



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

July 25, 2006

Mr. Mark E. Seymour  
General Manager  
Trentec, Incorporated  
4600 East Tech Drive  
Cincinnati, Ohio 45245

SUBJECT: NRC INSPECTION REPORT 99901338/2006-201

Dear Mr. Seymour:

On June 5-6, 2006, U.S. Nuclear Regulatory Commission (NRC) inspectors conducted a limited scope inspection at the Trentec, Incorporated (Trentec) facility in Cincinnati, Ohio. Additionally, telephone discussions regarding a 10 CFR Part 21 violation were conducted between NRC and Trentec staff on June 29-30, 2006. The enclosed report presents the details of the inspection and telephone discussions .

This was a limited scope inspection which focused on the implementation of portions of Trentec's quality assurance (QA) program, and evaluated the effectiveness and control of Trentec's program that has been established to implement the provisions of 10 CFR Part 21, "Reporting of Defects and Noncompliance," which establishes requirements for the implementation of Section 206 of the Energy Reorganization Act of 1974. Additionally, this NRC inspection report is not intended to endorse or approve your overall quality assurance or 10 CFR Part 21 program. Based upon the limited review of records and discussions with Trentec personnel, the inspectors concluded that the control of Trentec's 10 CFR Part 21 and QA program related activities were generally acceptable with one exception regarding the identification of a 10 CFR Part 21 violation discussed with Trentec staff on June 30, 2006. The inspector identified that although Trentec did not have the capability to conduct an evaluation, as defined in §21.3 of 10 CFR Part 21, Trentec determined that a defect did not exist on a basic component supplied to an NRC licensee and informed the licensee the issue was not reportable in accordance with 10 CFR Part 21. Although this is an inadequate evaluation by Trentec, the licensee involved was aware of the deviation. As a result of the licensee being aware of the issue, this violation of 10 CFR Part 21 is characterized as minor and will not be cited. Therefore, no response to this letter is required.

In accordance with 10 CFR 2.390 of the NRC's "Public inspections, exemptions, requests for withholding," a copy of this letter, its enclosures and any associated correspondence will be placed in the NRC's Public Document Room (PDR).

Sincerely,

*(/RA by M. E. Mayfield)*

Michael E. Mayfield, Director  
Division of Engineering  
Office of Nuclear Reactor Regulation

Docket No.: 99901338

Enclosure: Inspection Report 99901338/2006-201

M. E. Seymour

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cc w/encl: Mr. Dudley W. Mowrey, Sr.  
Quality Assurance Manager  
Trentec, Incorporated  
4600 East Tech Drive  
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M. E. Seymour

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## 1.0 INSPECTION SUMMARY:

The purpose of this inspection was to evaluate limited portions of the quality assurance (QA) and 10 CFR Part 21 (Part 21) controls that Trentec has established and implemented. The inspection was conducted at Trentec's facility in Cincinnati, Ohio. The NRC inspection bases were:

- Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Part 50 of Title 10 of the Code of Federal Regulations (Appendix B), and
- 10 CFR Part 21, "Reporting of Defects and Noncompliance."

## 2.0 STATUS OF PREVIOUS INSPECTION FINDINGS

NRC Inspection Report No. 9901338/1999201, dated February 17, 1999, performed at Trentec's facility in Cincinnati, Ohio, documented a weakness in Trentec's procedures adopted pursuant to Part 21, "Reporting of Defects and Noncompliances." The weakness was dispositioned as a minor violation.

## 3.0 INSPECTION FINDINGS AND OTHER COMMENTS:

### 3.1 10 CFR PART 21

#### a. Inspection Scope

The NRC inspectors reviewed Trentec's 10 CFR Part 21 implementation procedure Quality Assurance Procedure (QAP) 2, "Evaluation of Nonconformances and Conditions Adverse to Quality for Reporting per 10 CFR Part 21," Revision 4 and related procedures as noted below. Additionally, the inspectors reviewed documents, such as nonconformance reports (NCRs), and corrective action reports (CARs) associated with the provisions of Part 21 that were controlled in accordance with the Trentec quality program.

