

GNRO-2008/00035

May 13, 2008

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Attention: Document Control Desk

Subject: Response to Request for Additional Information for Alternative No.
VRR-GGNS-2007-02 from ASME OM Code 5-Year Test Interval for
Main Steam Safety Relief Valves

Grand Gulf Nuclear Station, Unit 1
Docket No. 50-416
License No. NPF-29

- References:
1. Request for Alternative VRR-GGNS-2007-01 and VRR-GGNS-2007-02 Requests for Alternative from ASME OM Code 5-year Test Interval for Main Steam Safety Relief Valves, letter dated January 8, 2008, GNRO-2007/00076
 2. Grand Gulf Nuclear Station, Unit 1 – Request for Additional Information Regarding Request for Alternative No. VRR-GGNS-2007-02 From ASME OM Code 5-Year Test Interval for Main Steam Safety Relief Valves (Tac No. MD7758), letter dated March 14, 2008, GNRI-2008/00035

Dear Sir or Madam:

In Reference 1, Grand Gulf requested relief from American Society of Mechanical Engineers Operation and Maintenance Code (ASME OM Code), 2001 Edition through 2003 Appendix, "Code of Operation and Maintenance of Nuclear Power Plants," Subsection ISTC, Mandatory Appendix I. Relief Request No. VRR-GGNS-2007-02 requested to extend the 5-year test interval, on a one-time basis, for eleven Main Steam Safety Relief Valves (SRVs) for Grand Gulf Nuclear Station, Unit 1 (GGNS). In Reference 2, the NRC transmitted a Request for Additional Information to Grand Gulf concerning the requested relief. The responses to Reference 2 are provided in the enclosure to this letter. This letter was delayed from the original 30 days as allowed by the Grand Gulf NRC Project Manager. The responses in this letter are applicable to both Relief Requests VRR-GGNS-2007-01 and VRR-GGNS-2007-02 submitted in Reference 1.

Entergy requests approval of Relief Request VRR-GGNS-2007-02 by July 11, 2008 to enable startup of GGNS Unit 1 following RF-16 in Fall of 2008, and continued operation until the seventeenth refueling outage (RF-17) and the eighteenth refueling outage (RF-18). RF-17 is currently scheduled to begin in Spring of 2010 and RF-18 is scheduled to begin in Winter of 2012.

This letter contains no commitments.

Should you have any questions regarding this submittal, please contact Michael Larson at (601) 437-6685.

Sincerely,



Michael J. Larson
Acting Licensing Manager

MJL:mjl

Enclosure: Response to NRC Request for Additional Information –
VRR-GGNS-2007-02

cc:

NRC Senior Resident Inspector Grand Gulf Nuclear Station Port Gibson, MS 39150
U.S. Nuclear Regulatory Commission ATTN: Mr. Elmo E. Collins, Jr. (w/2) 611 Ryan Plaza Drive, Suite 400 Arlington, TX 76011-4005
U. S. Nuclear Regulatory Commission ATTN: Mr. Jack N. Donohew, Jr., NRR/APRO/ DORL (w/2) ATTN: ADDRESSEE ONLY ATTN: U. S. Postal Delivery Address Only Mail Stop OWFN/O-8G14 Washington, DC 20555-0001

Response to Request for Additional Information Relief Request VRR-GGNS-2007-02

The NRC transmitted a Request for Additional Information in a letter (Reference 2) dated March 14, 2008 to Grand Gulf concerning the requested relief. The response to the NRC requests shown below.

NRC Request #1

Verify that Valves 1B21-F041K, 1B21-F041F, 1B21-F051F, 1B21-F051B, 1B21-F041D, and 1B21-F047D were refurbished to a like-new condition prior to being placed in storage and later installed in October 2005. Verify that Valves 1B21-F047L, 1B21-F041G, 1B21-F047G, 1B21-F051C, and 1B21-F047C were refurbished to a like-new condition prior to being placed in storage and later installed in March 2007.

Response

The table below lists the refurbishment work orders and the installation work orders as verification that the Main Steam Safety Relief Valves (SRVs), were refurbished to a like-new condition prior to being placed in storage and later installed in the plant. During the time between refurbishment and installation, the valves were stored in metal storage containers in an indoor Class "C" storage area in accordance with ANSI N45.2.2-1972, Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants.

