e. fasteners, mounting brackets/clips or braces etc.) used for seismic mounting of parts and components. The PBSA worksheets were specific to RTP-supplied safety-related orders for a forced-air cooling assembly, a universal gate card, and an optical isolator.

The NRC staff observed all aspects of the team's conduct of the audit at the RTP facility. This started with the audit team meeting conducted the day before the audit to review the details of the audit and all audit expectations. The NRC staff observed the auditors as they conducted a performance-based review of the specific audit checklist sections. The NRC staff observed how documents were selected for review and the adequacy of the reviews, interviews conducted of RTP technical personnel, and observed testing of a commercially dedicated data acquisition card at the RTP facility. The NRC staff observed the daily meetings that the audit team conducted internally, the daily debrief with the RTP business manager, and the formal exit meeting with RTP management.

The checklist sections were divided among the five audit team members, with one of the three FP&L auditors acting in a managerial function as the audit team lead. A representative each from Constellation and Exelon completed the NUPIC audit team. The audit team reviewed the RTP QA manual and other lower tier implementing documents such as procedures and purchase orders. The audit was performed by reviewing the requirements of the QA program and supporting implementing procedures, evaluating the documentation associated with the activities that had been performed, and discussing the activities with RTP personnel.

The staff observed all the audit team members, in part or in whole, conducting their portion of the audit. The members of the audit team adequately addressed the specific areas of the checklist. In general, the audit team performed a sound, thorough, performance-based review of the audited areas.

The audit team identified seven preliminary findings and recommendations with the implementation of the quality program and regulatory requirements. These preliminary findings and recommendations were discussed in detail with RTP management during the exit meeting. The audit findings and recommendations represented the following Appendix B areas: 1) Commercial Grade Dedication; 2) Training; 3) Organization; 4) Nonconforming Materials, Parts, or Components, and Corrective Actions; 5) 10 CFR Part 21; 6) Internal Audit; and 7) Procurement. The audit report was issued to RTP on April 25, 2008.

The staff noted that the audit team was presented with an additional challenge since RTP does not have a dedicated QA Manager. The President of RTP has acted as the QA Manager for over two years. The President of RTP did not participate in audit activities during the first two days of the audit despite repeated requests from the audit team and the staff. The President of the RTP acting as QA Manager for over two years raised questions as to the independence of RTP's QA management from cost and schedule when opposed to safety considerations, and contributed to the audit team's finding for Organization.

Conclusions

The audit team leader conducted effective daily briefings with the audit team and RTP on each day's issues and potential findings. These daily briefings enhanced the audit team's understanding of issues and audit findings and provided an effective feedback mechanism from experienced audit team members on the significance of individual team findings. The staff noted that the audit team leader was effective at communicating audit findings to RTP's management, despite not having access to appropriate QA management during most of the audit. The auditors supported their findings with comprehensive objective evidence and went to sufficient depth in their respective areas of focus. Overall, the staff concluded, based on the review of the audit areas covered, that the NUPIC audit process was effectively implemented by

the audit team and resulted in sound performance-based findings for failure to adequately implement QA program and 10 CFR Part 21 requirements.

Pending Actions/Planned Next Steps for NRC

This NRC assessment was one of at least two planned for FY 2008. Depending on the adequacy of the responses from RTP to the NUPIC findings, the staff may conduct a follow-up inspection.

The NRC staff implemented NRC IP 36100, "Inspection of 10 CFR Parts 21 and 50.55(e) Programs for Reporting Defects and Noncompliance." The results of the staff's inspection of RTP's implementation of 10 CFR Part 21 requirements are documented in NRC inspection report 99901372/2008-201 (ADAMS Accession # ML081210694).

Points for Commission Consideration/Items of Interest

None.

List of Meeting Participants

U.S. NRC	Position
Victor Hall	Vendor Inspector
NUPIC	
Jose Magalhaes	Team Leader, Principal Engineer, Florida Power and Light
Brad Allyn	Systems Administrator, Florida Power and Light
Jeffrey Baysinger	Manager Procurement Quality, Florida Power and Light
James Perry	Lead Auditor, Exelon Generation Company
Eugene Wasson	Principal Quality Analyst, Constellation Energy
RTP Corporation	
Garfield Monfries	Business and Development Manager
Warren Bitter	Manufacturing Director
Steve Durren	Quality Assurance Associate
Ali Erbay	Director of Safety Products
Ben Goodman	Test Manager
Joanie Lui	Materials Manager
Sal Provanzano	President
Eric Wagoner	Technical Sales Engineer