

June 9, 2009

Mr. Raul Terceno, Quality Assurance Manager  
Wyle Laboratories  
7800 Highway 20 West  
Huntsville, AL 35806

SUBJECT: NRC INSPECTION REPORT NO. 99900905/2009-201, AND NOTICE OF  
NONCONFORMANCE

Dear Mr. Terceno:

On April 13–17, 2009, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Wyle Laboratories' (Wyle) facility in Huntsville, AL. The enclosed report presents the results of this inspection.

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

Based on the results of this inspection, the NRC inspectors found that the implementation of your Quality Assurance (QA) program failed to meet certain NRC requirements imposed on you by your customers. Specifically, the NRC inspectors determined that Wyle's implementing actions for the control of measuring and test equipment were inadequate. The enclosed Notice of Nonconformance cites the specific finding and reference to the requirements of Appendix B, and the enclosed inspection report discusses the circumstances surrounding the finding.

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 Notice of Nonconformance. We will consider extending the response time if you show good cause for us to do so.

In accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding," 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 Agencywide Documents Access and Management System, which is accessible from the NRC Web site 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 copy of your response that identifies the information that should be protected in brackets and a redacted copy of your response that deletes such information. If you request that such material be 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., you should 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, "Protection of Safeguards Information: Performance Requirements."

Sincerely,  
*/RA/*

Juan Peralta, Chief  
Quality and Vendor Branch 1  
Division of Construction Inspection  
& Operational Programs  
Office of New Reactors

Docket No. 99900905

Enclosures:

1. Notice of Nonconformance
2. Inspection Report No. 99900905/2009-201

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Sincerely,  
/RA/

Juan Peralta, Chief  
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<b>DATE</b>	6/03/2009	5/28/2009	6/9/2009	

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## NOTICE OF NONCONFORMANCE

Wyle Laboratories  
7800 Highway 20 West  
Huntsville, AL 35806

Docket No. 99900905  
Inspection Report No. 2009-201

Based on the results of a U.S. Nuclear Regulatory Commission (NRC) inspection conducted at the Wyle Laboratories' (Wyle) Huntsville, AL, facility on April 13–17, 2009, the NRC inspectors found that certain activities were not conducted in accordance with the following NRC requirements which were contractually imposed on Wyle by NRC licensees.

Criterion XII, "Control of Measuring and Test Equipment," of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," states, in part, that measures shall be established to ensure that tools, gauges, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits.

Section 12 of the Wyle Quality Assurance Program Manual, "Control of Measuring and Test Equipment," Revision 2, dated August 1, 2001, states, in part, that, when inspection, measuring, and test equipment is found to be out of tolerance, an evaluation shall be made and documented regarding the validity of previous inspection or test results and the acceptability of items previously inspected or tested.

Quality Directive XII-1, "Control of Measuring and Test Equipment," Revision 0, dated April 18, 2008, states, in part, that an out-of-tolerance piece of measuring and test equipment must be documented on a Notification of Out-of-Tolerance Record (Wyle Form WH-1140), and a job tracking history record (listing jobs on which the out-of-tolerance measuring and test equipment was used) must be developed. The assigned project engineer must locate and review all tests for which the out-of-tolerance instrumentation was used and determine whether the test data were affected.

Contrary to the above, as of April 17, 2009, Wyle failed to implement its procedures to control measuring and test equipment as required. Specifically, the NRC inspectors noted the following:

Wyle's records for out-of-tolerance instrumentation provided no objective evidence that the company had performed the required evaluations for all tests in which the out-of-tolerance instrumentation was used. Furthermore, the NRC inspectors noted in the Notification of Out-of-Tolerance Record Control No. 16-008, dated August 6, 2008, that the evaluation of out-of-tolerance instrumentation had been performed by a calibration laboratory supervisor, and not by the project engineer as required by Quality Directive XII-1.

These issues are identified as nonconformance 99900905/2009-201-01.

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 Chief, Quality and Vendor Branch 1, Division of Construction Inspection and Operational Programs, Office of New Reactors, 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 (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 noncompliances; and (4) the date when your corrective action will be completed. Where good cause is shown, the NRC will consider 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 Agencywide Documents Access and Management System, which is 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 that such material be withheld, 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., you should 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, "Protection of Safeguards Information: Performance Requirements."

Dated this 9th day of June 2009

**U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF NEW REACTORS  
DIVISION OF CONSTRUCTION INSPECTION AND OPERATIONAL PROGRAMS  
VENDOR INSPECTION REPORT**

Docket No.: 99900905

Report No.: 99900905/2009-201

Vendor: Wyle Laboratories  
7800 Highway 20 West  
Huntsville, AL 35806

Vendor Contact: Mr. Raul Terceno  
Quality Assurance Manager  
(256)-837-4411, ext. 4483  
E-mail: [raul.terceno@wylelabs.com](mailto:raul.terceno@wylelabs.com)

Nuclear Industry: Wyle Laboratories (Wyle) is a supplier of safety-related testing services; safety-related equipment; engineering; and research and consulting services to utilities, the U.S. Navy, and power plant equipment manufacturers throughout the world.

Inspection Dates: April 13–17, 2009

Inspectors: Greg Galletti NRO/DCIP/CQVP, Lead Inspector  
Kenneth Heck NRO/DCIP/CQVP  
Neil Day NRO/DCIP/CQVP  
Raju Patel NRO/DCIP/CQVP  
John Bartleman Region II/CIB3  
Tim Steingass NRO/DE/CIB2

Approved by: Juan Peralta, Chief  
Quality and Vendor Branch 1  
Division of Construction Inspection  
& Operational Programs  
Office of New Reactors

## **EXECUTIVE SUMMARY**

Wyle Laboratories  
99900905/2009-201

The purpose of this inspection was to verify that Wyle Laboratories (Wyle) implemented an adequate quality assurance (QA) program that complied with the requirements of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities." The inspection also verified that Wyle implemented a program under 10 CFR Part 21, "Reporting of Defects and Noncompliance" (hereafter referred to as the Part 21 program), that met the regulatory requirements of the U.S. Nuclear Regulatory Commission (NRC). The inspection was conducted at Wyle's Eastern Operations facility in Huntsville, AL.

The bases for the NRC inspection included the following:

- 10 CFR Part 21
- Appendix B to 10 CFR Part 50

The NRC inspectors implemented Inspection Procedure 43002, "Routine Inspections of Nuclear Vendors," and Inspection Procedure 36100, "Inspection of 10 CFR Part 21 and 50.55(e) Programs for Reporting Defects and Noncompliance," during the conduct of this inspection.

The last NRC inspection performed at Wyle's facility in Huntsville, AL was documented in NRC Inspection Report 99900902/95-02, dated February 6, 1995. The report did not document any findings.