Valve Location	Serial Number	Date Refurbished	Refurbishment Work Order #	Storage Duration	Date installed	Installation Work Order
1B21F041K	160796	1/9/2004	50325284	21 months	10/3/2005	41320
1B21F041F	160836	1/9/2004	50325333	22 months	10/3/2005	50983208
1B21F051F	160831	1/9/2004	50325330	22 months	10/3/2005	50983208
1B21F051B	160844	1/9/2004	50325287	22 months	10/3/2005	50983208
1B21F041D	160838	1/9/2004	50325286	22 months	10/3/2005	50983208
1B21F047D	160808	1/9/2004	50325285	23 months	10/3/2005	50983208
1B21F047L	160825	1/25/2007	85663	2 months	3/21/2007	51034868
1B21F041G	160819	9/13/2005	44310	18 months	3/21/2007	51034868
1B21F047G	160804	9/15/2005	44320	18 months	3/21/2007	51034868
1B21F051C	160812	9/15/2005	44309	18 months	3/21/2007	51034868
1B21F047C	160803	9/20/2005	44306	18 months	3/21/2007	51034868

**Response to Request for Additional Information
Relief Request VRR-GGNS-2007-02**

NRC Request #2

Discuss if the controlled environment for the storage of Valves 1B21-F041K, 1B21-F041F, 1B21-F051F, 1B21-F051B, 1B21-F041D, 1B21-F047D, 1B21-F047L, 1B21-F041G, 1B21-F047G, 1B21-F051C, and 1B21-F047C was equipped to prevent condensation and corrosion.

Response

The valves in question are stored in an indoor Class C storage area in accordance with ANSI N45.2.2-1972, Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants. Class C storage areas are defined as follows:

“Level C items shall be stored indoors or equivalent with all the provisions and requirements set forth in Level B items except that heat and temperature control is not required. Level B items shall be stored within a fire resistant, tear resistant, weathertight, and well ventilated building or equivalent enclosures... This area shall be situated and constructed so that it will not be subject to flooding; the floor shall be paved or equal, and well drained... Items shall be placed on shoring to permit circulation...”

For the valves in question, each valve is stored in metal container. The seating surfaces between the metal container and the base of the container has a rubber gasket material, which seals the container, therefore while in storage the SRVs are protected from moisture. There has not been any indication of condensation or corrosion based on the current practice to store the valves in a Level C storage area coupled with sealing the valves in metal containers.

Response to Request for Additional Information Relief Request VRR-GGNS-2007-02

NRC Request #3

Provide test results for Dikkers Model G-471 SRVs that were maintained in a controlled environment similar to the GGNS controlled environment for an extended period of time and setpoint tested prior to actual installation. As an alternative, discuss why the as-found set-pressure test results for Dikkers Model G-471 SRVs provided in a letter dated September 28, 2007 (Agency wide ADAMS Accession No. ML072740030) are applicable to the GGNS SRVs.

Response

Grand Gulf is not aware of a situation in which a Grand Gulf SRV has been stored for an extended period, greater than two operation cycles, prior to being installed in the plant without the valve being inspected and recertified. The standard practice at Grand Gulf is to refurbish and certify valves no more than 30 months prior to installation in the plant. The table below shows the Grand Gulf actual test results for SRVs tested from RF11 (April 2001) through RF15 (February 2007). The table documents the time the valve was previously tested, date valve installed, and the as-found testing results. For 21 of the tests, the as-found pressure was found to be within 1% of the as-left set pressure. One valve in this group of 21, serial number 160837 testing during RF14 (September 2005), had 97 months between tests. This valve's as-found test result was within 1% of the valve's as-left set pressure. The test results, summarized in the table below, confirm that the storage of Dikkers Model G-471 SRVs for an extended period of time has minimal impact upon the ability of the SRVs to satisfy the ASME as-found acceptance criteria of plus or minus 3%, and thus does not reduce the level of quality or safety.

Outage / Work Order	Valve Location	Valve Serial Number	Date of Previous Test	Date Installed in Plant	Date of As Found Test	Time Between Test	Correlation Set Pressure	As Found Test Result	PSIG above or below set	% above of below set
RF15 / 51034868										
	1B21F047L	160823	2/27/2001	10/02/2002	3/25/2007	73 months	1199.91	1189	-10.91	-0.91%
	1B21F041G	160800	9/11/2002	10/02/2002	3/25/2007	54 months	1184.32	1204	19.68	1.66%
	1B21F047G	160826	2/27/2001	10/02/2002	3/25/2007	73 months	1199.44	1177	-22.44	-1.87%
	1B21F047C	160824	9/15/2005	10/03/2005	3/25/2007	18 months	1199.47	1209	9.53	0.80%
	1B21F041C	160795	9/14/2005	10/03/2005	3/25/2007	18 months	1184.3	1189	4.7	0.40%
	1B21F041A	160816	7/15/2002	3/15/2004	3/27/2007	56 months	1184.47	1183	-1.47	-0.12%
	1B21F051A	160809	7/15/2002	3/15/2004	3/27/2007	56 months	1210.56	1219	8.44	0.70%
RF14 / 50983208										
	1B21F041K	160801	3/14/2001	5/03/2001	9/25/2005	54 months	1183.96	1190	6.04	0.51%
	1B21F051K	160832	1/9/2004	3/15/2004	9/25/2005	20 months	1209.35	1208	-1.35	-0.11%
	1B21F041F	160822	4/18/2001	5/03/2001	9/25/2005	53 months	1183.98	1189	5.02	0.42%
	1B21F051F	160834	4/18/2001	5/03/2001	9/25/2005	53 months	1209.33	1215	5.67	0.47%
	1B21F041B	160835	4/18/2001	5/03/2001	9/25/2005	53 months	1183.92	1186	2.08	0.18%
	1B21F051B	160811	4/18/2001	5/03/2001	9/25/2005	53 months	1209.47	1223	13.53	1.12%

