

# The Light company

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October 31, 1985  
ST-HL-AE-1491  
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 on Chapter 10

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 attachments include 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 10.3-1 Q282.001N-1	Secondary Water Chemistry

\* Legend

D - DSER Open Item  
F - FSAR Open Item

C - DSER Confirmatory Item  
Q - FSAR Question Response Item

L1/DSER/a3

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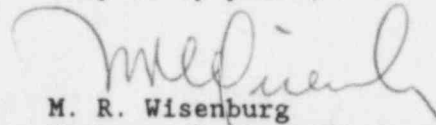
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Houston Lighting & Power Company

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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

REP/b1

Attachments: See above

L1/DSER/a3

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Revised 9/25/85

Question 282.01N

Provide a summary of operative instructions to be used for the steam generator secondary water chemistry control and monitoring program, addressing the following:

1. Sampling frequency for the critical chemical and other parameters and of control points or limits for these parameters for each mode of operation: normal operation, hot startup, cold startup, hot shutdown, cold wet layup;
2. Procedures used to measure the values of the critical parameters;
3. Location of process sampling points;
4. Instructions for the recording and management of data;
5. The program element defining corrective actions for off-control point chemistry conditions detailing time allowed at off-chemistry conditions.

Branch Technical Position MTEB 5-3 describes an acceptable means for monitoring secondary side water chemistry in PWR steam generators, including corrective actions for off-control point chemistry conditions. However, the staff is amenable to alternatives, particularly to Branch Technical Position B.3.b(9) of MTEB 5-3 (96-hour time limit to repair or plug confirmed condenser tube leaks).

6. The program element identifying (a) the authority responsible for the interpretation of the data and (b) the sequence and timing of administrative events required to initiate corrective action.

Response

The Secondary Water Chemistry Program for South Texas Project Electric Generating Station provides for effective, long-term, reliable operation of the steam generators and secondary side components.

System corrosion will be controlled by feeding all-volatile chemicals to the secondary systems for minimizing dissolved oxygen and maintaining an alkaline pH in the feedwater to each steam generator. All-volatile treatment will also be used for wet layup of secondary systems during periods of unit shutdown.

Impurity ingress into the secondary systems will be controlled by the condensate polishing system, the steam generator blowdown system, and the deaerator.

