

September 13, 2011

Mr. George Baitinger, Quality Assurance Manager
Emerson Process Management
Fisher Controls International LLC
1702 South 12th Avenue
Marshalltown, IA 50158

SUBJECT: NRC INSPECTION REPORT NO. 99900105/2011-201, NOTICE OF VIOLATION,
AND NOTICE OF NONCONFORMANCE

Dear Mr. Baitinger:

On August 1, 2011, through August 5, 2011, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Fisher Controls International LLC facility (hereafter referred to as Fisher Controls) in Marshalltown, IA. The purpose of this limited scope inspection was to assess Fisher Controls' 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." The enclosed report presents the results of this inspection. This 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 a Severity Level IV violation of NRC requirements occurred. The NRC evaluated the violation in accordance with the agency's Enforcement Policy, which is available on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>.

This violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. The violation is being cited in the Notice because Fisher Controls failed to complete its evaluation and to prepare and submit an interim report to the Commission for an identified deviation or failure to comply potentially associated with a substantial safety hazard within 60 days from discovery pursuant to 10 CFR 21.21(a)(2), "Notification of failure to comply or existence of a defect and its evaluation."

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC's review of your response to the Notice will also determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In addition, during this inspection, the NRC inspection team found that the implementation of your QA program failed to meet certain NRC requirements imposed on you by your customers or NRC licensees. Specifically, the NRC inspection team determined that Fisher Controls was not fully implementing its organization, design control, procurement document control, control of

purchase material, equipment, and services, corrective action, and audit programs consistent with regulatory requirements, the Fisher Controls Nuclear Quality Assurance Manual, or applicable implementing procedures. These nonconformances are cited in the enclosed Notice of Nonconformance (NON), and the circumstances surrounding them are described in detail in the enclosed inspection report.

Please provide a written explanation or statement within 30 days 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, "Public Inspections, Exemptions, Requests for Withholding," 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 Agencywide Documents Access and Management System, 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 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 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, "Protection of Safeguards Information: Performance Requirements."

Sincerely,

/RA/

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

Docket No.: 99900105

Enclosures:

1. Notice of Violation
2. Notice of Nonconformance
3. Inspection Report No. 99900105/2011-201 and Attachment

purchase material, equipment, and services, corrective action, and audit programs consistent with regulatory requirements, the Fisher Controls Nuclear Quality Assurance Manual, or applicable implementing procedures. These nonconformances are cited in the enclosed Notice of Nonconformance (NON), and the circumstances surrounding them are described in detail in the enclosed inspection report.

Please provide a written explanation or statement within 30 days 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, "Public Inspections, Exemptions, Requests for Withholding," 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 Agencywide Documents Access and Management System, 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 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 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, "Protection of Safeguards Information: Performance Requirements."

Sincerely,

/RA/

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

Docket No.: 99900105

Enclosures:

1. Notice of Violation
2. Notice of Nonconformance
3. Inspection Report No. 99900105/2011-201 and Attachment

DISTRIBUTION: R Rasmussen K Kavanagh J Dixon-Herrity RidsNroDcipCQVB RidsNroDcipCQVA
RidsNroDcip george.baitinger@emerson.com

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NRO-001

OFFICE	NRO/DCIP/CQVA	NRO/DCIP/CQVB	NRO/DCIP/CQVB	NRO/DCIP/CQVA
NAME	YDiaz-Castillo	SCrane	DBollock	PCoco
DATE	09/13/2011	09/13/2011	09/13/2011	09/13/2011
OFFICE	NRO/DCI/CQVA	NRO/DCIP/CQVA	NRO/DE/EMB1	RIV/DRS/EB1
NAME	ABelen	SDowney	TLe	*RLatta
DATE	09/13/2011	09/13/2011	09/13/2011	09/13/2011
OFFICE	NRO/DCIP/CAEB	NRO/DCIP/CQVA		
NAME	TFrye	JPeralta		
DATE	09/13/2011	09/13/2011		

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NOTICE OF VIOLATION

Fisher Controls International LLC
1702 South 12th Avenue
Marshalltown, Iowa 50158

Docket No. 99900105
Report No. 2011-201

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted at the Fisher Controls International LLC facility (hereafter referred to as Fisher Controls) in Marshalltown, IA, on August 1, 2011 through August 5, 2011, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is described below:

Title 10 of the *Code of Federal Regulations* (10 CFR) 21.21(a), "Notification of failure to comply or existence of a defect and its evaluation," requires, in part, that "[e]ach individual, corporation, partnership, or other entity subject to the regulations in this part shall adopt appropriate procedures to -- (2) [e]nsure that if an evaluation of an identified deviation or failure to comply potentially associated with a substantial safety hazard cannot be completed within 60 days from discovery of the deviation or failure to comply, an interim report is prepared and submitted in writing to the Commission. . . within 60 days of discovery of the deviation or failure to comply."

Section 8c of Fisher General Specification 15B76, "Reporting of Potential Defects and Noncompliance in Accordance with 10 CFR Part 21, US Code of Federal Regulations," Revision D, dated June 2, 2011, states, in part, that "if an evaluation of the deviation cannot be completed within 60 days, an interim report must be submitted to the NRC by the Director, Quality-Valve Division."

Contrary to the above, as of August 5, 2011, Fisher Controls International LLC did not complete an evaluation and failed to prepare and submit in writing to the Commission an interim report within 60 days of discovery of an identified deviation or failure to comply potentially associated with a substantial safety hazard. Specifically, Fisher Controls did not complete its evaluation, nor prepared and submitted an interim report to the Commission for an ongoing 10 CFR Part 21 evaluation initially identified on March 3, 2011.

This issue has been identified as Violation 99900105/2011-201-01.

This is a Severity Level IV violation (Section 6.5.d of the NRC Enforcement Policy).

Pursuant to the provisions of 10 CFR 2.201, "Notice of Violation," Fisher Controls is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-001 with a copy to the Chief, 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 Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because 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, 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, "Protection of Safeguards Information: Performance Requirements."

Dated at Rockville, MD, this 13th day of September 2011.

NOTICE OF NONCONFORMANCE

Fisher Controls International
1702 South 12th Avenue
Marshalltown, Iowa 50158

Docket No. 99900105
Report No. 2011-201

Based on the results of a U.S. Nuclear Regulatory Commission (NRC) inspection conducted at the Fisher Controls International LLC facility (hereafter referred to as Fisher Controls) in Marshalltown, IA, on August 1, 2011 through August 5, 2011, it appears that certain activities were not conducted in accordance with NRC requirements that were contractually imposed on Fisher Controls by NRC licensees:

- A. Criterion III, "Design Control," of Appendix B, "Quality Assurance Program 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 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."

Fisher Manufacturing Procedure (FMP) 2G19.3, "Material Verification Using Niton Alloy Analyzers," Revision 8, dated November 14, 2005, states, in part, that "the test methods outlined in this procedure are intended to identify alloy materials and are not intended to establish the exact conformance of a material to a particular alloy specification."

Contrary to the above, as of August 5, 2011, Fisher Controls failed to review for suitability of application materials that are essential to the safety-related functions of the structures, systems, and components. Specifically, Fisher Controls did not employ a suitable method to verify that a pin and a stud connection for a nuclear safety-related butterfly valve met the material specifications identified as critical characteristics in the associated dedication plans.

This issue has been identified as Nonconformance 99900105/2011-201-02.

- B. Criterion IV, "Procurement Document Control," of Appendix B to 10 CFR Part 50 states, in part, that "measures shall be established to assure that applicable regulatory requirements, design bases, and other requirements which are necessary to assure adequate quality are suitably included or referenced in the documents for procurement of material, equipment, and services, whether purchased by the applicant or by its contractors or subcontractors."

FMP 2K47, "Supplier Qualification and Control," Revision 2, dated June 3, 2010, states, in part, that "The nuclear buyer uses the ASL along with Purchasing Notes information in the supplier to ensure that proper requirements are passed on to the supplier by the Purchase Order (PO) or Purchase Order Appendix (POA). A POA should be attached to the PO in order to convey additional requirements to the supplier as applicable."

FMP 2K27, "Control of Commercial Grade Items to be Dedicated for Use in Nuclear Safety Related Applications," Revision 15, dated October 15, 2010, states, in part, that "Commercial grade items which are to be produced and tested by the original equipment manufacturer may be purchased from the approved suppliers list (ASL) when the test is

used as part of the dedication process. Procurement documents shall specify the required tests or controls as stated in the scope of qualification listed in the ASL.”

Contrary to the above, as of August 5, 2011, Fisher Controls failed to impose the applicable requirements in procurement documents. Specifically, Fisher Controls failed to impose the requirements of Appendix B to 10 CFR Part 50 on two purchase orders for valve body forgings intended for use in a safety-related valve and failed to impose the required controls identified during a commercial grade survey that are necessary to verify the critical characteristics of a valve positioner.

This issue has been identified as Nonconformance 99900105/2011-201-03.

- C. 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. These measures shall include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery.”

Contrary to the above, as of August 5, 2011, Fisher Controls failed to provide objective evidence of quality by the contractor through commercial grade surveys. Specifically, Fisher Controls’ commercial grade surveys of SIMCO Electronics and Honeywell Inc. did not verify the critical characteristics identified in the commercial grade survey checklist.

This issue has been identified as Nonconformance 99900105/2011-201-04.

- D. Criterion XVI, “Corrective Action,” of Appendix B to 10 CFR Part 50 states that “Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.”

Contrary to the above, as of August 5, 2011, Fisher Controls failed to establish measures to evaluate significant conditions adverse to quality. Specifically, Fisher Controls considers all nonconformances, deviations, malfunctions, etc., as conditions adverse to quality and does not evaluate them to determine if any are significant conditions adverse to quality, which require (1) that the cause of the condition be determined, (2) corrective action be taken to preclude repetition, and (3) that appropriate levels of management be notified of the significant condition adverse to quality, the cause of the condition, and the corrective action taken to preclude repetition.

This issue has been identified as Nonconformance 99900105/2011-201-05.

- E. Criterion XVIII, “Audits,” of Appendix B to 10 CFR Part 50 states, in part, that “The audits shall be performed in accordance with the written procedures or check lists by

appropriately trained personnel not having direct responsibilities in the areas being audited.”

Subsection 19.2.1 of Fisher Controls’ Nuclear Quality Assurance Manual, Revision 8, dated October 4, 2010, states, in part, that “Auditors selected shall not have direct responsibilities in the area he/she is auditing.”

Contrary to the above, as of August 5, 2011, Fisher Controls failed to verify that audits were performed by personnel not having direct responsibilities in the areas being audited. Specifically, the NRC inspection team identified one internal audit in which the QA Manager, who has direct responsibility for the implementation of Fisher Controls’ QA program, participated in an internal audit as a member of the audit team and audited an area for which he has direct responsibility.

This issue has been identified as Nonconformance 99900105/2011-201-06.

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 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 noncompliance, and (4) the date when the 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’s Agencywide Documents Access and Management System, 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, “Protection of Safeguards Information: Performance Requirements.”

Dated at Rockville, MD, this 13th day of September 2011.

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

Docket No.: 99900105

Report No.: 99900105/2011-201

Vendor: Fisher Controls International, LLC
1702 South 12th Avenue
Marshalltown, IA 50158

Vendor Contact: George Baitinger, Quality Assurance Manager
George.Baitinger@emerson.com
641-754-2026

Nuclear Industry Activity: Fisher Controls International LLC (hereafter referred to as Fisher Controls) is an American Society of Mechanical Engineers N (nuclear components) and NPT (nuclear parts) certificate holder. Fisher Controls' scope of supply for the commercial domestic nuclear industry includes manufacturing, maintenance, repair, and replacement of safety-related control valves; including spare and replacement parts, components, associated engineering, and field services. Fisher Controls' rotary and sliding-stem control valves, as well as other new valve designs, will be used in new nuclear power plant designs including the Advance Passive (AP) 1000 new plant design that will be constructed in the United States in the near future.