With the exception of the area described below, the NRC inspectors concluded that Wyle's QA policies and procedures comply with the applicable requirements of 10 CFR Part 21 and Appendix B to 10 CFR Part 50 and that Wyle personnel are implementing these policies and procedures effectively.

### **Control of Measuring and Test Equipment**

The NRC inspectors issued Nonconformance 99900905/2009-201-01 for Wyle's failure to implement its procedures for controlling measuring and test equipment, as required by the vendor's Quality Assurance Program Manual and associated implementing procedures.

## REPORT DETAILS

### 1. 10 CFR Part 21 Program

#### a. Inspection Scope

The NRC inspectors reviewed the policies and implementing procedures of Wyle Laboratories (Wyle) that govern the program to verify compliance with the requirements 10 CFR Part 21. In addition, the NRC inspectors evaluated a sample of Wyle's purchase orders (POs) for compliance with the requirements of 10 CFR 21.31, "Procurement Documents," and verified the vendor's implementation of the posting requirements in accordance with 10 CFR 21.6, "Posting Requirements." Specifically, the NRC inspectors reviewed the following Wyle policies and procedures:

- Quality Assurance Program Manual (QAPM), Section 4.5, "10 CFR Part 21—Reporting Defects," Revision 2, dated August 1, 2001
- QAPM, Section 19, "Reporting of Defects and Noncompliance in Accordance with Title 10, Code of Federal Regulations, Part 21," Revision 3, dated March 30, 2009
- Quality Directive (QD) XIX-1, "Reporting of Defects and Noncompliance Per 10 CFR Part 21," Revision E, dated March 3, 2009
- QD XVI-1, "Corrective Action Program," Revision F, dated March 31, 2009
- QD XV-2, "Notice of Anomaly," Revision G, dated March 31, 2009

#### b. Observations and Findings

##### b.1. Postings

The NRC inspectors evaluated Wyle's compliance with the posting requirements of 10 CFR 21.6. The NRC inspectors found that Wyle posted Section 206 of the Energy Reorganization Act of 1974 and a notice describing the regulations and procedures, the location where the regulations and procedures could be examined, and instructions regarding to whom reports of a failure to comply or a defect should be directed. The NRC inspectors verified that these postings were consistent with the requirements defined in Section 19.3, "Posting," of the QAPM. However, the NRC inspectors noted that QD XIX-1, Revision E, states, in part, that Section 206 of the Energy Reorganization Act, 10 CFR Part 21, and the latest revision of QD XIX-1 shall be posted, which differs from the QAPM requirements and observed facility practice. The NRC inspectors discussed the issue with the Wyle quality assurance (QA) manager, who initiated a revision to the QD posting description to be consistent with the QAPM requirements and current site practice.

##### b.2. 10 CFR Part 21 Procedure

QD XIX-1 establishes the process and responsibilities for identifying, controlling, documenting, and resolving conditions for reporting defects and noncompliances discovered at Wyle or in products returned by customers. The procedure describes the specific actions taken if the noncompliance is discovered during testing of specimens provided by the customer as well as



for any noncompliance discovered during the implementation of the Wyle TPQ (Dedication) process.

The NRC inspectors also evaluated the interface between the Wyle corrective action and nonconformance processes and the Part 21 program process. Section 5.2 of QD XVI-1 states that corrective action reports (CARs) (Wyle Form WH-1370) should be forwarded to the Part 21 program coordinator if the initiator believes a condition may exist in which a deviation or failure to comply could lead to a potential safety hazard. Attachment 7.1, "Detailed Instructions," also provides guidance concerning the applicability of a condition adverse to quality, including specific actions for the QA manager to use in screening all CARs for 10 CFR Part 21 applicability.

Similarly, Section 1.0 of QD XV-2 provides additional guidance for evaluating the nonconformance or defect for possible action under 10 CFR Part 21. Attachment 7.2, "Notice of Anomaly" (Wyle Form WH-1066), to QD XV-2 includes provisions for the nonconformance originator to identify the activity or component associated with the nonconformance as safety related and the Part 21 program coordinator to evaluate the nonconformance for potential 10 CFR Part 21 applicability.

The NRC inspectors discussed Wyle's Part 21 program with the Wyle QA manager, Part 21 program coordinator, and staff personnel. The NRC inspectors determined that QD XVI-1 and QD XV-2 contain adequate procedural guidance to initiate Wyle's 10 CFR Part 21 process when a CAR or nonconformance evaluation indicates that a reportable defect might exist. The NRC inspectors also determined that Wyle's staff was knowledgeable about conditions that would warrant a 10 CFR Part 21 evaluation.

### b.3. 10 CFR Part 21 Implementation

The NRC inspectors reviewed a sample of Wyle Part 21 program reports. The inspectors verified the timeliness of review, thoroughness and adequacy of the evaluations, appropriate management and technical staff involvement, and final disposition, including a review of information provided in the reports in accordance with 10 CFR 21.21(d)(4). The sample of reports reviewed included the following:

- Wyle Letter, Reference No. EWS-GT21-020, Irradiation Performed with the Cobalt-60 Sources in GT Hot Cell, dated May 22, 2002
- Potential Part 21 on Bussmann KWN-R Fuses, dated September 27, 2005
- Potential Degradation of Hydraulic Snubber Fluid, dated January 3, 2007
- Siemens 1200A Circuit Breakers, dated April 21, 1998

The NRC inspectors also reviewed a sample of evaluations performed on issues identified through the CAR and nonconformance processes and confirmed adequate disposition of issues associated with these evaluations, including timely notification of customers when Wyle was not capable of performing the evaluation. The NRC inspectors did not identify any issues associated with the development and conduct of Part 21 program reports or evaluations.

b.4. Purchase Orders

Section 4.5 of Wyle's QAPM requires POs to include the 10 CFR Part 21 requirements, as appropriate. Wyle imposes the provisions of 10 CFR Part 21 on its qualified suppliers, requiring them to have programs meeting the requirements of Appendix B to 10 CFR Part 50. All reviewed POs contained the 10 CFR Part 21 provisions.

The NRC inspectors reviewed several Wyle and Wyle supplier POs and verified that Wyle had implemented a program consistent with the requirements described in 10 CFR 21.31 for specifying the applicability of 10 CFR Part 21 in its POs.

c. Conclusions

The NRC inspectors concluded that Wyle's Part 21 program requirements were consistent with the regulatory requirements of 10 CFR Part 21 and were being effectively implemented.

2. Procurement Document Control

a. Inspection Scope

The NRC inspection team reviewed Wyle's QA program commitments and controls for procurement of material, equipment, and services from its suppliers to verify compliance with Criterion IV, "Procurement Document Control," of Appendix B to 10 CFR Part 50. The scope of the inspection evaluated the effectiveness of quality and administrative controls for contracts from 2007 through 2008 with respect to the imposition of adequate technical, regulatory, and reporting requirements. The NRC inspection team reviewed selected project files and discussed related documents and activities with responsible Wyle personnel.

