

September 17, 2008

Mr. Randy Reynolds, Quality Assurance Manager  
Spectrum Technologies  
Utilities Service Division  
112 Erie Boulevard  
Schenectady, NY 12305

SUBJECT: NRC INSPECTION REPORT NO. 99901119/2008-201 AND NOTICE OF  
NONCONFORMANCE

Dear Mr. Reynolds:

From July 29 to August 1, 2008, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Spectrum Technologies (Spectrum) facility in Schenectady, NY. The enclosed report presents the results of that inspection.

This was a limited scope inspection which focused on assessing your compliance with the provisions of Part 21 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 21) "Reporting of Defects and Noncompliance," and selected portions of Appendix B to 10 CFR Part 50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." This NRC inspection report does not constitute NRC endorsement of your overall quality assurance (QA) or 10 CFR Part 21 programs.

Based on the results of this inspection, the NRC has determined that one Severity Level IV violation of NRC requirements occurred. This violation is being treated as a Non-Cited Violation (NCV), consistent with Section VI.A of the Enforcement Policy. The NCV is described in the subject inspection report. If you contest the violation or significance of the NCV, you should provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

During this inspection, NRC inspectors also found that implementation of your QA program failed to meet certain NRC requirements contractually imposed on you by your customers. The findings are discussed in the enclosed Notice of Nonconformance (NON) and NRC Inspection Report. Specifically, deficiencies were noted in the following activities: 1) failure to establish an adequate acceptance criterion related to the dedication process; 2) failure to prescribe a process to identify and determine the significance of issues identified in the corrective action request process; 3) failure to document any engineering evaluation in lieu of testing; 4) failure to adequately review documentation from a third-party supplier; 5) failure to provide traceability to the Original Equipment Manufacturer as part of the dedication process; and 6) inadequate audit of a supplier.

These nonconformances are cited in the enclosed NON, and the circumstances that surround them are described in the enclosed report. Please provide a written statement or explanation within 30 days from the date of this letter in accordance with the instructions specified in the

enclosed NON. We will consider extending the response time if you show good cause for us to do so.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material is withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Sincerely,

**/RA/**

Patrick L. Hiland  
Division Director  
Division of Engineering  
Office of Nuclear Reactor Regulation

Docket No.: 99901119

Enclosures: 1. Notice of Nonconformance  
2. Inspection Report 99901119/2008-201

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material is withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Sincerely,

**/RA/**

Patrick L. Hiland  
Division Director  
Division of Engineering  
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Docket No.: 99901119

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## NOTICE OF NONCONFORMANCE

Spectrum Technologies  
Utilities Service Division  
112 Erie Boulevard  
Schenectady, NY 12305

Docket Number 99901119  
Inspection Report No. 99901119/2008-201

Based on the results of a Nuclear Regulatory Commission (NRC) inspection conducted July 29 to August 1, 2008, of activities performed at Spectrum Technologies (Spectrum), certain activities were not conducted in accordance with NRC requirements which were contractually imposed upon Spectrum by NRC licensees.

- A. Criterion III, "Design Control," of Appendix B to 10 CFR Part 50, states in part that, "Measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems and components." Additionally, Criterion III states in part that, "The design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program."

Argo Turboserve Corporation (ATC), Utilities Services Division, Quality Program Manual, Revision 1, dated December 29, 2004, Section 3.0 "Design Control," Paragraph 2.b. states that "Applicable design inputs, quality requirements and standards shall be appropriately specified and correctly translated into specifications, drawings, procedures and instructions."

Spectrum Quality Assurance Procedure QAP-3-001 "Design Control," Revision 4, dated July 6, 2004, Section 2.4 states in part that, "The adequacy of a design shall be checked or verified by the performance of design reviews, by the use of alternate or simplified calculation methods, or by the performance of a suitable testing program."

Contrary to the above, as of August 1, 2008:

Spectrum failed to establish an adequate acceptance criterion for the locked rotor current test in Job Number 07P3730/1, dated March 28, 2007, for a 100HP/460VAC Electric Motor to LaSalle Nuclear Power Station for Exelon Generation Company Order 00429577.

This issue has been identified as Nonconformance 99901119/2008-201-01.