Inspection Dates: August 1 - 5, 2011

Inspectors: Yamir Diaz-Castillo NRO/DCIP/CQVA Team Leader
Samantha Crane NRO/DCIP/CQVB
Douglas Bollock NRO/DCIP/CQVB
Paul Coco NRO/DCIP/CQVA
Aixa Belén-Ojeda NRO/DCIP/CQVA
Steven Downey NRO/DCIP/CQVA
Tuan Le NRO/DE/EMB1
Robert Latta R-IV/DRS/EB1

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

EXECUTIVE SUMMARY
Fisher Controls International LLC
99900105/2011-201

The U.S. Nuclear Regulatory Commission (NRC) conducted this inspection to verify that the Fisher Controls International LLC facility (hereafter referred to as Fisher Controls) 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." In addition, the inspection was performed to verify that Fisher Controls implemented a program under 10 CFR Part 21, "Reporting of Defects and Noncompliance," that met NRC's regulatory requirements. The inspection was conducted at the Fisher Controls' facility in Marshalltown, IA, during the period of August 1 - 5, 2011.

The NRC based its inspection on the following:

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

During this inspection, the NRC inspection team implemented Inspection Procedure (IP) 43002, "Routine Inspections of Nuclear Vendors," IP 43004, "Inspection of Commercial-Grade Dedication Programs," and IP 36100, "Inspection of 10 CFR Part 21 and 50.55(e) Programs for Reporting Defects and Noncompliance," all dated April 25, 2011.

With the exception of the violation and nonconformances described below, the NRC inspection team concluded that Fisher Controls is effectively implementing its QA and 10 CFR Part 21 programs. The results of the inspection are summarized below.

10 CFR Part 21 Program

The NRC inspection team concluded that Fisher Controls is not effectively implementing its 10 CFR Part 21 program consistent with the requirements of 10 CFR Part 21. The NRC inspection team issued Violation 99900105/2011-201-01 for Fisher Controls' failure to prepare and submit an interim report for an ongoing evaluation of an identified deviation or failure to comply, potentially associated with a substantial safety hazard, within 60 days from discovery, in accordance with 10 CFR 21.21(a)(2). Specifically, Fisher Controls had not completed its evaluation, nor had it prepared and submitted an interim report to the Commission for an ongoing 10 CFR Part 21 evaluation initially identified on March 3, 2011.

Training and Qualification of Personnel

The NRC inspection team concluded that Fisher Controls is effectively implementing its training and qualification program consistent with the regulatory requirements of Criterion II, "Quality Assurance Program," of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team determined that Fisher Controls is effectively implementing its policies and procedures associated with the training and qualification of personnel. No findings of significance were identified.

Commercial Grade Dedication

The NRC inspection team concluded that Fisher Controls is not effectively implementing its commercial grade dedication program consistent with the regulatory requirements of Criterion III, "Design Control," Criterion IV, "Procurement Document Control," and Criterion VII, "Control of Purchased Equipment, Materials, and Services," of Appendix B to 10 CFR Part 50. The NRC inspection team issued Nonconformance 99900105/2011-201-02 for Fisher Controls' failure to review the suitability of the application of materials that are essential to the safety-related functions of the structures, systems, and components; Nonconformance 99900105/2011-201-03 for Fisher Controls' failure to impose the applicable requirements in procurement documents; and Nonconformance 99900105/2011-201-04 for Fisher Controls' failure to provide objective evidence of quality by the contractor through commercial grade surveys. Each of the sections below provides more information regarding these nonconformances.

Design Control

The NRC inspection team concluded that Fisher Controls is not effectively implementing its design control program consistent with the regulatory requirements of Criterion III, "Design Control," of Appendix B to 10 CFR Part 50. The NRC inspection team issued Nonconformance 99900105/2011-201-02 for Fisher Controls' failure to review the suitability of the application of materials that are essential to the safety-related functions of the structures, systems, and components. Specifically, Fisher Controls did not identify a suitable method to verify that a pin and a stud connection for a nuclear safety-related butterfly valve met the material specifications identified as critical characteristics in the associated dedication plans.

Procurement Document Control

The NRC inspection team concluded that Fisher Controls is not effectively implementing its procurement document control program consistent with the regulatory requirements of Criterion IV, "Procurement Document Control," of Appendix B to 10 CFR Part 50. The NRC inspection team issued Nonconformance 99900105/2011-201-03 for Fisher Controls' failure to include the applicable requirements in the procurement documents. Specifically, Fisher Controls failed to impose the requirements of Appendix B to 10 CFR Part 50 in two safety related purchase orders for valve body forgings intended for use in a safety-related valve and failed to impose the required controls that are necessary to control the critical characteristics of a valve positioner identified during a commercial grade survey.

Control of Purchased Equipment, Materials, and Services

The NRC inspection team concluded that Fisher Controls is not effectively implementing its control of purchased material, equipment, and services program consistent with the regulatory requirements of Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50. The NRC inspection team issued Nonconformance 99900105/2011-201-04 for Fisher Controls' failure to provide objective evidence of quality by the contractor through commercial grade surveys. Specifically, Fisher Controls' commercial grade surveys of SIMCO Electronics and Honeywell, Inc. did not verify the critical characteristics identified in the commercial grade survey checklist.

Control of Special Processes

The NRC inspection team concluded that Fisher Controls is effectively implementing its control of special processes program consistent with the regulatory requirements of Criterion IX, "Control of Special Processes," of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team determined that Fisher Controls is effectively implementing its policies and procedures associated with the control of special processes. No findings of significance were identified.

Test Control

The NRC inspection team concluded that Fisher Controls is effectively implementing its test control program consistent with the regulatory requirements of Criterion XI, "Test Control," of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team determined that Fisher Controls is effectively implementing its policies and procedures associated with test control. No findings of significance were identified.

Control of Measuring and Test Equipment

The NRC inspection team concluded that Fisher Controls is effectively implementing its control of measuring and test equipment program consistent with the regulatory requirements of Criterion XII, "Control of Measuring and Test Equipment," of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team determined that Fisher Controls is effectively implementing its policies and procedures associated with the control of measuring and test equipment. No findings of significance were identified.

Nonconforming Materials, Parts or Components

The NRC inspection team concluded that Fisher Controls is effectively implementing its nonconforming materials, parts, or components program consistent with the regulatory requirements of Criterion XV, "Nonconforming Materials, Parts, or Components," of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team determined that Fisher Controls is effectively implementing its policies and procedures associated with the control of nonconforming materials, parts, or components. No findings of significance were identified.

Corrective Action

The NRC inspection team concluded that Fisher Controls is not effectively implementing its corrective action program consistent with the regulatory requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. The NRC inspection team issued Nonconformance 99900105/2011-201-05 for Fisher Controls' failure to establish measures to evaluate significant conditions adverse to quality. Specifically, Fisher Controls considers all nonconformances, deviations, malfunctions, etc., as conditions adverse to quality and does not evaluate them to determine if any are significant conditions adverse to quality, which require (1) that the cause of the condition be determined, (2) corrective action be taken to preclude repetition, and (3) that appropriate levels of management be notified of the significant condition adverse to quality, the cause of the condition, and the corrective action taken to preclude repetition.

Audits

The NRC inspection team concluded that Fisher Controls is not effectively implementing its audits program consistent with the regulatory requirements of Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50. The NRC inspection team issued Nonconformance 99900105/2011-201-06 for Fisher Controls' failure to verify that audits were performed by personnel not having direct responsibilities in the areas being audited. Specifically, the NRC inspection team identified one internal audit in which the QA Manager, who has direct responsibility for the implementation of Fisher Controls' QA program, participated in an internal audit as a member of the audit team and audited an area for which he has direct responsibility.

REPORT DETAILS

1. 10 CFR Part 21 Program

a. Inspection Scope

The U.S. Nuclear Regulatory Commission (NRC) reviewed Fisher Controls International LLC (hereafter referred to as Fisher Controls) policies and implementing procedures that govern the Fisher Controls program under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21, "Reporting of Defects and Noncompliance," to verify compliance with the regulatory requirements. In addition, the NRC inspection team evaluated the 10 CFR Part 21 postings and a sampling of Fisher Controls' purchase orders (POs) for compliance with the requirements of 10 CFR 21.6, "Posting Requirements," and 10 CFR 21.31, "Procurement Documents," respectively.

The NRC inspection team reviewed the following documents for this inspection area:

- Fisher Controls Nuclear Quality Assurance Manual (NQAM), Section 16, "Nonconforming Materials and Items," Revision 8, dated October 4, 2010
- Fisher General Specification (FGS) 15B76, "Reporting of Potential Defects and Noncompliance in Accordance with 10 CFR Part 21, US Code of Federal Regulations" Revision D, dated June 2, 2011
- Fisher Manufacturing Procedure (FMP) 2K9, "Procedure for Corrective Action," Revision 19, dated July 14, 2011
- FMP 2K29, "Processing of Nonconforming Materials and Items," Revision 10, dated July 8, 2011

b. Observations and Findings

b.1 Postings

The NRC inspection team verified that Fisher Controls had posted notices that included (1) a copy of Section 206 of the Energy Reorganization Act of 1974, (2) a copy of 10 CFR Part 21, and (3) a description of the Fisher Controls' procedure that implements the regulation.

b.2 Purchase Orders

The NRC inspection team reviewed a sample of POs to verify that Fisher Controls had implemented a program consistent with the requirements described in 10 CFR 21.31, "Procurement Documents," which specify the applicability of 10 CFR Part 21 in POs for safety-related services. The NRC inspection team verified that Fisher Controls imposed the requirements of 10 CFR Part 21 on qualified suppliers having programs meeting the requirements of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plans," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities."

b.3 10 CFR Part 21 Procedures and Implementation

Section 16 of Fisher Controls' NQAM and FGS 15B76 establish the requirements for compliance with the regulatory requirements of 10 CFR Part 21. These documents define the process for reporting defects; the posting requirements; and the responsibilities, timelines, and actions for identifying and evaluating deviations and failures to comply. The NRC inspection team also verified that Fisher Controls' corrective action program, as described in procedure FMP 2K9 provides a connection to the 10 CFR Part 21 program.

The NRC inspection team verified that Fisher Controls' procedural guidance was adequate to initiate the 10 CFR Part 21 process. The NRC inspection team also verified that Fisher Controls' staff is knowledgeable about the conditions that would warrant a 10 CFR Part 21 evaluation. The NRC inspection team also reviewed a sample of completed and ongoing 10 CFR Part 21 evaluations.

During the review of corrective action requests (CARs), the NRC inspection team identified that a 10 CFR Part 21 evaluation was initiated for CAR No. 1474, related to the use of a non American Society of Mechanical Engineers (ASME) certified weld rod in weld repair of castings intended for nuclear service. Although the 10 CFR Part 21 evaluation was identified March 3, 2011, the NRC inspection team determined that as of August 3, 2011, Fisher Controls had not completed its evaluation or submitted an interim report to the Commission. In 10 CFR 21.21(a)(2), the regulation states, in part, "that if an evaluation of an identified deviation or failure to comply potentially associated with a substantial safety hazard cannot be completed within 60 days from discovery of the deviation or failure to comply, an interim report is prepared and submitted to the Commission." Therefore, Fisher Controls failed to meet the 60 day interim reporting requirement as specified by 10 CFR 21.21(a)(2), for the 10 CFR Part 21 evaluation for CAR No. 1474. The NRC inspection team identified this issue as Violation 99900105/2011-201-01. Fisher Controls initiated CAR No.1505 to address this issue.

