

The Light company

Houston Lighting & Power

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December 20, 1990

ST-HL-AE-3640

File No.: G10

10CFR50.71

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

South Texas Project Electric Generating Station
Units 1 and 2


Docket Nos. STN 50-498, STN 50-499
Updated Final Safety Analysis Report

Reference 1: STPEGS Annual 10CFR50.59 Summary Report
(letter dated December 12, 1990,
ST-HL-AE-3611)

Pursuant to 10CFR50.71, Houston Lighting & Power (HL&P) is submitting Revision 1 to STPEGS Updated Final Safety Analysis Report (UFSAR). In accordance with 10CFR50.71(e), the UFSAR is up-to-date within six months of this submittal. The changes enclosed have been reported to the NRC in Reference 1 according to the requirements of 10CFR50.59, except as noted in Attachment 2. Figures which have been revised since the last UFSAR update are also included.

Changes are summarized in Attachment 1. A cross-reference between Unreviewed Safety Question Evaluations (USQE) and Change Notices (CN), where applicable, is provided in Attachment 2. Eleven copies of the STPEGS UFSAR Revision 1 are provided under separate cover in accordance with the distribution requirements of 10CFR50.4(b)(6). A copy of this transmittal is attached to each UFSAR copy.

If you should have any questions on this matter, please contact Mr. A. W. Harrison at (512) 972-7298 or myself at (512) 972-8434.



D. P. Hall
Group Vice President,
Nuclear

AMR/sgs

Attachment 1: UFSAR Changes Since Revision 0
Attachment 2: USQE and CN Cross-Reference
Attachment 3: List of revised UFSAR pages

A Subsidiary of Houston Industries Incorporated

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NOTE: This correspondence distributed without the UFSAR set, except
as noted by the asterisk (*).

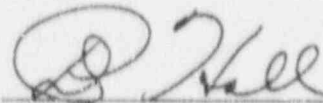
Revised 10/08/90

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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

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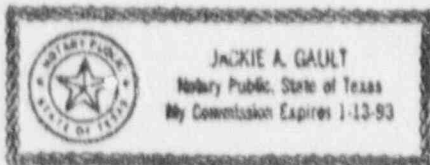
D. P. Hall being duly sworn, hereby deposes and says that he is Group Vice President, Nuclear of Houston Lighting & Power Company; that he is duly authorized to sign and file with the Nuclear Regulatory Commission the attached revision to the Updated Final Safety Analysis Report; is familiar with the content thereof; and that the matters set forth therein are true and correct to the best of his knowledge and belief.



D. P. Hall
Group Vice President,
Nuclear

STATE OF TEXAS)
)
)

Subscribed and sworn to before me, a Notary Public in and for The State of Texas this 20TH day of DECEMBER, 1990.



Jackie A. Gault

Notary Public in and for the
State of Texas

ATTACHMENT 1

UFSAR CHANGES SINCE REVISION 0

UFSAR CHANGES SINCE REVISION 0

Chapter 2 "Site Characteristics"

- 1) Added upper shallow aquifer monitoring piezometer #274C which replaced decommissioned piezometer #262C. (CN-1433)
- 2) Added a note to Figure 2.5.6-3 stating that reference to toe ditch elevations are original toe ditch invert elevations; actual elevations may be above original due to partial filling of ditches to prevent excess seepage. (CN-1656)
- 3) Updated data from annual Geotechnical Monitoring Program and reinserted Figure 2.4.8-4 which was inadvertently deleted. (CN-1662)

Chapter 3 "Design of Structures, Components, Equipment and Systems"

- 1) Changed the "Regulatory Guide Matrix," Table 3.12-1:
 - a) Revised the commitment of Regulatory Guide 1.35 Revision 2 to proposed Revision 3 for In-Service Surveillance of Tendons. (CN-1397)
 - b) Withdrew commitment to Regulatory Guide 1.74. This Regulatory Guide has been withdrawn by the NRC. (CN-1618)
 - c) Changed Note 26 to specify the edition of IEEE 450 used to conform with Regulatory Guide 1.129. (CN-1641)
- 2) Made changes to Section 3.10N, "Seismic Qualification of Seismic Category 1 Equipment." (CN-1623)
- 3) Changed peak equipment qualification temperatures and pressures for the Main Steam Line Break accident. (CN-1680)

Chapter 4 "Reactor"