#### b. Observations and Findings

The NRC inspectors review of QAP-2 found that the procedure generally addressed the requirements for implementation of the provisions of Part 21. The inspectors determined that, although the procedure was generally satisfactory, it required some minor clarification to ensure effective implementation of the provisions of Part 21. For example, the inspectors identified that wording in Sections 5.0 and 6.0 of QAP-2 regarding the meaning of "deviation" or "failure to comply was not consistent with 21.21(b)." The inspectors and the Trentec staff discussed the procedure clarification which was then revised prior to the inspection exit meeting.

The NRC inspectors also evaluated whether Trentec had complied with the posting requirements of 10 CFR 21.6. The inspectors found that Trentec had posted notices which included a copy of Section 206 of the Energy Reorganization Act of 1974, a current copy of 10 CFR Part 21, a copy of the Trentec implementing procedure QAP-2, and the

name of the individual to whom reports should be made. The inspectors had no concerns in this area.

The NRC inspectors reviewed a sample of CAR's to determine if they were in compliance with 10 CFR Part 21 and if customers were adequately informed in accordance with 21.21(b). The inspectors noted that the sampled CARs were evaluated for Part 21 reportability and all affected customers were appropriately informed in accordance with Part 21.

NCRs reviewed by the inspectors included NCR 04-105, dated September 29, 2004, which documented the inservice failure of a basic component (time delay relay - TDRPRO-5002) supplied to a licensee, Florida Power & Light (FP&L) by Trentec. Specifically, FP&L notified Trentec of the TDRPRO relay failures in a letter dated September 16, 2004. The letter included the failure analysis performed by the relay manufacturer, Magnecraft/Struthers-Dunn (MSD) on one of the failed relays. An additional failure analysis requested by FP&L was performed by Nuclear Logistics, Inc. (NLI); however, these results were not provided to Trentec. The inspectors noted that the failure analysis documentation for both MSD and NLI had determined the same root cause for the failures.

On September 28, 2004, Trentec requested FP&L send them two of the relays remaining from the lot in order for Trentec to perform their own failure analysis. FP&L sent the requested relays to Trentec who forwarded them untouched to MSD for analysis. In this instance MSD found one relay fully functional while the other was found to be inoperative, however, the cause could not be determined. In conclusion, the failure analysis performed by MSD for Trentec determined that there was insufficient evidence to support the previous MSD and NLI analyses performed for FP&L. Based on this information, Trentec stated in a letter to FP&L dated November 29, 2004, that given the available information they did not consider this a 10CFR Part 21 reportable incident.

After their review of all the relevant information, the NRC inspectors determined that Trentec did not have the capability to perform the evaluation (and potential notification) as required in §21.21(a), even if the potential defect would have been confirmed by the failure analysis performed by Trentec. Per §21.3, an evaluation is the process for determining whether a particular deviation could create a substantial safety hazard or determining whether a failure to comply is associated with a substantial safety hazard. Likewise, a substantial safety hazard means a loss of safety function to the extent that there is a major reduction in the degree of protection provided to public health and safety for any facility or activity licensed by the NRC. Trentec, not knowing the specific application for the relay, did not have the capability to determine if a potentially defective basic component installed in a facility represented a substantial safety hazard. In this situation, Trentec's responsibility was to inform affected customers (in this case FP&L) of the potential defect so that they could perform the evaluation and potential notification. The inadequate evaluation by Trentec and subsequent notification to the licensee, FP&L, that the issue was not a reportable incident is a violation of 10 CFR 21.21(a).

c. Conclusions

The inspector's identified that even though Trentec did not have the capability to conduct an evaluation, as defined in §21.3 of 10 CFR Part 21, Trentec determined that a defect did not exist on a basic component supplied to an NRC licensee and informed the licensee the issue was not reportable in accordance with 10 CFR Part 21. Although this is an inadequate evaluation by Trentec, the licensee involved was aware of the deviation. As a result of the licensee being aware of the issue, this violation of 10 CFR Part 21 is characterized as minor and will not be cited.