Conclusions

The NRC inspection team concluded that Fisher Controls is not effectively implementing its 10 CFR Part 21 program consistent with the requirements of 10 CFR Part 21. The NRC inspection team issued Violation 99900105/2011-201-01 for Fisher Controls' failure to prepare and submit an interim report for an ongoing evaluation of an identified deviation or failure to comply, potentially associated with a substantial safety hazard, within 60 days from discovery, in accordance with 10 CFR 21.21(a)(2). Specifically, the NRC inspection team determined that Fisher Controls had not completed its evaluation, nor had it prepared and submitted an interim report to the Commission for an ongoing 10 CFR Part 21 evaluation initially identified on March 3, 2011.

2. Training and Qualification of Personnel

a. Inspection Scope

The NRC inspection team reviewed Fisher Controls' policies and procedures governing the implementation of Fisher Controls' training and qualification program to verify compliance with Criterion II, "Quality Assurance Program," of Appendix B to 10 CFR Part 50. In addition, the NRC inspection team discussed the training and qualification program with Fisher Controls' management and technical staff.

The NRC inspection team reviewed the following documents for this inspection area:

- NQAM, Section 2, "Quality Assurance Program," Revision 8, dated October 4, 2010
- FMP 2J1 "American Society for Nondestructive Testing Personnel Qualification and Certification," Revision 26, dated October 21, 2010
- FMP 2J3, "Qualification of Auditors/Audit Program," Revision 12, dated May 24, 2011

b. Observations and Findings

b.1 Policies and Procedures

Sections 2.6 and 2.7 of Fisher Controls' NQAM serve as the implementing procedure for indoctrination, general training, and specific training of Fisher Controls' personnel.

FMP 2J1 requires personnel performing quality control (QC) functions, such as nondestructive testing (NDT) and/or evaluation, to be qualified, certified and recertified as required by applicable codes and standards, such as the 2006 Revision of the American Society of Nondestructive Testing SNT-TC-1A, "Non-Destructive Testing - Qualification and Certification of NDT Personnel."

FMP 2J3 defines the requirements for selecting and qualifying auditors and lead auditors and provides a common set of criteria necessary for auditor qualifications as required by the ASME NQA-1-1994, "Quality Assurance Requirements for Nuclear Facility Applications."

b.2 Implementation of the Training and Qualification Program

The NRC inspection team verified that Fisher Controls had established and implemented training programs for the indoctrination and training of personnel who perform activities that affect quality, including senior management, lead auditors and auditors, NDT personnel, engineers, and quality assurance (QA) personnel, to ensure that proficiency is achieved and maintained. The NRC inspection team verified that all personnel performing activities affecting quality had completed the required training and met all the specified requirements in accordance with Fisher Controls' policies and procedures.

b.3 Audit Personnel

The NRC inspection team reviewed a sample of the training and qualification records of Fisher Controls' lead auditors and auditors and confirmed that auditing personnel had completed all required training and maintained qualification and certification in accordance with Fisher Controls' policies and procedures. The NRC inspection team also verified that audit teams selected by Fisher Controls were sufficiently qualified to evaluate areas within the scope of the audit. In addition, the NRC inspection team verified that the qualification requirements for lead auditors and auditors are consistent with Supplement 2S-3, "Supplementary Requirements for the Qualification of Quality Assurance Program Audit Personnel," to ASME NQA-1-1994, and Nonmandatory Appendix 2A-3, "Nonmandatory Guidance on the Education and Experience of Lead Auditors," to ASME NQA-1-1994.

b.4 Nondestructive Testing Personnel

The NRC inspection team reviewed a sample of the training and qualification records for Fisher Controls' NDT personnel and confirmed that NDT personnel had completed all required training and maintained qualification and certification in accordance with Fisher Controls' policies and procedures. NDT personnel are certified as Level I, II, or III based on their education, training, and experience.

The NRC inspection team also verified that the qualification requirements for NDT personnel are consistent with Section NX-5500 of the ASME Code, Section III, and with SNT-TC-1A.

c. Conclusions

The NRC inspection team concluded that the implementation of the Fisher Controls' training and qualification program is consistent with the regulatory requirements of Criterion II, "Quality Assurance Program," of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team determined that Fisher Controls is effectively implementing its policies and procedures associated with the training and qualification of personnel. No findings of significance were identified.

3. Commercial Grade Dedication

a. Inspection Scope

The NRC inspection team reviewed Fisher Controls' policies and procedures governing the implementation of Fisher Controls' dedication program of commercial grade items (CGIs) for use in safety-related application to verify compliance with applicable regulatory requirements. Specifically, the NRC inspection team verified that Fisher Controls had established adequate controls for performing technical evaluations of items being dedicated, including Fisher Controls' review of materials, parts, equipment, and processes for suitability of application as established in Criterion III of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed the following documents for this inspection area:

- NQAM, Section 2, "Quality Assurance Program," Revision 8, dated October 4, 2010
- Engineering Standard (ES) 142, "Identification of Essential-to-Function Parts or Assemblies for Use in Nuclear Safety Related Applications," Revision H, dated December 22, 2005
- ES 266, "Commercial Grade Dedication Requirements for Fisher Manufactured Instruments and Accessories," Revision A, dated December 22, 2005
- ES 248, "Classification and Processing of Nuclear Valve Parts, Accessories and Components," Revision E, dated January 10, 2010
- FMP 2G19.3, "Material Verification Using Niton Alloy Analyzers," Revision 8, dated November 14, 2005
- FMP 2K27, "Control of Commercial Grade Items to be Dedicated for Use in Nuclear Safety Related Applications," Revision 15, dated October 15, 2010

- FMP 2K43, "Supplier Evaluation - Commercial Grade Survey," Revision 2, dated February 4, 2009
- FMP 2K43, "Supplier Checklist - Commercial Grade Survey," Revision 1, dated June 10, 2011
- FMP 2K43.1, "Supplier Evaluation - Commercial Grade Survey - Calibration Services," Revision 1, dated June 10, 2011
- FMP 2K43.1, "Supplier Checklist - Commercial Grade Survey - Calibration Services," Revision 1, dated June 10, 2011
- FMP 2K43.1.1, "Supplier Evaluation - Accreditation - Calibration Services," Revision 1, dated June 20, 2011
- FMP 2K43.1.1, "Supplier Checklist - Accreditation Evaluation - Calibration Services," Revision 1, dated June 20, 2011
- FMP 2K43.2, "Supplier Evaluation - Commercial Grade Survey - Laboratory Services," Revision 1, dated June 10, 2010
- FMP 2K43.2, "Supplier Checklist - Commercial Grade Survey - Laboratory Services," Revision 1, dated June 10, 2010
- FMP 2K46, "Supplier Evaluations - Audits, Surveys (Code) and Commercial Grade Surveys," Revision 7, dated February 4, 2009
- FMP 2K49, "Supplier Evaluation - Technical Surveillance," Revision 0, dated March 11, 2011
- FMP 2K49, "Supplier Checklist - Technical Surveillance," Revision 0, dated March 11, 2011
- FMP 2Q22, "Control of Safety-Related Components," Revision 4, dated January 5, 1995

In addition, the NRC inspection team reviewed the following sample of POs, drawings, inspection reports, inspection plans, and supplier evaluations and surveillances to verify proper implementation of Fisher Controls' commercial grade dedication program:

- PO 135447 to Martin Calibration for Commercial Calibration Services, dated June 6, 2011
- PO 135228 to SIMCO Electronics for Calibration Services, dated July 22, 2009
- PO 135400 to Honeywell Inc for Commercial Calibration Services
- Drawing Number 1B5992, Revision C, dated December 13, 1990
- Drawing Number 11B1273, "Design E Connection Stud Bellows Seal," Revision C, dated June 2, 2011

- Fisher Controls Bao'An Manufacturer's Certification for Customer PO 088G-132636, dated July 15, 2011
- Level C Nuclear Safety Related Inspection Report for Pin, Groove, Type F and H, Serial No. 19462625, dated July 12, 2010
- Level C Nuclear Safety Related Inspection Plan No 1303C for Part FS3582-12, Serial Number 20201917, Positioner, Type 3582, dated August 2, 2011
- Level C Nuclear Safety Related Inspection Report for Serial Number (SN) 110803-2, Screw, Mach, RD HD; 10-24X0.38
- Level C Nuclear Safety Related Inspection Report for Part V110744X012, "Lee Spring, LC-072J-7," dated August 4, 2011
- Level C Nuclear Safety Related Inspection Report for Part 1B599235072, "Pin, Groove, Type F; 3/32X0.69," per Drawing 1B599235072, SN 19462625, dated July 12, 2010
- Level C Nuclear Safety Related Inspection Report for Part 11B1273X012, "Stud Connection; 1/2X1 1/2," per Drawing 11B1273X012, SN 19462625, dated July 12, 2010
- Level C Nuclear Safety Related Inspection Plan 1388C for Part 11B1273X012, "Stud Connection; 1/2X1 1/2," dated August 2, 2011
- Level C Nuclear Safety Related Inspection Plan 1001C for Part Number 1A340828992, "Screw, round head, slotted," per Drawing 1A3408 for a Control Valve Assembly for McGuire Nuclear Station
- Level C Nuclear Safety Related Inspection Plan 1028C for Part V110744X012, "Lee Spring, LC-072J-7" SN 110803-3 dated August 4, 2011
- Level C Nuclear Safety Related Inspection Plan 1005C for Part 1A35724122, "L/NUT HEX 1/4-20 CV; 1/4-20," per Drawing 1A347, SN110804-3-6
- Level C Nuclear Safety Related Inspection Plan 1021C for Part 1B599235072, "Pin, Groove, Type F; 3/32X0.69," dated August 2, 2011
- Positive Material Identification Test Report reading number 677 for Part 1B599235072, "Pin, Groove, Type F; 3/32X0.69"
- Positive Material Identification Test Report reading number 679
- "Subcontractor/Calibration Services Supplier Evaluation - 10 CFR 50 Appendix B for SIMCO Electronics," dated June 10, 2008
- Supplier Checklist - Accreditation Evaluation - Calibration Services for Martin Calibration, dated June 2011
- Supplier Checklist - Technical Surveillance of Fisher Controls - Sherman, dated April, 4, 2011

- Survey of Suppliers- Calibration Checklist for Honeywell Inc, dated February 24, 2009
- Surveillance of Interface Sealing Solutions, dated February 24, 2009

The NRC inspection team also observed dedication activities and reviewed several dedication packages, including dedication plans, the criteria for the selection of critical characteristics, the selection of verification methods, commercial grade surveys, and source surveillances to verify effective implementation of the Fisher Controls' CGI dedication process.

b. Observations and Findings

b.1 Technical Evaluations and Identification of Critical Characteristics

ES 248 provides guidance for classifying valve parts, accessories, and appurtenances for use in nuclear safety-related applications. This procedure is used to identify essential-to-function parts that will need to be dedicated or procured as safety related, and defines active and nonactive safety functions for valves and actuators. The procedure gives examples of which parts of the valves and actuators must be procured as ASME Code Section III safety related, or purely commercial grade. The procedure also describes how Fisher Controls performs technical evaluations and determines the critical characteristics based on the safety function, lists typical safety functions of the commonly supplied Fisher Controls valves and actuator assemblies, and explains the difference between active and passive safety functions. In addition, the procedure explains how to determine which piece parts are essential to ensuring that the valves and assemblies perform their safety function.