**Response to Request for Additional Information
Relief Request VRR-GGNS-2007-02**

Outage / Work Order	Valve Location	Valve Serial Number	Date of Previous Test	Date Installed in Plant	Date of As Found Test	Time Between Test	Correlation Set Pressure	As Found Test Result	PSIG above or below set	% above of below set
	1B21F041D	160837	8/4/1997	5/03/2001	9/25/2005	97 months	1184.14	1174	-10.14	-0.86%
	1B21F047D	160825	3/30/1999	5/03/2001	9/25/2005	78 months	1199.36	1157	-42.36	-3.53%
	1B21F051C	160830	9/18/2002	10/02/2002	9/25/2005	36 months	1209.35	1196	-13.35	-1.10%
RF13/ 50336965										
	1B21F041A	160815	12/12/1997	12/04/1999	3/3/2004	75 months	1184.63	1180	-4.63	-0.39%
	1B21F041E	160795	12/30/1997	12/04/1999	3/3/2004	75 months	1184.71	1165	-19.71	-1.66%
	1B21F047A	160804	5/6/1999	12/04/1999	3/3/2004	58 months	1199.97	1193	-6.97	-0.58%
	1B21F047H	160839	3/30/1999	12/04/1999	3/3/2004	60 months	1199.93	1183	-16.93	-1.41%
	1B21F051A	160829	1/6/1998	12/04/1999	3/3/2004	74 months	1210.12	1190	-20.12	-1.67%
	1B21F051D	160813	2/17/1999	12/04/1999	3/3/2004	61 months	1210.03	1183	-27.03	-2.23%
RF12/ MAI311478										
	1B21F041C	160802	12/3/1997	5/08/1998	9/22/2002	57 months	1184.69	1216	31.31	2.60%
	1B21F047C	160841	11/13/1997	5/08/1998	9/22/2002	58 months	1199.79	1209	9.21	0.40%
	1B21F051C	160814	11/21/1997	5/08/1998	9/22/2002	58 months	1210.03	1225	14.97	1.30%
	1B21F047L	160827	11/12/1997	5/08/1998	9/22/2002	58 months	1199.83	1193	-6.83	-0.50%
	1B21F047G	160824	12/18/1997	5/08/1998	9/22/2002	57 months	1199.89	1194	-5.89	-0.49%
	1B21F041G	160818	11/28/1997	5/08/1998	9/22/2002	58 months	1184.49	1174	-10.49	-0.89%
RF11/ MAI287068 *										
				*			Steam Set Pressure	As-found Result		
	1B21F047D	160840	5/1/1995	10/22/1996	4/30/2001	73 months	1180	1207	27	2.29%
	1B21F041D	160817	5/11/1995	10/22/1996	4/30/2001	73 months	1165	1172	7	0.60%
	1B21F041K	160800	5/18/1995	10/22/1996	4/30/2001	73 months	1165	1166	1	0.09%
	1B21F051K	160830	5/16/1995	10/22/1996	4/30/2001	73 months	1190	1202	12	1.00%
	1B21F041F	160821	5/5/1995	10/22/1996	4/30/2001	73 months	1165	1175	10	0.86%
	1B21F051F	160809	5/15/1995	10/22/1996	4/30/2001	73 months	1190	1200	10	0.84%
	1B21F041B	160816	5/17/1995	10/22/1996	4/30/2001	73 months	1165	1180	15	1.29%
	1B21F051B	160810	5/15/1995	10/22/1996	4/30/2001	73 months	1190	1209	19	1.60%

Note: RF11 valves were set and tested by the use of steam, not nitrogen * See PO #NHS00370 for pressure see results