Within the scope of this inspection, the NRC inspection team reviewed the following Wyle policies, procedures, and contracts:

- QAPM, Section 4, "Procurement Document Control," Revision 2, dated August 1, 2001
- QD IV-1, "Procurement of Safety-Related and Commercial Grade Materials, Services and Instrumentation," Revision F, dated March 31, 2009
- Internal Operating Procedure for the Contracts Department, Revision I, issued December 2007
- Internal Operating Procedure for Purchasing and Subcontracting, Revision 5, issued May 2007
- Job T54176, PO 0297363, "Crystal River/Cyclone Separator Qualification Testing," dated March 15, 2007
- Job T55453, PO 71729, "Flow Serve/Target Rock Valve Test," dated February 12, 2008
- Job T55792, PO 0379420, "Progress Energy/Third Part Qualification," Circuit Breakers, dated November 10, 2008

- Job T55942, PO 255234, "SPX Flow Control/Squib Valve Functional Testing," dated July 18, 2008

b. Observations and Findings

b.1. Policies and Procedures Governing the Procurement Process

Section 4 of the Wyle QAPM establishes requirements and assigns responsibilities for the control of procurement documents, including purchase authorizations and POs for nuclear safety-related items, materials, and services; instrumentation; and calibration. Procurement documents specify supplier quality requirements and the elements of the QA program applicable to the items procured. Procurement documents identify basic technical requirements, such as drawings, specifications, and codes and industrial standards. Contract provisions include documentation requirements, review of procurement documents and changes thereto, and access to supplier facilities for the purpose of inspection, surveillance, or audit. Contract provisions also include the extension of contract requirements to lower tier suppliers, right of access to subcontractor facilities, and imposition of 10 CFR Part 21 reporting requirements.

QD IV-1 supplements the requirements of the Wyle QAPM by providing specific guidance for the preparation, review, and approval of procurement documents and revisions thereof. The Wyle purchasing department maintains the original procurement documentation and a copy of completed QA procurement reviews, as required by Wyle Form WH-1220.

The Wyle internal procedure for purchasing and subcontracting provides specific guidance for initiating, implementing, and completing business transactions with suppliers to acquire goods and services in support of Wyle operations. Purchasing agents are directly responsible for processing purchase authorizations, soliciting quotations, preparing orders, and ensuring that specified supplies and services are obtained. The purchasing department works with the operations and administrative departments to fully define requirements, maintains a database of approved suppliers, and ensures that materials and services ordered meet Wyle quality standards. The purchasing department also works with the shipping and receiving department regarding deliveries and actions taken on nonconforming items.

The NRC inspection team determined that the Wyle QAPM and supplemental directives adequately describe how the company's QA program satisfies the requirements of Criterion IV of Appendix B to 10 CFR Part 50, and that associated procedures adequately implement the procurement process.

b.2. Review of Procurement Documents

The NRC inspection focused on two principal areas of services that Wyle provides to the nuclear industry: (1) nuclear valve testing and engineering and (2) commercial-grade dedication. Valve services include retrofit evaluation, obsolete parts replication and qualification, and refurbishment of valves received for recertification. Commercial-grade dedication involves dedication of retrofit equipment and replacement parts no longer available as nuclear grade from the original sources.

Procurement of safety-related items and services by Wyle is generally associated with projects performed under contract. For valve services, original equipment manufacturers (e.g., Dresser, Target Rock) maintain a staff on site and provide expert services for valve part replacement

under the direction of Wyle engineers and management. For commercial-grade dedication and qualification services, the customer generally supplies or specifies the equipment.

The Wyle quality assurance and engineering departments maintain the project files for Wyle service contracts, which document project history from initial contract negotiation through delivery, generally in the form of a test report or certificate of conformance. The Wyle contract administration department also maintains a record copy. Complete files provide both administrative and technical documentation for the contract and associated Wyle procurement documentation for safety-related items. The NRC inspection team selected nine project files (some of which are listed above), representative of Wyle's scope of services, for review. The NRC found that the files adequately documented the procurement requirements as established by the governing policies and procedures. Documentation included task definitions and responsibilities; imposition of appropriate quality, technical, and regulatory requirements; and identification of applicable codes and standards. The inspectors also found that the documentation adequately defined contract deliverables, dispositioning of nonconformances, access rights, and extension of contractual requirements to subcontractors. The Wyle staff performed QA reviews and approvals, as procedurally required.

c. Conclusions

The NRC inspection team concluded that Wyle's procurement document control process conforms to the regulatory requirements of Criterion IV of Appendix B to 10 CFR Part 50 and was implemented in accordance with applicable Wyle policies and procedures. No findings of significance were identified.

3. Control of Purchased Material, Equipment, and Services

a. Inspection Scope

The NRC inspection team reviewed Wyle's QA program commitments and controls for purchased material, equipment, and services to verify compliance with Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50. Within the scope of this inspection, the NRC inspection team reviewed the following Wyle policies, procedures, and documents:

- QAPM, Section 7, "Control of Purchased Material, Equipment, and Services," Revision 2, dated August 1, 2001
- QD IV-1, "Procurement of Safety-Related and Commercial Grade Materials, Services and Instrumentation, Revision F, dated March 31, 2009
- QD VII-1, "Supplier Evaluation and the Approved Supplier List," Revision G, dated June 19, 2006
- QD VII-2, "Source Surveillance and Inspection," Revision B, dated October 10, 2006
- QD XIV-1, "Receiving Inspection," Revision H, dated October 28, 2004
- Nuclear Environmental Qualification (NEQ)-409, "Wyle Third Party Qualification/Dedication Process," Revision G, dated May 22, 2002

- Approved Supplier List, Level A, dated March 28, 2009
- Wyle Active Job List, “Environmental Qualification and Third Part Qualification,” Department 593, dated April 13, 2009
- Wyle Active Job List, “Nuclear Testing Services,” Department 544, dated April 15, 2009

b. Observations and Findings

b.1. Policies and Procedures for Purchased Material, Equipment, and Services

Section 7 of the Wyle QAPM establishes requirements and assigns responsibilities for the control of purchased materials, equipment, and services. The QA program requires establishment of a quality program to ensure that purchased items and services conform to the specifications identified in the procurement documents. This is accomplished through inclusion of provisions for source evaluation and selection; objective evidence of quality; source inspection, audit, or surveillance; and examination of items or services upon delivery.

QD IV-1, QD VII-1, QD VII-2, and QD XIV-1 provide supplementary requirements to Section 7 of the QAPM. QD IV-1 provides specific requirements for the preparation, review, and approval of procurement documents and revisions thereof. QD VII-1 provides requirements for evaluating prospective new suppliers, reevaluating current suppliers, and maintaining the Approved Supplier List (ASL). QD VII-2 establishes a standard process for performing source surveillances and inspections of nuclear safety-related materials, items, or services. QD XIV-1 establishes a standard process for planning, performing, and documenting receipt inspection.

