GE Energy

David H. Hinds
Manager, ESBWR

PO Box 780 M/C L60
Wilmington, NC 28402-0780
USA

T 910 675 6363
F 910 362 6363
david.hinds@ge.com

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Subject: **Response to Portion of NRC Request for Additional Information Letter No. 79 – Standby Liquid Control System – RAI Number 6.2-135**

Enclosure 1 contains GE's response to the subject NRC RAI transmitted via the Reference 1 letter.

If you have any questions about the information provided here, please let me know.

Sincerely,

Kathy Sedney for

David H. Hinds
Manager, ESBWR

D068

Reference:

1. MFN 06-393, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 79 Related to ESBWR Design Certification Application*, October 11, 2006

Enclosures:

1. MFN 06-433 – Response to Portion of NRC Request for Additional Information Letter No. 79 – Standby Liquid Control System – RAI Numbers 6.2-135

cc: AE Cubbage USNRC (with enclosures)
GB Stramback GE/San Jose (with enclosures)
eDRF 0060-1888

ENCLOSURE 1

MFN 06-433

Response to Portion of NRC Request for

Additional Information Letter No. 79

Related to ESBWR Design Certification Application

Standby Liquid Control System

RAI Number 6.2-135

NRC RAI 6.2-135

DCD Tier 2, Revision1, Section 6.2.4.3.1.1, "Influent Lines," discusses the Standby Liquid Control System Line. It seems to say that the outboard CIVs are a check valve in series with two parallel squib valves. However, Table 6.2-32 indicates that the only outboard CIV is a simple check valve. GDC 55 specifically prohibits the use of a simple check valve outside containment as a CIV.

Provide justification for this design or bring the design into compliance with GDC 55.

Response to RAI 6.2-135

The description of the Standby Liquid Control system compliance with GDC 55 is contained in Tier 2, Revision 1, Subsection 6.2.4.3.1.1 and Table 6.2-13, and is correct as written. Table 6.2-32 will be modified accordingly to add the two parallel squib valves in each influent line, as shown in the following markup.

Table 6.2-32

Containment Isolation Valve Information for the Standby Liquid Control System

Penetration Identification	C41-MPEN-001				C41-MPEN-002			
Valve No.	F005A	F004A	F003A	F003C	F005B	F004B	F003B	F003D
Applicable Basis	GDC 55	GDC 55	GDC 55	GDC 55	GDC 55	GDC 55	GDC 55	GDC 55
Tier 2 Figure	9.3-1	9.3-1	9.3-1	9.3-1	9.3-1	9.3-1	9.3-1	9.3-1
ESF	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fluid	Boron/ Water	Boron/ Water	Boron/ Water	Boron/ Water	Boron/ Water	Boron/ Water	Boron/ Water	Boron/ Water
Line Size	80 mm	80 mm	80 mm	80 mm	80 mm	80 mm	80 mm	80 mm
Type C Leakage Test	See Table 3.9-8	See Table 3.9-8	See Table 3.9-8	See Table 3.9-8	See Table 3.9-8	See Table 3.9-8	See Table 3.9-8	See Table 3.9-8
Pipe Length from Cont. to Outboard Isolation Valve	COL applicant to provide	COL applicant to provide	COL applicant to provide	COL applicant to provide	COL applicant to provide	COL applicant to provide	COL applicant to provide	COL applicant to provide
Leakage Through Packing(a)	N/A	(a1)	N/A	N/A	N/A	(a1)	N/A	N/A
Leakage Past Seat(b)	(b5)	(b5)	N/A	N/A	(b5)	(b5)	N/A	N/A
Location	Inboard	Outboard	Outboard	Outboard	Inboard	Outboard	Outboard	Outboard
Valve Type	Check	Check	Gate	Gate	Check	Check	Gate	Gate
Operator(c)	N/A	N/A	Squib	Squib	N/A	N/A	Squib	Squib
Normal Position	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Shutdown Position	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed

Table 6.2-32

Containment Isolation Valve Information for the Standby Liquid Control System

Penetration Identification	**C41-MPEN-001**				**C41-MPEN-002**			
Valve No.	F005A	F004A	F003A	F003C	F005B	F004B	F003B	F003D
Post-Acc Position	Operable	Operable	Open	Open	Operable	Operable	Open	Open
Power Fail Position	N/A	N/A	As is	As is	N/A	N/A	As is	As is
Cont. Iso. Signal(d)	Q	Q	N/A	N/A	Q	Q	N/A	N/A
Primary Actuation	Self	Self	Automatic	Automatic	Self	Self	Automatic	Automatic
Secondary Actuation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Closure Time (sec)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Power Source	N/A	N/A	Div I Div III DPS	Div II Div IV	N/A	N/A	Div I Div III DPS	Div II Div IV

Note: For explanation of codes, see legend on Table 6.2-15.