Additionally, within the limited scope of this review and with the exception of the violation described above, the inspectors concluded that the Trentec QA program activities were generally acceptable and that Trentec had maintained and implemented procedures for conforming to the requirements of 10 CFR Part 21 including the required postings pursuant to 10 CFR 21.6.

3.2 Commercial Grade Dedication

a. Inspection Scope

The NRC inspectors reviewed Trentec's commercial-grade item (CGI) dedication program implementation to evaluate the quality activities related to its dedication program. The inspectors reviewed dedication procedures, selected dedication packages and records, and interviewed key personnel involved in dedication activities.

b. Observations and Findings

QAP-20, "Dedication and Supply of Commercial-Grade Items Having Safety-Related Applications," Revision 5, described Trentec's program for the classification and dedication of CGI's that were intended for use in safety-related applications. The procedure generally described the pertinent policies governing Trentec's procurement and dedication activities. QAP-20 addressed requirements for dedication plans that included, engineering evaluations, identification and verification of critical characteristics, procurement, documentation, identification, and approval. QAP-20 also contained various terms and definitions, responsibilities and authorities, and organizational interfaces. Trentec implemented QAP-20 during the development of dedication plans for specific items or for specific projects/customers, and had established controls for the use of those plans on subsequent dedication activities.

Dedication activities at Trentec were documented in dedication plans that included:

- (1) Safety function of the CGI item. In some instances the customer determined the item's safety function via purchase order requirements.
- (2) Identification of critical characteristics and acceptance criteria, based on original engineering design data.
- (3) Component/Similarity analyses.

- (4) Provisions for special surveillances, testing and inspection activities required by the dedication plan.
- (5) Manufacturer's technical data relevant to the dedicated item.
- (6) Procurement documentation (licensee's purchase orders, Trentec's purchase orders).
- (7) Equipment qualification initial inspection report.
- (8) Certificate of conformance, which included shelf life storage, restrictions and limitations, shipping, handling, and storage requirements.

The NRC inspectors reviewed several completed CGI dedication packages from NRC licensees encompassing mechanical and electrical components to evaluate the effectiveness of the implementation of QAP-20. The review of selected dedication packages focused on the identification of the licensee's requirements in the purchase order, selection of the item's safety function, critical characteristics, verification methods and acceptance criteria, supplier audits/surveys, and Certificates of Conformance supplied to the customer.

During the review of the dedication packages, and after conversations with Trentec personnel, the inspectors noted that approximately 80% of the dedication packages did not require licensee approval of the dedication plan or the identification and selection of critical characteristics. Licensees typically specified the item's part number and Trentec determined the item's critical characteristics based upon component part number and manufacturer's specification sheet.

The NRC inspectors determined that, although the dedication procedure was generally acceptable, it required some minor clarification to ensure the effective use of acceptable supplier/manufacturer item performance records as described in Generic Letter (GL) 89-02, "Actions to Improve the Detection of Counterfeit and Fraudulently Marketed Products," dated March 21, 1989. The inspectors and QA manager discussed the procedure clarification and the procedure was revised prior to completion of the inspection.

c. Conclusions

Within the limited scope of this review, the NRC inspectors concluded that Trentec's CGI dedication program generally addressed the essential elements of the dedication process and that sufficient guidance for performing verification activities was provided.

#### **4.0 MANAGEMENT MEETINGS AND PERSONNEL CONTACTED**

##### **4.1 Entrance and Exit Meetings:**

In the entrance meeting on June 5, 2006, the NRC Inspectors discussed the scope of the inspection, outlined the areas to be inspected, and established interfaces with Trentec's General Manager and several staff personnel. During the exit meeting on June 6, 2006, and telephone calls on June 29-30, 2006, the NRC Inspectors discussed the inspection observations with Trentec's General Manager and staff.



4.2 Personnel Contacted:

D.J. Linton	President	Curtis Wright Flow Control Corp.
M.E. Seymour	General Manager	Trentec
G.V. Chapman	Director of Operations	Trentec
M.W. Bell	EQ Supervisor	Trentec
M.D. McClung	QA Supervisor	Trentec