The NRC inspection team reviewed these documents and determined that the QAPM and supplemental directives adequately describe how the Wyle QA program satisfies the requirements of Criterion VII of Appendix B to 10 CFR Part 50.

b.2. Review of Supplier Evaluation Files

QD VII-1 requires that a supplier evaluation file be maintained for each supplier of Level A products or services (i.e., nuclear safety-related materials, items, or services; American Society of Mechanical Engineers (ASME) Code materials, items, or services; and commercial-grade materials, items, or services that may be used in nuclear safety-related applications). Each evaluation file for Level A suppliers should contain a supplier evaluation worksheet, audit reports, and pertinent supplier information. The NRC inspection team selected evaluation files for five Level A suppliers. The review verified performance of the required annual evaluations and triennial audits and confirmed that the Wyle QA department had evaluated the supplier’s Appendix B program. The files also contained references to POs and supplementary documentation to support the evaluations. The inspector’s review of supplier evaluation files did not identify any findings of significance.

b.3. Control of Ongoing Work Activities

The NRC inspection team reviewed work in process for Department 593, Environmental Qualification (EQ) and Third Party Qualification (TPQ), and Department 544, Nuclear Testing Services. Section 5, “Test Control,” of this report describes the details of these reviews. NRC inspectors confirmed correct identification of Wyle job numbers and customer POs for all jobs in Department 593. The inspectors also reviewed travelers, test reports, receipt inspection

reports, and shipping reports, including documentation such as certificates of conformance. In Department 593, the inspectors reviewed areas for receiving and shipping; areas reserved for segregating nonconforming materials; and areas for holding jobs pending subcontracted services (such as material testing and irradiation) and items pending further customer direction. The inspectors reviewed the enclosure for retaining original qualified items and another enclosure for stocking qualified components, pending customer orders. Wyle performs homogeneity inspections on previously qualified commercial items, in accordance with NEQ-409. The inspection team noted that NEQ-409 incorporates NRC Information Notice No. 89-70 and Supplement, "Possible Indications of Misrepresented Vendor Parts," dated October 11, 1989.

c. Conclusions

The NRC inspection team concluded that Wyle's controls for purchased material, equipment, and services conform to the regulatory requirements of Criterion VII of Appendix B to 10 CFR Part 50 and were implemented in accordance with applicable Wyle policies and procedures. No findings of significance were identified.

4. Control of Special Processes

a. Inspection Scope

The NRC inspectors reviewed Wyle's QA policies and implementing procedures that govern the performance of nondestructive examinations and nondestructive examination personnel to verify compliance with applicable regulatory requirements. Specifically, the NRC inspectors reviewed the following Wyle procedures:

- Wyle QA-VT-1-001, "Test Procedure for VT-1 Examinations," dated March 5, 1998
- Wyle QA-NDE-001, "Liquid Penetrant Inspection, Color Contrast," Revision B, dated November 15, 2002
- Wyle QA-VT3-001, "Visual Examination Procedure," Revision 0, dated February 13, 1998

The NRC inspectors also reviewed the qualification records and annual eye examinations of Wyle nondestructive examination technicians, maintenance of welder qualifications, and procedures applicable to weld procedure and welder qualification, in accordance with the requirements of ASME Code, Section IX.

b. Observations and Findings

Procedure No's QA -VT-1-001 and QA-VT3-001 provide the methodology for performing VT-1 and VT-3 visual examinations of components. The NRC inspectors noted that the procedures provided adequate guidance for identification of welding flaws, corrosion, and damage resulting from service failure. The NRC inspectors also noted that the procedures provided adequate controls, including recording criteria, acceptance and rejection criteria, identification of nonconformances, and notification of the customer, in accordance with the requirements of ASME Code, Sections III, V, and XI.

The NRC inspectors reviewed the qualification of welding procedures and maintenance of welder qualifications in accordance with Section IX of the ASME Code. During the review of the

welder qualification records, the NRC inspectors reviewed a sample of welder qualification cards that documented the generic process for which the welders are qualified. In addition, the NRC inspectors reviewed qualification records which documented welder qualifications for specific welding procedures. The NRC inspectors did not identify any findings in this area.

The NRC inspectors witnessed the performance of a visible dye penetrant examination using vendor-supplied procedure QPT-001, Revision 44, on Dresser Valve BS06248. The NRC inspectors noted that the nondestructive examination complied with procedural requirements, such as temperature, lighting, cleaning, and dwell time, and that the measuring and test equipment used had valid calibration stickers. The NRC inspectors concluded that the technician performed the examination in accordance with the procedure and identified no adverse conditions.

The NRC inspectors reviewed the qualification records of nondestructive examination personnel to verify recertification of these personnel every 3 years, in accordance with 10 CFR 50.55a(b)(2)(xviii)(A). The NRC inspectors noted that Wyle performed and maintained recertification of the nondestructive examination personnel in accordance with the requirements of ASME Code, Section XI, and CP-189, "Standard for Qualification and Certification of Nondestructive Testing Personnel."

During the review of a sample of annual eye examination records, the NRC inspectors noted that the records for two employees qualified to perform visual examination indicated five occurrences in which their eye examinations exceeded the 12-month requalification limit. Upon discussion of this issue with Wyle management, the QA manager presented the NRC inspectors with CAR 07-009, dated May 29, 2007, documenting this discrepancy. The NRC inspectors reviewed the actions taken to prevent recurrence and found them to be acceptable. Since this nonconformance was self-documented and corrected, no finding was identified by the NRC inspectors.

c. Conclusions

The NRC inspection team concluded that Wyle's program requirements for special processes are consistent with Criterion IX, "Special Process," of Appendix B to 10 CFR Part 50. Based on the limited sample of special process documents and activities reviewed, the NRC inspectors determined that the Wyle QAPM and associated welding and nondestructive examination procedures were being effectively implemented. No findings of significance were identified.