ES 142 identifies potential essential-to-function parts or assemblies when these parts or assemblies are to be selected for use in nuclear safety-related applications. The procedure is the result of Fisher Controls' technical evaluation of its standard valve and actuator assemblies and provides a representative list of critical characteristics for certain types of parts or assemblies. It further specifies that the qualification engineer or product engineer is responsible for determining the essential-to-function parts for a particular customer's PO.

b.2 Acceptance of Commercial Grade Items

FMP 2K27 describes the controls necessary to verify the critical characteristics of CGIs. The controls described in this procedure are designed around the Electric Power Research Institute's NP-5652, "Guideline for the Utilization of Commercial Grade Items in Nuclear Safety Related Applications," dated June 1998, and 10 CFR Part 21. FMP 2K27 provides high level guidance on performing special tests and inspections. The procedure also includes definitions, directs the qualification engineer to identify the critical characteristics and acceptance methods and to include them on the dedication plan, and requires the results of the dedication to be documented on the inspection report.

FMP 2K46 provides the requirements for performing and documenting commercial grade surveys. This procedure describes the high level requirements for performing surveys and refers to the FMP 2K43 procedures series and checklists used to perform various types of commercial grade surveys, including surveys of material and hardware manufacturers, surveys of calibration services, evaluations of the National Voluntary Laboratory Accreditation Program, the American Association for Laboratory Accreditation, ACLASS, the Laboratory Accreditation Bureau, International Accreditation Service, or Perry Johnson Laboratory Accreditation

calibration services, and surveys of laboratory services. The NRC inspection team verified that the checklists are specific to the control of critical characteristics necessary to accept CGIs.

FMP 2K49 provides the requirements and a checklist for performing source verifications. The checklist describes the surveillance scope and lists the requirements that Fisher Controls will be surveying, the applicable documents necessary to control the critical characteristics, and whether the supplier is in compliance with the requirements specified in the Fisher Controls' PO.

b.3 Implementation of Fisher Control's Commercial Grade Item Dedication Program

The NRC inspection team observed dedication activities and reviewed completed dedication packages, commercial grade surveys, and source surveillances to verify that Fisher Controls had properly developed and implemented a plan for CGIs.

The NRC inspection team reviewed two completed dedication packages for a pin and a stud connection for a sliding stem and a butterfly valve that were shipped to Watts Bar Nuclear Plant Unit 2. The NRC inspection team reviewed the dedication plans, associated drawings and inspection reports to verify that the critical characteristics and verification methods were specified on the dedication plans, that the dedication plans referenced drawings and material specifications that contained the associated acceptance criteria for each critical characteristic, and that the inspection report documented the acceptance of the critical characteristics.

During the review of the dedication plans, the NRC inspection team noted that both dedication plans included the material specifications as a critical characteristic and called for verification that the material met ASME Code material specifications using the positive material identification (PMI) technique in accordance with FMP 2G19.3. FMP 2G19.3 describes Fisher Controls' material verification process using PMI and states, in part, that "the test methods outlined in this procedure are intended to identify alloy materials and are not intended to establish the exact conformance of a material to a particular alloy specification." The dedication plans for (1) the pin and (2) the stud connection required both to meet the ASME Code material specification SA479 S31600 and SA276 S31600 for 316 type stainless steel, respectively. The dedication plan specified no methods other than PMI for verifying the material characteristics.

To implement the PMI technique on the pin and stud connection, Fisher Controls used a Niton Alloy Analyzer, which employs x-ray fluorescence (XRF) in air, to verify that the material meets the ASME Code material specifications. XRF is a characterization technique used for quantitative and qualitative elemental analysis, but has quantitative limitations due to inherent instrument constraints that do not allow for the detection of light atomic elements such as carbon, sulfur, phosphorus, and silicon, because the low energy x-rays are largely absorbed in air within a very short distance and never reach the detectors. XRF may be considered a qualitative or semiquantitative technique and should not be used to check for elemental compliance with standards limits. Both ASME Code SA479 S31600 and SA276 S31600 contain maximum limits on carbon, phosphorus, sulfur, silicon, and nitrogen which XRF cannot detect in air. Therefore, XRF alone would not be able to verify the material specifications of the pin and stud connection. The NRC inspection team identified this issue as an example of Nonconformance 99900105/2011-201-02 for Fisher Controls' failure to adequately verify that a pin and a stud connection for a nuclear safety-related butterfly valve met the material specifications identified as critical characteristics in the associated dedication plans.

The NRC inspection team observed special tests and inspections, including dimensional verification, XRF, and hardness testing for four commercial grade dedications of a screw and a

lee spring for a control valve assembly for McGuire Nuclear Station, four hexagonal nuts, and a 3582 valve positioner for Fermi Unit 2. The NRC inspection team verified that the Fisher Controls nuclear valve stream technician was qualified, picked the correct item, and used qualified equipment. The NRC inspection team also verified that the associated dedication plans specified the critical characteristics and verification methods. The dedication plans referenced drawings and material specifications that contained the associated acceptance criteria for each critical characteristic. The nuclear technician verified the part number, dimensional critical characteristics, and chemical critical characteristics according to the dedication plan and associated drawings and documented them on the inspection record. The NRC inspection team did not identify any issues with the dedication of the screw or hexagonal nuts.

While dedicating the lee spring, the nuclear technician observed that the drawing of the lee spring (V110744) that identified the dimensional critical characteristics did not contain tolerances and that the lee spring did not meet the dimensional specifications identified on the drawing. The technician called the qualification engineer responsible for the lee spring dedication plan and the qualification engineer explained that he had previously opened Engineering Change Request Notice 20110872 to revise Drawing V110744 to add tolerances. The technician also opened Nonconformance Report (NCR) 103736-1 to address the dimensional nonconformity.

While observing the dedication of the 3582 valve positioner, the NRC inspection team noted that the dedication plan identified the material properties as critical characteristics, which are to be verified by commercial grade survey and review of the material certification provided by the supplier. The NRC inspection team ascertained that the commercial grade survey had verified that the supplier had a documented and effectively implemented program and procedures to control the critical characteristics of the items procured. However, the NRC inspection team found that the PO to Fisher Controls-Bao'An for an FS3582-12/*SR valve positioner did not invoke the controls identified in the commercial grade survey necessary to control the critical characteristics as contract requirements by referencing the applicable procedure and revision in the PO. Therefore, Fisher Controls could not be assured that the controls reviewed and accepted during the survey were implemented during the manufacturing process of the valve positioner. In addition, the manufacturer's certification did not include the cure date for elastomeric material, which is one of the critical characteristics listed on the dedication plan. The NRC inspection team identified this issue as an example of Nonconformance 99900105/2011-201-03 for Fisher Controls' failure to impose the applicable requirements in the procurement documents. Fisher Controls initiated NCR 103706-1 and CAR 1510 to address this issue.

The NRC inspection team also verified that commercial grade surveys were conducted frequently enough to ensure that the process controls applicable to the critical characteristics of the CGIs continue to be effectively implemented. In addition, the NRC inspection team reviewed a sample of commercial grade surveys and evaluations to verify that the surveys were specific to the control of critical characteristics and that the supplier's programmatic and procedural controls necessary to accept CGIs were adequately identified.

During the review of the commercial grade surveys, the NRC inspection team observed that two of the surveys did not contain sufficient objective evidence showing that the critical characteristics were adequately controlled. For example, Fisher Controls issued a safety related PO to SIMCO Electronics for calibration services although SIMCO did not have an Appendix B QA program. The NRC inspection team asked Fisher Controls if it had dedicated

the calibration services before using the commercially calibrated equipment in safety related applications. Fisher Controls informed the NRC inspection team that this issue was identified during a 2008 audit performed by the Nuclear Procurement Issues Committee and opened CAR 1332. Subsequently, an evaluation was performed, which determined that the audit covered all the controls for the critical characteristics necessary to accept the commercial grade calibration services and that the audit was equivalent to a commercial grade survey. The NRC inspection team reviewed the portion of the CAR related to the SIMCO Electronics audit review and found that while Fisher Controls had determined that the audit was sufficient to verify most of the critical characteristics, the audit did not verify controls for at least two of the critical characteristics. The audit did not verify that programs or procedures were in place to (1) ensure that the measuring and test equipment (M&TE) was calibrated over the range for which it is intended to be used, and (2) ensure that SIMCO reported nonconforming M&TE or standards used to calibrate Fisher Controls' M&TE. The NRC inspection team also confirmed that the PO did not include the missing controls as additional quality and technical requirements. The NRC inspection team identified this issue as an example of Nonconformance 99900105/2011-201-04 for Fisher Controls' failure to provide adequate objective evidence in the commercial grade surveys necessary to demonstrate that the critical characteristics were adequately controlled. Fisher Controls initiated CAR 1507 to address this issue.

During the review of the commercial grade survey for Honeywell Inc, which provides onsite commercial calibration services, the NRC inspection team noted that Fisher Controls had not verified that Honeywell had documented and effectively implemented a program and procedures to adequately control the critical characteristics. During discussions with the NRC inspection team, Fisher Controls stated that certain controls of critical characteristics identified in the commercial grade survey checklist were not necessary because the calibration was performed at Fisher Controls' facility. Specifically, Fisher Controls stated that the following controls used to verify the critical characteristics were not necessary: (1) verifying that there is a process for documenting and controlling deviations/exceptions to customer POs, (2) resolving deviations before commencing work, (3) verifying that there is sufficient authority and independence, and (4) verifying that there was a 4 to 1 ratio of master to equipment. These four areas in the commercial grade survey were marked as "N/A." The NRC inspection team reviewed the PO to Honeywell and verified that the PO did not invoke these provisions. The NRC inspection team identified this issue as an example of Nonconformance 99900105/2011-201-04 for Fisher Controls' failure to provide adequate objective evidence in the commercial grade surveys necessary to demonstrate that the critical characteristics were adequately controlled. Fisher Controls initiated CAR 1507 to address this issue.

For a sample of two source verifications, the NRC inspection team verified that the source verifications identified the specific process of interest that was correlated with a manufacturing or testing phase, the verification method used to verify the critical characteristics for acceptance, direct observation of the verification of a CGI's critical characteristics and manufacture at the supplier facility, and documentation of the source verification results. The source verification of Fisher Controls - Sherman included surveillance of welding and leak testing of two plug/stem bellows assemblies p/v 23B2323X012 for Order 027D-269110, Items 001 and 001A. The source verification of Interface Sealing Solutions included witnessing cutting, inspection, special handling, packaging and shipping of four nuclear diaphragms, part number 1F7022X0062.

c. Conclusions

The NRC inspection team concluded that Fisher Controls is not effectively implementing its commercial grade dedication program consistent with the regulatory requirements of Criterion

III, "Design Control," Criterion IV, "Procurement Document Control," and Criterion VII, "Control of Purchased Equipment, Materials, and Services," of Appendix B to 10 CFR Part 50. The NRC inspection team issued Nonconformance 99900105/2011-201-02 for Fisher Controls' failure to review the suitability of the application of materials that are essential to the safety-related functions of the structures, systems, and components, Nonconformance 99900105/2011-201-03 for Fisher Controls' failure to include in the procurement documents the required controls identified during a commercial grade survey that are necessary to control the critical characteristics of a valve positioner, and Nonconformance 99900105/2011-201-04 for Fisher Controls' failure to provide sufficient objective evidence in the commercial grade surveys necessary to demonstrate that the critical characteristics were adequately controlled. More information regarding the nonconformances identified above is provided in each of the applicable sections below.