- B. Criterion V, "Instructions, Procedures, and Drawings," of Appendix B to 10 CFR Part 50, states in part that, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

ATC, Utilities Services Division, Quality Program Manual, Revision 1, dated December 29, 2004, Sections 5.0 "Instructions, Procedures and Drawings," Paragraphs 2.b. and

ENCLOSURE

2.c. state that, "All activities affecting quality shall be prescribed and performed in accordance with documented instructions, procedures or drawings. Instructions, procedures or drawings shall include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished."

Spectrum Quality Assurance Procedure QAP-5-001, "Control of Instructions, Procedures and Drawings," Revision 6, dated August 2, 2005, Sections 2.1 and 2.2 state that, "All activities affecting quality shall be prescribed and performed in accordance with documented instructions, procedures or drawings. Instructions, procedures or drawings shall include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished."

Spectrum Quality Assurance Procedure QAP-16-001, "Corrective Action," Revision 3, dated September 13, 2005, establishes the process for initially identifying and determining the significance of issues identified in the corrective action request process.

Contrary to the above, until July, 30, 2008;

Spectrum Quality Assurance Procedure QAP-16-001, "Corrective Action," failed to prescribe appropriate procedures to initially identify a deviation for evaluation, as defined in 10 CFR Part 21, "Reporting of Defects and Noncompliance."

This issue has been identified as Nonconformance 99901119/2008-201-02.

- C. Criterion V, "Instructions, Procedures, and Drawings," of Appendix B to 10 CFR Part 50, states in part that, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

ATC, Utilities Services Division, Quality Program Manual, Revision 1, dated December 29, 2004, Sections 5.0 "Instructions, Procedures and Drawings," Paragraphs 2.b. and 2.c. state that, "All activities affecting quality shall be prescribed and performed in accordance with documented instructions, procedures or drawings. Instructions, procedures or drawings shall include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished."

Spectrum Quality Assurance Procedure QAP-5-001, "Control of Instructions, Procedures and Drawings," Revision 6, dated August 2, 2005, Sections 2.1 and 2.2 state that, "All activities affecting quality shall be prescribed and performed in accordance with documented instructions, procedures or drawings. Instructions, procedures or drawings shall include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished."

Spectrum Procedure GP0060, "Qualification by Similarity Analysis Procedure," Revision 3, dated August 20, 2007, Section 5.2.2, "Metallic Material Components," requires that a

Rockwell Hardness test be performed on metallic parts as determined by the Procurement & Qualification Engineer.

Contrary to the above, as of August 1, 2008:

Spectrum failed to perform Rockwell Hardness testing on the identified critical metallic parts for  $\frac{3}{4}$ in, 316 stainless steel ball valves dedicated under Spectrum Job Number 07P1630 for Three Mile Island Nuclear Station Order 80023053. Spectrum also failed to document any engineering evaluation to justify the lack of testing.

This issue has been identified as Nonconformance 99901119/2008-201-03.

- D. Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50, states in part that, "documentary evidence shall be sufficient to identify the specific requirements, such as codes, standards, or specifications, met by the purchased material and equipment."

ATC, Utilities Services Division, Quality Program Manual, Revision 1, dated December 29, 2004, Sections 7.0 "Control of Purchased Material, Equipment and Services," Paragraph 2 states in part that, "The procurement of items and services shall be controlled to assure conformance with specified requirements. Such controls shall provide for evaluation of objective evidence of quality furnished by the supplier."

Spectrum Quality Assurance Procedure QAP-2-002, "Certificates of Conformance and Authorization to Ship," Revision 4, dated May 17, 2005, Section 3.2.2 states in part that "Q1 items being provided to customers other than the utility owner shall be provided through Spectrum Technologies or as otherwise authorized by Spectrum QA. Such items shall be treated as commercial grade until properly re-certified by Spectrum under ATC's Quality Assurance Program meeting the requirements of 10 CFR 50 Appendix B.

The Vice President for Quality Assurance, or his designee, shall perform a detailed review of the certification documentation package provided by the original utility owner to assure that an acceptable Certificate of Conformance from the original supplier of the safety related equipment is provided."

Contrary to the above, as of August 1, 2008:

Spectrum failed to adequately review purchase order documentation from a third-party supplier for Certificate of Conformance COC08P0650, dated February 1, 2008, regarding acceptance of 10 CFR Part 21 requirements for supplying a basic component.

This issue has been identified as Nonconformance 99901119/2008-201-04.