5. Inspection

a. Inspection Scope

The NRC inspectors reviewed Wyle's QA policies and implementing procedures that govern the performance of inspection activities to verify their compliance with the requirements of Criterion X, "Inspection," of Appendix B to 10 CFR Part 50. Specifically, the NRC inspectors reviewed the following Wyle policies and procedures:

- QAPM, Section 10, "Inspection," Revision 3, dated March 30, 2009
- QD XIV-1, "Receiving Inspection," Revision H, dated October 28, 2004
- QD XII-1, "Control of Measuring and Test Equipment," Revision O, dated April 18, 2008

- QD XIV-2, "Planning, Performing, and Documenting Holdpoint Inspections," Revision A, dated January 1, 2000
- NEQ-403, "Third Party Qualification Receiving and Component Homogeneity Inspections," Revision E, dated February 5, 2002

The NRC inspectors reviewed a sample of POs, receiving inspection reports (Wyle Form WH-1103), completed QA requirements (Wyle Form WH-1220), packing slips, sales invoices, Wyle bar codes, certificates of conformance, calibration certificate documentation, TPQ test reports, and SRV test control records (TCRs), and observed inspection activities at Wyle to verify effective implementation of such requirements.

b. Observations and Findings

The NRC inspectors reviewed sections of the Wyle QAPM and associated implementing QDs to verify that Wyle maintains a program that effectively controls examinations and measurements that were used to verify whether an item or activity conformed to specified requirements. Wyle's QAPM establishes controls to ensure that activities affecting quality conform to documented instructions, procedures, and drawings. Inspections are performed by Wyle technicians in accordance with prescribed procedures for receiving, in-process and final inspections.

b.1. Receiving Inspection

QD XIV-1 describes the process for performing receiving inspections. This procedure establishes responsibilities and standard direction for inspecting specimens, test equipment, instrumentation, materials, items and services, and consumables for use in technical operation of the laboratory. All items are required to go through a receiving inspection that includes verifying that (1) all documentation contains the correct part and item numbers, (2) the shipping package and item are free of damage, and (3) a certificate of conformance contains part and item numbers of the received items with applicable procurement requirement information.

QD XII-1 defines the requirements, establishes organizational responsibilities, and provides standard direction to ensure that tools, gauges, instruments, and other measuring and testing devices affecting quality are properly controlled, calibrated, adjusted, and repaired as required to maintain accuracy within specified limits. Regarding the purpose of the receiving inspection, the QD provides guidance to calibration laboratory personnel relevant to their portion of the receiving inspection process.

NEQ-403 describes the process of performing receiving and component homogeneity inspections for Wyle's TPQ program. All items received for TPQ are subjected to inspection and testing. This procedure, along with the Wyle receiving inspection report (WH-1103), ensures verification of the PO part number with the part number identified on the packing box or on the item and documents, the applicable identification and traceability of the item on the receiving inspection report. The inspection process consists of physical inspection for any damage or missing hardware that would impair the structural or electrical integrity of an item.

The NRC inspectors observed and reviewed receipt inspection of several POs that were documented on TCRs associated with SRV testing, as well as TPQ receiving inspection reports. The NRC inspectors observed that the Wyle receipt inspector verified dimensional aspects of the item, verified the item's receiving condition, identified item number and part number



documentation on the PO and packing slip, and verified existence of a certificate of conformance for each specimen. The Wyle QA inspector also verified that the items received were correctly documented, in accordance with the TCR, during the receipt activities and in-progress holdpoints. The SRV test facility performs its own receiving inspection because of the potential size and radiological contamination of the items. Wyle personnel placed acceptable received items in a designated area to ensure proper accountability. These items were identified by QA test specimen tags along with the TCR, which provided evidence of the receipt inspection.

#### b.2. In-Process and Final Inspections

QD XIV-2 describes the process of establishing responsibilities and providing standard direction for planning, performing, and documenting holdpoint inspections. This procedure requires the establishment of testing requirements and the development of a TCR for each test. The project engineer is responsible for developing the test's sequential order and establishing QA holdpoints throughout the testing sequence. The next step in the sequence cannot be completed until the QA holdpoint is signed, even during nonworking hours. QA personnel must also perform a final post-test inspection after the TCR test sequence is complete.

The NRC inspectors reviewed several TCRs by verifying dates and preestablished QA holdpoints on the TCR. Each TCR reviewed contained two QA holdpoints—during receipt inspection and before final shipment. All reviewed TCRs adequately demonstrated the proper implementation of Wyle's QA procedures.

#### c. Conclusions

The NRC inspectors concluded that Wyle's program requirements for inspection are consistent with the regulatory requirements of Criterion X of Appendix B to 10 CFR Part 50. Based on the limited sample of inspection documents reviewed and observed activities, the NRC inspectors determined that Wyle was effectively implementing its QAPM and associated inspection procedures. No findings of significance were identified.

#### 6. Test Control

##### a. Inspection Scope

The NRC inspectors reviewed Wyle QA program commitments and controls for test programs designed to demonstrate that items will perform satisfactorily in service to assess compliance with the requirements of Criterion XI, "Test Control," of Appendix B to 10 CFR Part 50. Specifically, the NRC inspectors reviewed the following Wyle policies and procedures:

- QAPM, Section 11, "Control of Examination and Testing," Revision 2, dated August 1, 2001
- QD XI-1 "Test Control Program," Revision K, dated September 28, 2007
- QD V-1, "Instructions, Procedures, and Certification Reports," Revision K, dated March 31, 2009
- QD VIII-4, "Test Specimen Control," Revision C, dated September 1, 2001

- QD XV-2, "Notice of Anomaly," Revision G, dated March 31, 2009

The NRC inspectors observed in-process testing activities, such as valve qualification, and prototype performance testing and reviewed records for seismic and environmental testing. The NRC inspectors reviewed a sample of completed test records and compared them to the requirements of the applicable POs and customer specifications.

b. Observations and Findings

Section 11 of the Wyle QAPM establishes the responsibilities and requirements for the control for all testing activities. The program ensures that testing demonstrates that an item will perform according to established criteria. QD XI-1 supplements the QAPM for test control. Based on the review of a sample of PO packages, the NRC inspectors determined that completed tests were accomplished in accordance with Wyle test plans and procedures and customer design specifications.

b.1. Seismic and Environmental Testing

The inspectors reviewed and evaluated procedures, qualification plans, documentation, and testing activities associated with seismic and nuclear qualification testing activities performed at the Wyle facility on components and items supplied to the nuclear power industry or nuclear equipment manufacturers. Wyle personnel were conducting testing in accordance with QAPM, Section 11.

During review of a sample of recently completed test procedures, qualification plans, and completed test reports for testing and qualification orders, the NRC inspectors verified that the test reports adequately captured the information required by the test procedure and PO requirements. The sample of records reviewed included the following:

- Job No. 53298, "Seismic and NEQ Testing of Toshiba NRW-FPGA-Based PRM System," as outlined in Toshiba Corporation's Project Document #FPG-RQS-C51-00004, Revision 4, and Procurement Specification PN-0025126, Revision 4, dated September 21, 2006, and PO #MIT-P0610 and #MIT-P0610
- Job No. T54106, "Seismic Testing/Analysis Qualification of a 10" Bore Gas Charged Hydraulic Actuator and Design and Fabrication of Test Stand," as outlined in Ralph A. Hiller PO #NUC3164 and #NUC3345
- Job No. T54620, "Seismic Testing on a Siemens GM-SG Medium Voltage Switchgear Configuration," as outlined in Siemens Power Transmission and Distribution, Inc., PO #3443926 and #3440853
- Job No. T54626, "Perform Irradiation and DBA Testing of Coatings at the San Onofre Nuclear Generating Station," as outlined in Southern California Edison PO #6F247007
- Job No. T56354, "Qualification Testing and Design Engineering Activities in Support of the AP1000 Squib Valve Design Development," as outlined in Westinghouse Electric Co. PO #4500286395

## b.2. In-Process Testing

During the inspection, the NRC inspectors observed activities in Wyle's SRV test facility. The NRC inspectors observed activities such as receipt inspection, as-found testing, disassembly, decontamination, refurbishment, and certification testing. The NRC inspectors reviewed several in-process jobs—some unassembled and others assembled. All in-process job test specimens were identified with a QA test specimen tag, identifying Wyle job order number, customer name, serial number, and date and signature of QA technician. The NRC inspectors interviewed test personnel and project engineers related to the test procedure and the tests that were being conducted and determined that test personnel were knowledgeable of their test responsibilities. The NRC inspectors reviewed a sample of qualification records of the vendor's test technicians and project engineers. The qualification records found "in-house" reviews of personnel qualifications by vendor management.

