FLOWSERVE
RALEIGH, NC ®

August 31, 2009

US Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-001

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

Subject: **"REPLY TO A NOTICE OF NONCONFORMANCE"**
 Nonconformance 99901356 / 2009-201-02

Dear Mr. Peralta,

I am writing in response to the **NOTICE OF NONCONFORMANCE # 99901356 / 2009-201-02** addressed to me in the NRC Inspection Report No. 9901356 / 2009-201.

In accordance with the instructions outlined within the subject Notice of Nonconformance, Flowserve Corporation, Raleigh, NC offers the following reply:

1. The reason for this nonconformance, as stated in the Flowserve Quality Problem Corrective Action Plan (QPCAP #516) issued during the NRC Inspection (see attached) and as a result of our review of the NRC Inspection Report Details paragraph 6.b where stated "In addition, the NRC inspectors noted that PIOP 36-40-10-14 does not provide adequate instructions to implement the requirements of section 15.1.4 of the QAM", the reasons rework instructions were not adequately specified and verified against the QAP, resulted from inadequate procedural instructions and training.

2. As stated in Flowserve QPCAP #516, the corrective steps that were taken at the time of the NRC Inspection were:

   a. Training was provided to those people responsible for specifying work instructions; including the selection of welding procedures associated with weld repairs to be in accordance with those specified within the QAP (Quality Assurance Plan). This training was documented as evidenced on Training Record dated 7/07/2009 on subject QPCAP #516.
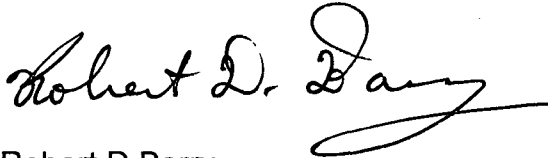
b. As a result of the review of NRC Inspection Report Details, it was deemed necessary to revise PIOP 36-40-10-14 to include specific instructions for responsible personnel to consult the applicable QAP for selection of applicable Drawings and Method Specifications including Welding Procedures. PIOP 36-40-10-15 was revised on 8/31/09 to include these instructions, and appropriate people were provided additional training in the revised PIOP instructions.

c. A review of 2009 Rejection Tickets associated with weld repair was performed to determine if other weld repairs had been performed using welding procedures other than those specified within the applicable QAP, none were found. This review was documented and provided to the NRC Inspection Team at the time. (Attached)

3. The corrective steps that have been taken as described in this response and Flowserve QPCAP #516 together with the revision of PIOP 36-40-10-15 and the additional training of responsible personnel has been implemented and will avoid further noncompliances.

4. The corrective steps concerning Notice of Nonconformance 99901356 / 2009-201-02 have been completed and are effectively implemented as of August 31, 2009.

Respectfully Submitted,

Robert D. Barry
Manager, Quality Assurance
Flowserve US Inc
Flow Control Division
Raleigh, NC 27603

Attachments:
Flowserve Quality Problem Corrective Action Plan No 516 and supporting objective evidence.
Flowserve PIOP 36-40-10-15 dated August 31, 2009, page 5 of 8 paragraph 3.1.2.1 and associated training record dated 8/31/09.

FLOWSERVE US INC.
FLOW CONTROL DIVISION

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FLOWSERVE

1900 South Saunders Street
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Raleigh, North Carolina 27603

Nº. 516

QUALITY PROBLEM CORRECTIVE ACTION PLAN

D. __: July 7, 2009

SIZE & FIGURE NO.: 1.0 800 SW

PART / VALVE NAME: Body

PART / VALVE NUMBER: 041003899991200

TRACEABILITY NO.: N4668 / 20,23,27   REJECT TICKET NO.: 123341 & 120445   RESPONSIBLE DEPT.: Met. Process

INITIATED BY: Todd McKinney   Assigned to: B. Carothers   ☒ CODE MATERIAL   ANI REVIEW _____

PROBLEM (to be completed by QA or responsible Department)   ☐ Not Required – Reject Ticket Attached

Reject Ticket 120445 was written and issued for a weld repair on some bodies being manufactured to the 99912 QAP. The basemetal

Welding repair procedure specified in the 99912 QAP was P1-323N LR but the welding procedure listed on the Reject Ticket was for

P1-321N LR. This error was identified during the NRC Inspection on July 7, 2009. Reject Ticket 123341 was written to disposition the bodies as Use-As-Is by Metallurgical Process Control.

