



Omaha Public Power District
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

February 14, 2000
LIC-00-0011

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555

Reference: Docket No. 50-285

SUBJECT: Response to Request for Proposed Updates to the NRC Reactor Vessel Integrity Database (RVID)

At a January 6, 2000 meeting involving Omaha Public Power District (OPPD), ABB-Combustion Engineering, and the NRC Staff, OPPD committed to provide comments/proposed changes to the RVID for Fort Calhoun Station based on discrepancies identified during a recent review of the surveillance program portion of the RVID. Attachment 1 provides these proposed changes, while Attachment 2 provides a basis for the changes.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "S. K. Gambhir", with a long horizontal stroke extending to the right.

S. K. Gambhir
Division Manager
Nuclear Operations

Attachment

TCM/tcm

c: E. W. Merschoff, NRC Regional Administrator, Region IV
L. R. Wharton, NRC Project Manager
W. C. Walker, NRC Senior Resident Inspector
Winston & Strawn (w/o attachment)

A001

LIC-00-0011
Attachment 1

NRC – Reactor Vessel Integrity Database
Surveillance Data Summary
FORT CALHOUN STATION

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Docket No: 50-285
EOL Date: 06/09/2008
08/09/2013

Type/ Direction	Heat ID/ Capsule, Lead Factor	Neutron Fluence	Fluence Factor	Group CF	Used in CF Calcs	Predicted ΔRT_{ndt}	Measured ΔRT_{ndt}	Predicted- Measured ΔRT_{ndt}	Credible RG1.99 Scatter	σ of Pred- Meas ΔRT_{ndt}	Unit USE	Meas USE	%Drop in USE	%Drop in USE Line Offset	Cu%	Ni%	P%	S%
PLATE	A1768-1	0.45	0.78	71.5	YES	55.7	60.0	-4.3	YES	3.8	141.0	122.0	13.48	1.21154	0.100	0.480	0.043	0.014
LONGITUDINAL	W-225,1.5	0.553	0.83	72.0	YES	60.1	60.0	+0.1	YES	3.8	141.0	109.0	22.70	1.36675	0.100	0.480	0.043	0.014
PLATE	A1768-1	0.90	0.97	71.5	YES	69.4	74.0	-4.6	YES	3.8	141.0	109.0	22.70	1.36675	0.100	0.480	0.043	0.014
LONGITUDINAL	W-265,1.02	0.771	0.93	72.0	YES	66.7	70.0	-3.3	YES	3.8	120.0	93.0	22.50	1.36300	0.100	0.480	0.043	0.014
PLATE	A1768-1	0.90	0.97	71.5	YES	69.4	70.0	-0.6	YES	3.8	120.0	93.0	22.50	1.36300	0.100	0.480	0.043	0.014
TRANSVERSE	W-265,1.02	0.771	0.93	72.0	YES	66.7	70.0	-3.3	YES	3.8	120.0	93.0	22.50	1.36300	0.100	0.480	0.043	0.014
PLATE	A1768-1	1.28	1.07	71.5	YES	76.5	73.0	3.5	YES	3.8	141.0	109.0	22.70	1.33058	0.100	0.480	0.043	0.014
LONGITUDINAL	W-275			72.0	YES	76.9	72.0	+4.9	YES	3.8	120.0	88.0	26.67	1.40062	0.100	0.480	0.043	0.014
PLATE	A1768-1	1.28	1.07	71.5	YES	76.5	72.0	4.5	YES	3.8	120.0	88.0	26.67	1.40062	0.100	0.480	0.043	0.014
TRANSVERSE	W-275			72.0	YES	76.9	72.0	4.9	YES	3.8	120.0	88.0	26.67	1.40062	0.100	0.480	0.043	0.014
PLATE	CM	0.48	0.80	0	NO	0	124.0	0	(NO)		128.0	102.0	20.31	1.38176	0.180	0.660	0.008	0.008
LONGITUDINAL	W-225,1.5	0.553	0.83	138.3	YES	115.4	124.0	-8.6	YES		128.0	102.0	20.31	1.38176	0.174	0.665	0.012	0.018
PLATE	CM	1.28	1.07	0	NO	0	141.0	0	(NO)		128.0	90.0	29.69	1.44757	0.140	0.680	0.012	0.018
LONGITUDINAL	W-275			138.3	YES	147.8	141.0	+6.8	YES		128.0	90.0	29.69	1.44757	0.174	0.665	0.012	0.018
WELD	305414	0.42	0.76	236.5	YES	179.5	238.0	-58.5	NO	38.9	104.0	65.0	37.50	1.65963	0.300	0.600	0.042	0.011
N/A	W-225,1.5	0.553	0.83	229.0	YES	191.1	210.0	-18.9	YES		103.5	59.0	43.27	1.64658	0.350	0.600	0.013	0.011
WELD	305414	0.90	0.97	236.5	YES	229.4	221.0	8.4	YES	38.9	104.0	59.0	43.27	1.64658	0.300	0.600	0.042	0.011
N/A	W-265,1.02	0.771	0.93	229.0	YES	212.3	225.0	-12.7	YES		103.5	59.0	43.27	1.64658	0.350	0.600	0.013	0.011
WELD	305414	1.28	1.07	236.5	YES	252.9	219.0	33.9	NO	38.9	103.5	60.0	42.03	1.59919	0.350	0.600	0.042	0.011
N/A	W-275			229.0	YES	244.7	219.0	+25.7	YES		103.5	60.0	42.03	1.59919	0.350	0.600	0.042	0.011