The NRC inspectors observed that Wyle staff adequately verified and documented that (1) all test prerequisites, including equipment, materials, and test conditions (such as test temperature, pressure, and fluid condition) necessary for testing were met; (2) examinations were performed and relevant examination information recorded on the TCR, including the specific test procedure used, all test and calibration equipment used and the date of last calibration, and final test results; and (3) confirmation that the test fixture was correct, test instrumentation was adequate in terms of range and precision, test procedures used were reviewed, and acceptance criteria were adequately identified.

During walkdown of the SRV test facility, the NRC inspectors observed the as-received set pressure and seat leak operability test of SRV Model No. 7567F (under Entergy/Fitzpatrick PO #10231192, Wyle Job Order No. T56660) on SRV Test Cell Number 2. Wyle personnel performed the test in accordance with Entergy-approved Wyle Test Procedure WLTP-1116, Revision 0, dated July 25, 2003. The observation included installation, test preparation, pretest condition verification, and final instrumentation calibration. While observing the test from the test control room, the NRC inspectors witnessed implementation of Wyle's QD XV-2, "Notice of Anomaly," by the project engineer, who noted that the valve failed to meet the setpoint criteria of the test procedure. The project engineer initiated a Notice of Anomaly and immediately reported the incident to the customer for disposition and evaluation. No issues were identified in this area.

The NRC inspectors also observed operability and leakage refurbishment testing of the Target Rock 2-Stage Pilot-Operated SRV Model 7567F (under Georgia Power/Hatch Plant PO #6076021-002, Wyle Job No. T5658). The test was performed on SRV Test Cell Number 1, in accordance with customer-approved Wyle Test Procedure WLTP-1117, Revision A, dated June 3, 2005. The observation included installation, test preparation, pretest condition verification, and final instrumentation calibration. The NRC inspection team observed the test from the test control room. The inspectors noted no test discrepancy and observed that the test technician properly documented the test data in the test logbook and TCRs. No issues were identified in this area.

In addition, in the Wyle High Flow Bay area, the NRC inspectors observed prefunctional testing of a prototype Squib valve (under SPX Flow Control PO #255234-000, Wyle Job No. T55942). Wyle personnel performed the test in accordance with customer-approved Wyle Test Procedure TPR55942, Revision 1, dated February 25, 2009. The observation included installation, test preparation, pretest condition verification, and final instrumentation calibration. The NRC inspectors watched the test from the test control room. The inspection team verified that Wyle

performed testing and qualification activities in accordance with Section 11 of the Wyle QAPM, Revision 2. No issues were identified in this area.

b.3. Test Documentation

QD XI-1 establishes the requirements for recording test activities. The QD requires that test results be documented on the TCR and that proof be provided that all test prerequisites were met, adequate test instrumentation was available and used, and necessary monitoring was performed. The approved TCR shall state, at a minimum, Wyle's job number, test specimen tested, test title, test procedure/plan/standard and the revision used, QA and customer holdpoints, approval of the test receipt inspection, as-received testing record, test drawings, final testing, test or data recorded, type of observations performed, instrumentation equipment list, test results, and acceptability of the tests. The QD requires documentation of any action taken in connection with any deviations, including identification of the person evaluating test results and any measuring and test equipment used. Test deviations are recorded in accordance with QD XV-2, "Notice of Anomaly."

The NRC inspectors reviewed several open, in-process, on-hold, and completed test record files. The job orders reviewed consisted of functional qualification testing of SRVs, TPQ, and pre-performance testing. The closed test files were complete and included the required documentation, such as receipt inspection, TCR with sign-off for each operation, as-receipt testing, final testing, instrumentation equipment sheet, any notice of anomaly, certification of test data, QA holdpoint checklist, certification test report, and certification of conformance.

In its review of a sample of test procedures and completed test reports for recently completed functional testing and TPQ orders, the NRC inspectors verified that the test reports adequately captured the information required by the test procedure and PO requirements. The NRC inspectors selected a sample of 10 ongoing and completed test records, a subset of which is listed below:

- Job No. T56459, PO #M32775, "Anderson Greenwood Crosby Relief Valve Test Per Wyle Test Procedure WLTP-1022," Revision 0, dated February 1, 2009
- Job No. T56608, PO #24393, "Curtiss-Wright/Target Rock Safety Relief Valve Functional Qualification Test Per Target Rock Test Procedure No. 8529," Project No. 06X104, dated March 26, 2009
- Job No. T55654, PO #00103625, "Duke Oconee/Dresser Valve Steam Test Per Wyle Test Procedure WLTP-1115," Revision D, dated April 13, 2007
- Job No. T55792, PO #0379420, "Progress Energy/Third Part Qualification, Circuit Breakers," dated November 10, 2008
- Job No. T55942, PO #255234, "SPX Flow Control/Squib Valve Functional Testing of 8" 2500# Per Test Procedure TPR55942," Revision 1, dated February 25, 2009

Based on the objective evidence of completed test records, the NRC inspectors found Wyle's test control program to be adequate and effectively implemented. No issues were identified in this area.

c. Conclusions

The NRC inspectors concluded that Wyle's testing, seismic, and NEQ program requirements for test control complied with the regulatory requirements of Criterion XI of Appendix B to 10 CFR Part 50. Based on the sample of test control documents and activities reviewed, the NRC inspectors determined that Wyle's QAPM and associated test control procedures were effectively implemented. No findings of significance were identified.

