



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

December 17, 2008

Mr. Paul Marbaix, President  
Weir Valves & Controls USA, Incorporated  
29 Old Right Road  
Ipswich, MA 01938

SUBJECT: NRC INSPECTION REPORT 99900746/2008-201, NOTICE OF VIOLATION,  
AND NOTICE OF NONCONFORMANCE

Dear Mr. Marbaix:

On December 2-4, 2008, U.S. Nuclear Regulatory Commission (NRC) inspectors conducted an inspection at the Weir Valves & Controls USA, Incorporated (WVC) facility in Ipswich, Massachusetts. The enclosed report presents the details of that inspection.

This was a limited scope inspection which focused on assessing your compliance with the provisions of Part 21 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 21, or 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 Part 50 of Title 10 of the *Code of Federal Regulations* (Appendix B). This NRC inspection report does not constitute NRC endorsement of your overall quality assurance (QA) or 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 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 NRC inspectors identified that WVC failed to meet the requirements set forth in 10 CFR Part 21 for failure to identify and evaluate a deviation in Constellation Energy Purchase Order 6603289, dated August 16, 2007.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

During this inspection, NRC inspectors also found that the implementation of your QA program failed to meet certain NRC requirements contractually imposed on you by your customers. The inspectors identified that WVC accepted a safety-related parts order from a sub-tier vendor even though the vendor's certificate of compliance did not identify the material identification information required by WVC procedures: material specification, grade, class and condition of the safety-related components received. The specific findings and references to the pertinent requirements are identified in the enclosures to this letter.

Please provide a written statement or explanation within 30 days from the date of this letter in accordance with the instructions specified in the enclosed Notice of Nonconformance.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible 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 is withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If Safeguards Information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Sincerely,

*(/RA by P. L. Hiland)*

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

Docket No.: 99900746

Enclosures:

1. Notice of Violation
2. Notice of Nonconformance
3. Inspection Report 99900746/2008-201

cc w/enclosures:

Mr. John Webb, QA Manager  
Weir Valves & Controls USA, Incorporated  
29 Old Right Road  
Ipswich, MA 01938

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible 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 is withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information).

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Mr. John Webb, QA Manager  
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 29 Old Right Road  
 Ipswich, MA 01938

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## NOTICE OF VIOLATION

Weir Valves & Controls USA, Incorporated  
29 Old Right Road  
Ipswich, MA 01938

Docket Number 99900746  
Inspection Report 99900746/2008-201

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted at the Weir Valve & Controls USA, Incorporated (WVC) facility in Ipswich, MA, December 2 - 4, 2008, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Section 21.21, "Notification of failure to comply or existence of a defect and its evaluation," of Part 21 of Title 10 of the Code of Federal Regulations, "Reporting of Defects and Noncompliance" (10 CFR Part 21, or Part 21) requires each entity subject to 10 CFR Part 21 to adopt appropriate procedures to evaluate deviations and failures to comply to identify defects and failures to comply associated with substantial safety hazards as soon as practicable, and except as provided in Part 21, in all cases within 60 days of discovery.

WVC Procedure CP-E-20, "Reporting of Defects and Noncompliance Under 10 CFR Part 21," Revision 1, dated August 13, 2008, provides the implementing procedure and is consistent with the requirements of 10 CFR Part 21.

Contrary to the above, as of December 4, 2008:

WVC failed to properly evaluate a deviation associated with Constellation Energy Purchase Order (PO) 6603289 (WVC job number 53797), dated August 16, 2007. Specifically, the PO required WVC to provide a "weak link analysis" as part of the technical deliverables. After the valve failed in service it was determined that WVC did not include a contributing factor in the weak link analysis. However, a subsequent WVC review incorrectly determined that all contract documents had been met and there was no deviation requiring evaluation under Part 21. As a result of the incorrect conclusion, the Part 21 evaluation was not completed by WVC nor was the customer, Constellation Energy, informed so the end user could perform an evaluation in accordance with Section 21.21(a).

This issue has been identified as Violation 99900746/2008-201-01.

This is a Severity Level IV Violation (Supplement VII).

Pursuant to the provisions of 10 CFR 2.201, "Notice of Violation," WVC is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, with a copy to the Director, Division of Engineering, Office of Nuclear Reactor Regulation, within 30 days of the date of the letter transmitting this Notice of Violation. This reply should be clearly marked as a "Reply to a Notice of Violation" and should include (1) the reason for the violation, or, if contested, the basis for disputing the violation; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; 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.

