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June 28, 1985
ST-HL-AE-1274
File No: G3.8

Mr. Hugh L. Thompson, Jr., Director
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

South Texas Project
Units 1 & 2
Docket Nos. STN 50-498, STN 50-499
Response to NRC Generic Letter 83-28,
"Required Actions Based on Generic Implications
of Salem ATWS Events"

Dear Mr. Thompson:

The attached report is in response to Generic Letter 83-28 which requested that Houston Lighting & Power Company (HL&P) provide information regarding the generic implications of the Salem ATWS events. An interim response was submitted to your office by letter dated February 26, 1985. This report provides additional and updated information. New and revised sections are indicated by change bars.

HL&P received a Request for Additional Information (RAI) from the NRC staff dated May 30, 1985, part of which concerned Generic Letter 83-28. Sections 4.1, 4.2.1, and 4.2.2 of the attached report address the topics discussed in attachment 2 of the RAI. This submittal also closes action item #15 from the NRC ICSB review meeting documented by letter to the NRC dated May 13, 1985 (ST-HL-AE-1239).

Plant specific information regarding the automatic shunt trip modification is not included with the report. This information will be submitted no later than October 1, 1985.

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If you have any questions, please contact Mr. Mark A. McBurnett at 512-972-8530.

Very truly yours,

J. H. Goldberg
Group Vice President, Nuclear

PLW/bjf

Attachment: Response to Generic Letter 83-28

S8/NRC2/f

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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

AFFIDAVIT

J. H. Goldberg 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 response to NRC Generic Letter 83-28; 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.

J. H. Goldberg
Group Vice President, Nuclear

STATE OF TEXAS §
§
COUNTY OF HARRIS §

Subscribed and sworn to before me, a Notary Public in and for Harris County, Texas this 28th day of June, 1985.

Angelina K. Self
Notary Public in and for the
State of Texas

My commission expires:
2/17/89

S8/NRC2/f

SOUTH TEXAS PROJECT
UNITS 1 & 2
Dockets Nos. STN 50-498, STN 50-499
Response to Generic Letter 83-28

1.1 Post-Trip Review (Program Description and Procedures)

The following is a description of the program STPEGS will use to determine the cause of unscheduled reactor trips, determine the proper functioning of safety-related equipment, and to determine that the unit may be started up safely.

1.1.1 Unscheduled reactor trips will be placed in one of three categories.

Category 1 - The cause of the trip has been identified. Safety-related equipment functioned properly.

Category 2 - The cause of the trip has been identified. Some safety-related equipment may not have functioned properly. The malfunctioning safety related equipment must be corrected to comply with Technical Specification requirements prior to startup.

Category 3 - The cause of the reactor trip is unknown or safety-related equipment did not function properly and the malfunction has not been corrected.

1.1.2 The responsibilities and authorities of personnel who will perform the review and analysis for post trip reviews are as follows:

A. The Shift Technical Advisor (STA)

1. Obtains information necessary to perform the review

2. Reviews the information to

a. Determine the cause of the trip

b. Evaluate plant response, especially safety system response

c. Determine the category of the trip

3. Provides the results of the review to the Shift Supervisor for review and approval.

B. The Shift Supervisor (SS)

1. Reviews the results of the trip review performed by the STA

2. Authorizes startup for Category 1 trips

3. Informs plant management about the status of the unit

4. Initiates any corrective actions deemed necessary to startup

5. Recommends to the Plant Manager when the unit can be started up following Category 2 trips.

C. The Plant Operations Review Committee (PORC)

1. Reviews all unscheduled reactor trips

a. Reviews of Category 1 and 2 trips are not required prior to startup, but may be performed at regularly scheduled meetings

b. Reviews of Category 3 trips shall be conducted prior to startup

2. Recommends to the Plant Manager when the unit can be started up following Category 3 trips

3. Recommends to the Plant Manager any corrective actions identified during the review of the plant trip.

D. The Plant Manager

1. Authorizes startup following a Category 2 trip based on the recommendations of the Shift Supervisor

2. Authorizes startup following a Category 3 trip after considering the recommendation of the PORC

3. Initiates any corrective actions identified during review of the trip.

1.1.3 Qualifications and Training for personnel identified in 1.1.2 above are described in Sections 13.1 and 13.2 of the FSAR. FSAR Sections 13.1 and 13.2 reference RG 1.8, Revision 1-R, "Personnel Selection and Training". An update to section 13.2 is in progress, and an advance copy of this update was submitted to G.W. Knighton by letter dated April 17, 1985 (ST-HL-AE-1230).