- E. Criterion VII, "Control of Purchased Material, Equipment, and Services" of Appendix B to 10 CFR Part 50 states, in part that, "Measures shall be established to assure that purchased material, equipment, and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents."

Spectrum Quality Assurance Procedure QAP-7-001, "Control of Purchased Material, Equipment and Services," Revision 6, dated September 12, 2006, Section 4.2.2.2, states that, "The Purchase Order shall require that all items be 'Drop Shipped' directly from the

[Original Equipment Manufacturer] to Spectrum, and shall state that all items shall be new and not refurbished and that no substitutions are permitted. The Purchase order shall also clearly state that traceability to the O.E.M. is required.”

Contrary to the above, as of August 1, 2008:,

Spectrum failed to provide traceability to the Original Equipment Manufacturer in Job Number 08P1630 for a commercially-dedicated Barton 288A/224 pressure switch, purchased from The Park Company, and provided to the Fermi Nuclear Generating Station for Detroit Edison Company Purchase Order 4700114545, on April 15, 2008.

This issue has been identified as Nonconformance 99901119/2008-201-05.

- F. Criterion XVIII, Audits, of Appendix B to 10 CFR Part 50, states in part that, “A comprehensive system of planned and periodic audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program.”

ATC, Utilities Services Division, Quality Program Manual, Revision 1, dated December 29, 2004, Section 18.2.g., states that, “External audits of Spectrum Technologies Division of ATC suppliers of items and services, shall be performed at prescribed frequencies, when said suppliers are required to have a documented Quality Assurance Program which complies with the requirements of 10 CFR 50 Appendix B.”

Spectrum Quality Assurance Procedure QAP 18-001 “Audits,” Revision 5, dated September 12, 2006, Section 3.2.1, states in part that, “Audits of suppliers of items and services that are required to have documented Quality Assurance programs in accordance with 10 CFR 50 Appendix B shall be audited as specified in Section 18.0 of the Quality Assurance Manual.”

Contrary to the above, as of August 1, 2008:,

The last audit of the ATC Woodridge warehouse facility that Spectrum conducted August 23-24, 2005, did not verify compliance with all aspects of the ATC Woodridge documented quality assurance program. Appendix B to 10 CFR Part 50 criteria not addressed in the audit included: 1) quality assurance program; 2) instructions, procedures, and drawings; 3) identification and control of materials, parts, and components; 4) control of measuring and test equipment; and 5) audits.

This issue has been identified as Nonconformance 99901119/2008-201-06.

The NRC has concluded that information regarding the reason for Nonconformance 99901119/2008-201-02, the corrective actions taken and planned to correct the nonconformance and prevent recurrence and the date when full compliance will be achieved is already adequately addressed in the report details. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a “Reply to Notice of Nonconformance; 99901119/2008-201-02,” and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Chief, Quality and

Vendor Branch within 30 days of the Date of the letter transmitting this Notice of Nonconformance (Notice).

Regarding the remaining nonconformances, please provide a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Director, Division of Engineering, within 30 days of the date of the letter transmitting this Notice of Nonconformance. This reply should be clearly marked as a "Reply to a Notice of Nonconformance" and should include for each noncompliance: (1) the reason for the noncompliance, or if contested, the basis for disputing the noncompliance; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid future non-compliances; and (4) the date when your corrective action will be completed. Where good cause is shown, consideration will be given to extending the response time.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated this (17) day of September 2008



U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION  
DIVISION OF ENGINEERING  
VENDOR INSPECTION REPORT

Docket No.: 99901119

Report No.: 99901119/2008-201

Vendor: Spectrum Technologies  
Utilities Service Division  
112 Erie Boulevard  
Schenectady, NY 12305  
Phone: (518) 382-0056  
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Vendor Contact: Randy Reynolds  
Quality Assurance Manager  
Phone: (518) 878-8431  
rreynolds@argoturbo.com

Nuclear Industry: Spectrum Technologies (Spectrum) provides safety-related dedication services to the nuclear power industry and performs commercial-grade dedication on a variety of electrical and mechanical products. Spectrum was acquired by Argo Turboserve Corporation (ATC) in 2004 and operates under ATC's Utility Services Division.