RVID Changes Fort Calhoun Station Surveillance Data

The NRC-RVID Surveillance Data Summary sheet for Fort Calhoun Station has been updated. The source references for the changes are provided below. [Note: The computed FF and predicted shifts will change accordingly.]

Neutron Fluence-

Source: BAW-2226, 7/20/94, Capsule W-275 evaluation

W-225 0.553E19

W-265 0.771E19

W-275 1.28E19

Comment: Updated surveillance capsule fluence per latest capsule evaluation

Group CF (Chemistry Factor)-

Source: CEN-636, 11/99

Plate Material, CF=72.0°F

Correlation Monitor Material, CF=138.3°F

Weld Material, CF=229°F

Comment: Analysis of available data (W-225, W-265 and W-275)

Measured RT_{NDT} (Charpy T30) shift-

Source: EPRI RPVDATA, Version 1.4 (1/97)

Weld Metal

W-225 210°F shift

W-265 225°F shift

Comment: Shifts from curve fitting analysis for EPRI database consistent with shifts determined for use in NUREG/CR-6551 (E900 database).

Unit USE for Weld Material-

Source: BAW-2226, 7/20/94 (reference to baseline data)

USE_i=103.5°F

Comment: Revised to maintain consistent value (without some entries rounded)

Chemistry Values for Plate Material-

Source: BAW-2226, 7/20/94 (reference to original surveillance program documentation, TR-O-MCD-001, dated March 1977)

Cu=0.10 w/o

Ni=0.48 w/o

P=0.009 w/o

S=0.014 w/o

Comment: Value of P revised consistent with above reference.

Chemistry Values for Correlation Monitor Material-

Source: BAW-2226, 7/20/94 for phosphorus and sulfur content (reference to ORNL-4314); NUREG/CR-6551 (E900 database) for copper and nickel content

Cu=0.174 w/o

Ni=0.665 w/o

P=0.012 w/o

S=0.018 w/o

Comment: Single values of Cu, Ni, P and S must apply to both capsule data sets.

Chemistry Values for Weld Material-

Source: BAW-2226, 7/20/94 (reference to original surveillance program documentation, TR-O-MCD-001, dated March 1977)

Cu=0.35 w/o

Ni=0.60 w/o

P=0.013 w/o

S=0.011 w/o

Comments: Single value of Cu must apply to three capsule data sets. Value of P must be consistent with above reference.