1.1.4 For the post trip review, information will be collected to determine the pre-trip status of the plant, the cause of the trip and the plant response to the trip. This information will normally consist of the following:

a. Control room operator logs and Shift Supervisor logs

b. Computer sequence of events and pre-trip and post-trip printouts

c. Plant recorder charts as available

d. Interviews with operators and other plant personnel involved with the trip.

For additional information, refer to the response to Action 1.2.

1.1.5 During the trip review, the trip information shall be analyzed for protection system response and overall plant response. Comparisons will be made as necessary with expected plant response as described in the FSAR, Technical Specifications, etc. or plant response observed in previous reactor trips.

1.1.6 Trip review reports shall be reviewed by the PORC. Trip review reports for Category 3 trips shall be reviewed by PORC prior to startup of the unit.

Trip review reports and supporting documentation shall be retained as Quality Assurance Records.

1.1.7 Instructions on performing reactor trip reviews will be contained in a plant procedure. This procedure will contain the following:

a. Instructions on what information to obtain and how to obtain it (This will include those items identified in 1.1.4 above)

b. Instructions on determining the category of a trip and who has the authority to approve a startup

c. Forms to summarize required information

d. Checklists to guide the reviewer on items to be considered in the review

e. Instructions to transmit the trip review report and supporting documentation to PORC for review.

This procedure shall be approved prior to fuel load.

1.2 Post-Trip Review - Data and Information Capability

Equipment supplied to the South Texas Project has the capability to record, recall, and display data and information to permit diagnoses of the causes of unscheduled reactor shutdowns prior to restart and for ascertaining the proper functioning of safety-related equipment. This capability is provided by the following systems:

1. Proteus Computer System

2. Emergency Response Facilities Data Acquisition and Display System (ERFDADS)

The Proteus Computer System is designed to provide supervision of the Reactor Control and Protection Systems, the NSSS process systems, and the plant secondary systems, with online data acquisition, alarming, logging, and data reduction.

The ERFDADS provides continuous monitoring of NSSS process systems and safety-related support systems and provides the data acquisition and display required by NUREG-0696. The system performs online data acquisition, alarming, logging, data reduction, and archival data storage.

1.2.1 Capability for Assessing Sequence of Events (on-off indications)

1.2.1.1 Equipment

The Proteus Computer System provides Sequence of Events (SOE) recording capabilities to monitor the detailed status of selected key paramenters. The Proteus Computer System is a Westinghouse multi-CPU P-2500 system with capability provided for monitoring 350 SOE inputs. All SOE points are digital contact inputs which initiate a computer system interrupt on the occurrence of a change of state. The multi-CPU configuration assures a high system reliability via auto-switchover techniques to backup failed components. The system is provided with a dedicated SOE typer within the control room for output of the SOE information. Additional typers in the control room may be used for output should the dedicated typer be unavailable.

1.2.1.2 Parameters Monitored

The parameters which require SOE monitoring are established by the following selection criteria:

1. All equipment which directly supports plant operation and whose tripping would have a high probability of causing either a reactor trip, turbine trip, or generator trip

2. Parameters which will cause or may lead to the tripping of equipment defined by Criterion 1

3. Parameters which will initiate actuation of the Reactor Protection System

4. Parameters which will initiate turbine or generator trips

5. All manual actuations of RPS, turbine trip, and reactor trip

6. All auxiliary bus distribution breakers which feed equipment defined by Criterion 1:

1.2.1.3 Time Discrimination Between Events

The system has a time discrimination between events of 4 milliseconds. Events which occur within less than 4 milliseconds are detected and recorded, but time tag resolution is to the nearest 4 milliseconds following time of initial event.