Inspection Dates: July 29 – August 1, 2008

Inspection Team Leader: Paul Prescott, DE/NRR

Inspectors: Victor Hall, DE/NRR  
Barry Miller, DE/NRR  
Carla Roquecruz, DE/NRR

Approved by: Dale F. Thatcher, Chief  
Quality & Vendor Branch  
Division of Engineering  
Office of Nuclear Reactor Regulation

## EXECUTIVE SUMMARY

Spectrum Technologies  
99901119/2008-201

The purpose of this inspection was to review selected portions of Spectrum Technologies' (Spectrum) quality assurance and 10 CFR Part 21 (Part 21) programs. The inspectors focused on Spectrum's activities in the area of dedication of electrical and mechanical items that Spectrum supplies as basic components to NRC-licensed facilities. The inspection was conducted at Spectrum's facility in Schenectady, New York from July 29 to August 1, 2008.

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*
- 10 CFR Part 21, "Reporting of Defects and Noncompliance."

The NRC identified five nonconformances and one unresolved item during a previous inspection of Spectrum's facility in Schenectady, New York, on February 2 – 5, 2004. All previous nonconformances and the unresolved item were closed prior to the 2008 inspection.

The results of the latest inspection are summarized below.

### 10 CFR Part 21 Program

The inspectors identified one Non-Cited Violation for failure to meet the requirements of 10 CFR Part 21. The violation was not cited because Spectrum identified the issue and initiated appropriate corrective actions. With the exception of the Non-Cited Violation noted above, the inspectors concluded that Spectrum's 10 CFR Part 21 program was consistent with the regulatory requirements. No findings of significance were identified.

### Corrective Action

Based on the review of Spectrum's corrective action process and Part 21 procedures, and a sample of corrective action requests (CARs), the NRC inspectors concluded that strengthening the integration of Part 21 evaluation requirements into Quality Assurance Procedure (QAP) 16-001 was necessary for Spectrum to adequately implement their corrective action program. The inspectors identified Notice of Nonconformance (NON) 99901119/2008-201-02, for the failure to adequately prescribe the initial Part 21 screening process. This deficiency was subsequently corrected by Spectrum, and a response is not requested. No findings of significance were identified.

### Commercial-Grade Dedication

The inspectors determined through review of dedication packages for various items that Spectrum is generally implementing a commercial-grade dedication process in compliance with regulatory and industry guidance and Spectrum's quality program requirements documented in its Quality Program Manual (QPM) and implemented by its procedures. However, the inspectors identified NON 99901119/2008-201-01 for failure to establish an adequate

acceptance criterion related to the dedication process; NON 99901119/2008-201-03 for failure to document any engineering evaluation in lieu of testing; NON 99901119/2008-201-04 for failure to adequately review documentation from a third-party supplier, and NON 99901119/2008-201-05 for failure to provide traceability to the Original Equipment Manufacturer (OEM) as part of the dedication process.

### Audits

The inspectors concluded that with the exception of NON 99901119/2008-201-06 for an inadequate audit of a supplier, Spectrum's audit program requirements are generally consistent with the regulatory requirements of Criterion XVIII of Appendix B to 10 CFR Part 50.

## REPORT DETAILS

### 1. 10 CFR Part 21 Program

#### a. Inspection Scope

The inspectors reviewed Spectrum's quality assurance (QA) policies and procedures to determine compliance with 10 CFR Part 21, "Reporting of Defects and Noncompliances." Specifically, the inspectors reviewed portions of the Argo Turboserve (ATC), Utilities Services Division, Quality Program Manual (QPM), Revision 1, dated December 12, 2004, and portions of Spectrum's implementing Quality Assurance Procedures (QAPs).

In addition, the inspectors evaluated all of Spectrum's Nonconformance Reports (NCRs) and associated Part 21 evaluation forms from the past two years to verify compliance with Part 21 requirements.

Finally, the inspectors reviewed a sample of safety-related purchase orders to verify that Spectrum properly specified the applicability of 10 CFR Part 21 in procurement documents for safety-related services from sub-suppliers.

#### b. Observations and Findings

The inspectors noted that Spectrum's QA program was governed by an overarching corporate ATC manual: QPM. This manual was divided into 20 sections, which included 18 sections corresponding to the 18 criteria of Appendix B of 10 CFR Part 50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," and two sections for Part 21 and definitions.

The inspectors noted that Spectrum self-identified a finding regarding its Part 21 process in internal audit INT 08-1, dated January 10, 2007. The finding stated:

"Spectrum Technologies currently has no practices for documenting evaluations to determine if a condition is reportable when discovered as a NCR during dedication testing."

