

General Information or Other (PAR)

Event # 45296

<b>Rep Org:</b> GENERAL ATOMICS	<b>Notification Date / Time:</b> 08/25/2009 15:17 (EDT)
<b>Supplier:</b> GENERAL ATOMICS	<b>Event Date / Time:</b> 06/30/2009 (PDT)
	<b>Last Modification:</b> 08/31/2009
<b>Region:</b> 4	<b>Docket #:</b>
<b>City:</b> SAN DIEGO	<b>Agreement State:</b> Yes
<b>County:</b>	<b>License #:</b>
<b>State:</b> CA	
<b>NRC Notified by:</b> KEITH ASMUSSEN	<b>Notifications:</b> JOHN WHITE R1DO
<b>HQ Ops Officer:</b> VINCE KLCO	SCOTT SHAEFFER R2DO
<b>Emergency Class:</b> NON EMERGENCY	STEVE ORTH R3DO
<b>10 CFR Section:</b>	GEOFFREY MILLER R4DO
21.21 UNSPECIFIED PARAGRAPH	OMID TABATABAI NRO
	JOHN THORP NRR

## PART 21 - RADIATION MONITOR DEFECT

"The defect is contained in the General Atomics Electronic Systems, Inc (GA-ESI) radiation monitoring system model RM-80 firmware. The RM-80 firmware anomaly was initially identified at the St. Lucie Nuclear Power Plant. The radiation monitor was part of the control room outside air intake ventilation radiation monitors.

"More specifically, if the radiation monitor is already in a high and or alert alarm state, and subsequently suffers a loss of power, then upon restoration of power to the unit, the RM-80 high and or alert alarm relays are not reenergized by the RM-80 firmware. This in turn prevents the relays that are located in the [RM]-80 from performing their safety related function.

"This error in the firmware only affects those plant sites that connect annunciator panels or other safety related equipment to the RM-80 Alert and High Alarm relays.

"Plant sites that use RM-80 radiation monitors will be advised to test their systems for this anomaly. When so requested, GA-ESI will provide all necessary information to plants on how to test their RM-80 radiation monitors, and how to receive firmware upgrades if the condition is found during testing."

General Atomics will notify the following affected plants: Beaver Valley, Braidwood, Byron, Callaway, Indian Point 2 & 3, Limerick, River Bend, Shearon Harris, South Texas, St. Lucie, Waterford, and Wolf Creek.

\*\*\* UPDATE FROM KEITH E. ASMUSSEN TO C. TEAL AT 1900 ON 8/31/2009 \*\*\*

"This notification is an update to a notification made on 1506 Hrs. EST on August 25, 2009 regarding the existence

JEK  
NRR

General Information or Other (PAR)

Event # 45296

of a defect. This notification is being provided in compliance with the requirements of Title 10 Code of Federal Regulations Part 21.21.

"In the initial notification, under the section titled 'Locations affected by the reported condition,' General Atomics Electronic Systems, Inc. (GA-ESI) provided a table (Table1) that listed sites and corresponding firmware sets having safety related RM-80 software that had been found to contain the reported firmware anomaly. GA-ESI has now identified one additional firmware set that should be included in Table 1. The site is Braidwood and the firmware set is bhr165/01.

"Accordingly, Table 1 has been revised to include this firmware set for the Braidwood site. The revised Table 1 is attached to this update notification.

"Also, please note that earlier today, August 31, 2009, GA-ESI emailed a notification letter to its customer contact at the Braidwood site.

"All other information remains the same as was initially reported on August 25, 2009"

Notified R3DO (Lipa). Also notified NRR and NRO via email.


\*\*\*\*\*

# FACSIMILE

August 31, 2009

TO: **NRC Operations Center**  
**U.S Nuclear Regulatory Commission**  
Washington, D. C. 20555  
Facsimile No.: (301) 816-5151  
Telephone No.: (301) 816-5100

From: General Atomics-Electronic System, Inc. (GA-ESI)



Contact Person: Keith E. Asmussen, Director  
Licensing, Safety and Nuclear Compliance  
General Atomics  
3550 General Atomics Court  
San Diego, CA 92121  
Ph. (858) 455-2823  
Fax (858) 455-2822

No. of Pages (including this one): 2

**Subject: Update to a Previous Report Made on August 25, 2009:**  
**"Reportable Occurrence under 10CFR21: Firmware Anomaly in**  
**GA-ESI's Model RM-80 Radiation Monitoring System"**

This notification is an update to a notification made at 1506 Hrs EST on August 25, 2009 regarding the existence of a defect. This notification is being provided in compliance with the requirements of Title 10 Code of Federal Regulations Part 21.21.

In the initial notification, under the section titled "Locations affected by the reported condition," General Atomics Electronic Systems, Inc. (GA-ESI) provided a table (Table 1) that listed sites and corresponding firmware sets having safety related RM-80 software that had been found to contain the reported firmware anomaly. GA-ESI has now identified one additional firmware set that should be included in Table 1. The site is Braidwood and the firmware set is bhr165 /01.

Accordingly, Table 1 has been revised to include this firmware set for the Braidwood site. The revised Table 1 is attached to this update notification.

Also, please note that earlier today, August 31, 2009, GA-ESI emailed a notification letter to its customer contact at the Braidwood site.

All other information remains the same as was initially reported on August 25, 2009.

**Table 1: List of Affected Safety Related RM-80 Firmware Versions (Revised 8/31/09)**

Site Name	Firmware Version/Revision <sup>1</sup>
Beaver Valley	dhr173 / 02
	erm179 / 03
	wrg185 / 03
Braidwood	bhr165 / 01
	wrg181 / 03
Byron	wrg181 / 03
Callaway	wrg194 / 07
IP2	wrg092 / 06
IP3	wrg189 / 03
Kori	hrg184 / 01
Limerick	ind149 / 02
	wrg194 / 07
Maanshan	mapg37 / 04
River Bend	liq119 / 01
	wrg125 / 03
Shearon Harris	gpi046 / 01
	ind149 / 02
	li1118 / 01
South Texas	er1209 / 01
St. Lucie	sid136 / 02
	slq16 / 08
	slpr26 / 08
	wrg194 / 07
Waterford	ind149 / 02
	walq14 / 02
	wapr24 / 10
Wolf Creek	wrg194 / 07
YGN	er1010 / 01
	er1021 / 03

<sup>1</sup> Revisions numbers less than that shown are also affected.