4. Design Control

a. Inspection Scope

The NRC inspection team reviewed Fisher Controls' policies and procedures governing the implementation of Fisher Controls' design control program to verify compliance with Criterion III, "Design Control," of Appendix B to 10 CFR Part 50. In addition, the NRC inspection team discussed the design control program with Fisher Controls' management and technical staff.

The NRC inspection team reviewed the following documents for this inspection area:

- NQAM, Section 4, "Order Entry and Design Control," Revision 8, dated October 4, 2010
- Engineering Practice (EP) 20, "Determining Pressure Vessel Strength," Revision F, dated February 18, 2009
- EP 48, "Validation & Documentation of Computational Simulations," Revision D, dated March 3, 2011
- ES 93, "Nuclear Valve Design Reports - ASME Boiler and Pressure Vessel Code, Section III, Nuclear Power Plant Components," Revision N, dated August 22, 2000
- ES 121, "Control and Maintenance Procedures for Emerson Process Management - Valve Division Analytical Computer Programs and Databases," Revision P, dated April 19, 2011
- ES 235, "Product Safety Fisher Valve Division Safety Checklist," Revision J, dated September 29, 2003
- ES 256, "Code and Specification Reconciliation for Nuclear Service Replacement Parts and Components," Revision C, dated August 25, 2008
- FMP 2G19.3, "Material Verification Using Niton Alloy Analyzers," Revision 8, dated November 14, 2005

- FMP 2Q12, "Large and/or Special Contract (LSC) & Nuclear Order Processing System - Determination of Project/Order Processing Requirements," Revision 7, dated September 1, 2010
- FMP 2Q19, "LSC Order Purchasing System-Change Order Processing," Revision 5, dated June 9, 2010
- FMP 2Q20, "LSC Order Processing System - Nuclear Repair/Evaluation Order Processing" Revision. 5, dated July 20, 2010
- FMP 2Q22, "Control of Safety-Related Components," Revision 4, dated January 5, 2010
- FMP 2Q23, "Reconciliation of ASME Section III, Division 1 Replacement Orders" Revision. 4, dated August 28, 2008

The NRC inspection team also reviewed the following documentation related to the design and manufacturing of control valves to be used at the Watts Bar Nuclear Power Plant Unit 2 and Westinghouse Electric Company's (WEC's) Advance Passive (AP) 1000 design.

- PO 4500262259 from WEC to Fisher Controls for a 4 inch pressurizer spray valve, ASME Code Section III, Class 1
 - Document No. APP-PV63-Z0-001, "Design Specification for Pressurizer Spray Valve, ASME Boiler and Pressure Vessel Code, Section III Class 1," Revision 5
 - Document No. APP-PV63-V0-001, "Pressurizer Spray Valve 4 inch, CL15000INT Stainless Steel Air Operated w/Position," Revision 1
 - Document. No. 08QN02-DR-01.01, "Design Report for Class 1 Components per ASME Section III, Division 1," Revision A, dated June 11, 2010
 - Document No. 08QN02-0E-01, "Design Report for Operating Experience Report for Westinghouse PV63 Pressurizer Spray Valve," Revision A, dated April 5, 2010
 - Document No. 08QN02-SA-02, "Seismic Qualification Report," Revision A, dated May 28, 2010
 - Document No. 08QN02-SA, "Westinghouse PV63 Pressurizer Spray Valve Seismic Qualification Report," Revision B, dated September 4, 2009
 - Document No. DR0808, "Non-conformance Design Report," Revision A, dated October 17, 2009
 - Drawing No. GE42385, SS-B4PSV63-1052PSV, Revision L
- PO 450032524 from WEC to Fisher Controls for a 14 inch passive residual heat removal discharge valve, ASME Code Section III, Class 1

- Document No. APP-PV20-Z0-001, “Design Specification for Passive Residual Heat Removal Discharge Valve, ASME Boiler and Pressure Vessel Code Section III, Class 1,” Revision 0, dated September 3, 2009
 - Document No. CPP-PV20-GDX-001, Appendix 5: “Release Document List (CRDL) for the Procurement of PV20 Passive Residual Heat Removal Valves for China Sanmen 1 and Haiyang,” Revision 0
 - Document No. 09QN47-SA-01, “Seismic Qualification Report”, Revision A, dated June 21, 2011
- PO 450034186 from Watts Bar Nuclear Power Plant Unit 2 to Fisher Controls for a butterfly valve ASME Section III, Division 1, 1971 Edition w/1972 Addenda, Class 2, Revision 6, dated September 13, 2010
 - Document No. 678976, “Butterfly Valves ASME Boiler and Pressure Vessel Code Section III, Class 2 and 3,” Revision 6
 - Document No. 10QN65-DR-01, “Design Report,” Revision D, dated April 11, 2011
 - Document No. CD73-90, “Seismic Analysis Report,” Revision 1, dated October 11, 1976
- PO 4500341879 from Watts Bar Nuclear Power Plant Unit 2 to Fisher Controls for a sliding stem valve ASME Section III Division 1, 1972 Edition
 - Document. No. 10QN66-OR-01, “Design Report,” Revision E, dated March 24, 2011
 - Document. No. 10QN67-CC-02, “Seismic Report,” Revision F, dated June 21, 2011
 - Document. No. 08QN02-SA, “Seismic Analysis,” Revision B, dated February 15, 2010
- Document. No. 1036, “NS Parent Valve Seismic Analysis,” Volume 1
- Document No. M20100092, Laboratory Report
- Drawing. No. GE42385, Revision L

b. Observations and Findings

b.1 Policies and Procedures

Section 4 of Fisher Controls’ NQAM establishes the responsibilities and methods for processing ASME Code and nuclear safety related orders, and describes the preparation of design

documents required to ensure compliance with the ASME Code, design specifications, and contract requirements.

EP 48 provides guidelines for validating and documenting the results of computational simulations.

ES 93 establishes the procedures for developing, reviewing, and certifying nuclear valve design reports.

ES 121 provides a procedure for documenting, revising, and maintaining analytical computer programs and databases to ensure that those programs and databases have been qualified to be accurate and verified in accordance with the applicable procedures.

ES 235 describes the product safety function and its operation, and provides a checklist to assess the safety of the products within the scope of ES 235.

ES 256 addresses the engineering activities associated with reconciliation of nuclear code and specification requirements for material, design, and configuration changes when supplying Level A (ASME Code Section III) and Level B (10 CFR Part 50, Appendix B) replacement parts and components. ES 256 addresses in detail reconciliation activities involving materials, design, fabrication, examination and testing. Specifically, this procedure provides a method to ensure that the nuclear code and specification design and material requirements have been met for nuclear service replacement parts and products, when supplied according to more recent codes and specifications than those originally used.

FMP 2Q12 outlines the normal processing requirements necessary and the responsibility for performing LSC and nuclear project and/or orders.

FMP 2Q19 outlines the normal processing requirements and the responsibilities for performing a change order received for an LSC project and/or order. The limitations or complexities of the change order and the corresponding project and/or order will dictate the deletion or possible addition to be performed.

FMP 2Q20 outlines the normal processing requirements and the responsibilities for performing those requirements in the processing of a repair or evaluation order for nuclear power plant equipment.

FMP 2Q22 provides control of safety related components used in valves, valve parts, and appurtenances for compliance with Appendix B to 10 CFR Part 50, ASME/American National Standards Institute N45.2-1977, "Quality Assurance Program Requirements for Nuclear Facilities," and ASME NQA-1-1994.

FMP 2Q23 outlines the requirements for reconciling the differences between the original valve's contractual requirements and ASME Code Section III, Division 1, requirements to the current order's contractual requirements, including any differences in the original Code edition and addenda and the current applicable edition and addenda for processing Level A items.

b.2 Implementation of Design Control Program

The NRC inspection team reviewed the design specification reports, seismic analysis and qualification reports for the Watts Bar Nuclear Power Plant and WEC's AP1000 design valves

and key Fisher Controls' design control documents to verify Fisher Controls' design control process. The NRC inspection team verified that the Watts Bar and WEC design specifications were adequately translated into appropriate manufacturing design documents by Fisher Controls personnel. Specifically, the Fisher Controls design plan (checklist) for the Watts Bar and WEC AP1000 valves documented the required design control activities needed to implement the project, including, but not limited to, the customer-specified reviews, design input development, design report preparation, layout, drawings, and design verification requirements.

The Fisher Controls' design reports included technical details such as applicable codes, calculations, background information, results from information research, component drawings, machine drawing parts, and references to qualification and test reports. The NRC inspection team verified that all governing specifications for traceable components included PO specifications, codes, and Authorized Nuclear Inspector (ANI) review requirements. In addition, the NRC inspection team reviewed seismic analysis, qualification and test reports for the Watts Bar and WEC AP1000 valves. The NRC inspection team concluded that the documents generated by Fisher Controls met the requirements of the Fisher Controls' design control procedures and NQAM.

The NRC inspection team reviewed the Watts Bar and WEC AP1000 valve procurement specifications and valve data sheets to verify that Fisher Controls had correctly translated these design inputs into specifications, drawings, and procedures for the manufacture of the valves. All review activities of Fisher Controls' specification documents and drawings were verified to conform to ASME Code requirements and Watts Bar and WEC specifications and data sheets. The NRC inspection team also reviewed Fisher Controls' procedures for the development, review, and revision of engineering drawings. All drawings reviewed conformed to Fisher Controls' procedures.

In general, the NRC inspection team concluded that Fisher Controls' design control process was consistent with the applicable regulatory requirements, and that Fisher Controls had correctly translated the design basis into the applicable specifications, drawings, procedures, and instructions. The NRC inspection team confirmed that (1) the appropriate quality standards were specified and included in design documents, (2) sufficient coordination between Watts Bar, WEC and Fisher Controls was taking place for the design and manufacturing of the valves, (3) independent verifications and checks were integrated into the process and were being performed, (4) required qualification tests were being performed, and (5) design changes were being effectively controlled and approved.

However, during the review of the dedication plans associated with the design of the Watts Bar valves, the NRC inspection team noted that both dedication plans included the material specifications as a critical characteristic and called for verification that the material met ASME Code material specifications using the PMI technique in accordance with FMP 2G19.3. Fisher Controls failed to adequately verify that a pin and a stud connection met the material specifications identified as critical characteristics in the associated dedication plans. The NRC inspection team identified this issue as an example of Nonconformance 99900105/2011-201-02. Section 3.b.3 above provides a detailed discussion of the nonconformance.

c. Conclusions

The NRC inspection team concluded that Fisher Controls is not effectively implementing its design control program consistent with the regulatory requirements of Criterion III, "Design Control," of Appendix B to 10 CFR Part 50. The NRC inspection team issued Nonconformance

99900105/2011-201-02 for Fisher Controls' failure to review the suitability of the application of materials that are essential to the safety-related functions of the structures, systems, and components. Specifically, Fisher Controls did not identify a suitable method to verify that a pin and a stud connection for a nuclear safety-related valve met the material specifications identified as critical characteristics in the associated dedication plans. Please refer to Section 3.b.3 above for a detailed discussion of the nonconformance.

5. Procurement Document Control

a. Inspection Scope

The NRC inspection team reviewed Fisher Controls' policies and procedures governing the implementation of Fisher Controls' procurement document control program to verify compliance with Criterion IV, "Procurement Document Control," of Appendix B to 10 CFR Part 50. In addition, the NRC inspection team discussed the procurement document control program with Fisher Controls' management and technical staff.

