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Baldor Electric Co
P. O. Box 250, 4349 Avery Drive
Flowery Branch, GA 30542 USA
Tel 678.947.7350

August 23, 2013

To: Document Control Desk

United States Nuclear Regulatory Commission

Washington, DC 20555

Dear Sir or Madam:

In accordance with Title 10, Code of Federal Regulations, Part 21, Baldor Electric is making written notification as required by 10CFR21.21 for event #49302.

A. Name and address of the individual informing the NRC.

James Thigpen
Quality Assurance Manager
Baldor Electric/Gainesville Motor Plant
4349 Avery Drive
Flowery Branch, Georgia 30506

B. Identification of Basic Component being Supplied.

AC Motor

C. Name of firm supplying basic component.

Baldor Electric/Gainesville Motor Plant
4349 Avery Drive
Flowery Branch, Georgia 30506

D. Nature of the defect, deviation, or failure to comply.

Subject: Nuclear Nonconformance Event Number 49302

This is a reportable 10CFR21 notification because we believe it is possible that some 1E motors in frame sizes 360, 400, and 440 may have been shipped by Baldor Electric, which contain an entry point for blast media to enter the motor during post shipment paint treatment preparations.

During a recent inspection of a returned motor some foreign materials were discovered inside the motor which appeared to consist of two types of blast media.

One type of blast media found is used during the manufacturing process to clean the rotor end ring area before applying an end ring coating. This media is non-conductive and is typically cleaned away as part of the treatment process. The presence of blast media is a key inspection point at rotor final inspection. In mid 2008 this type of blast media was eliminated from Baldor processes and substituted with CO2 blast media.

The other blast media found inside the motor is not used during the motor manufacturing process at Baldor. It was a metallic bead media and used during a paint preparation process after leaving Baldor. The entry point of this material was found to be through a small window in the frame casting that normally is closed with

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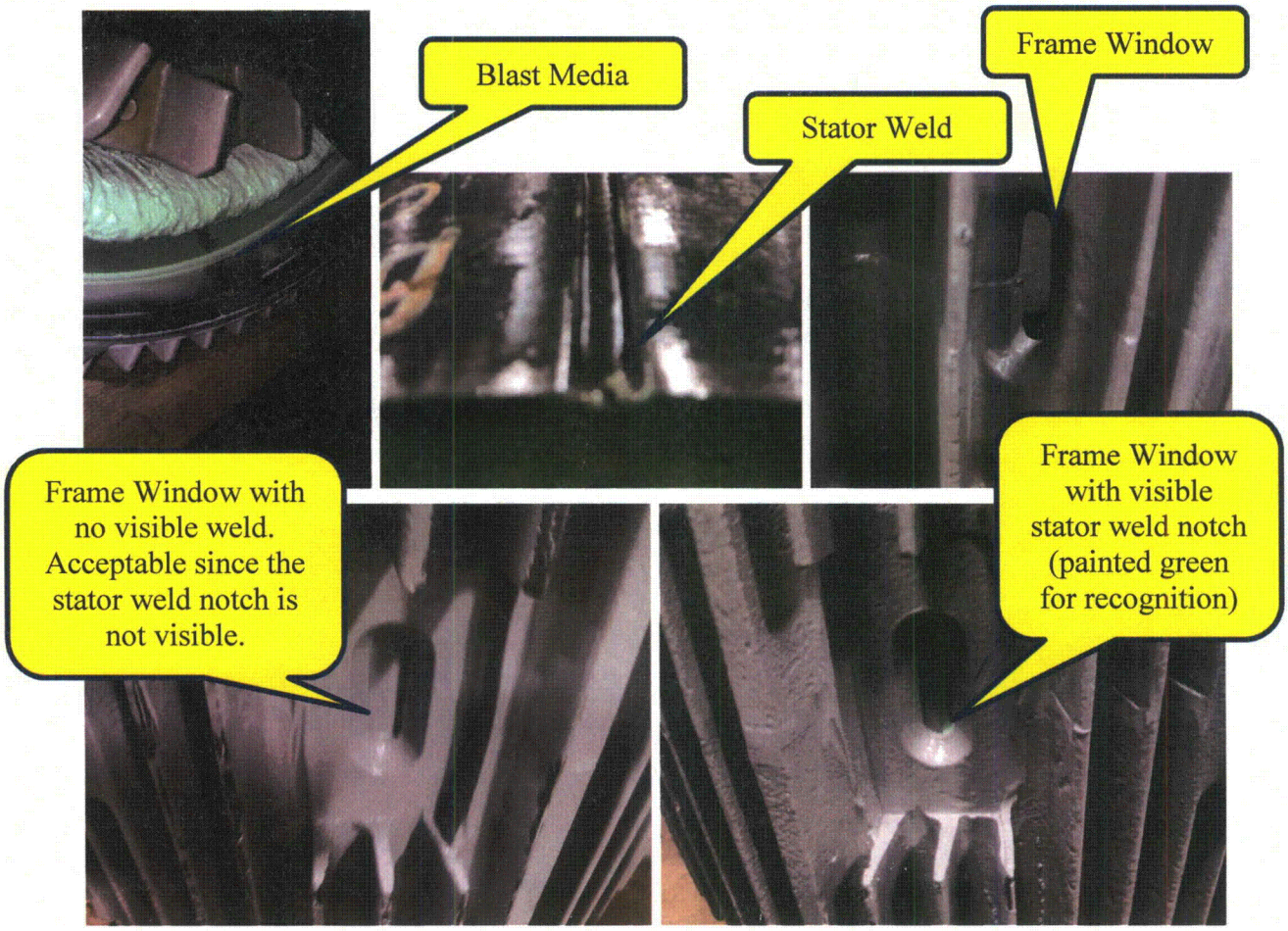
weld after the stator is assembled into the frame. In this instance, one of the stator weld notches was aligned with one (of the two) small windows in the frame casting. This allowed the blast media to enter and travel along the OD of the stator core weld notch and into the motor.