1.2.1.4 Display Format

The Proteus system collects the SOE interrupts in groups of 40. Upon initiation of the first event, the system logs the next 40 events and/or monitors the SOE points for 60 seconds. After 40 events are logged or 60 seconds has passed, the system prints an SOE log on the control room typer. The system resets after 40 events or 60 seconds until triggered again by a new SOE interrupt.

The SOE log printout is a complete history of the SOE interrupt. It contains the time and date of the initial sequence, the time of each subsequent event, the point identification of each SOE detected, the status of the point and the description of the point. The log is printed in chronological order starting with the initial interrupt.

1.2.1.5 Data and Information Retention

The SOE log buffer is cleared and reset after printout. SOE data is maintained only for the period required for collection and printout. The hardcopy printouts of the SOE logs are retained as required by the post-trip review procedure.

1.2.1.6 Power Source

The Proteus Computer System has a non-Class 1E uninterruptible power supply that provides power for 10 minutes following loss of offsite power.

1.2.2 Capability for Assessing the Time History of Analog Variables

The capability for determining the cause of an unscheduled shutdown and the proper functioning of safety-related equipment is provided by a combination of the Proteus Computer System and the ERFDADS.

1.2.2.1 Equipment

Both the Proteus and ERFDADS computer systems are configured using multiple interconnected processing units which provide highly reliable monitoring and logging capabilities. The Proteus system is a Westinghouse multi-CPU P-2500 system with various time history logging capabilities. The ERFDADS is a multiple Modcomp Classic II/75 based system with long term data storage and logging capabilities. Both systems have the ability to scan and process plant analog input signals at rates commensurate with the time resolution of the inputs.

A Pre-trip/Post-trip Log capability is provided in both the Proteus and ERFDADS. In addition, a Transient Log is provided within the ERFDADS which enhances the plant trip and safety system performance assessment capabilities.

The Pre-trip/Post-trip Logs monitor the values of key analog inputs. Individual ten second averages of each input selected are stored by the systems in a ten minute circular buffer. The newest ten second values are continuously added to the buffer with the oldest values being pushed out (older than 10 minutes). Upon detection of a triggering event, the contents of the buffer are frozen and a new buffer is created. The new buffer will contain the ten second values for each input for the 10 minute period after a triggering event. The triggering events are Reactor Trip, Turbine Trip, and Generator Trip for Proteus and Reactor Trip and Turbine Trip for ERFDADS.

The Transient Log in ERFDADS provides a combination analog history and sequence of events data log for additional key plant parameters not included in the logs described above. The Transient Log monitors selected analog and digital inputs on a half-second scan frequency. The value of each analog point is recorded twice a second for the 10 minute period after a triggering event. Digital input status is recorded at each change of state. The status change is time tagged to within a half second of actual occurrence.

The Pre-trip/Post-trip and Transient Logs are printed out on the control room typer automatically or on demand. The Pre-trip log information can be printed at any time without affecting the Pre-trip storage buffers. After initiation of the Post-trip data collection, the total contents of the Pre-trip/Post-trip and Transient Logs are automatically printed out after the 10 minute collection period. After printout, the logs reset and begin a new log collection period.

1.2.2.2 Parameters Monitored

The parameters monitored by the Pre-trip/Post-trip and Transient Logs are established by the following selection criteria:

A. Plant Trip Log

1. Primary operating parameters of each system that directly supports plant operation (Pressure, flow, temperature, level)

2. Primary operating parameters of each ESF system

3. Each parameter which is used as an input to the Reactor Protection System (RPS). Only one loop of redundant parameters need be logged. For example, RPS has multiple narrow range level loops from each steam generator but only one would need to be in the log

4. Each parameter which is used as an input to the generator protection system

Trip Log Trigger

1. Proteus will trigger the Trip log on the occurrence of any of the following conditions:

   a. Reactor trip

   b. Turbine trip

   c. Generator trip

2. ERFDADS will trigger the Trip log on the occurrence of any of the following conditions:

   a. Reactor trip

   b. Turbine trip

B. Transient History Log

1. Parameters subject to rapid transients for systems which directly support plant operation or mitigate the consequences of an accident. Examples would be reactor coolant system pressure and containment pressure.

