The Light company
Houston Lighting & Power South Texas Project Electric Generating Station P. O. Box 289 Wadsworth, Texas 77483

May 19, 1997
ST-HL-AE-5628
File No.: G03.08
10CFR50.54(f)

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Updated Response to Generic Letter 92-01, Revision 1, Supplement 1,
"Reactor Vessel Structural Integrity"

Reference: Correspondence from J. F. Groth, Houston Lighting & Power, to the Nuclear Regulatory Commission Document Control Desk, dated August 16, 1995 (ST-HL-AE-5146)

Pursuant to 10CFR50.54(f), the South Texas Project submits this updated response to address remaining open items requested by NRC Generic Letter 92-01, Revision 1, Supplement 1. The attached response is for parts 2, 3, and 4 of the Generic Letter; the response for part 1 was provided previously in the referenced correspondence.

If there are any questions, please contact either Mr. P. L. Walker at (512) 972-1892 or me at (512) 972-8787.

T. H. Cloninger
Vice President,
Nuclear Engineering

PLW

Attachments: 1. Affidavit
2. Updated Response to Generic Letter 92-01, Revision 1, Supplement 1

A028

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U. S. Nuclear Regulatory Commission
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ATTACHMENT 1

AFFIDAVIT

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)		
	)		
Houston Lighting & Power	)	Docket Nos.	50-498
Company, et al.,	)		50-499
	)		
South Texas Project	)		
Units 1 and 2	)		

AFFIDAVIT

I, T. H. Cloninger, being duly sworn, hereby depose and say that I am Vice President, Nuclear Engineering, of Houston Lighting & Power Company; that I am duly authorized to sign and file with the Nuclear Regulatory Commission the attached response to Generic Letter 92-01, Revision 1, Supplement 1; that I am familiar with the content thereof; and that the matters set forth therein are true and correct to the best of my knowledge and belief.

T.H. Cloninger
Vice President,
Nuclear Engineering

STATE OF TEXAS)
)
COUNTY OF MATAGORDA)

Subscribed and sworn to before me, a Notary Public in and for the State of Texas, this 19th day of May, 1997.

LINDA RITTENBERRY
Notary Public, State of Texas
My Commission Expires 10/9/97

Linda Rittenberry
Notary Public in and for the
State of Texas

ATTACHMENT 2

UPDATED RESPONSE TO GENERIC LETTER 92-01,

REVISION 1, SUPPLEMENT 1

UPDATED RESPONSE TO GENERIC LETTER 92-01,

REVISION 1, SUPPLEMENT 1

The South Texas Project response to part 1 of Revision 1, Supplement 1 to Generic Letter 92-01 described acquisition of data relevant to determination of reactor pressure vessel integrity. The South Texas Project has gathered relevant data from available sources, including: Material Certification Reports; Surveillance Program Reports; Westinghouse Reactor Materials Database Project; Combustion Engineering Owners Group Reactor Vessel Working Group Program; EPRI's RMATCH Database; and, the NRC Reactor Vessel Integrity Database. This data has been evaluated for preparation of the following responses to parts 2, 3, and 4.

NRC Question 2

Provide an assessment of any change in best-estimate chemistry based on consideration of all relevant data.

Response

Review of available sources did not reveal any change in best-estimate chemistry. However, two cases were identified where beltline plate material heat numbers for other plants duplicate those of the South Texas Project.

One case involves a duplicate heat number used to fabricate beltline plate material for Surry Unit 1. Material certification records indicated that the same heat number, C4326, was used on two distinct heats at Lukens Steel in 1968 and 1974. The former heat applies to Surry Unit 1, while the latter heat applies to South Texas Project Unit 1. Since the two heats are distinct, this case presents no change in best-estimate chemistry previously reported for South Texas Project Unit 1.

