Part 21 (PAR) Event # 48745

Rep Org: DRESSER-RAND
Supplier: DRESSER-RAND
Notification Date / Time: 02/12/2013 16:52 (EST)
Event Date / Time: 02/01/2013 (EST)
Last Modification: 04/01/2014

Region: 1
City: WELLSVILLE
County:
State: NY
Docket #:
Agreement State: Yes
License #:

NRC Notified by: D. G. MARTIN
HQ Ops Officer: DONALD NORWOOD
Emergency Class: NON EMERGENCY
10 CFR Section:
21.21(d)(3)(i) DEFECTS AND NONCOMPLIANCE

Notifications: ANTHONY DIMITRIADIS R1DO
BOB HAGAR R4DO
PART 21 RX GROUP E-MAIL

PART 21 REPORT - DEFECTIVE RAW MATERIAL USED TO MANUFACTURE VALVE STEMS

Dresser-Rand is reporting that one of its vendors supplied annealed material instead of the specified heat-treated material. Dresser-Rand used the defective raw material to manufacture valve stems for Terry Type Emergency Feedwater pump drive turbines. Dresser-Rand has verified that the annealed material is not acceptable for the finished product.

The two customers (Wolf Creek Nuclear Plant and Callaway Nuclear Plant) that received the affected parts have been notified of this issue and have confirmed that the components in question are not in service at their facilities. The remaining material and affected parts have been quarantined at the Dresser-Rand plant in Wellsville, NY.

All questions should be addressed to:
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* * * UPDATE FROM JOE MENICHINO TO CHARLES TEAL ON 3/11/13 AT 1614 EDT * * *

The following was excerpted from a facsimile received from Dresser-Rand:

"DESCRIPTION OF DEFECT OR NON-COMPLIANCE

IE19
NRR

"Specific designs of steam turbine control valve stems are made from heat treated ASM 5663M Inconel Bar raw material. Certifications associated with heat numbers of certain inventory of this material indicate that the material vendor incorrectly supplied material in an annealed condition (AMS 5662M).

"POTENTIAL SAFETY HAZARD OR NON-COMPLIANCE

"Valve stems are used to control steam turbine speed and power. The valve stems must be free to move within the guiding assembly during operation. Stems are made using materials that have the correct material properties to reduce the risk of failure. The use of inconel raw stock in an annealed condition is unacceptable for steam turbine valve stems due to the risk of unacceptable wear and strength characteristics which could lead to sticking or tensile failure in the mating guide bushings within the valve assembly.

"ADVICE TO EFFECTED CLIENT RELATED TO THIS REPORT

"For those affected sites identified, locate and return the material to Dresser-Rand immediately."

Affected facilities include Point Beach, Clinton, Wolf Creek, Cooper, Callaway, San Onofre, and Prairie Island.

Notified R1DO (Dentel), R3DO (Dickson), R4DO (Powers), and the Part 21 Group via email.

* * * UPDATE FROM ED GRANDUSKY TO CHARLES TEAL AT 1510 EST ON 2/28/14 * * *

The following was excerpted from a facsimile received from Dresser-Rand:

"DESCRIPTION OF DEFECT:

"This is an addendum to Part 21 Reports Log# 2013-008-00 and Log# 2013-008-01. Another Vendor certification has been discovered for valve stem material that indicates the annealed condition-Inconel was supplied in lieu of the heat treated that is specified.

"ENGINEERING EVALUATION & RECOMMENDATIONS:

"1- Complete review of all Vendor certification for this material to make certain no more.
Discrepant material was used in the manufacture of these stems.

"2- Identify all DR part numbers that were made using the affected heat numbers.

"3- Notify affected customers and recall non-compliant parts.

"Potential Affected Part Numbers:

"800777-001 Rev. NA
"800768-701 Rev. A
"800768-702 Rev. A
"800858-001 Rev. E
"800740-701 Rev. A
"800746-001 Rev. B
"800739-001 Rev. NA
"800743-001 Rev. A
"801061-701 Rev. A
"800741-701 Rev. B
"800744-001 Rev. NA
"800745-001 Rev. NA
"800748-001 Rev. A
"800742-001 Rev. B"

Notified R1DO (DeFrancisco), R3DO (Kunowski), R4DO (Hagar), and the Part 21 Group via email.

* * *UPDATE FROM ED GRANDUSKY TO JEFF ROTTON AT 1520 EDT ON 04/01/2014 * * *

The following information is excepted from a facsimile provided by Dresser-Rand:

Specifications for valve stems provided to Palo Verde (Part Number W800743-001), Tihange 2 (Part Number W800746-001), Catawba (Part Number W800746-001), and Davis Besse (Part Number (W800746-001) call for the material to be heat treated AMS 5663M Inconel Bar. Certifications associated with another heat number of material indicate that the vendor supplied material in an annealed condition (AMS 5662M). The lower mechanical properties of the AMS 5662M could lead to shorter operating life for these stems.

The material certification for all Inconel valve stems has been reviewed back to the first Inconel stem made by Dresser-Rand. No new corrective actions were deemed necessary. The four sites listed above should locate and return the valve stems immediately to Dresser-Rand for evaluation.

Notified R2DO (Vias), R3DO (Passehl), R4DO (Gepford), and the 10CFR Part 21 Group via email.

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DRESSER-RAND

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April 1, 2014

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Nuclear Regulatory Commission

Subject: 10CFR50art 21 Reporting of defects

Find attached our final report of defect. This report is Dresser –Rand number 46.

Please call if additional information is required

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FINAL REPORT 10CFR PART 21
REPORT OF A POTENTIAL SAFETY HAZARD

Report No. 46

PREPARED BY:	Ed Grandusky	File No:	Various
		Serial No:	Various
TITLE:	Manager Gov't Aftermarket Engineering	Type:	Various
		Ref:	Report #45
PART NAME:	Inconel Valve Stem	DR Part No:	Various
		DR Dwg No:	Various
		Rev. Level:	Various

1. DESCRIPTION OF DEFECT OR NON-COMPLIANCE

As previously identified in Reports Log # 2013-008-00 and Log # 2013-008-01, specifications for these valve stems call for the material to be heat treated AMS 5663M Inconel Bar. Certifications associated with another heat number of material indicate that the vendor supplied material in an annealed condition (AMS 5662M).

2. POTENTIAL SAFETY HAZARD OR NON-COMPLIANCE

The lower mechanical properties of the AMS 5662M could lead to shorter operating life for these stems.

3. NUMBER AND LOCATION OF ALL COMPONENTS

Nuclear Site	Client PO#	D-R P/N	Qty	D-R Order No.	Ship Date
Palo Verde 40568ABC	500525835	W800743-001	3	CSS 417027	4/2/2009
Tihange 2 40814A	63913/RU	W800746-001	2	CSS 424709	10/13/2009
Catawaba 40096AB	00121072	W800746-001	1	CSS 454423	3/11/2010
Davis Besse 37686AB	00123023	W800746-001	2	CSS 462246	3/11/2010

4. CORRECTION ACTION BY: Staff — COMPLETED BY 3/27/2014

This condition was discovered because of the corrective actions defined on Dresser-Rand report no. 45. The material certification for all Inconel valve stems has been reviewed back to the first Inconel stem made by Dresser-Rand. No new corrective actions were deemed necessary.

See Part 21 Reports Log # 2013-008-00 and 2013-008-01 for previous Corrective Actions.

5. ADVICE TO EFFECTED CLIENT RELATED TO THIS REPORT

The 4 sites identified in section 3 should locate and return the valve stems to Dresser-Rand immediately for evaluation.