7. Control of Measuring and Test Equipment

a. Inspection Scope

The NRC inspection team reviewed Wyle's QA program commitments and controls for control of measuring and test equipment to verify that the guidance adequately described the process and implementation consistent with the requirements of Criterion XII, "Control of Measuring and Test Equipment," of Appendix B to 10 CFR Part 50. Specifically, the NRC inspectors reviewed the following Wyle policies and procedures:

- QAPM, Section 12, "Control of Measuring and Test Equipment," Revision 2, dated August 1, 2001
- QD XII-1, "Control of Measuring and Test Equipment," Revision O, dated April 18, 2008
- QD IV-1, "Procurement of Safety-Related and Commercial Grade Materials, Services, and Instrumentation," Revision F, dated June 7, 2007
- QD VIII-3, "Identification and Tagging Directive," Revision E, dated May 8, 2007

The NRC inspectors also reviewed a sample of equipment calibration procedures, calibration records, calibration extension records, calibration recall schedules, and the disposition methods for out-of-tolerance instrumentation to verify compliance with the requirements for control of measuring and test equipment.

b. Observations and Findings

Section 12 of the Wyle QAPM establishes requirements and assigns responsibilities for the control of measuring and test equipment. The program ensures that tools, gauges, instruments, and other measuring and test equipment, as well as devices used in activities affecting quality, are of the proper range, type, and accuracy to verify conformance to established requirements. To ensure accuracy, the measuring and test equipment shall be controlled, calibrated, adjusted, and maintained at prescribed intervals, or before use, against certified equipment having known relationships to nationally recognized standards. If no national standards exist, the basis for calibration shall be documented. Out-of-tolerance equipment provisions include documentation and evaluation of the validity of previous inspection or test results and of the acceptability of items previously inspected or tested. Calibration certificates and report provisions include the requirements of records to be accurate, clear, and unambiguous and shall contain all information necessary for interpretation of the calibration results. Subcontracting of calibration activities is performed in accordance with QAPM, Section VII, "Control of Purchased Items, Equipment, and Services."

QD XII-1 supplements the requirements of Wyle's QAPM and provides specific guidance for the maintenance, control, calibration, record documentation, and identification of measuring and test equipment used in activities affecting quality. Section 5.48 of the QD describes the process for controlling and evaluating out-of-tolerance instrumentation. A Notification of Out-of-Tolerance Record (Wyle Form WH-1140) is initiated, along with a job track history record, which lists jobs for which the instrumentation was used. The assigned project engineer is responsible for reviewing and evaluating the validity of previous inspection or test results and confirming the acceptability of items previously inspected or tested. For those jobs yielding data that may be affected, the project engineer initiates a Notice of Anomaly and notifies the customers.

Upon review of a sample of closed Notification of Out-of-Tolerance Records (Control Nos. 16-008 through 27-0058, as logged in the Control Record Log Book), the NRC inspectors found that these records did not provide objective evidence that Wyle personnel had performed the required evaluation of test results, other than those from the most recent test, that may have been affected. In addition, the NRC inspectors noted that the Notification of Out-of-Tolerance Record Control No. 16-008, dated August 6, 2008, indicated that the calibration laboratory supervisor, rather than the responsible project engineer, performed the required review and evaluation. The NRC inspectors determined that this practice is inconsistent with provisions in Wyle's QD XII-1, which requires that the responsible project engineer perform this evaluation. This is an example of Wyle's failure to provide the necessary objective evidence to demonstrate the validity of previous test results. The NRC inspection team identified this issue as Nonconformance 99900905/2009-201-01.

The NRC inspectors verified that the measuring and test equipment sampled in the SRV and TPQ test facilities had appropriate calibration stickers and current calibration dates, including calibration due date, and that their records were available for review. The NRC inspectors selected a representative sample of measuring and test equipment identified on TCRs and instrument equipment lists for in-process job orders and reviewed their calibration records for consistency and compliance to procedures. The NRC inspectors verified that the calibration records complied with procedures.

The NRC inspectors observed activities in the calibration laboratory. Wyle's calibration laboratory is certified by the American Association for Laboratory Accreditation. The NRC inspectors verified that the laboratory measuring and test equipment were calibrated using procedures traceable to known industry standards. Calibration records indicated that calibration procedures were followed; these records included information concerning found/as-left conditions, the accuracy required, date of calibration and due date for recalibration, and the applicable National Institute of Standards and Technology reference equipment used. The NRC inspectors verified that Wyle maintained appropriate environmental controls, as required by QD XII-1. In addition, through interview and review of qualification records for several technicians, the NRC inspectors concluded that the technicians were knowledgeable and qualified.

c. Conclusions

Except for the issues identified in Nonconformance 99900905/2009-201-01, the NRC inspectors concluded that Wyle's program requirements for control of measuring and test equipment were consistent with the regulatory requirements of Criterion XII of Appendix B to 10 CFR Part 50. Based on the limited sample of calibration records reviewed, evaluation of controls established within the vendor's calibration laboratory, and observation of a sample of testing activities

performed by the vendor, the NRC inspectors determined that Wyle's QAPM and associated measuring and test equipment procedures were being effectively implemented.

8. Control of Nonconforming Materials, Items, and Services

a. Inspection Scope

The NRC inspectors reviewed Wyle's QA policies and implementing procedures that govern the control of nonconformances to verify compliance with the requirements of Criterion XV, "Nonconforming Materials, Parts, or Components," of Appendix B to 10 CFR Part 50.

Within the scope of this inspection, the NRC inspection team reviewed the following Wyle policies, procedures, and documents:

- QAPM, Section 15, "Control of Nonconformances," Revision 2, dated August 1, 2001
- QD XV-1, "Control of Nonconforming Materials, Items and Services," Revision K, dated March 31, 2009
- QD XV-2, "Notice of Anomaly," Revision G, dated March 31, 2009
- QD XIX-1, "Reporting of Defects and Noncompliance Per 10 CFR Part 21," Revision E, dated March 31, 2009
- Notice of Anomaly 1, dated December 16, 2008, issued on Wyle Job No. T55622 during TPQ accident simulation testing of Class 1E safety-related 300 horsepower medium-voltage motor; part number 1E10144-QUAL that failed the test.
- Notice of Anomaly 1, dated March 12, 2009, issued on Wyle Job No. T55453 prior to second functional testing of Edwards A-290 actuator hydraulic pump when the customer representative stated the hydraulic pump emitted unusual noises and recommended that the pump be replaced.
- Notice of Anomaly 1, dated March 14, 2009, issued for Wyle Job No. T56660 when the pilot valve during as-received set pressure test failed to meet test parameters of WLTP 1116, Revision 0, paragraph 6.4.3.

The NRC inspectors also reviewed a sample of nonconformances initiated during the past 24 months. These nonconformances were primarily the result of deficiencies identified by Wyle personnel and customers during routine operations and through internal audits and inspections performed by Wyle personnel.

b. Observations and Findings

Section 15 of Wyle's QAPM establishes requirements and assigns responsibilities for the control of nonconforming items, services, and activities. The QA manager is responsible for monitoring activities in this area to ensure effective implementation. QD XV-1 includes provisions to address (1) defective material, (2) deviations from specified requirements, (3) test failures, (4) deviations from prescribed processing, inspection, or test procedures, and (5) physical

defects. Wyle's QA department is responsible for issuing nonconformances in response to an identified defect or deficiency from a variety of sources.

