

Part 21 (PAR)

Event # 52407

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|---|-----------------------------|---|-------|
| Rep Org: VALCOR ENGINEERING CORPORATION | | Notification Date / Time: 12/05/2016 14:09 (EST) | |
| Supplier: VALCOR ENGINEERING CORPORATION | | Event Date / Time: 12/05/2016 (EST) | |
| Last Modification: 12/05/2016 | | | |
| Region: 1 | Docket #: | | |
| City: SPRINGFIELD | Agreement State: Yes | | |
| County: | License #: | | |
| State: NJ | | | |
| NRC Notified by: FRAN LUCANO | | Notifications: ART BURRITT | R1DO |
| HQ Ops Officer: STEVEN VITTO | | VINCENT GADDY | R4DO |
| Emergency Class: NON EMERGENCY | | PART 21/50.55 REACTORS | EMAIL |
| 10 CFR Section: | | | |
| 21.21(d)(3)(i) DEFECTS AND NONCOMPLIANCE | | | |

PART 21 - NON-CONFORMING COVER MACHINING ON SOLENOID VALVE

The following is a synopsis of the Part 21 report that was received via fax:

"Cover Machining is installed on upper section of Solenoid Valve and it allows for the electrical connection to the valve solenoid and protects inside wiring of the solenoid from environmental condition. Cover machining part number V52636-567 has 0.190 radius (Drawing V52620-50 Zone D3) which was machined too deep removing material from surface needed for proper O-ring seal. The lack of material exposes part of the sealing O-ring which could diminish the O-ring sealing capability. With O-ring sealing capability diminished, Valcor cannot ensure that valves with Cover Machining Installed on Solenoid Assembly will perform its safety function during all postulated events.

"This item has historically been manufactured by machining a casting. For the lot involved, castings were not available. Authorization was given to manufacture the Cover directly from suitable bar stock. To accomplish this, Valcor's vendor used the casting drawing and casting machining drawing to manufacture the finished machined part. The combination of these two drawings had insufficient control on the corner radius, resulting in this nonconformance.

"All defective covers in stock have been quarantined and a nonconformance report has been generated. Lack of location controlling dimension on the Cover Machining drawing for 0.190 radius was discovered to be the root cause of the defect. Valcor has created and released a new engineering drawing that properly controls the location of 0.190 radius. This action has been completed as of 11/22/2016. Engineering Manager-Nuclear was responsible to this action.

"Valcor is in a process of notifying all affected customers.

"Customers:

Ameren, Valve Part Number V526-6000-16 (Stock# 7731643), S/N 9, QTY 1, Location Ameren Missouri - Callaway
Bruce Power (BPC), Valve Part Number V526-6000-20 (Cat ID 142129), S/N 28-36, QTY 9, Bruce NGS

"Note: All 9 valves supplied to BPC have been returned to Valcor for nameplate correction and are accounted for.

"If you have any questions or addition information is needed regarding this matter, please contact Fran Lucano at
973-467-8400."



VALCOR ENGINEERING CORPORATION®

2 LAWRENCE ROAD, SPRINGFIELD, NEW JERSEY 07081 U.S.A. (973) 467-8400
FAX (973) 467-9391

December 5, 2016

VIA FACSMILE

U.S. Nuclear Regulatory Commission

Operation Center

301-816-5151

Subject: 10 CFR 21 Written Notification for Cover Machining Valcor P/N V52636-570

Pursuant to 10 CFR 21.21 (d) (3) (ii), Valcor Engineering Corporation is providing the required written notification within 30 days of the identification of a defect in Valcor Engineering Corp. Cover Machining P/N V52636-570.

On the basis of our evaluation, it has been determined that Valcor Engineering Corp. has enough information to determine if the subject condition is left uncorrected it has potential to create Substantial Safety Hazard. The enclosure to this letter provides the information required by 10 CFR 21.21 (d) (4).

If you have any questions or addition information is needed regarding this matter, please contact Fran Lucano at 973-467-8400

Sincerely,

Fran Lucano

Vice President of Quality Systems

Enclosure: 10 CFR 21 Written Notification

Enclosure
10 CFR Part 21 Report V52636-570
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WRITTEN REPORT PER 10 CFR 21.21 (d) (4)

(i) Name and Address of the individual or individuals informing the Commission.