Spectrum's discussion on the above finding further stated:

"This finding is of sufficient importance to require immediate corrective action. A checklist for determining 10CFR21 reportability shall be included with each NCR. There is actually a de facto determination performed during the NCR process but no specific documentation actually referencing Part 21. The checklist shall remain in effect until the Quality Assurance Procedures are changed during integration of Spectrum and STS [Southern Testing Services]."

The inspectors noted that Spectrum's internal audit identified that implementing procedure QAP-19-001, "10 CFR Part 21 Reporting," did not include comprehensive interfaces with all of Spectrum's corrective action procedures to identify and evaluate potential deviations or failures to comply associated with substantial safety hazards. The inspectors found the interim corrective actions that Spectrum initiated, including the

NCR checklist to be adequate. The inspectors also observed that QAP-19-001 did not provide appropriate guidance to evaluate deviations and failures to comply associated with substantial safety hazards.

Part 21, Section 21.21, "Notification of failure to comply or existence of a defect and its evaluation," paragraph (a), requires, in part, each individual, corporation, partnership, or other entity subject to 10 CFR Part 21 shall adopt appropriate procedures to (1) evaluate deviations and failures to comply associated with substantial safety hazards as soon as practicable.

The inspectors determined that the deficiencies noted above constituted a Severity Level IV violation of NRC requirements. Because Spectrum self-identified these issues and initiated corrective actions to correct the deficiency and prevent recurrence, this violation was treated as a Non-Cited Violation, consistent with Section VI.A of the NRC Enforcement Policy.

The inspectors found that QPM, Section 19.0, and Spectrum procedure QAP-19-001 provided adequate procedures and guidance regarding notification to the NRC by directors or responsible officers and provided adequate procedures and guidance for informing affected customers of identified defects or failures to comply. The inspectors found that the manual and procedures adequately incorporated the timeliness requirements of Part 21.

The inspectors verified, in a sample of procurement documents for safety-related services from sub-suppliers, that Spectrum had specified the applicability of Part 21 as required in 10 CFR 21.31. The inspectors noted that Spectrum's QAP-19-001 provided adequate controls for the retention of Part 21 evaluations or notifications. Spectrum did not provide any records of Part 21 evaluations or Part 21 notifications.

c. Conclusions

The inspectors identified one Non-Cited Violation for failure to meet the requirements of 10 CFR Part 21. The violation was not cited because Spectrum identified the issue and initiated appropriate corrective actions. With the exception of the Non-Cited Violation noted above, the inspectors concluded that Spectrum's 10 CFR Part 21 program was consistent with the regulatory requirements. No findings of significance were identified.

2. Corrective Action

a. Inspection Scope

The inspectors reviewed the procedures governing the implementation of Spectrum's corrective action program to ensure the procedures provided adequate guidance consistent with the requirements of Appendix B to 10 CFR Part 50 and 10 CFR Part 21. The inspectors also reviewed a sample of corrective action requests (CARs) to assess Spectrum's implementation of the corrective action program.

b. Observations and Findings

b.1. Corrective Action Program

Spectrum's QAP-16-001, "Corrective Action," Revision 3, established the process for identifying, investigating, reporting, tracking, and correcting conditions adverse to quality, significant conditions adverse to quality, communicating lessons learned, and tracking customer-identified issues. This procedure detailed the process of identifying and documenting apparent conditions adverse to quality that fall under the scope of Spectrum's quality program, investigating and correcting those adverse conditions, and closing CARs upon completion of corrective action.

The inspectors noted that Spectrum's CAR document was used to identify an issue, report measures and actions taken to evaluate and resolve apparent conditions adverse to quality, and track required actions through completion. The CAR process included, but was not limited to actions such as: description of the issue, the owner of the CAR, investigation and evaluation documentation results, and prescribed action(s) to be taken.

QAP-19-001, "Part 21 Reporting," Revision 5, established the guidance and responsibilities to ensure compliance with and execution of Part 21 requirements.