The NRC inspection team reviewed the following documents for this inspection area:

- NQAM, Section 8, "Procurement Control," Revision 8, dated October 4, 2010
- FMP 2K47 "Supplier Qualification and Control," Revision 2, dated June 3, 2010
- FMP 2Q12, "LSC & Nuclear Order Processing System - Determination of Project/Order Processing Requirements," Revision 7, dated September 1, 2010
- FMP 2Q19, "LCS Order Purchasing System - Change Order Processing," Revision 5, dated June 9, 2010
- FMP 2Q22, "Control of Safety-Related Components," Revision 4, dated January 5, 2010

In addition, the NRC inspection team reviewed a sample of POs to verify proper implementation of Fisher Controls' procurement document control program.

b. Observations and Findings

b.1 Policies and Procedures

Section 8 of Fisher Controls' NQAM establishes the 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 and shall identify basic technical requirements, such as drawings, specifications, and codes and industrial standards. Contract provisions include documentation requirements, review of procurement documents and changes to the documents, 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.

FMP 2K47 provides guidance for the approval, maintenance, and use of qualified suppliers which maintain the PO appendices that convey additional requirements imposed on orders to their suppliers. FMP 2K47 Annex 4 is the appendix attached to safety related POs that imposes the requirements of Appendix B to 10 CFR Part 50 and 10 CFR Part 21 on all items procured as safety-related.

b.2 Implementation of Procurement Document Control Program

The NRC inspection team reviewed a sample of POs issued by Fisher Controls in support of the Watts Bar Nuclear Plant Unit 2 and WEC's AP1000 design to determine whether the requirements identified in the procedures were imposed on applicable purchasing documents. The NRC inspection team found that most of the POs adequately documented the procurement requirements as established by the governing Fisher Controls' policies and procedures which include (1) task definitions and responsibilities, (2) imposition of appropriate quality, technical, and regulatory requirements, and (3) identification of applicable codes and standards. The NRC inspection team also found that these POs adequately defined contract deliverables, disposition of nonconformances, access rights to subtier suppliers, and extension of contractual requirements to subcontractors.

However, during the review of two POs issued to Dubose National Energy Services for the procurement of a safety related valve body forging and a safety related flange bottom, the NRC inspection team noted that the POs did not impose the requirements of Appendix B to 10 CFR Part 50 as required by Fisher Controls' procedure FMP 2K47 and the customer specifications. The NRC identified this issue as another example of Nonconformance 99900105/2011-201-03 for Fisher Controls' failure to include the applicable requirements in the procurement documents.

c. Conclusions

The NRC inspection team concluded that Fisher Controls is not effectively implementing its procurement document control program consistent with the regulatory requirements of Criterion IV, "Procurement Document Control," of Appendix B to 10 CFR Part 50. The NRC inspection team issued Nonconformance 99900105/2011-201-03 for Fisher Controls' failure to include the applicable requirements in the procurement documents. Specifically, Fisher Controls failed to impose the requirements of Appendix B to 10 CFR Part 50 in two safety related POs and failed to impose the required controls that are necessary to control the critical characteristics of a valve positioner identified during a commercial grade survey as discussed in Section 3.b.3 above.

6. Control of Purchased Material, Equipment and Services

a. Inspection Scope

The NRC inspection team reviewed Fisher Controls' policies and procedures governing the implementation of Fisher Controls' control of purchased material, equipment, and services program to verify compliance with Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50. In addition, the NRC inspection team discussed the control of purchased material, equipment, and services program with Fisher Controls' management and technical staff.

The NRC inspection team reviewed the following documents for this inspection area:

- NQAM, Section 7, “Supplier Qualification,” Revision 8, dated October 4, 2010
- NQAM, Section 19, “Surveys and Audits,” Revision 8, dated October 4, 2010
- Quality Specification (QS) 50-0021, “Supplier Evaluation,” Revision 8, dated November 30, 2009
- QS50-0018, “Quality Requirements for Suppliers,” Revision 7, dated November 30, 2009
- Fisher Procurement Procedure (FPP) 009, “Supplier Qualification Procedure and Worksheets,” Revision M, dated April 26, 2011
- FMP 2A7, “Initiation, Processing, Acceptance, and Documentation of Tryout Orders,” Revision 5, dated December 18, 2009
- FMP 2H2, “Procedure for Control and Calibration of Gages, Measurements Equipment and Examination Equipment,” Revision 43, dated May 12, 2010
- FMP 2K47, “Supplier Qualification and Control,” Revision 2, dated June 3, 2010
- FMP 2S13, “Suspect and Counterfeit Item Detection,” Revision 0, dated May 10, 2010

b. Observations and Findings

b.1 Policies and Procedures for Vendor Qualification

Section 7 of Fisher Controls’ NQAM describes the requirements for ensuring that the qualifications of suppliers are in compliance with the ASME Code and applicable regulatory requirements. The NQAM also provides referencing documentation in the processing and requirements of all audits and supplier evaluations for suppliers that provide raw, semifinished, and finished items and or services used in the manufacture of Fisher Controls’ valves.

QS 50-0021 describes the minimum quality requirements for suppliers of materials, parts, and services to be listed on Fisher Controls’ World Wide Qualified Suppliers List, or Site’s Qualified Suppliers List, which is equivalent to Fisher Controls’ approved suppliers list (ASL).

QS 50-0018 describes the requirements for providing material used in the production of process control equipment and the tryout requirements. A tryout is an experimental trail piece that requires verification of a supplier’s patterns, dies, casting, or manufacturing techniques which may be used for a production order if the process deems the piece acceptable.

FPP 009 defines the total requirements used when assessing a supplier for addition to the Fisher Controls’ ASL.

FMP 2A7 defines the internal roles and processes necessary for the verification of tryout parts which encompasses order initiation, order processing, acceptance, and documentation of tryout orders.

FMP 2H2 provides the requirements for maintaining accuracy of gauges, measuring instruments, and examination equipment used in acceptance inspection of products purchased or manufactured by Fisher Controls. It also describes the control system, inspection

instructions, inspection interval and methods used to inspect and calibrate dimensional gauges, measuring instruments, and examination equipment owned by the company

FMP 2K47 provides guidance for the approval, maintenance, and use of qualified suppliers, while FMP 2S13 provides guidance for the handling of suspect and counterfeit parts or components.

b.2 Maintenance of the Approved Suppliers List

The NRC inspection team reviewed the ASL to ensure that qualified and approved suppliers were listed; that the lists were maintained, distributed, and periodically updated by authorized personnel; and that any revisions to the lists were implemented following the applicable procedures. The NRC inspection team confirmed that the suppliers performing work for Fisher Controls were appropriately listed on the ASL. In addition, the NRC inspection team confirmed that the scope of supply was documented and consistent for the activities contracted.

b.3 External Audits

The NRC inspection team reviewed a sample of external audits and annual vendor evaluations to verify the implementation of Fisher Controls' audit program. The NRC inspection team verified that plans identifying the audit scope, focus, and applicable checklist criteria had been prepared and approved before the initiation of the audit activity. In addition, the NRC inspection team verified that qualified lead auditors and auditors performed the external audits. The NRC inspection team confirmed that the audit, annual evaluation, and commercial grade survey reports contained a review of the relevant QA criteria in Appendix B to 10 CFR Part 50 for the activities performed by the individual suppliers as well as documentation of pertinent supplier guidance associated with each criterion. For audits and surveys resulting in findings, the NRC inspection team verified that the supplier had established a plan for corrective action and that Fisher Controls had reviewed and approved the corrective action and verified its satisfactory completion and proper documentation.

During the review of the commercial grade surveys, the NRC inspection team noted that two surveys did not contain sufficient objective evidence to demonstrate that the critical characteristics were adequately controlled. The NRC inspection team identified this issue as an example of Nonconformance 99900105/2011-201-04. Section 3.b.3 above provides a detailed discussion of this nonconformance.

b.4 Tryout Inspection

The NRC inspection team witnessed a tryout inspection of a valve forging for the AP1000 design. Tryout inspection 4249 was completed in accordance with FMP 2A7 and verified against Revision D of Drawing GE 43840 and Inspection Plan TR 003. During the tryout inspection, the Fisher Controls' inspector noted that the valve forging was originally machined to Revision C of Drawing GE 43840. The Fisher Controls' inspector initiated NCR 100240-1 to address this issue. The tryout inspection was completed to verify that all necessary corrections were made in accordance with the NCR. The NRC inspection team observed that the Fisher Controls' inspector had all procedures and drawings readily available and actively referred to them.

c. Conclusions

The NRC inspection team concluded that Fisher Controls is not effectively implementing its control of purchased material, equipment, and services program consistent with the regulatory requirements of Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50. The NRC inspection team identified issued Nonconformance 99900105/2011-201-04 for Fisher Controls' failure to provide objective evidence of quality by the contractor through commercial grade surveys. Specifically, Fisher Controls' commercial grade surveys of SIMCO Electronics and Honeywell Inc. did not verify the critical characteristics identified in the commercial grade survey checklist. Section 3.b.3 above provides a detailed discussion of this nonconformance.

7. Control of Special Processes

a. Inspection Scope

The NRC inspection team reviewed Fisher Controls' policies and procedures governing the implementation of Fisher Controls' control of special processes program to verify compliance with Criterion IX, "Control of Special Processes," of Appendix B to 10 CFR Part 50. In addition, the NRC inspection team discussed the control of control of special processes program with Fisher Controls' management and technical staff. Fisher Controls' special processes include welding, heat treatment, nondestructive examination (NDE), and painting.

The NRC inspection team reviewed the following documents for this inspection area:

- NQAM, Section 10, "Control of Special Manufacturing Processes," Revision 8, dated October 4, 2010
- FMP 2J1, "American Society for Non destructive Testing Personnel Qualification and Certification," Revision 26, dated October 21, 2010
- FMP 2G30, "Fluorescent Water - Washable Liquid Penetrant Inspection," Revision 6, June 9, 2011
- FMP 5CP8.8G1.1TSNN, "GTAW-SMAW P8-P8 G1-G1, BMT=3/16" - 8" w/NACE, w/PED, Revision 2, dated October 28, 2009
- Engineering Drawing for Part # V112298X432
- Assembly Test Report No. 1006154-1-1, Revision 0, dated June 4, 2010
- Assembly Test Report No. 1007863-1-1, Revision 1, dated July 10, 2010
- Inspection and Test Report No. 097930-2-2, Revision 0, dated November 4, 2010
- Inspection and Test Report No. 1007863-1-1, Revision 0, dated July 1, 2010
- Inspection and Test Report No. 1006154-1-1, Revision 0, dated June 4, 2010

- Manufacturing Processing Requirements Form No. 108732-1, Revision 1, dated January 17, 2011
- Weld Order for Part # V112298, dated August 2, 2011
- WELDQUAL 4, Welder Qualification Database

b. Observations and Findings

b.1 Policies and Procedures

Section 10 of Fisher Controls' NQAM describes responsibilities, requirements, and personnel qualifications necessary for the control of special fabrication processes. A suitable environment will be provided for items during the performing of fabrication processes, including: welding, heat treating, cleaning, NDE, and painting; under controlled conditions in accordance with the ASME Code, the customer specification, and other special requirements.

FMP 2G30 describes the requirements for liquid penetrant inspection, such as the cleaning, the application of the penetrant and developer, the surface examination, and the standard for determining the acceptability of a part.