Part 21 evaluation required ☐ Yes ☒ No   Department Manager Signature: _R. D. Day_   Date: 7/7/09

ROOT CAUSE and PROPOSED CORRECTIVE ACTION within 30 days, which is _8/7/09_

Rework instructions were not adequately verified against QAP which now references PI-323N, LR instead of PI-321N, LR

By: _BC Carothers_   Date: 7/7/09

CORRECTIVE ACTION will be completed by _7/10/09_ (to be completed by responsible Department):

Review QPCAP with all personnel responsible for developing welding instructions, Review all 2009 Reject Tickets associated with weld repairs against QAP requirements   9 BCC 7/9

By: _BC Carothers_   Date: 7/8/09

REVIEW/TRAIN RESPONSIBLE INDIVIDUAL (If Applicable)

Training record and Reject Ticket review attached

Name of Responsible Individual   Signature _BC Carothers_ Date 7/9/09   By: _____   Date: _____

CONFIRMATION OF CORRECTIVE ACTION TAKEN to be verified by Q.A within 30 days of completion date, which is _8/10/09_ :

Training record & Reject Ticket review verified – considered satisfactory.

CORRECTIVE ACTION REVIEWED BY: _Vic Self_ for RB   Date 7-9-09

Manager, Quality Assurance or Designee

Form No. 36-A-171 Rev. 1 (10/08)

FLOWSERVE

TRAINING RECORD

Record No.: _____

1900 South Saunders Street
Raleigh, NC 27603

| Department : | **Met. Process Control** | Date : | 7/7/2009 |
| | | Due : | 7/10/2009 |

Subject :   **QPCAP 516 - Welding Procedure verification between QAP and Reject Ticket instructions**

During the NRC Inspection, it was identified that on Reject Ticket 120445 the welding procedure prescribed was not listed in the QAP for 99912. The welding procedure was listed as P1-321N LR on the Reject Ticket but the QAP only contained a procedure of P1-123N LR, P1-223N LR or P1-323N LR for use. Reject Ticket 123341 was written to disposition the items welded as Use-As-I by Metallurgical Process Control after the finding had been made. It is very important that the instructions provided for rework meet those prescribed in the applicable QAP's to avoid a potential Quality Issue. Always verify the QAP instructions versus the instructions written on the Reject Ticket prior to issuance.

NAME	INITIAL / DATE
Daniel Mann	*Daniel Mann* 7-8-09
James Cobb	*James Cobb* 7/8/09
Bernie Carothers	*B Carothers* 7/8/09

Length of Session : _____   Self Review

Instructor : _____
Todd McKinney, QC Supervisor

Reject Tiicket No	QAP No	Correct WPS USED
123027	90891	YES
123040	90891	YES
123073	90891	YES
123085	48450	YES
123088	90891	YES
123095	90891	YES
123124	51244	YES
123126	51524	YES
123137	52023	YES
123138	52023	YES
123141	52023	YES
123142	90891	YES
123200	51917	YES
123203	90714	YES
123205	53196	YES
123206	52567	YES
123208	90714	YES
123234	52887	YES
123237	52733	YES
123241	45515	YES
123243	99901	YES
123245	99912	YES
123245	99912	YES
123258	90714	YES
123259	90714	YES
123260	90714	YES
123261	90713	YES
123262	90714	YES
123269	52822	YES
123272	52822	YES
123277	51509	YES
123280	53312	YES
123286	99901	YES
123288	51835	YES
123295	52777	YES
123298	52777	YES
123310	99913	YES
123401	50924	YES
123404	90891	YES
123417	90891	YES
123419	90891	YES
123443	90891	YES
123465	90891	YES
120549	50202	YES
120551	47485	YES
120558	50691	YES
120556	90714	YES
120567	90713	YES
120581	50796	YES
120582	50796	YES
120590	99914	YES
120591	99901	YES
120592	50722	YES
120596	99914	YES
120598	90713	YES
120970	49431	YES