QD XV-2 addresses the process of nonconformance reporting for anomalies observed in test specimens during test activities. The project engineer initiates a notice of anomaly describing the anomaly and documenting the violation of the requirements. The project engineer then notifies the customer for evaluation and disposition.

The NRC inspectors noted that the procedure clearly identified the responsibilities for nonconformance issuance, disposition, and corrective action. Typically, the project engineer had the primary responsibility for disposition of the nonconformance, taking actions such as accept as is, reject, scrap, or rework. The procedure included guidance for documenting the justification for the particular action taken.

The NRC inspectors noted that, in the sample nonconformances reviewed, Wyle personnel had (1) dispositioned identified nonconformances in accordance with Wyle's approved procedures; (2) presented an appropriate technical justification for each disposition; (3) taken adequate action with regard to the nonconforming material or item; and (4) subjected all identified nonconformances, as appropriate, to a 10 CFR Part 21 assessment or evaluation.

c. Conclusions

The NRC inspectors concluded that Wyle's program requirements for the control of nonconformances are consistent with the regulatory requirements of Criterion XV of Appendix B to 10 CFR Part 50. Based on the limited sample of nonconformance and notices of anomaly reviewed, the NRC inspectors determined that the Wyle QAPM and associated nonconformance procedure were being effectively implemented.

9. Corrective Actions

a. Inspection Scope

The NRC inspectors reviewed Wyle's QA program and implementing procedures that govern the control of corrective actions to verify compliance with the requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. Specifically, the NRC inspectors reviewed the following Wyle policies and procedures:

- QAPM, Section 16, "Corrective Action," Revision 3, dated March 31, 2009
- QD XVI-1, "Corrective Action Program," Revision F, dated March 31, 2009

The NRC inspectors also reviewed CAR 07-009. This CAR resulted primarily from a self-identified deficiency in the fulfillment of the yearly inspector eye examinations.

b. Observations and Findings

Wyle QAPM, Section 16, is an upper tier document that mandates the establishment of a corrective action program. The QAPM identifies the QA manager as the individual responsible for the development and implementation of the corrective action program.



QD XVI-1 defines the requirements, organizational responsibilities, and measures to generate, track, and close CARs. Wyle's corrective action system starts with identification and documentation of a problem and continues through verification of the actions taken to eliminate the identified root cause. Wyle's QA department is responsible for issuing CARs in response to an identified problem from a variety of sources, such as product inspection, an internal or external quality system audit, a customer audit, customer product surveillance, or a customer returned product. All Wyle employees are responsible for identifying real or potential problems and bringing them to the attention of Wyle's QA department. The QA manager, upon review and evaluation of the CAR for a condition adverse to quality, authorizes a stop work order. The NRC inspectors noted that QD XVI-1 clearly stated who was responsible for the action and the expected outcome.

Attachment 7.1 and Section 5.3 of QD XVI-1 address action to prevent recurrence. The department manager to whom the CAR has been issued is responsible for the development and implementation of actions to prevent recurrence. The NRC inspectors noted that the procedure required the QA department personnel to verify whether disciplinary action was taken, without compromising the affected person's personnel file, by using the human resources department to verify the action. The NRC inspectors noted that the program provided sufficient authority to ensure that effective corrective action was taken, with escalation to the appropriate levels of management if necessary.

The NRC inspectors reviewed CARs generated by Wyle in 2007, 2008, and 2009. The NRC inspectors noted that all CARs had been completed by their assigned completion dates. The NRC inspectors reviewed CAR 07-009, dated May 29, 2007. Wyle generated the subject CAR because the eye examination requalification period for two visual inspectors had exceeded the 12-month limitation. The NRC inspectors reviewed the actions taken to prevent recurrence and found them to be acceptable. Since the nonconformance was self-identified and corrected, no finding was cited. The NRC inspectors found that the QA manager's actions taken were fully appropriate for this CAR. The NRC inspectors did not identify any findings in this area.

c. Conclusions

The NRC inspectors concluded that Wyle's program requirements for corrective actions are consistent with the regulatory requirements of Criterion XVI of Appendix B to 10 CFR Part 50. Based on the limited sample of CARs reviewed, the NRC inspectors determined that the Wyle QAPM and associated corrective action procedures were being effectively implemented. The NRC inspectors did not identify any issues in this area.

10. Entrance and Exit Meetings

On April 13, 2009, the NRC inspectors discussed the scope of the inspection with Keith Wilson, Wyle Eastern Operations Vice President, and Wyle management and engineering staff. On April 17, 2009, the NRC inspectors presented the inspection results and observations during an exit meeting with Keith Wilson, Raul Terceno, Wyle Quality Assurance Manager, and other Wyle management staff. A list of entrance and exit meeting attendees is attached to this report.

## ATTACHMENT

### 1. PERSONS CONTACTED

Steve Cagle	Third Party Qualification Verifier, Level II
Robert Francis	Manager, Nuclear Program Development
J. Greg Mason	Senior Project Engineer, Nuclear Testing Services
Brenda Morse	Quality Assurance Specialist/NDT Level III
Serge M'Sadoques	Senior Project Engineer, Nuclear Testing Services
E. Reilly Schum	Manager, Environmental Qualification and Third Party Qualification
Kris Seguin	Test Technician
Raul Terceno	Quality Assurance Manager
Patrick Turrentine	Manager, Nuclear Testing Services
Keith Wilson	Vice President, Test Engineering, and Research
Tim Yancy	Instrumentation Technician

### 2. INSPECTION PROCEDURES USED

Inspection Procedure 43002, "Routine Inspections of Nuclear Vendors"

Inspection Procedure 36100, "Inspection of 10 CFR Part 21 and 50.55(e) Programs for Reporting Defects and Nonconformance"

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

No previous NRC inspections had been performed at Wyle's facility in Huntsville, AL, within the last 5 years prior to this inspection.

The following items were found during this inspection:

<u>Item Number</u>	<u>Status</u>	<u>Type</u>	<u>Description</u>
99900905/2009-201-01	Opened	Notice of Nonconformance	Criterion XII

### 4. LIST OF ACRONYMS USED

ASL	approved supplier list
ASME	American Society of Mechanical Engineers
CAR	corrective action report
CFR	<i>Code of Federal Regulations</i>
DBA	design-basis accident
EQ	environmental qualification
NDT	nondestructive testing
NEQ	nuclear environmental qualification
NIAC	Nuclear Industry Assessment Committee
NRC	U.S. Nuclear Regulatory Commission
PO	purchase order
PRM	power range monitoring
QA	quality assurance
QAPM	Quality Assurance Program Manual
QD	quality directive

SSH	substantial safety hazard
SRV	safety relief valve
TCR	test control record
TPQ	third party qualification
T-RAD	Thermal and Radiation Aging Database
VT	visual testing