#### b.2. Corrective Action Implementation

The inspectors reviewed QAP-16-001 and QAP-19-001 to determine how these procedures incorporated Part 21 requirements into Spectrum's corrective action program. QAP-16-001 did not require personnel to review the issue identified in a CAR to determine if a Part 21 evaluation was required. QAP-19-001, Section 2.2, stated in part, that all identified deviations or failures to comply shall be evaluated to determine if a defect or failure to comply associated with a substantial safety hazard exists. However, the inspectors noted that QAP-16-001 did not reference or include a mechanism to initially identify a potential Part 21 deviation for further evaluation using QAP-19-001. Additionally, supplier issues, the probable source of potential deviations, were not required to be formally documented in the CAR process.

The inspectors identified that the lack of procedural guidance to initially document a potential deviation in QAP-16-001 created the possibility for the failure to perform an evaluation as required by Part 21. The failure to prescribe an initial Part 21 screening process in QAP-16-001 is inconsistent with the regulatory requirements of Appendix B to 10 CFR Part 50, Criterion V. This issue was identified as Notice of Nonconformance (NON) 99901119/2008-201-02.

Spectrum issued CAR 08-05, "Spectrum Procedure for Nonconformance Reports does not Contain Part 21 Reporting Evaluation," to document the inspectors' concerns. Revision 4 to QAP-16-001 was completed and approved prior to completion of onsite NRC inspection activities. The inspectors noted that the changes required that: 1) a CAR's issue be initially evaluated for a potential deviation; 2) all CARs be issued through Spectrum's quality assurance manager; 3) supplier-related issues be formally documented on a CAR; and, 4) the CAR form contain a block requiring a response as to whether the issue is a potential deviation and the identification of any associated documentation. The inspectors found Spectrum's implemented corrective actions to be adequate. No additional response is required to address the nonconformance.

The inspectors reviewed the corrective actions associated with the CARs that documented one unresolved item and four nonconformances associated with the previous NRC inspection documented in NRC Inspection Report 99901119/2004-201.

The inspectors determined that Spectrum's corrective actions were adequate. No outstanding issues were identified and these items are considered closed.

c. Conclusion

Based on the review of Spectrum's corrective action process and Part 21 procedures, and a sample of CARs, the NRC inspectors concluded that strengthening the integration of Part 21 evaluation requirements into QAP 16-001 was necessary for Spectrum to adequately implement their corrective action program. The inspectors identified Notice of Nonconformance 99901119/2008-201-02, for the failure to adequately prescribe the initial Part 21 screening process. This deficiency was subsequently corrected by Spectrum, and a response is not requested.

3. Commercial-Grade Dedication

a. Inspection Scope

The inspectors reviewed Spectrum's QPM and the implementation process for commercial-grade dedication activities. This assessment included a review of the procedures governing the implementation of commercial-grade dedication activities, interviews with Spectrum personnel and a review of a sample of completed commercial-grade dedication packages.

The inspectors reviewed Spectrum's dedication process to ensure compliance with Part 21.

b. Observations and Findings

The inspectors noted that Job Number 07P3730/1, dated March 28, 2007, for a 100HP/460VAC Electric Motor to LaSalle Nuclear Power Station for Exelon Generation Company Order 00429577 failed to establish adequate acceptance criteria for the locked rotor current test. Spectrum identified in NCR 07P3730/1, dated March 28, 2007, that the locked rotor current test could not be completed to the motor's rated voltage due to testing equipment limitations. The inspectors determined through interviews with Spectrum personnel that the motor was tested by application of single-phase power to two of the motor's terminals. Institute of Electrical and Electronics Engineers (IEEE) Standard 112-2004 permits this test to be performed in lieu of mechanically locking the rotor to check the quality of squirrel-cage machines. The motor successfully completed the test, however, Spectrum's dedication plan failed to document the IEEE standard or list an acceptance criterion for the single-phase test. This issue has been identified as Nonconformance 99901119/2008-201-01.

The inspectors noted that Job Number 07P1630 for ¾in 316 stainless steel ball valves for Three Mile Island Nuclear Station Order 80023053 failed to document any engineering evaluation to justify the lack of testing in accordance with Spectrum Procedure GP0060, "Qualification by Similarity Analysis Procedure," Revision 3, dated August 20, 2007. Spectrum purchased the ball valves from an OEM as commercial-grade items. The items were dedicated by similarity analysis to verify form, fit, and function, to a previously dedicated valve. The inspectors noted that GP0060 required a Rockwell Hardness test for critical metallic parts which were identified in a technical memo stating the parts would be tested in accordance with GP0060. The dedication

package provided evidence that a different test was performed on the metallic parts (ElectroSpot). The inspectors determined that this test provided reasonable assurance of the material composition. However, the inspectors determined that Spectrum did not provide engineering justification for acceptability of the ElectroSpot method in lieu of hardness testing. This issue has been identified as Nonconformance 99901119/2008-201-03.