**ENCLOSURE 1**

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

Dated at Rockville, Maryland this 17<sup>th</sup> day of December 2008.

## NOTICE OF NONCONFORMANCE

Weir Valves & Controls USA, Incorporated  
29 Old Right Road  
Ipswich, MA 01938

Docket Number 99900746  
Inspection Report 99900746/2008-201

Based on the results of a U.S. Nuclear Regulatory Commission (NRC) inspection conducted at the Weir Valve & Controls USA, Incorporated (WVC) facility in Ipswich, MA, December 2 - 4, 2008, certain activities were not conducted in accordance with NRC requirements which were contractually imposed upon WVC by NRC licensees.

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."

WVC Quality Assurance Manual, Revision 5, dated May 16, 2008, Section 7.0, "Control of Purchased Items and Services," subsection 7.3.4 states in part that "The QA manager, or designee, reviews and approves material certifications. This review consists of a cross-check of the certification against the purchase order information and applicable Code requirements."

WVC Purchasing Specification P-66-027, "Procurement Specification for 10 CFR Appendix B Items and Services," Revision 1, dated February 22, 2007, Section 1 states in part that "C of C [Certificate of Conformance] must contain the following information:

- WVC purchase order and item number
- Material identification (heat number)
- Material specification, grade, class and condition
- Quantity (number of pieces)."

Contrary to the above, as of December 4, 2008:

WVC failed to identify that the Certificate of Compliance (CofC), provided by Flowserve and accepted by WVC staff (i.e., Job Number 53797 dated April 9, 2008) did not include the required information to verify material certification. That is, the CofC did not contain item numbers, quantities, material identification (heat numbers), nor material specification, grade class or condition.

This issue has been identified as Nonconformance 99900746/2008-201-02.

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

**ENCLOSURE 2**

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

Dated at Rockville, Maryland this 17<sup>th</sup> day of December 2008.

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

Docket No.: 99900746

Report No: 99900746/2008-201

Vendor: Weir Valves & Controls USA, Incorporated (WVC)  
29 Old Right Road  
Ipswich, Massachusetts 01938

Vendor Contact: Mr. John Webb  
Quality Assurance Manager  
Phone: (978) 825-2587

Nuclear Industry: WVC provides the nuclear industry safety-related American Society of Mechanical Engineers (ASME) and non-ASME valves, valve replacement parts and accessories under an Appendix B to 10 CFR Part 50 and ASME Section III quality assurance program. WVC also manufactures and supplies valves and valve replacement components under the Atwood & Morrill Valve and Powell brands.

Inspection Dates: December 2 – December 4, 2008

Inspection Team Leader: Joseph J. Petrosino, DE/NRR

Inspectors: Gregory C. Cwalina, DE/NRR  
Carla Roquecruz, DE/NRR  
Aaron Armstrong, DE/NRR

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



## EXECUTIVE SUMMARY

Weir Valves & Controls USA, Incorporated  
99900746/2008-201

The purpose of this inspection was to review selected portions of Weir Valves & Controls USA, Incorporated's (WVC's) quality assurance (QA) and 10 CFR Part 21 (Part 21) programs. The inspectors focused on WVC's nuclear industry valve and control manufacturing activities. The inspection was conducted at WVC's facility in Ipswich, Massachusetts.

The NRC inspection bases were:

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

There were no NRC inspections of WVC's facility in Ipswich, Massachusetts in the previous five years. The results of this inspection are summarized below.

### 10 CFR Part 21 Program

The inspectors determined that WVC established and implemented adequate procedures to comply with the requirements of 10 CFR Part 21 with the exception of properly identifying the time of "discovery." Further, WVC failed to perform an evaluation under 10 CFR Part 21 for a deviation associated with a safety-related purchase order. Violation 99900746/2008-201-01 was identified in this area.

### QA Program Implementation

The inspectors determined that WVC has generally established and implemented an adequate Appendix B program for the areas inspected with the exception of the herein discussed inconsistencies. The inspectors also determined through review of the above listed dedication packages that WVC is generally implementing an adequate commercial-grade dedication program. The inspectors did not identify any significant issues with the reviewed dedication packages.