The second case involves beltline plate material for Comanche Peak Unit 2 and South Texas Project Unit 1 fabricated under a common heat number, but separate lot numbers. Material certification records indicate that the variability in chemistry between the two lots, B9566-1 and B9566-2, does not result in a change in chemistry factor. Therefore, this case presents no change in previously reported best-estimate chemistry.

A review of best-estimate copper and nickel values in Combustion Engineering Owners Group Final Report CE NPSD-1039 (reference 1) shows a minor change in the reported best-estimate chemistry for reactor vessel weld materials in South Texas Project Units 1

and 2. However, this change does not impact the reactor pressure vessel integrity evaluation since the weld material is not the limiting material in either unit.

NRC Question 3

Provide a determination of the need for use of the ratio procedure in accordance with the established Position 2.1 of Regulatory Guide 1.99, Revision 2, for those licensees that use surveillance data to provide a basis for the RPV integrity evaluation.

Response

The South Texas Project Unit 1 and Unit 2 reactor pressure vessels were fabricated using weld material containing very low copper and nickel content, and the variation in copper and nickel content between the vessel weld and surveillance weld is not significant. However, the ratio procedure has been applied to the most recent surveillance capsule analysis performed under WCAP-14850 (reference 2) to account for any variation in chemistry, regardless of its magnitude.

NRC Question 4

Provide a written report of any newly acquired data as specified above and (1) the results of any necessary revision to the evaluation of RPV integrity in accordance with the requirements of 10CFR 50.60, 10 CFR 50.61, Appendices G and H to 10 CFR Part 50, and any potential impact on the LTOP or P-T limits in the technical specifications or (2) a certification that previously submitted evaluations remain valid. Revised evaluations and certifications should include consideration of Position 2.1 of Regulatory Guide 1.99, Revision 2, as applicable, and any new data.

Response

The limiting material in both South Texas Project units for determining reactor pressure vessel integrity is the beltline plate material. No new data have been acquired that would change beltline plate chemistry; consequently, the data (reference 3) and reactor pressure vessel integrity evaluation results previously reported (reference 4) remain applicable.

In addition, best estimate weld wire chemistry has been documented by the Combustion Engineering Owners Group in Final Report CE NPSD-1039 (reference 1). Table 1 is a table of chemical composition values based on these results. Since the best estimate weld wire chemistry for the vessel weld does not vary significantly from the surveillance weld, and the limiting material for determining reactor pressure vessel integrity is the beltline

plate material, the reactor pressure vessel integrity evaluation results previously reported (reference 4) remain applicable.

References:

1. CE NPSD-1039, Final Report, "Best Estimate Copper and Nickel Values in CE Fabricated Reactor Vessel Welds," Combustion Engineering Owners Group, December 1996

2. WCAP-14850, "South Texas Unit 1 Heatup and Cooldown Limit Curves for Normal Operation," April 1997

3. Correspondence from T. H. Cloninger, Houston Lighting & Power, to the NRC Document Control Desk, dated June 21, 1994 (ST-HL-AE-4819)

4. Correspondence from J. F. Groth, Houston Lighting & Power, to the NRC Document Control Desk, dated August 16, 1995 (ST-HL-AE-5146)

Table 1

Plant Name	Beltline Ident.	Heat No. Ident.	Chemistry Factor	Method of Determin. CF	%Cu	%Ni
South Texas 1	Axial welds	89476	23	Table	.02	.07
EOL: 8/20/2027	Circ. weld	89476	23	Table	.02	.07

References:

Chemical composition values for all weld materials are the best-estimate simple mean values from CE NPSD-1039.

Plant Name	Beltline Ident.	Heat No. Ident.	Chemistry Factor	Method of Determin. CF	%Cu	%Ni
South Texas 2	Axial welds	90209	36	Table	.04	.13
EOL: 12/15/2028	Circ. weld	90209	36	Table	.04	.13

References:

Chemical composition values for all weld materials are the best-estimate simple mean values from CE NPSD-1039.