

# The Light company

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October 30, 1985  
ST-HL-AE-1452  
File No.: G9.17

Mr. George W. Knighton, Chief  
Licensing Branch No. 3  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

South Texas Project  
Units 1 and 2  
Docket Nos. STN 50-498, STN 50-499  
Responses to DSER/FSAR Items;  
Post-irradiation Fuel Surveillance Program

Dear Mr. Knighton:

The attachments enclosed provide STP's response to Draft Safety Evaluation Report (DSER) or Final Safety Analysis Report (FSAR) items.

The item numbers listed below correspond to those assigned on STP's internal list of items for completion which includes open and confirmatory DSER items, STP FSAR open items and open NRC questions. This list was given to your Mr. N. Prasad Kadambi on October 8, 1985 by our Mr. M. E. Powell.

The attachment includes mark-ups of FSAR pages which will be incorporated in a future FSAR amendment unless otherwise noted below.

The items which are attached to this letter are:

<u>Attachment</u>	<u>Item No.*</u>	<u>Subject</u>
1	D 4.2-1	Post-irradiation fuel surveillance program; additional surveillance if unusual behavior is noted
	D 4.2-7	Include post-irradiation fuel surveillance program in the FSAR
	D 4.2-9	Address disposition of failed fuel in the post-irradiation fuel surveillance program

\*Legend

D - DSER Open Item  
F - FSAR Open Item

C - DSER Confirmatory Item  
Q - FSAR Question Response Item

LL/DSER/aae

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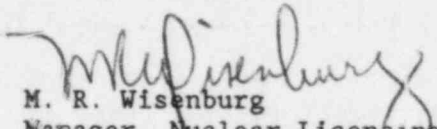
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Houston Lighting & Power Company

ST-HL-AE-1452  
File No.: G9.17  
Page 2

If you should have any questions concerning this matter, please contact Mr. Powell at (713) 993-1328.

Very truly yours,

  
M. R. Wisenburg  
Manager, Nuclear Licensing

JSP/b1

Attachments: See above

L1/DSER/aae

cc:

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Revised 9/25/85

- 4.2-1 A commitment in the post-irradiation fuel surveillance program to perform additional surveillance if unusual behavior is noted in the visual examination or if plant instrumentation indicates gross fuel failures (see Section 4.2.4.3 in this report).

RESPONSE: The STP surveillance program for the inspection of post irradiated fuel consists of a qualitative visual examinations of some of the discharged fuel assemblies during refueling. If unusual characteristics are identified additional inspection will be performed to determine if gross fuel failure has occurred, and if so address the disposition of those fuel assemblies.

4.2-7 A statement describing the post-irradiation surveillance program (see Section 4.2.4.3 on this report).

RESPONSE: The STP fuel, although longer than a standard fuel assembly is expected to exhibit similar performance characteristics during operation and should not merit any special surveillance program other than that currently performed at other operating plants.

HL&P's post irradiation surveillance program is described in FSAR Section 4.2.4.5

3. All rods are checked for integrity by the methods described in Sub-section 4.2 4.2.3.
4. To assure proper fitup with the fuel assembly, the rod cluster control, burnable poison and source assemblies are installed in the fuel assembly without restriction or binding in the dry condition. Also a straightness of 0.01 in/ft is required on the entire inserted length of each rod assembly.

The RCCAs are functionally tested, following core loading but prior to criticality to demonstrate reliable operation of the assemblies. Each assembly is operated (and tripped) one time at no flow/cold conditions and one time at full flow/hot conditions. In addition, selected assemblies are operated at no flow/operating temperature conditions and full flow/ambient conditions. Also the slowest rod and the fastest rod are tripped 10 times at no flow/ambient conditions and at full flow/operating temperature conditions. Thus each assembly is tested a minimum of 2 times or up to a maximum of 14 times to ensure the assemblies are properly functioning.

In order to demonstrate continuous free movement of the RCCAs and to ensure acceptable core power distributions during operations, partial movement checks are performed on every RCCA every two weeks during reactor critical operation. In addition, periodic drop tests of the RCCAs are performed at each refueling shutdown to demonstrate continued ability to meet trip time requirements, to ensure core subcriticality after reactor trip, and to limit potential reactivity insertions from a hypothetical RCCA ejection.

If a RCCA cannot be moved by its mechanism, adjustments in the boron concentration ensure that adequate shutdown margin would be achieved following a trip. Thus inability to move one RCCA can be tolerated. More than one inoperable RCCA could be tolerated, but would impose additional demands on the plant operator. Therefore, the number of inoperable RCCA has been limited to one.

4.2.4.4 Tests and Inspections by Others. If any tests and inspections are to be performed on behalf of Westinghouse, Westinghouse will review and approve the quality control procedures, inspection plans, etc., to be utilized to ensure that they are equivalent to the description provided above and are performed properly to meet all Westinghouse requirements.

4.2.4.5 In-Service Surveillance. Westinghouse is conducting a program to examine detailed aspects of the 17 x 17 fuel assembly. This program is described in Section 23 of Ref. 4.2-8. Ref. 4.2-1 is periodically updated in order to provide recent results of operating experience with Westinghouse fuel and incore control components.

The STP surveillance program for the inspection of post irradiated fuel consists of a qualitative visual examinations of some of the discharged fuel assemblies during refueling. If unusual characteristics are identified additional inspection will be performed to determine if gross fuel failure has occurred, and if so address the disposition of those fuel assemblies.



4.2-9 A statement in the post-irradiation fuel surveillance program that addresses the disposition of failed fuel (see Section 4.2.4.3 in this report).

RESPONSE: The STP surveillance program for the inspection of post irradiated fuel consists of a qualitative visual examinations of some of the discharged fuel assemblies during refueling. If unusual characteristics are identified additional inspection will be performed to determine if gross fuel failure has occurred, and if so address the disposition of those fuel assemblies. "