Further, the inspectors concluded that the receiving and storing of items intended for safety related applications appeared to be adequate and in compliance with applicable regulatory requirements. Additionally, the inspectors concluded that the MK businesses system has the necessary capabilities to maintain traceability of purchased items.

## REPORT DETAILS

### 1. 10 CFR Part 21 Program

#### a. Inspection Scope

The NRC inspectors reviewed WVC Procedure CP-E-20, "Reporting of Defects and Noncompliance under 10 CFR Part 21" (Revision 1, dated August 13, 2008), 10 CFR Part 21 evaluation packages, and other associated policies, procedures and records related to the identification and evaluation of deviations for overall program adequacy in identifying and evaluating applicable deviations in accordance with WVC's established program for compliance with the requirements of Part 21.

#### b. Observations and Findings

##### b.1 Policy and Procedures Adopted to Implement Part 21

The NRC inspectors reviewed WVC Procedure CP-E-20, which was adopted by WVC to implement the provisions of Part 21. The inspectors determined the procedure to be comprehensive, provided good direction, and addressed the salient attributes of Part 21. The procedure accurately defined the specific terms used in Part 21 and articulated the requirements, including timeliness limitations, pertaining to notification and informing the customer. However, the inspectors identified one concern regarding the time of "discovery." While the procedure accurately defines discovery as "the completion of the documentation first identifying the existence of a Deviation..," Section 2.0, "Initial Review of Conditions (Discovery)," of Attachment 5.1, "Supplemental Guidance – CP-E-20," and Part 2A of Attachment 5.2, "Evaluation of Deviation or Potential Failure to Comply," indicate the time of discovery at a different point. Both attachments indicate that discovery occurs at the time when the cognizant manager receives and signs the initial report prepared by the employee (Part 1 of Attachment 5.2) who initiates the review process. The inspectors discussed the issues with the QA manager and explained that discovery actually occurs when Part 1 of Attachment 5.1 is completed, i.e., the documentation first identifying the existence of the deviation. The QA manager understood the distinction and stated that he would revise the document and that the revision would be incorporated into the next revision of the procedure which is currently being prepared. The QA manager stated that the intent is that Part 2A would be signed within a matter of hours after completion of Part 1. The inspectors showed him a Part 21 evaluation example in which the delay between signing of Parts 1 and 2 was 6 days.

The inspectors also noted a positive practice contained in the review checklist [Parts 1C through 1D(4)]. In asking the employee certain questions to aid in determining if the deviation warrants further evaluation, the checklist allows employees to check a "Yes" or "Uncertain," thus removing the burden from the employee if the employee does not have sufficient knowledge to answer the specific questions.

##### b.2 Part 21 Evaluation Review

The inspectors reviewed three Part 21 evaluation packages. One issued involved a determination by WVC that they had supplied a commercial-grade hinge pin as opposed to the required safety-related hinge pin. WVC initiated Corrective Action Report

(CAR) 08-03 for the issue. Although the material was commercial-grade, WVC did obtain a Certificate of Test from the material supplier, which indicated the material properties were acceptable. WVC was not able to verify the material properties, as no material was left in inventory. However, WVC noted they had a satisfactory relationship with the supplier. WVC informed the one affected customer in a letter dated June 26, 2008. In addition, WVC also determined that the subject valve had not been installed in the plant. Therefore, WVC requested the valve be returned to WVC so that the correct hinge pin could be installed.

The second Part 21 issue related to the potential for vibration-induced wear on the pilot poppet nut and stem assemblies provided for use by WVC in the Beaver Valley Power Station Unit 2 Main Steam System Isolation Valves (MSIV) that, if uncorrected, could potentially create a significant safety hazard. The issue was identified by the licensee, First Energy Nuclear Operating Company (FENOC), who also notified the NRC in accordance with 10 CFR Part 21. WVC identified one additional licensee that may be affected. WVC informed the affected licensee by letter dated August 2, 2007.

The last Part 21 evaluation package related to WVC performance of a “weak link” analysis for a safety-related valve (Job #53797) for Ginna. The problem was identified when, during operation, the valve seal was driven through the seat. WVC performed a Part 21 review in accordance with procedure CP-E-20. The initial review (Part 1 of CP-E-20), performed by the originator, concluded the deviation warranted further evaluation. The review by the cognizant manager (Part 2 of CP-E-20) concurred with the originator’s determination and identified other potential affected customers. The cognizant manager concluded that a decision on reportability could not be made with the available information. The information was passed on to the cognizant vice president (VP). The VP disagreed with the reportability conclusion. Section 3B, “Basis for decision,” stated that all requirements of the purchase order, contract documents and ASME code had been met and, “there is no deviation requiring evaluation under 10 CFR Part 21.” The inspectors reviewed the Part 21 determination and had several observations.