Fran Lucano
Vice President of Quality Systems
Valcor Engineering Corporation
2 Lawrence Road
Springfield, NJ 07081

(ii) Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

Cover Machining, Valcor Part No. V52636-567

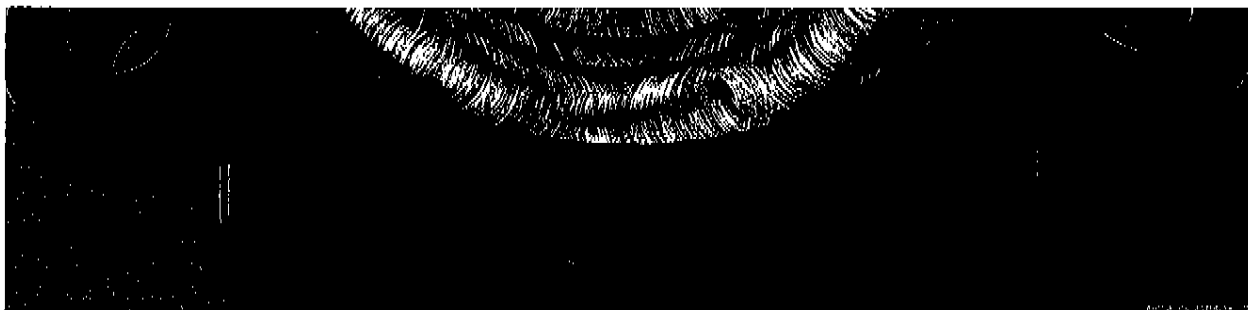
(iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

Valcor Engineering Corporation
2 Lawrence Road
Springfield, NJ 07081

(iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

Cover Machining is installed on upper section of Solenoid Valve and it allows for the electrical connection to the valve solenoid and protects inside wiring of the solenoid from environmental condition. Cover machining part number V52636-567 has .190 radius (Drawing V52620-50 Zone D3) which was machined too deep removing material from surface needed for proper o-ring seal. The lack of material exposes part of the sealing o-ring which could diminish the o-ring sealing capability. With o-ring sealing capability diminished, Valcor cannot ensure that valves with Cover Machining installed on Solenoid Assembly will perform its safety function during all postulated events. This item has historically been manufactured by machining a casting. For the lot involved, castings were not available. Authorization was given to manufacture the Cover directly from suitable bar stock. To accomplish this, Valcor's vendor used the casting drawing and casting machining drawing to manufacture the finished machined part. The combination of these two drawings had insufficient control on the corner radius, resulting in this nonconformance.

Non-conforming cover with incorrectly machined .190 radius



Enclosure

10 CFR Part 21 Report V52636-570

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Conforming Cover with correctly machined .190 radius

(v) The date on which the information of such defect or failure to comply was obtained.

October 7, 2016. 10CFR21 Reportability evaluation was performed on December 5, 2016.

(vi) In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part.

| <u>Customer</u> | <u>Valve Part Number</u> | <u>S/N</u> | <u>QTY</u> | <u>Location</u> |
|-----------------|-------------------------------|------------|------------|----------------------------|
| Ameren | V526-6000-16 (Stock# 7731643) | 9 | 1 | Ameren Missouri – Callaway |
| Bruce Power | V526-6000-20 (Cat ID 142129) | 28-36 | 9 | Bruce NGS* |

*Note: All 9 valves supplied to BPC have been returned to Valcor for nameplate correction and are accounted for.

(vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

All defective covers in stock have been quarantined and a nonconformance report has been generated. Lack of location controlling dimension on the Cover Machining drawing for .190 radius was discovered to be the root cause of the defect. Valcor has created and released a new engineering drawing that properly controls the location of .190 radius. This action has been completed as of 11/22/2016. Engineering Manager- Nuclear was responsible to this action.

(viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

Valcor is in a process of notifying all affected customers.

(ix) In the case of an early site permit, the entities to whom an early site permit was transferred.

Not applicable