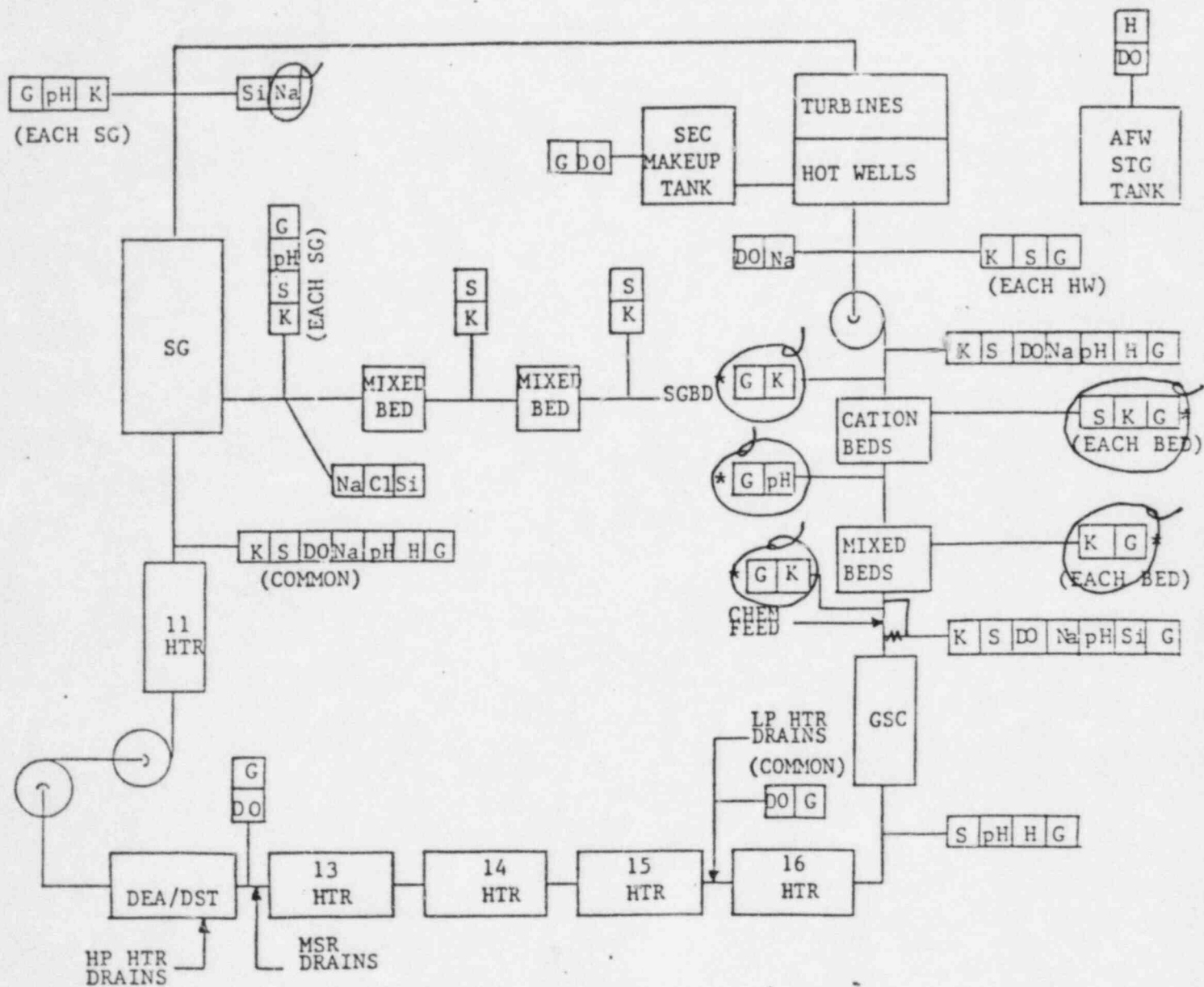
A sampling and analysis program will be maintained for monitoring the blowdown from each steam generator. Concentration levels for each parameter

have been established with specific operational action required in the event that a concentration level is exceeded.

1. The sampling frequency and action level requirements will be included in plant procedures. These frequencies and action level requirements will be developed in accordance with vendor recommendations and EPRI NP-2704 "PWR Secondary Water Chemistry Guidelines".
2. Laboratory analyses will be performed using procedures based upon ASTM or Standard Methods for Analysis of Water and Wastewater or by methods demonstrated to be equivalent or better than those listed above.
3. The location of the secondary sampling points are shown in Figure 1.
4. Analytical results are recorded on the appropriate Worksheet, Log Sheet, Data Sheet, or other approved form. Key plant chemistry data is transferred to daily chemistry reports as well as plotted graphically to show abnormal trends of parameters.
5. Plant Chemistry Specifications define corrective action for off-control chemistry conditions and detail the time allowed at off-chemistry conditions. These specifications are based upon vendor recommendations and EPRI NP-2704 "PWR Secondary Water Chemistry Guidelines".
- 6a.) Plant Chemistry Specifications identify the Chemical Operations and Analysis Superintendent as the authority responsible for interpreting chemistry data.
- b.) When an analysis indicates that a chemical parameter is not within specified limits, appropriate actions are taken as soon as possible. If the sample was taken to satisfy a technical specification surveillance requirement, then the applicable surveillance procedure is consulted to determine the corrective action required. If the sample was not taken to satisfy a technical specification surveillance requirement, then Plant Chemistry Specifications are consulted to determine the corrective action required.

FIGURE 1

SECONDARY PROCESS INSTRUMENTATION DIAGRAM



LEGEND

K - CATION CONDUCTIVITY  
S - SPECIFIC CONDUCTIVITY  
DO - DISSOLVED OXYGEN  
Na - SODIUM  
pH - pH

Si - SILICA  
H - HYDRAZINE  
CL - CHLORIDE  
G - GRAB SAMPLE  
\* - CPD SAMPLE SYSTEM