Engineering and Quality reviewed all nuclear orders to verify the frame sizes that may have used the weld slot construction. The frames were determined to be 360, 400, and 440 during the time frame when the welds may not have been verified. The date range was established as 2002 thru 2013.

Nuclear Motor Assembly Checklist RGGFCD-00004, used as part of the dedication of Class 1E motors, was reviewed and found not to have a verification check for the stator/ frame welds. The puddle welds were not required to be verified as part of the documented dedication characteristics by Quality personnel. Therefore we believe it is possible that other 1E motors in frame sizes 360, 400, and 440 may have been shipped with this same entry point for blast media.



Engineering reviewed and confirmed for 360,400, and 440 frame sizes, the stator/frame assembly mechanical construction without the welds present was adequate to meet torsional or axial loads for motor performance and seismic loads.

A review of reported quality issues found no winding failures have ever been reported for FME (blast media) in any of the 360, 400, or 440 frame sizes.

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This is a reportable 10CFR21 notification because there is a possibility that other Nuclear Class 1E motors have shipped with both the following:

a.The frame weld window on identified 360, 400, or 440 frame motors shows no weld.

b.The stator core weld notch is visible in at least one (of the two) frame weld windows.

The combination of both these items would allow an entry point for external conductive blast media (FME) to enter the motor.

STEPS TAKEN TO PREVENT FUTURE OCCURRENCES

Containment:

All in process and on the dock motors were inspected to verify the welds were in place. No motors were found without the proper weld during this inspection. Engineering and Quality reviewed all nuclear orders to verify the frame sizes that may have used the weld slot construction. The frames were determined to be 360, 400, and 440 during the time frame when the welds may not have been verified. The date range was established as 2002 thru 2013.

Nuclear Motor Assembly Checklist RGGFCD-00004 used as part of the dedication of Class 1E motors was reviewed and found not to have a verification check for the stator/ frame welds.

Engineering reviewed and confirmed for 360,400, and 440 frame sizes, the stator/frame assembly mechanical construction without the welds present was adequate to meet torsional or axial loads for motor performance and seismic loads.

A review of reported quality issues found no winding failures have ever been reported for FME (blast media) in any of the 360, 400, or 440 frame sizes.

CONCLUSION

The problem is the possibility that motors shipped with a path thru a stator weld notch into the motor. The possibility of this happening is confined to the specific sales orders identified.

D. The Discovery Date.

June 24, 2013.