FMP 5CP8.8G1.1TSNN is used for gas tungsten arc or shielded metal arc welding of stainless steel to stainless steel with a base metal thickness of 3/16 of an inch to 8 inches. The FMP is the welding procedure specification (WPS) and the procedure qualification record (PQR). The PQR is documentation that the WPS has been qualified per ASME Section IX, "Welding and Brazing Qualifications."

The NRC inspection team verified that Fisher Controls had established and implemented procedures for the control of special processes such as welding, NDE and heat treatment. The procedures provide measures for the generation of special process control documents such as travelers, shop orders, inspection and test reports, assembly test reports, and weld orders. The NRC inspection team verified that process control documents include personnel and equipment requirements, conditions for accomplishing the process, acceptance criteria, results of inspections, and appropriate signatures.

Additionally, the NRC inspection team reviewed a sample of completed routing packages for valves shipped to Watts Bar Nuclear Plant Unit 2 and verified that the supporting documentation, including assembly test reports, weld joint records, inspection and test reports, and the qualifications of the welders and NDE personnel performing those activities performed in accordance with Fisher Controls' procedures and applicable requirements.

b.2 Welding

Section 10.2 of Fisher Controls' NQAM describes in detail the control of welding and states, in part, that all welding operations shall be performed using qualified WPSs and welders currently qualified per the ASME Code, Sections III and XI. The QA Manager, who is also responsible for certifying the PQR, approves the WPSs. The Welding Manager is responsible for (1) witnessing the qualification of WPSs and recording the actual parameters being used, (2) ensuring the qualification of welders and weld operators, and (3) establishing a weld log for each welder; which lists the name of the welder, the material, process, and procedure used. The Welding

Supervisor is responsible for (1) selecting the welder to perform a task, (2) ensuring that the proper procedures are used, (3) determining and issuing the weld filler material each job, (4) completing the weld order, and (5) creating a monthly record showing each welder's performance of a process for the purpose of documenting welder qualification. Welder qualifications are maintained in an electronic database titled WELDQUAL 4.

The NRC inspection team witnessed the performance of a valve stop to body weld for an 8 inch 7800 butterfly valve for the Edwin I Hatch Nuclear Plant (Customer Order No. 6085235). During this observation, the NRC inspection team reviewed the WPS and associated PQR contained in FMP 5CP8.8G1.1TSNN, the engineering drawing of the welded component, and the qualifications of the welder performing the job. The finished weld was inspected and the weld order was signed by the welder, the Welding Supervisor, and the inspector as required by Fisher Controls' procedures. In addition, the NRC inspection team verified that calibrated equipment was used to perform the weld and that the documents generated in support of the welding activity complied with Fisher Controls' procedures. Furthermore, the NRC inspection team determined that the welding procedure was in compliance with the requirements of Section XI of the ASME Code.

b.3 Nondestructive Examination

Section 10.4 of Fisher Controls' NQAM describes the control of NDE. Section 10.4.1 states, in part, that NDE procedures are prepared in accordance with the ASME Code and approved by the NDE Level III technician. The QA Manager is responsible for ensuring that the NDE procedures are demonstrated to the satisfaction of the ANI before they are used. Qualification and certification of NDE personnel must meet with the requirements of FMP 2J1.

The NRC inspection team witnessed two liquid penetrant tests performed on valve disks for WEC and Caltrol Inc. For both tests, the team witnessed the application and removal of the liquid penetrant, the drying of the treated surface, the application of dry developer, and the surface examination and acceptance of the part. The NRC inspection team verified that the NDE procedure used was approved by the NDE Level III technician and was in accordance with the ASME Code. In addition, the NRC inspection team reviewed the documents generated in support of the liquid penetrant tests. The NRC inspection team also verified, through direct examination and discussions with the NDE operator, that the liquid penetrant examinations were performed satisfactorily in accordance with FMP 2G30 and the Fisher Controls' NQAM.

c. Conclusions

The NRC inspection team concluded that the implementation of Fisher Controls' control of special processes program is consistent with the regulatory requirements of Criterion IX, "Control of Special Processes," of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team determined that Fisher Controls is effectively implementing its policies and procedures associated with the control of special processes. No findings of significance were identified.

8. Test Control

a. Inspection Scope

The NRC inspection team reviewed Fisher Controls' policies and procedures governing the implementation of Fisher Controls' test control program to verify compliance with Criterion XI,

“Test Control,” of Appendix B to 10 CFR Part 50. In addition, the NRC inspection team discussed the test control program with Fisher Controls’ management and technical staff.

The NRC inspection team reviewed the following documents for this inspection area:

- NQAM, Section 12, “Test Control,” Revision 8, dated October 4, 2010
- FMP 2C2.8, “Hydrostatic Testing of a Nuclear Valve Body Assembly”, Revision 8, dated July 20, 2009
- FMP 2J2, “Qualification of Clean Area Assembly/Assembly Test Personnel,” Revision 12, dated May 17, 2010
- Assembly Test Report (ATR) No. 1006154-1-1, Revision 0, dated June 4, 2010
- ATR No. 1007863-1-1, Revision 1, dated July 10, 2010

b. Observations and Findings

b.1 Policies and Procedures

Section 12 of Fisher Controls’ NQAM describes the responsibilities and requirements necessary to ensure that tests required by the ASME Code and the design specification meet the applicable requirements. The QA Documentation Supervisor is responsible for ensuring that (1) the test times, pressures, and acceptance criteria are included on the ATR, (2) test results are documented and (3) test results meet the procedure specified on the ATR. Personnel performing assembly and testing shall be qualified by experience and evaluation on the specific test involved. An inspector must witness hydrostatic tests, and the ANI must witness hydrostatic tests on valve assemblies and pressure boundary items greater than 4 inch nominal diameter valve size.

FMP 2C2.8 provides the requirements for hydrostatic testing of nuclear valve body assemblies under Fisher Controls’ testing program.

b.2 Implementation of Test Control Program

The NRC inspection team observed a hydrostatic test of a nuclear valve assembly, related to Customer Order No. 6085235. The test was performed using FMP 2C2.8 and witnessed by the Fisher Controls inspector and the ANI. Upon completion of the test, nuclear pressure gauge #222 was removed from the hydrostatic test machine and taken for recalibration. The NRC inspection team witnessed the calibration of the pressure gauge by a QA technician. The QA technician explained to the NRC inspection team that the nuclear pressure gauges are calibrated and installed on the hydrostatic tester before a nuclear valve assembly is tested and that once the hydrostatic testing is complete; the nuclear gauge is removed and recalibrated before being returned to storage. The NRC inspection team determined that this procedure for nuclear gauge calibration is in accordance with the requirements of Section 13.5.1 of the NQAM. The NRC inspection team also determined that the performance of the hydrostatic test and the supporting documentation were consistent with the requirements specified in FMP 2C2.8.

The NRC inspection team also reviewed ATR No. 1006154-1-1 and ATR No. 107863-1-1 as part of the completed routing packages for valves shipped to Watts Bar Nuclear Plant Unit 2. The inspection team verified that the ATRs provide the information required by NQAM Section 12.1.1, including the item inspected, the type of test, the names of the assembler/tester and observer, the applicable procedures to be followed, and the mandatory hold points for testing to be witnessed by the ANI.

c. Conclusions

The NRC inspection team concluded that the implementation of Fisher Controls' test control program is consistent with the regulatory requirements of Criterion XI, "Test Control," of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team determined that Fisher Controls is effectively implementing its policies and procedures associated with test control. No findings of significance were identified.

9. Control of Measuring and Test Equipment

a. Inspection Scope

The NRC inspection team reviewed Fisher Controls' policies and procedures governing the implementation of Fisher Controls' control of measuring and test equipment (M&TE) program to verify compliance with Criterion XII, "Control of Measuring and Test Equipment," of Appendix B to 10 CFR Part 50. In addition, the NRC inspection team discussed the control of M&TE program with Fisher Controls' management and technical staff.

The NRC inspection team reviewed the following documents for this inspection area:

- NQAM, Section 13, "Control of Measuring and Test Equipment," Revision 8, dated October 4, 2010
- FMP 2H2, "Procedure for Control and Calibration of Gages, Measurement Equipment and Examination Equipment," Revision 43, May 12, 2010

In addition, the NRC inspection team reviewed the calibration records for the following devices:

- Tri-point Micrometer, Serial ID# G10024-0015, calibrated September 6, 2010
- Blade Micrometer, Serial ID# G10123-0003, calibrated August 26, 2010
- Outer Diameter Micrometer, Serial ID# G10069-0003, calibrated August 31, 2010
- Threaded Ring Gauge, Serial ID# G12904-0004, calibrated February 14, 2011
- Threaded Ring Gauge, Serial ID# G11559-0002, calibrated April 27, 2011
- Hardness Tester, Serial ID# G16581-0005, calibrated July 27, 2011
- RMA-7 Flowmeter, Asset # 9206047, calibrated February 28, 2011
- Pressure Gauge, Asset # PG3034, calibrated February 28, 2011

- Pressure Gauge, Asset # PG3261, calibrated February 28, 2011,

b. Observations and Findings

b.1 Policies and Procedures

Section 13 of Fisher Controls' NQAM describes actions and requirements necessary to ensure that the tools, gauges, and other final measuring and testing devices used in manufacturing and inspection activities, are calibrated and properly adjusted at specified intervals to maintain accuracy within necessary limits. The QC technician is responsible for calibrating gauges and measuring instruments by the calibration due date. Inspection gauges and measuring instruments are calibrated in accordance with FMP 2H2. FMP 2H2 provides the procedure for control and calibration of gauges including the required calibration interval.

b.2 Implementation of Control of Measuring and Test Equipment Program

The NRC inspection team verified that M&TE sampled had appropriate calibration stickers and current calibration dates, and that records were available for review. The NRC inspection team determined that the M&TE used was calibrated according to procedures traceable to known industry standards. Calibration records were determined to be in accordance with the Fisher Controls' NQAM and FMP 2H2.

c. Conclusions

The NRC inspection team concluded that the implementation of Fisher Controls' control of M&TE program is consistent with the regulatory requirements of Criterion XII, "Control of Measuring and Test Equipment," of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team determined that Fisher Controls is effectively implementing its policies and procedures associated with the control of M&TE. No findings of significance were identified.

10. Nonconforming Materials, Parts or Components

a. Inspection Scope

The NRC inspection team reviewed Fisher Controls' policies and procedures governing the implementation of Fisher Controls' nonconforming materials, parts or components program to verify compliance with Criterion XV, "Nonconforming Materials, Parts or Components," of Appendix B to 10 CFR Part 50. In addition, the NRC inspection team discussed the nonconforming materials, parts or components program with Fisher Controls' management and technical staff.

The NRC inspection team reviewed the following documents for this inspection area:

- NQAM, Section 16, "Nonconforming Materials and Items," Revision 8, dated October 4, 2010
- FMP 2K29, "Processing of Nonconforming Materials and Items," Revision 10, dated July 8, 2011

b. Observations and Findings

b.1 Policies and Procedures

Section 16 of the Fisher Controls' NQAM establishes the measures to control nonconforming items or activities. FMP 2K29 provides additional guidance and describes the detailed actions required to implement the program, including definition of the roles and responsibilities of Fisher Controls' personnel and the requirements for identification, documentation, control, disposition, review, and approval of nonconforming materials and services.

b.2 Implementation of Nonconforming Materials, Parts or Components Program

The NRC inspection team verified that the nonconformance reporting methods adequately identified the equipment, physical item description, description of the nonconformance (where applicable), and cause of the deficiency. In addition, the NRC inspection team identified the QA management reviewer, the justification for the disposition, the final quality review, closure date and signature, and the corrective actions completed and verified by the QA/QC staff. The NRC inspection team also verified that Fisher Controls' nonconformance process provides guidance to evaluate nonconformances for reportability under Fisher Controls' 10 CFR Part 21 program. The nonconformance process is also linked to the corrective action program.