7/9/09

Reject Tiicket No	QAP No	Correct WPS USED
121039	90892	YES
121045	50420	YES
121061	49882	YES
121062	50224	YES
121063	50694	YES
121065	90714	YES
121067	50488	YES
121070	51370	YES
121071	51355	YES
121072	50294	YES
121076	50294	YES
121077	49589	YES
121078	49882	YES
121085	50488	YES
121089	51370	YES
121093	52202	YES
121621	90713	YES
121626	50710	YES
121644	90713	YES
121645	90713	YES
121646	90713	YES
121647	90713	YES
121662	90714	YES
121693	90714	YES
121758	50883	YES
121769	50883	YES
121900	48088	YES
121901	90892	YES
121905	90892	YES
121941	91081	YES
121942	78312	YES
121953	91111	YES
121960	91111	YES
121966	52447	YES
121967	52447	YES
121982	49579	YES
121991	90713	YES
120224	49245	YES
120227	90891	YES
120230	90891	YES
120231	90891	YES
120244	51123	YES
120272	90891	YES
120273	90891	YES
120274	90891	YES
120276	90891	YES
120277	51677	YES

James CoBB   7-9-09

Reject Tiicket No	QAP No	Correct WPS USED
123706	52924-01	Yes
123715	52924-01	Yes
123717	52924-01	Yes
123753	78322-01	Yes
123767	52924-01	Yes
123980	53475-01	Yes
122811	90812	Yes
122826	90891	Yes
122858	90713	Yes
122859	90714	Yes
122705	48505	Yes
122718	49431	Yes
122726	51272	Yes
122735	49431	Yes
122742	90891	Yes
122760	50924	Yes
122770	90891-03	Yes
122915	90891-03	Yes
122916	90891-03	Yes
122939	90891	Yes
122947	90891	Yes
122994	51272	Yes
122003	90713	Yes
122004	90713	Yes
122005	90714	Yes
122006	90714	Yes
122013	90713	Yes
122014	90713	Yes
122016	90713	Yes
122017	99901	Yes
122020	50202	Yes
122033	90713	Yes
122036	99901	Yes
122037	33192	Yes
122040	50202	Yes
122044	50713	Yes
122052	39915	Yes
122053	50224	Yes
122060	49180	Yes
122065	99901	Yes
122074	50270	Yes
122077	90713	Yes
122078	90713	Yes
122079	90713	Yes
122083	50270	Yes
122094	50836	Yes
122101	40285-01	Yes
122117	50294	Yes
122132	90714	Yes
122172	91111	Yes

Daniel W Mann 7-9-09

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122348    90891 Yes
122500    90714 Yes
122503 99901-00 Yes
122509    99901 Yes
122510    99901 Yes
122511    99901 Yes
122527    52505 Yes
122535    90891 Yes
122536    90891 Yes
122537    90891 Yes
122538    90891 Yes
122544    99913 Yes
122559    42580 Yes
122565    90714 Yes
122567    51240 Yes
122579    39915 Yes
122580    90713 Yes
122581    90713 Yes
122582    90714 Yes
122588    99901 Yes
122592    51480 Yes
122597    90714 Yes
122598    90714 Yes
122599    90713 Yes
122664    51272 Yes
122692    49431 Yes
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Daniel W Mann   7-9-09

