

Part 21 (PAR)

Event # 46760

Rep Org: ENGINE SYSTEMS, INC		Notification Date / Time: 04/15/2011 17:29 (EDT)	
Supplier: ENGINE SYSTEMS, INC		Event Date / Time: 04/15/2011 (EDT)	
Last Modification: 04/15/2011			
Region: 1	Docket #:		
City: ROCKY MOUNT	Agreement State:		Yes
County:	License #:		
State: NC			
NRC Notified by: TOM HORNER	Notifications:	KATHLEEN O'DONOHUE	R2DO
HQ Ops Officer: JOHN KNOKE		STEVE ORTH	R3DO
Emergency Class: NON EMERGENCY		PART 21 GROUP email	
10 CFR Section:			
21.21	UNSPECIFIED PARAGRAPH		

POTENTIAL DEFECT IN MAGNETROL LEVEL SWITCH FROM ENGINE SYSTEMS INCORPORATED

"Engine Systems, Incorporated (ESI) began an evaluation of a level switch on February 16, 2011. Monticello Nuclear Plant returned a level switch for failure evaluation. The reported condition was that the switch mechanism would not actuate throughout the entire level range. ESI supplied the level switch in July, 2008. The switch was functionally tested prior to shipment and it worked properly at that time. It remained in customer inventory until recently when it was tested and the problem was identified.

"This level switch is used in the fuel oil day tank of some EMD 999 emergency diesel generators and controls the fuel transfer pump. Malfunctioning of this switch could prevent the fuel transfer pump from operating and therefore the diesel generator could shut down due to insufficient fuel supply; thus preventing the diesel generator from performing its safety related function. The EMD 999 fuel system also incorporates a backup fuel transfer pump that is controlled by the level alarm switch within the day tank. The backup transfer pump turns on when the low level alarm is actuated and turns off when the high level alarm actuates.

"ESI has been conducting tests and inspections of the returned level switch and will be coordinating with the manufacturer (Magnetrol) to complete our evaluation. To date, no other similar failures with this Magnetrol level switch have been reported to ESI."

Component: Magnetrol level switch, ESI P/N: 8277780-ESI, Magnetrol type A10

Report No: 10CFR21-0101-INT

JEI9
NRR



ENGINE SYSTEMS, INC.

175 Freight Road, Rocky Mount, NC 27804

Telephone: 252/977-2720

Fax:

252/446-1134

TELEFAX

Date: April 15, 2011
Company: NRC Operations Center
Fax Number: 301/816-5151
Verification No.: 301/816-5100
Reference: Report No. 10CFR21-0101-INT, Rev. 0
From: Tom Horner
Page: 1 of 4

Dear Sir:

Following this cover is a copy of our Interim Report 10CFR21-0101-INT, Rev.0, for a 10CFR21 deviation evaluation regarding a Magnetrol level switch, ESI P/N : 8277780-ESI, Magnetrol type A10.

A copy of the report will be mailed to the NRC Document Control Desk.

Should you have questions, please let us know.

Sincerely,

ENGINE SYSTEMS, INC.

A handwritten signature in black ink, appearing to read 'Tom Horner', is written over a horizontal line.

Tom Horner
Quality Assurance Manager



ENGINE SYSTEMS, INC.

175 Freight Road, Rocky Mount, NC 27804

Telephone: 252/977-2720

Fax: 252/446-1134

Report No. 10CFR21-0101-INT

Rev. 0: 04/15/11

**INTERIM REPORT
10CFR21 REPORTING OF DEFECTS
AND NON-COMPLIANCE**

COMPONENT: Magnetrol level switch
ESI P/N: 8277780-ESI
Magnetrol type A10

SYSTEM: Emergency Diesel Generator – fuel oil system

CONCLUSION: Not yet completed

Prepared By: 
Engineering Manager

Date: 4/15/11

Reviewed By: 
Quality Assurance Manager

Date: 4-15-11

Report No. 10CFR21-101-INT

Record of Revisions
Page: 1 of 1

REV	DATE	PAGE	DESCRIPTION
0	04/15/11		Initial issue.

Report No. 10CFR21-101-INT
Revision: 0
Date: 04/15/11
Page: 1 of 1

COMPONENT:

Magnetrol level switch
ESI P/N: 8277780-ESI
Magnetrol type A10

PURPOSE:

This interim report is being issued because Engine Systems, Inc. (ESI) is not able to complete an evaluation of an identified deviation within the 60 day requirement of 10CFR21.21. The evaluation is expected to be completed no later than May 15, 2011.

SUMMARY:

ESI began an evaluation of a level switch on February 16, 2011. Monticello Nuclear Plant returned a level switch for failure evaluation. The reported condition was that the switch mechanism would not actuate throughout the entire level range. ESI supplied the level switch in July, 2008. The switch was functionally tested prior to shipment and it worked properly at that time. It remained in customer inventory until recently when it was tested and the problem was identified.

This level switch is used in the fuel oil day tank of some EMD 999 emergency diesel generators and controls the fuel transfer pump. Malfunctioning of this switch could prevent the fuel transfer pump from operating and therefore the diesel generator could shut down due to insufficient fuel supply; thus preventing the diesel generator from performing its safety related function. The EMD 999 fuel system also incorporates a backup fuel transfer pump that is controlled by the level alarm switch within the day tank. The backup transfer pump turns on when the low level alarm is actuated and turns off when the high level alarm actuates.

ESI has been conducting tests and inspections of the returned level switch and will be coordinating with the manufacturer (Magnetrol) to complete our evaluation.

To date, no other similar failures with this Magnetrol level switch have been reported to ESI.