- 1) Changed Section 4.4.4.3.2 to conform with Reanalysis of the Non-OTDT Transients using a Skewed-to-the-Top axial power shape. (CN-1592)
- 2) Increased the peak linear heat rate assumed in the accident analysis. (CN-1596)
- 3) Repositioned accelerometers in the reactor vessel and steam generators. (CN-1557)
- 4) Updated to include Anti Snag Grid Design for fuel. (CN-1531)

Chapter 5 "Reactor Coolant Sys. Connected Systems"

- 1) Removed a statement implying that stud holes are never exposed to borated water, and replaced it with a statement that adequate measures are taken to prevent corrosion and contamination of stud holes and bolts. (CN-1613)
- 2) Clarified language regarding heat input controls for welding austenitic stainless steel. (CN-1650)

Chapter 6 "Engineered Safety Features"

- 1) Changed the wording concerning accumulator check valves in order to be in agreement with the Technical Specifications. (CN-1426)
- 2) Updated to reflect current results of the Post-LOCA Hydrogen Generation Analysis. (CN-1625)
- 3) Changed Time-Zero Mass Energy release data for all Main Steam Line Break accidents. (CN-1587)

Chapter 7 "Instrumentation and Controls"

- 1) Changed Table 7.5-1, "Post-Accident Monitoring Instrumentation":
 - a) Changed units of ECCS Accumulator Tank Level from per cent to gallons. (CN-1407)
 - b) Deleted setpoint for Reactor Containment Fan Cooler differential pressure alarm. (CN-1407)
 - c) Revised notes to accommodate variance in radiation detector ranges. (CN-1603)
- 2) Showed addition of door between Technical Support Center Operations Room and corridor. (CN-1571)
- 3) Increased the peak linear heat rate assumed in the accident analysis. (CN-1596)
- 4) Corrected Engineered Safety Feature (ESF) actuation logic for Control Room and Fuel Handling Building (FHB) HVAC and Containment Ventilation Isolation. (CN-1647)

- 5) Specified use of scintillation-type analyzer to perform I-131 equivalent analyses for site environmental radioactivity level. Also corrected typo on page 7.5-17. (CN-1609)
- 6) Changed the symbol on Figure 7.2-10 for a permissive status indication previously shown as an alarm. This change is for Unit 1 only. (CN-1614)

Chapter 8 "Electric Power"

- 1) Specified exception to compliance with Regulatory Guide 1.129 with regard to updated revision of IEEE 450. (CN-1641)
- 2) Revised description of the alarm conditions for the Class 1E battery chargers. (CN-1552)
- 3) Revised electrical ratings for main transformers due to installation of replacement transformer. (CN-1599)
- 4) Corrected equipment electrical loading and revised electrical load totals in Table 8.3-3. (CN-1604)
- 5) Added two circuits for Welding Receptacles 9E591ERP5300 and 9E591ERP5301. (CN-1579)

Chapter 9 "Auxiliary Systems"

- 1) Provided alternate head ends and vitalized power for security communications as required by 10CFR73.55. (CN-1384)
- 2) Allowed contents of the Condensate Polishing Area Sump to be transferred to either Low Total Dissolved Solids (LTDS) tank instead of the Cation LTDS. (CN-1620)
- 3) Allowed Essential Cooling Water Intake Structure (ECWIS) and Auxiliary Feedwater (AFW) fans to be placed in pull-to-lock when outside air temperature $\leq 34^{\circ}\text{F}$ during normal operating conditions. Also allowed Main Steam Isolation Valve (MSIV) cubicle vent fans to be placed in pull-to-lock if the unit is not at power and the outside air temperature $\leq 34^{\circ}\text{F}$. (CN-1642)
- 4) Deleted mandatory requirement to pull vacuum on reactor vessel head during lift, transport and storage in rapid refueling. Added step for pulling vacuum, if needed, based on radiation survey. (CN-1646)
- 5) Changed Electrical Auxiliary Building (EAB) Air Handling Units filter efficiencies to 80% (pre-filter) and 90% (high efficiency filter). (CN-1677)

- 6) Removed phrase implying the use of chlorine gas in the chlorination facility because chlorine gas is no longer used at this facility. (CN-1659)
- 7) Added valves for Mechanical Auxiliary Building (MAB) Main Supply Air Flow and Heater Capacity for Unit 2 to Table 9.4-2.3. (CN-1627)
- 8) Clarified piping requirements for intercooler cooling water piping for Unit 1. (CN-1456)
- 9) Changed Fire Brigade composition to allow other qualified individuals to be fire brigade members. (CN-1652)
- 10) Revised description of operation of the circulating lube oil pump and heater for Unit 2. (CN-1595)
- 11) Clarified when the FHB Exhaust Air flow rate Hi/Lo Alarm is effective. (CN-1522)