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Raleigh, NC

Procedure No.	36-40-10-15
Effective Date	7/8/70
Revision Date	08/31/09

TITLE:
NONCONFORMING MATERIAL CONTROL - REJECTION
PROCEDURE, MATERIAL REVIEW BOARD INVOLVEMENT

**PLANT INTERNAL
OPERATING PROCEDURE**

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Verify that the revision of this printed document matches the current revision of the electronic master before use.   Page 5   of   8

3.1.2.1   If the decision is to rework, an Inspector will consult with Manufacturing Engineering and/or Metallurgical Process Control to determine necessary drawings, manufacturing specifications, welding procedures, operations, sequences and departments involved for rework of the nonconforming material. The QAPs shall be consulted for the selection of applicable manufacturing specifications and drawings as required.

3.1.2.2   For a 'use-as-is' disposition there must be a written Engineering justification given on the Reject Ticket (Exhibit I).

3.1.2.3   In-process material must have an accompanying job order packet containing a Reject Ticket, Manufacturing Route Card and the product drawing. Exception: Manufacturing Route Cards are not required for parts that are rejected in the following areas; Receiving/Receiving Inspection, Stores, Assembly, Test, or Shipping since Route Cards for individual parts rejected in these areas are the responsibility of the Supervisor of the area in which the rework begins. Drawings are not required when rework instruction are explicit, such as: Remove all burrs.

3.1.2.4   For Code Items ("N"/"U"/"PP"/"NR"/"R") the Reject Ticket will be presented to the Authorized Nuclear Inspector/Authorized Inspector for his review, concurrence, and assignment of any hold or witness points.

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TRAINING RECORD

Department: _Metallurgical Process Control_   **Date:** _08/31/2009_

Subject: _Revision to PIOP 36-40-10-15 dated 08/31/09 – Page 5 of 8 paragraph 3.1.2.1_

Added clarification to consult QAP for selection of applicable manufacturing

Specifications and drawings including welding procedures.

Print Name	Initial and Date
Bernie Carothers	_Bernard Carothers 8/31/09_
James Cobb	_James Cobb 8-31-09_
Daniel Mann	_Daniel W Mann 8-31-09_

Duration of Training: _10 minutes_   **Instructor:** _8/31/09_

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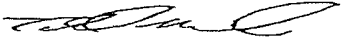
TRAINING RECORD

1900 South Saunders Street
Raleigh, NC 27603

| Department : | **INSPECTION** | Date : | 8/31/2009 |
| | | Due : | 8/31/2009 |

Subject :   **PIOP 36-40-10-15 - Writing rework instructions after checking QAP**

During the NRC Inspection a non-conformance was found in relation to a weld repair being performed with a different procedure than what was listed in QAP 99912. It is very important that anytime we issue rework instructions that we use the QAP, associated drawings and procedures for the particular item we are having reworked. PIOP 36-410-10-14 has been revised to address this in paragraph 3.1.2.1. This procedure will be issued in the coming days and everyone needs to be familiar with the contents. Paragraph 3.1.2.1 will now read, "*If the decision is to rework, an Inspector will consult with Manufacturing Engineering and/or Metallurgical Process Control to determine necessary drawings, manufacturing specifications, weld procedures, operations, sequences nad departments involved for rework of the non-conforming material. The applicable QAP shall be consulted for the selection of apllicable manufacturing specifications and drawings as required.*"

NAME	INITIAL / DATE
Samuel Encarnacion	SE 8-31-09
Mike Roberson	MR 8/31/09
Donnie Harper	DH 8/31/09
~~Jerry Fadoil~~	N/A to 8/31/...
Jason Thompson	JT 8/31/09
David Craddock	DKC 8-31-09
Mary Jo Hedgbeth	MJH 8/31/09
Scott Rehl	SC 8/31/09
James Vacanti	JV 8/31/09
Patricia Miller	PM 8-31-09
Karen Hay	KH 8-31-09
LaTisha Williams	LW 8.31.09
Donald Raby	DER 8/31/09

Length of Session :   **Self-Review**

Instructor : _____
           Todd McKinney - QC Supervisor