The inspectors reviewed the dedication package for Job Number 08P0650, for a fuel injection pump for Arizona Public Service Company – Palo Verde, Purchase Order (PO) 500516712, The item was originally purchased and accepted as safety-related from Cooper Energy Services by Commonwealth Edison Company (ComEd) for the Zion Nuclear Station. Cooper Energy Services subsequently rebuilt the component under PO 809696. The item was obtained by ATC as a surplus item from Exelon (formerly ComEd) and was maintained in ATC's controlled inventory at its warehouse in Woodridge, Illinois. Spectrum purchased the item from the ATC warehouse and verified the safety-related status by performing a visual inspection and by evaluating the traceability documentation provided by the original utility. The documentation supported that Zion Nuclear Station purchased the item from Cooper Energy Services and accepted the item as safety-related. The documentation included the ComEd receipt inspection and Cooper Energy Services' certification.

In the review of the records associated with this dedication the inspectors identified that Cooper Energy Services stated that the repair work is safety-related and 10 CFR Part 21 is not applicable. However, the contractor/vendor shall notify ComEd when problems or nonconforming conditions are identified subsequent to the repair. The Part 21 requirements will be the responsibility of the licensee.

Cooper Energy Services performed repairs and dedicated the item under an Appendix B to 10 CFR Part 50 program and was aware that the item was a basic component (safety-related). Therefore, Spectrum should have verified Cooper Energy Services was aware of its responsibility under Part 21 to notify end-users of any potential deviations with the supplied item. The failure to adequately verify the documentation associated with JN08P0650 is inconsistent with the regulatory requirements of Appendix B to 10 CFR Part 50, Criterion VII. This issue has been identified as Nonconformance 99901119/2008-201-04.

The inspectors noted that Job Number 08P1630, for a Barton 288A/224 pressure switch for the Fermi Nuclear Generating Station for Detroit Edison Company PO 4700114545, failed to provide traceability to the OEM. Spectrum purchased the commercial-grade pressure switch from The Park Company. Spectrum contracted Differential Pressure Instruments, Inc. to replace the internals of the switch, including 316 stainless steel bellows, allowing for a 1500 psi safe working pressure with a -7 to +2 psid input range. As a note, the external pressure retaining portion of the Barton switch is the same for all units. Spectrum performed Method 1 dedication on the switch. The PO for the pressure switch required Spectrum to provide traceability to the OEM. However, the inspectors noted that Spectrum did not provide traceability to the OEM in accordance with Spectrum's QAP-7-001, "Control of Purchased Material, Equipment and Services," Revision 6, dated September 12, 2006. This issue has been identified as Nonconformance 99901119/2008-201-05.



The inspectors did not identify any significant issues with the following dedication packages:

- Job Number 07P2630 for a Cutler-Hammer standard shaft for use with Vari-depth handle mechanism assembly (Part Number 47A4446G36) for Shearon Harris Nuclear Plant for Progress Energy PO 00340952
- Job Number 07P3180 for a Barton 227a indicator for Turkey Point for Florida Power and Light PO 00107877
- Job Number 07P3260 for Barton 227a indicators with 224 differential pressure indicators for Turkey Point for Florida Power and Light PO 00107984
- Job Number 08P0780 for 480VAC, 175A, 2-pole molded-case circuit breakers (Part Number TFJ224175WL) for Cooper Nuclear Station for Nebraska Public Power District PO 4500085255
- Job Number 08P1520 for a bolt, nut, and washer for Point Beach for Florida Power and Light PO 00022093

c. Conclusion

The inspectors determined through review of dedication packages for various items that Spectrum is generally implementing a commercial-grade dedication process in compliance with regulatory and industry guidance and Spectrum's quality program requirements as documented in its QPM and implemented by its procedures. However, the inspectors identified NON 99901119/2008-201-01 for failure to establish an adequate acceptance criterion related to the dedication process, NON 99901119/2008-201-03 for failure to document any engineering evaluation in lieu of testing, NON 99901119/2008-201-04 for failure to adequately review documentation from a third-party supplier, and NON 99901119/2008-201-05 for failure to provide traceability to the OEM as part of the dedication process.