Chapter 10 "Steam and Power Conversion Systems"

- 1) Added a capacity of 50% for condensate pumps. (CN-1611)
- 2) Deleted reference to Hotwell Sump Pump, as it is not needed in the UFSAR. (CN-1631)

Chapter 11 "Radioactive Waste Management"

- 1) Changed note in Table 11.5-1 to accommodate variance in radiation detector ranges. (CN-1603)
- 2) Changed range or setpoint of PT-4650, PI-4650 and PSL-4650 for Recycle Holdup Tank Venting and setpoint of PSH-4651 for Bellows Compression Leak Detection. (CN-1632)
- 3) Revised statements concerning expended filter cartridge transfers and handling in order to incorporate use of ALARA techniques. (CN-1639)
- 4) Corrected ESF actuation logic for Control Room and FHB HVAC and Containment Ventilation Isolation. (CN-1647)
- 5) Deleted Radiation Monitoring Alarm Windows in main control room annunciator. (CN-1600)
- 6) Removed flow instrumentation at inlet headers to the water removal skid. (CN-1355)

Chapter 12 "Radiation Protection"

- 1) Added note to Tables 12.3.4-1 and 12.3.4-2 to accommodate variance in radiation detector ranges. (CN-1603)

Chapter 13 "Conduct of Operations"

- 1) Changed Fire Brigade composition to allow other qualified individuals to be fire brigade members. (CN-1652)
- 2) Updated to reflect changes in STPEGS organization. (CN-1696)

Chapter 15 "Accident Analysis"

- 1) Deleted the flow path through valve CV-0215. (CN-1532)
- 2) Rewrote Section 15.6.3, "Steam Generator Tube Rupture," accident analysis to accommodate revised methodology and dose results. (CN-1628)
- 3) Eliminated Negative Flux Rate Trip from Dropped Rod Accident Analysis methodology. (CN-1651)
- 4) Specified valves to be closed during refueling to prevent boron dilution. (CN-1654)
- 5) Identified Peak Cladding Temperature penalties for large and small break LOCAs. (CN-1673)

Chapter 16 "Technical Specifications"

- 1) Referenced Feedwater Isolation Valves to revised Technical Specification 3/4.7.17. (CN-1687)

Chapter 17 "Quality Assurance"

- 1) Eliminated Ch. 17.2 from UFSAR by replacing it with reference to STPEGS Operations Quality Assurance Plan (OQAP). (CN 1637, 1675)

ATTACHMENT 2

USOE AND CM CROSS-REFERENCE

USQE AND CN CROSS-REFERENCE

<u>CN #</u>	<u>USQE #</u>
1355	88-0126 *
1384	88-0087 *
1397	N/A **
1407	89-0160 ***
1426	87-0061 *
1433	88-0162 ***
1456	89-0026 ***
1522	89-0064 ***
1531	89-0074 ***
1532	89-0113 ***
1552	89-0229
1557	89-0109 ***, 89-0129 ***
1571	89-0101 ***
1579	89-0127 ***
1587	90-0037
1592	89-0161
1595	89-0231
1596	89-0185
1599	89-0195
1600	89-0203
1603	89-0239
1604	89-0214
1609	89-0243
1611	N/A **
1613	90-0007
1614	89-0238
1618	90-0040
1620	89-0247
1623	89-0255

* Submitted in Annual 10CFR50.59 Summary letter dated 10/21/88, ST-HL-AE-2809.

** This change notice did not require a USQE.

*** Submitted in Annual 10CFR50.59 Summary letter dated 10/26/89, ST-HL-AE-3260.

USQE AND CN CROSS-REFERENCE

<u>CN #</u>	<u>USQE #</u>
1625	89-0264
1627	89-0232
1528	90-0160
1631	90-0048
1632	89-0032 ***
1637	90-0019
1639	90-0027
1641	N/A **
1642	90-0042
1646	90-0041
1647	87-0076 *
1650	N/A **
1651	90-0064
1652	87-0075 *
1654	90-0072
1656	90-0082
1659	90-0117
1662	90-0130
1673	90-0152
1675	90-0167 *****
1677	90-0171
1680	90-0180
1687	N/A **
1696	N/A **

* Submitted in Annual 10CFR50.59 Summary letter dated 10/21/88, ST-HL-AE-2809.

** This change notice did not require a USQE.

*** Submitted in Annual 10CFR50.59 Summary letter dated 10/26/89, ST-HL-AE-3260.

**** This USQE will be submitted in the next Annual 10CFR50.59 Summary letter.