The inspectors reviewed a WVC document entitled “Ginna Part 21 Evaluation,” prepared by the WVC Engineering Manager for internal review and discussion. Slide 5 of the evaluation stated, “WEIR generated a design report that didn’t include a contributing factor for a Weak link calculation.” There is no additional information in the file that indicated the results of the internal review, that is, if WVC management agreed or disagreed with the internal report that a deviation existed.

The WVC Part 21 evaluation report did not provide an adequate explanation of why the cognizant manager determined that purchase order (PO) requirements had been met. The inspectors believe that such an explanation was particularly important in light of the recommendations made by the previous reviewers and the statement included in the internal evaluation report. The inspectors reviewed the PO requirements and noted that PO 6603289, dated August 16, 2007, specified a weak link analysis to be a technical deliverable. Therefore, the inspectors believed that an incorrect weak link analysis should be treated as a deviation and evaluated in accordance with Part 21 requirements. Since the WVC Part 21 evaluation conclusion is that there was no deviation, it was determined that WVC did not comply with the requirements of 10 CFR Part 21.21, that is, WVC did not perform an evaluation or inform its customer so that they could perform the required evaluation. However, the inspectors did note that the licensee was aware of the

issue and there was frequent contact with licensee representatives throughout the review process.

A discussion with WVC management revealed that WVC did not know the particular application of the valve and believed the valve to be a passive component, whose only safety function is to maintain the pressure boundary. However, WVC did not verify that supposition with the licensee. Further, the inspectors pointed out that such a determination is not a reason to dismiss the need for an evaluation, but rather it is a component of an evaluation to determine if the deviation could cause a significant safety hazard. Finally, it was noted that, since WVC was not aware of the application of the valve in the plant, the issue should have been referred to the licensee to perform the evaluation. Violation 99900746/2008-201-01 was identified in this area.

During the discussion, WVC management acknowledged the documentation supporting their decision was not fully sufficient. Based on the discussion, WVC was reviewing the file to determine what additional steps should be taken.

### b.3 Interaction with Part 21

The inspectors reviewed other WVC procedures that impact Part 21, specifically, Procedure CP-S-04, Revision 6, "Customer Complaints," and Procedure CP-Q-02, Revision 6, "Corrective Action Program." While CP-S-04 contained instructions for receiving, logging and resolving customer complaints, the inspectors noted that neither the procedure nor the Complaint/Warranty form (Exhibit A of the procedure) contained a link or reference to the WVC Part 21 procedure. However, there was a reference to CP-Q-02. The inspectors noted that the procedure does require the WVC Corrective Action Committee to review all customer complaints on a quarterly basis. While the inspectors were concerned about the possibility that Part 21 issues could not be dealt with promptly, the inspectors did not identify any instances where WVC failed to properly identify a customer complaint as a potential Part 21 issue. The inspectors concern regarding the timeliness of identifying potential Part 21 issues is discussed below. The inspectors discussed the issue of referencing the Part 21 procedure in CP-S-04 with the Manager of Parts and Service. The manager agreed to consider adding references to Part 21 in the procedure and report form.

The inspectors reviewed CP-Q-02 to determine if there was proper interaction between the WVC corrective action program and Part 21. The inspectors determined that WVC Procedure CP-E-20 (Part 21) was included as a reference in the procedure. The procedure focuses on the establishment and responsibilities of the Corrective Action Committee (CAC). The CAC is required to meet quarterly and is responsible for identifying significant conditions adverse to quality and initiating CARs. The procedure also requires CAC members to provide potential Part 21 issues to the designated company officer for evaluation. The inspectors discussed the review of complaints on a quarterly basis with the CAC Chairman. The Chairman provided a record of CAC meetings and CAR tracking for 2008. CAR status is reviewed and updated by the Chairman approximately every two weeks. The log includes the CAR number, date of review, assigned individual, status and due date. New CARs are entered in a timely manner. In addition to customer complaints, the CAC considers findings and observations from internal audits, supplier audits, nonconformance reports and customer or outside agency audits. Meeting minutes are kept which document the items discussed and the CAC recommendations for each item. Although the CAC is only

required to meet quarterly, in practice, the CAC chairman usually reviews any issues bi-weekly. The inspectors found the CAC and CAR process to be comprehensive, assuring that identified issues, including potential Part 21 issues, are dealt with promptly.