E. The Quantity and Location of Motors Affected.

Quantity On Hand: 0 Shipped: 63

PART/COMPONENT NUMBER:

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	Customer Name	Customer PO #	Motor Serial #	End User / Location
A	AREVA NP, INC.	1007010502	7405444-001 T1	Mark For: P/N 1706512-007 JOB NAME: 2362 ISA
B	DAVID BROWN UNION PUMPS CO.	168038	7280451-001 T1 7280451-001 T2 7280451-002 T1 7280451-002 T2	Mark For: RI05136AN/BN - SHIN KORI RI05137AN/BN-SHIN WOLSONG
C	DUKE ENERGY CORP	DP3894, ITEM 0010	6503869 T1	Mark For: STK COD 560661-1 CATAWBA AUX BLDG FILTERED FAN
		NE23183, ITEM 0010	7189552-001 T1	Ship to Catawba Site, Mark For: Stock Code 595706-1
		NE23183, ITEM 0020	7189552A-001 T1	Ship to Catawba Site, Mark For: Stock Code 560661-1
		78439, ITEM 0001	7259472-001 T1	Ship to Catawba Site, Mark For: Stock Code 560661-1 AUX BLDG FILT EXH FAN MOTOR
		P83059	7314258-001 T1	Ship to Catawba Site, Mark For: Stock Code 560661-1
		50624 L/I 001	7242046-001 T1	Ship to Catawba Site, Mark For: STOCK CODE 594014-1
		81537 L/I 001	7306866-001 T1	Ship to Catawba Site, Mark For: STOCK CODE 594014
		00114161 L/I 0001	B464441-010 T1	Oconee Nuclear Station SSF RC MAKEUP PUMP MOTOR
		00131213	B604345-010 T1	Ship to Catawba Site
D	ENERTECH	615544	6933365-001 T1	Mark For: ENTERGY CAT ID 00922470033 PO 10105466 L/I 0001
		114835	7296045-001 T1	Ship to GOULDS PUMPS, 240 Fall Street SENECA FALLS, NY. Mark For: 840071 P/N D4224S
		114835-2 ITEM#30	7398284-001 T1	Ship to GOULDS PUMPS, 240 Fall Street SENECA FALLS, NY. Mark For: PO#114835 IT#30 P/N D5501S 840071
E	FIRST ENERGY	45349776, L/I 00002	B655271-010 T1 B655271-010 T2 B655271-010 T3	Ship to: Perry Main Warehouse, Perry Nuclear Power Plant, I0 CENTER ROAD, PERRY OH 44081
		45374079, L/I 00001	B809528-010 T1 B809528-010 T2	Ship to: Perry Main Warehouse, Perry Nuclear Power Plant, I0 CENTER ROAD, PERRY OH 44081
		45390853, L/I 00001	B869861-010 T1	Ship to: Perry Main Warehouse, Perry Nuclear Power Plant, I0 CENTER ROAD, PERRY OH 44081
F	FIRST ENERGY	45192009	7163989-001 T1	Ship to Perry Nuclear Power

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	SERVICE CO.			Plant. Mark For: MAT#96953395 PO#45192009
		45303885, L/I 00001	B502150-010 T1	Ship to 10 CENTER ROAD PERRY, OH 44081 Mark for: MAT # 96953395 PO # 45303885
G	FLOWSERVE PUMP DIVISION-SPAIN	HEL-013995	3769966A-001 T1 3769966A-001 T2 3769966A-001 T3 3769966A-001 T4	Ship to FLOWSERVE PUMP DIVISION Flowserve Spain Avd Fuentemar, 26-28 COSLADA, MADRID. Mark For: PO#HEL-013995 10.05.77.11079
H	GEORGIA POWER CO	7051394, ITEM 001	1KXV60398 T1	
		7051394, ITEM 002	2KXV60398 T1	
I	HOWDEN BUFFALO INC	17156	1KXV60503 T1	Exelon Generation Company LLC, Dresden Warehouse, 6500 North Dresden Rd, Morris, ,IL 60450-9765
		17578	1KXV60514 T1	United Controls International, 5139 S. Royal Atlanta Drive, Tucker, GA 30084
		25947	6869298-001 T1 6869298-001 T2	Southern California Edison / P.O.Box 128 / San Clemente, CA 92674-0128
		26942	6982377-001 T1	KHNP / 167 Samsung-Dong, Gangnam-Gu / Seoul 135-791 / Republic of Korea
		27592	7164652-001 T1	First Energy / Beaver Valley Power Station / P.O.Box 4 / Shippingport, PA 15077
		29445	7221083-001 T1	KHNP / 167 Samsung-Dong, Gangnam-Gu / Seoul 135-791 / Republic of Korea
		29619	7251392-001 T1	First Energy / Beaver Valley Power Station / P.O.Box 4 / Shippingport, PA 15077
		40294	B523030-010 T1	Southern California Edison / P.O.Box 128 / San Clemente, CA 92674-0128
		40796	B534396-010 T1	First Energy / Beaver Valley Power Station / P.O.Box 4 / Shippingport, PA 15077
		40869	B536076-010 T1 B536076-010 T2 B536076-010 T3	Trentec, A Business Unit of Curtiss-Wright Flow Control Corporation, 4600 East Tech Drive, Cincinnati, OH 45245
		40869	B536220-020 T1	Trentec, A Business Unit of Curtiss-Wright Flow Control Corporation, 4600 East Tech