4. Audits

a. Inspection Scope

The inspectors reviewed Spectrum's last audit of the ATC Woodridge warehouse facility conducted August 23-24, 2005, as part of the review of a dedication package. The inspectors also reviewed a sample of Spectrum's internal audits and corresponding procedures.

b. Observations and Findings

As part of the review of dedication package the inspectors reviewed Spectrum's last audit of the ATC Woodridge warehouse facility conducted August 23-24, 2005. As required, Spectrum had audited the ATC Woodridge warehouse facility's handling and storage procedures and practices and found the facility to be in compliance with Appendix B of 10 CFR Part 50 for establishing proper maintenance and storage of safety-related equipment. The ATC Woodridge warehouse facility was on Spectrum's

approved supplier list (ASL). However, the inspectors noted that the audit report did not cover all relevant criteria of Appendix B to 10 CFR Part 50. The audit report did not provide any explanation why certain criteria were not addressed. The inspectors discussed with Spectrum's quality assurance manager why the following criteria were not part of the audit: 1) quality assurance program; 2) instructions, procedures, and drawings; 3) identification and control of materials, parts, and components; 4) control of measuring and test equipment (M&TE); and 5) audits.

The inspectors identified that Spectrum did not conduct a thorough audit of ATC's Woodridge warehouse facility. The failure to adequately conduct a comprehensive audit to verify compliance with all aspects of the ATC Woodridge warehouse facility's quality assurance program to adequately determine the effectiveness of the program is inconsistent with the regulatory requirements of Appendix B to 10 CFR Part 50, Criterion XVIII. This issue was identified as Nonconformance 99901119/2008-201-06.

As discussed in section 1.b. of this inspection report, Spectrum's internal audit identified issues with its Part 21 program. The inspectors determined that Spectrum's internal audit process adequately implemented the quality assurance program.

c. Conclusion

The inspectors concluded that with the exception of NON 99901119/2008-201-06 for an inadequate audit of a supplier, Spectrum's audit program requirements are generally consistent with the regulatory requirements of Criterion XVIII of Appendix B to 10 CFR Part 50.

5. Exit Meeting

On August 1, 2008, the inspectors presented the inspection scope and findings during an exit meeting with ATC, Utilities Service Division, President, George Kuhn, and other Spectrum personnel.

## ATTACHMENT

### 1. PERSONS CONTACTED

G. Kuhn, President, Utilities Services Division, ATC  
R. Reynolds, Quality Assurance Manager, Spectrum  
M. Buel, Division Quality Manager, Utilities Services Division, ATC  
R. Kaylor, Business Development Manager, Utilities Services Division, ATC  
R. Lane, Vice President Operations, Utilities Services Division, ATC

### 2. INSPECTION PROCEDURES USED

Inspection Procedure (IP) 36100, "Inspection of 10 CFR Parts 21 and 50.55(e) Programs for Reporting Defects and Noncompliance"  
IP 38703, "Commercial Grade Dedication"  
IP 43004, "Inspection of Commercial-Grade Dedication Programs"

### 3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

The NRC performed an inspection of Spectrum's facility in Schenectady, New York, on February 2 – 5, 2004. During that inspection, the NRC identified five nonconformances and one unresolved item. All previous nonconformances and unresolved items were closed prior to this inspection.

<u>Item Number</u>	<u>Status</u>	<u>Type</u>	<u>Description</u>
99901119/2008-201-01	Open	NON	Criterion III
99901119/2008-201-02	Open	NON	Criterion V (No Response Requested)
99901119/2008-201-03	Open	NON	Criterion V
99901119/2008-201-04	Open	NON	Criterion VII
99901119/2008-201-05	Open	NON	Criterion VII
99901119/2008-201-06	Open	NON	Criterion XVIII

### 4. LIST OF ACRONYMS USED

ATC	Argo Turboserve Corporation
CAR	Corrective Action Request
CFR	Code of Federal Regulations
DE	Division of Engineering
GL	Generic Letter
IP	Inspection Procedure
IEEE	Institute of Electrical and Electronics Engineers
NCR	Nonconformance Report
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
NON	Notice of Nonconformance
OEM	Original Equipment Manufacturer
PO	Purchase Order
QA	Quality Assurance
QAP	Quality Assurance Procedure
QPM	Quality Program Manual