The inspectors reviewed selected CARs provided in the CAC log. CAR 08-04 (June 26, 2008) was identified as a result of WVC processing of CAR 08-03. CAR 08-03 related to classification of valve parts and resulted in a Part 21 evaluation. During that review the CAC determined that there was insufficient knowledge of Part 21 by WVC personnel and recommended training for appropriate personnel and the Part 21 procedure be reviewed for possible revision. The inspectors noted that the procedure was revised and several training sessions were held. The inspectors determined CAR 08-04 to be an example of WVC going beyond the technical issues to identify and correct other potential problem areas. The inspectors did not identify any concerns with other CARs reviewed.

c. Conclusions

The inspectors determined that WVC established and implemented adequate procedures to comply with the requirements of 10 CFR Part 21 with the exception of properly identifying the time of "discovery." Further, WVC failed to perform an evaluation under 10 CFR Part 21 for a deviation associated with a safety-related purchase order. Violation 99900746/2008-201-01 was identified in this area.

2. QA Program Implementation

a. Inspection Scope

The NRC inspectors reviewed the implementation of WVC's QA program as it related to procurement, receiving, commercial-grade dedication and material, and component traceability.

b.1 Procurement

The inspectors reviewed the purchase and sales orders for various safety related orders from the past two years. As part of the review, the inspectors reviewed all the related documentation for Order No. 53797 for Constellation Energy, dated August 16, 2007 for two safety-related 4-inch, 150-pound, stainless steel tricentric butterfly valves and repair kits. As part of this job, WVC generated a controlled manufacturing system (CMS - WVC designation for safety-related components), PO 851635, for various parts from Flowserve USA Incorporated (Flowserve), in Lynchburg, Virginia. The WVC PO package to Flowserve stated, in part, under the additional requirements section for CMS, "compliance to Purchasing Spec. P-66-027 Rev 1 and CofC required." A review of the WVC PO identified that WVC's Purchasing Specification P-66-027, Revision 1, "Procurement Specification for 10 CFR Appendix B Items and Services," Section 1, "Documentation", required that Flowserve's Certificate of Compliance (CofC) must contain the following information: (1) WVC purchase order and item number; (2) material identification (i.e., heat number); (3) material specification, grade, class and condition; and (4) quantity (i.e., number of pieces).

In the inspector's review of the CofC from Flowserve associated with this PO, the inspector noted that the CofC dated April 9, 2008 did not contain the required information. The CofC did not have (1) the material identification information; (2) material

specification, grade, class and condition; or (3) the actual quantity (i.e., number of pieces). The failure to adequately verify and accepting this CofC for Order No. 53797 for Constellation Energy is inconsistent with WVC's quality program requirements documented in its Quality Assurance Manual (QAM) and implementing procedures. Nonconformance 99900746/2008-201-02 was identified in this area.

During this inspection, WVC contacted Flowserve and requested a revised CofC for PO 851635 with all the required information. In addition, WVC entered this issue into their corrective action program and will assess the failure to comply in regard to Part 21.

## b.2 Commercial-Grade Dedication

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

The inspectors interviewed WVC personnel related to the process for the development and modification of Critical Characteristics. After engineering review and parts classification, the critical characteristics are documented in the sales order "Continuation Sheet," and this sheet is attached to the shop router that stays with the component during the dedication process. Additionally, the inspectors reviewed procedures CP-E-18, "Control of Commercial Grade Items to be Dedicated for Use in Nuclear Safety Related Applications", Revision 3, and CP-E-03, "Upgrading of Commercial Worm Gear Actuators for Nuclear Service."