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				Drive, Cincinnati, OH 45245
		41391	B549766-010 T1 B549766-010 T2	Southern California Edison / P.O.Box 128 / San Clemente, CA 92674-0128
		43094	B612674-010 T1	First Energy / Beaver Valley Power Station / P.O.Box 4 / Shippingport, PA 15077
		42700	B619134-010 T1	TVA Nuclear / Nuclear Assurance and Liscensing / 1101 Market St / Chattanooga, TN 37402-2801
		42978	B605377-010 T1 B605377-010 T2	TVA Nuclear / Nuclear Assurance and Liscensing / 1101 Market St / Chattanooga, TN 37402-2801
		PO011990	B944153-010 T1 B944153-010 T2	Ergytech, Inc. / 2400 Augusta , Suite 310 / Houston, TX 77057
		PO 010456	B792616-010 T1	Ergytech, Inc. / 2400 Augusta , Suite 310 / Houston, TX 77057
J	LIMITORQUE	125024	6504992 T1 6504992 T2	Mark For: PO#125024 L/I 001 R-608-F04-0800
K	SPENCER TURBINE CO	97716, L/I 1	B658247-010 T1 B721200-020 T1 B721200-020 T2 B721200-020 T3	Mark for: PROJECT# 209355
L	TAIWAN POWER COMPANY	8911120165	8KXV60501 T1	
		008971120105, ITEM 006	B446279-010 T1	
M	WESTINGHOUSE ELECTRIC COMPANY	4500199978 L/I 1	7192126-001 T1	Mark for: PO#4500199978 SO#05A01820 CUST PO#1772211 MAT#7650458
		4500336630 L/I 1	B588514-010 T1	Ship to FLORIDA P&L, 6501 S. OCSAN DRIVE, JENSEN BEACH, FL 34957

F. **The Corrective Action which has been completed.**

Baldor initiated corrective action per Baldor CAR-00409 on July 10, 2013 which was completed and received final approval by James Thigpen QA manager Baldor. Final verification of actions will be verified for effectiveness by 11/19/2013.

a. Manufacturing, Quality and Design Engineering personnel were made aware of the issue through an employee communication posting. RGGWI-00002 Frame Assembly and Weld Procedure was revised to detail the 360 ,400, and 440 frames with weld slots must always be welded and verified as welded as part of the operator final inspection.

b. Nuclear Motor Assembly Checklist RGGFCD-00004 was revised to include a quality verification that all 360, 400, or 440 stator/frame assemblies are verified to be welded if the design requires this process. Note: Many of 360 frame motors do not have the frame weld slots as part of the design.

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G. Other Information.

We suggest the motors identified as possibly having this non-conformance, be inspected for the following.

a. The frame weld windows on identified 360,400 or 440 frame motors show no weld.
and
b. The stator core weld notch is visible in at least one (of the two) frame weld windows.

If both these issues are present then we recommend the following:

1. Remove the motor from service
2. Remove the brackets from the motor
3. Inspect for FME (blast media) and if found vacuum it off the windings and inside the frame and brackets.
4. Verify the winding integrity through use of meggar, hypot, resistance and surge test.
5. Re-assemble motor.
6. Grind off any paint from the weld slot area and puddle weld to fill the bottom of the window.
7. Perform routine test to verify the motor meets requirements.

Sincerely,

James L Thigpen

Mr. James Thigpen
Quality Assurance Manager, Gainesville Motor Plant
Baldor Electric Co.