The NRC inspection team also attended a Material Review Board meeting where representatives from various Fisher Controls' departments meet to discuss the disposition of nonconforming materials and items.

The NRC inspection team walked down Fisher Controls' assembly floor and verified that nonconforming materials were properly identified, marked, and segregated when practical to ensure that they were not reintroduced into the production processes. The NRC inspection team also verified that Fisher Controls had adequate controls for segregation of in-process nonconforming materials.

The NRC inspection team verified that, for the sample nonconformances reviewed, Fisher Controls had (1) dispositioned identified nonconformances in accordance with Fisher Controls' 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 inspection team concluded that the implementation of Fisher Controls' nonconforming materials, parts, or components program is consistent with the regulatory requirements of Criterion XV, "Non-conforming Materials, parts, or Components," of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team determined that Fisher Controls is effectively implementing its policies and procedures associated with the control of nonconforming materials, parts, or components. No findings of significance were identified.

11. Corrective Action

a. Inspection Scope

The NRC inspection team reviewed Fisher Controls' policies and procedures governing the implementation of Fisher Controls' corrective action program to verify compliance with Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. In addition, the NRC inspection team discussed the corrective action program with Fisher Controls' management and technical staff.

The NRC inspection team reviewed the following documents for this inspection area:

- NQAM, Section 17, "Corrective Action," Revision 8, dated October 4, 2010
- FMP 2K9, "Procedure for Corrective Action", Revision 19, dated July 14, 2011
- FMP 2K29, "Processing of Nonconforming Materials and Items," Revision 10, dated July 8, 2011
- Fisher Intra-Company Correspondence, "2010 Trend Analysis," dated May 17, 2011

b. Observations and Findings

b.1 Policies and Procedures

Section 17 of Fisher Controls' NQAM defines the processes for the identification and documentation of corrective and preventive actions. It also describes the detailed actions required to implement the corrective action program, which include defining the roles and responsibilities of Fisher Controls personnel, establishing documentation requirements such as CAR forms, identifying a process for periodic review of NCRs for initiation of a CAR form, and establishing actions to correct the condition and prevent reoccurrence.

FMP 2K9 assigns responsibilities for identifying and reviewing service requests associated with materials departing from technical requirements, NCRs and CARs, documentation, and disposition of deviation or failures to comply. The procedure describes the process for identifying, evaluating, reporting, and correcting nonconformances. In addition, the NRC inspection team discussed the nonconformance and corrective action process with the vendor, including the establishment and roles of the QA Manager in the periodic review process. During the review of Section 17 of Fisher Controls' NQAM and FMP 2K29, the NRC inspection team noted that Fisher Controls does not evaluate NCRs and CARs for significance. During discussions with the QA Manager and the Quality Engineering Manager, both managers stated that all adverse conditions identified by Fisher Controls are considered conditions adverse to quality. Fisher Controls' corrective action program does not have measures to evaluate for significant conditions adverse to quality. Specifically, the program considers all nonconformances, deviations, malfunctions, etc., as conditions adverse to quality and does not evaluate them to determine if they are significant conditions adverse to quality, requiring further actions to prevent recurrence, does not determine their cause and does not brief management on the condition, its cause and actions taken. The NRC inspection team identified this issue as an example of Nonconformance 99900105/2011-201-05 for Fisher Controls' failure to establish measures to evaluate significant conditions adverse to quality.

b.2 Implementation of Corrective Action Program

The NRC inspection team reviewed a sample of service requests, NCRs, and CARs and verified that each contained a detailed description of the nonconformance and a justification for the disposition, which usually included corrective action to be taken to prevent recurrence when applicable. The NRC inspection team noted that Fisher Controls' corrective action procedures requires Fisher Controls to evaluate deviations for reportability under 10 CFR Part 21, as required. The NRC inspection team noted that Fisher Controls' policies and implementing procedures provide the necessary guidance to adequately document, evaluate, correct, report, and verify resolution of conditions adverse to quality.

c. Conclusions

The NRC inspection team concluded that Fisher Controls is not effectively implementing its corrective action program consistent with the regulatory requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. The NRC inspection team issued Nonconformance 99900105/2011-201-05 for Fisher Controls' failure to establish measures to evaluate significant conditions adverse to quality. Specifically, Fisher Controls considers all nonconformances, deviations, malfunctions, etc., as conditions adverse to quality and does not evaluate them to determine if any are significant conditions adverse to quality, which require (1) that the cause of the condition be determined, (2) corrective action be taken to preclude repetition, and (3) that appropriate levels of management be notified of the significant condition adverse to quality, the cause of the condition, and the corrective action taken to preclude repetition.

12. Audits

a. Inspection Scope

The NRC inspection team reviewed Fisher Controls' policies and procedures governing the implementation of Fisher Controls' audits program to verify compliance with Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50. In addition, the NRC inspection team discussed the audits program with Fisher Controls' management and technical staff.

The NRC inspection team reviewed the following documents for this inspection area:

- NQAM, Section 19, "Surveys and Audits," Revision 8, dated October 4, 2010
- FMP 2J3, "Qualification of Auditors/Audit Program," Revision 12, dated May 24, 2011

b. Observations and Findings

b.1 Policies and Procedures

Section 19 of Fisher Controls' NQAM specifies the requirements and activities necessary for assuring that required internal and external audits and commercial grade surveys are performed in accordance with the ASME Code.

FMP 2J3 defines the requirements for selecting and qualifying auditors and lead auditors and provides a common set of criteria necessary for auditor qualifications as required by NQA-1-1994.

b.2 Internal Audits

For a sample of internal audits conducted in 2010 and 2011, the NRC inspection team verified that internal audits of QA program activities had been scheduled at least annually and had been conducted using a checklist to ensure that all applicable regulatory and quality requirements and criteria were evaluated. The checklists contained an adequate level of objective evidence to support the classification of checklist criteria as satisfactory or unsatisfactory, and CARs were opened for all findings and recommendations identified in audit reports. The NRC inspection team noted that corrective actions for the audit findings reviewed were taken promptly and that the reports included adequate objective evidence to support closing the audit finding.

The NRC inspection team also verified that audit plans identifying the audit scope, focus, and applicable checklist criteria had been prepared and approved before the initiation of the audit activity.

The NRC inspection team also noted that for an internal audit performed in 2010, an auditor participating as a member of the audit team conducted audit activities in areas for which he has direct responsibility. Specifically, the QA Manager, who has direct responsibility for the implementation of Fisher Controls' QA program, participated in an internal audit as a member of the audit team and audited an area for which he has direct responsibility. The NRC inspection team identified this issue as an example of Nonconformance 99900105/2011-201-06 for Fisher Controls' failure to verify that audits were performed by personnel not having direct responsibilities in the areas being audited. Fisher Controls initiated CAR 1506 to address this issue.

c. Conclusions

The NRC inspection team concluded that Fisher Controls is not effectively implementing its organization and audits program consistent with the regulatory requirements of Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50. The NRC inspection team issued Nonconformance 99900105/2011-201-06 for Fisher Controls' failure to verify that audits were performed by personnel not having direct responsibilities in the areas being audited. Specifically, the NRC inspection team identified one internal audit in which the QA Manager, who has direct responsibility for the implementation of Fisher Controls' QA program, participated in an internal audit as a member of the audit team and audited an area for which he has direct responsibility.

Entrance and Exit Meetings

On August 1, 2011, the NRC inspection team presented the inspection scope during an entrance meeting with Mr. Bill Fitzgerald, Vice President Nuclear Business Unit and other Fisher Controls' personnel. On August 5, 2011, the NRC inspection team presented the inspection results during an exit meeting with Mr. Fitzgerald and other Fisher Controls' personnel.

ATTACHMENT 1

1. PERSONS CONTACTED

NAME	COMPANY	ENTRANCE MEETING	EXIT MEETING	INTERVIEWED
Scott Lustyk	Fisher Controls	√	√	√
Dave Stanze	Fisher Controls	√		
Scott Jones	Fisher Controls	√	√	√
Don Rowley	Fisher Controls	√	√	
Mike Mason	Fisher Controls	√	√	
Nate McCormick	Fisher Controls	√	√	
Marc Riveland	Fisher Controls	√	√	
Danny Nelson	Fisher Controls	√	√	
Larry Weber	Fisher Controls	√	√	
Jason Olberding	Fisher Controls	√	√	
Ed Merwald	Fisher Controls	√	√	
Dan Zuelke	Fisher Controls	√	√	
Jim Rhuland	Fisher Controls	√	√	
Ben Ahrens	Fisher Controls	√	√	√
Michael Wedemayer	Fisher Controls	√	√	√
Ted Grabau	Fisher Controls	√	√	
Graham Brett	Fisher Controls	√		
Tim McMahon	Fisher Controls	√	√	
Jason Jablonski	Fisher Controls	√	√	
Wes Ranard	Fisher Controls	√	√	√
Paul Alman	Fisher Controls	√	√	
Dennis Swanson	Fisher Controls	√	√	
Ross Long	Fisher Controls	√	√	

NAME	COMPANY	ENTRANCE MEETING	EXIT MEETING	INTERVIEWED
George Baitinger	Fisher Controls	√	√	√
Chad Engle	Fisher Controls	√	√	
Paul Abens	Fisher Controls	√	√	√
Trent Johnson	Fisher Controls	√	√	√
Neal Willer	Fisher Controls		√	√
Michael Frohwein	Fisher Controls		√	
Steve Anderson	Fisher Controls		√	
Ken Carder	Fisher Controls		√	
Bill Fitzgerald	Fisher Controls		√	
Ken Wall	Fisher Controls			√
Bill Mohr	Fisher Controls			√
Tricia McReynolds	Fisher Controls			√
Paul Anderson	Fisher Controls			√
Caleb Garten	Fisher Controls			√
Mark Elsberry	Fisher Controls			√
Deanna Waters	Fisher Controls			√
Jim Wormley	Fisher Controls			√
Kent Cocking	Hartford Steam Boiler	√		
Yamir Diaz-Castillo	NRC	√	√	
Samantha Crane	NRC	√	√	
Douglas Bollock	NRC	√	√	
Paul Coco	NRC	√	√	
Aixa Belén-Ojeda	NRC	√	√	
Steven Downey	NRC	√	√	
Tuan Le	NRC	√	√	
Robert Latta	NRC	√	√	

2. INSPECTION PROCEDURES USED

Inspection Procedure 36100, "Inspection of 10 CFR Part 21 and 50.55(e) Programs for Reporting Defects and Noncompliance," dated April 25, 2011.

Inspection Procedure 43002, "Routine Inspections of Nuclear Vendors," dated April 25, 2011.

Inspection Procedure 43004, "Inspection of Commercial-Grade Dedication Programs," dated April 25, 2011.

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Item Number</u>	<u>Status</u>	<u>Type</u>	<u>Description</u>
99900105/2011-201-01	Opened	NOV	10 CFR Part 21
99900105/2011-201-02	Opened	NON	Criterion III
99900105/2011-201-03	Opened	NON	Criterion IV
99900105/2011-201-04	Opened	NON	Criterion VII
99900105/2011-201-05	Opened	NON	Criterion XVI
99900105/2011-201-06	Opened	NON	Criterion XVIII