The inspectors reviewed a sample of completed dedication packages for various items to determine the adequacy of the program which WVC has established and implemented. The inspectors did not identify any significant issues with the reviewed dedication packages. The following dedication packages were reviewed:

- Order Number 80681 for a locking plate (WVC Part Number 36345-602-4774-000\_QLD) for Exelon Generation Company PO 90257796
- Order Number 80611 for a piston seal (WVC Part Number 24793-538-0000-000\_QLD) for Exelon Generation Company PO 90257796
- Order Number 80504 for a ball thrust bearing (WVC Part Number 23283-198-0000-000\_QLD) for Florida Power & Light PO 00023596

## b.3 Receiving

The inspectors reviewed a sample of current procurement packages and WVC Procedure CP-Q-33, "Receiving & Receiving Inspection," Revision 1. The inspectors chose one sample component to follow through the receiving process focusing on safety-related Appendix B ASME Section III components with an identified item code ending with a "QLC." The component was received and routed to inspection with its corresponding traveler/router as indicated by WVC Working Instruction WI-Q-33-01, "Receiving," Revision 0, dated April 13, 2007, which requires components defined by the QLC quality level designation to undergo a 100% inspection. After inspection is

complete and satisfactory, the component is then returned to the quality technician and entered into SSA Global Technologies Inc. Manufacturing Knowledge (MK) businesses system, Level 0401, Version 8.5.0, in accordance with WVC Working Instruction WI-Q-33-02, "Inspection-Maintain Approvals," Revision 0, dated April 17, 2007. The component is then physically moved to an individually designated valve staging bin, called a "kit cart," for use with that particular valve project. Each project has a corresponding job code and project number assigned. Larger QLC components are segregated in specific storage areas for CMS/ASME components awaiting work in accordance with the accompanying travelers/routers, which are kept with the components. No concerns were identified by the inspectors in this area.

#### b.4 Material and Component Traceability

The inspectors reviewed Procedures CP-Q-33 and CP-M-01, "Identification & Traceability of Product Related Items," interviewed WVC personnel, and toured the receiving and storage areas in this facility. The inspectors had the opportunity to witness how the MK inventory system works and how they keep traceability of purchased material. Components received at WVC are routed to inspection with its corresponding traveler/router sheets in accordance with WVC working instructions. After the inspection, the component is entered into MK with all its related information (i.e., part number, material, manufacturer, etc.) and the router sheet follows the item/component all through the manufacturing process. Additionally, WVC informed the inspectors that purchases are made in accordance with the specific needs for each order reducing the amount of excess inventory.

As part of the review of purchase and sales orders for various safety related components the inspectors noted that all purchase order packages contained a form generated by the MK system where the relevant information concerning the components included in that purchase order were stated, i.e., component description, applicable regulations and codes, part number, and supplier, among other things. No concerns were identified by the inspectors in this area.

#### c. Conclusion

The inspectors determined that WVC has generally established and implemented an adequate Appendix B program for the areas inspected with the exception of the herein discussed inconsistencies. The inspectors also determined through review of the above listed dedication packages that WVC is generally implementing an adequate commercial-grade dedication program. The inspectors did not identify any significant issues with the reviewed dedication packages.

Further, the inspectors concluded that the receiving and storing of items intended for safety related applications appeared to be adequate and in compliance with applicable regulatory requirements. Additionally, the inspectors concluded that the MK businesses system has the necessary capabilities to maintain traceability of purchased items.

### 3. Exit Meeting

On December 4, 2008, the NRC Inspectors presented the inspection findings with WVC management and staff.

## ATTACHMENT

### 1. PERSONS CONTACTED

Paul Marbaix, President  
Kevin McManus, Eng. Mgr  
Mark Milburn, VP Nuc Sales  
Sam Shields, VP Technical  
Brian Sullivan, Plant Mgr.  
John Webb, QA Manager  
Ronald Cote, Quality Tech.  
Gary Donnell, QA Engineer  
James Harris, Quality Tech  
Cathy Legere, Purchasing  
Lisa Levesque, Procurement  
Michael MacDonald, Parts & Ser. Mgr.  
Paul Syrakos, QA Eng.  
Vincent Titone, Nuc PM

### 2. INSPECTION PROCEDURES USED

IP 36100, "Inspection of 10 CFR Parts 21 and 50.55(e) Programs for Reporting Defects and Noncompliance"  
IP 38703, "Commercial Grade Dedication"  
IP 43001, "Reactive Inspection of Nuclear Vendors"  
IP 43004, "Inspection of Commercial-Grade Dedication Programs"

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

There were no NRC inspections of WVC's facility in Ipswich, Massachusetts in the previous five years.

<u>Item Number</u>	<u>Status</u>	<u>Type</u>	<u>Description</u>
99900746/2008-201-01	Opened	NOV	21.21 Evaluations
99900746/2008-201-02	Opened	NON	Criterion VII