2. The operating status of equipment required to support plant operation which is not included as part of the SOE monitoring function.

3. The operating status of equipment required to function to mitigate a transient which is not included as part of the SOE monitoring function.

4. The operating status of all ESF-actuated equipment.

5. The initiation of each ESF actuation signal shall be recorded by the transient log.

Clarification

The signals monitored on Items 2, 3, and 4 are contact closures which represent the status of equipment that does not require the fast resolution of SOE monitoring.

Transient History Triggers

The following conditions will trigger the transient history log:

1. Reactor trip

2. Turbine trip

The sampling rate for the Trip Logs is 10 seconds.

The sampling rate for the Transient Log is ½ second.

1.2.2.3 Duration of Time History

The Pre-trip/Post-trip Logs record the time history of the selected plant parameters for the 10 minute period before and after a triggering event.

The Transient Log records the time history of the selected parameters for the 10 minute period after a triggering event.

1.2.2.4 Format for Displaying Data

The Pre-trip/Post-trip Logs are automatically output on control room typers upon completion of the 10 minute data collection period. The log outputs provide a complete listing of all the recorded data values collected both before and after the triggering event. A printout of all pre-trigger data values may be obtained at any

time prior to post-trip collection initiation by operator command.

The Pre-trip/Post-trip Log contains an indication of the triggering event, time of triggering event, and the time tagged value of each point assigned to the log. The log contains a total of 60 pre-trip and 60 post-trip values for each point. Each set of values is identified by the point identification number and the engineering units of the value. Values from a given collection period are printed in a format to allow for cross comparisons between points and trend analysis. The description of each point identification is also provided.

The Transient Log will be formatted similar to the Trip logs.

1.2.2.5 Capability for Retention of Data, Information, and Physical Evidence

The Pre-trip/Post-trip and Transient Log buffers are cleared and reset after printout. The trip data is maintained only for the period required for collection and printout. Manual printout of the pre-trip portion of the log does not clear and reset the buffers.

The hardcopy printouts of the logs are retained as required by the post-trip review procedure.

1.2.2.6 Power Source

The Proteus Computer System is powered by a non-Class 1E uninterruptible power supply as discussed in section 1.2.1.6.

The ERFDADS computer is powered by a non-Class 1E uninterruptible power supply that provides power for 2 hours following loss of offsite power.

1.2.3 Other Data and Information Provided

In addition to the dedicated SOE and Trip Logs, both the Proteus and ERFDADS computer systems provide long term data storage and retrieval capabilities. The systems store averaged values of all analog points within the systems and accumulated values of digital points. This information is available either directly or through magnetic tape storage to supplement event analysis and diagnosis.

1.2.4 Schedule for Planned Changes

No changes are planned in the STPEGS design described above.

2.1 Equipment Classification and Vendor Interface (Reactor Trip System Components)

HL&P has reviwed all components whose functioning is required to trip the reactor to ensure that these components are properly classified in the design documents.

Prior to the approval of any maintenance, work order, or part replacement, an evaluation for proper safety classification is performed as required by procedures.

The STP vendor interface program for Reactor Trip System components is conducted in the same manner as for all safety-related components. A summary report of the STP vendor interface program is provided under item 2.2.

2.2 Equipment Classification and Vendor Interface (Programs for All Safety-Related Components)

2.2.1 HL&P will ensure that all components of safety-related systems necessary for accomplishing required safety functions are identified as safety related on design documents.

2.2.1.1 Safety classification of STP equipment is in accordance with ANSI N18.2a - 1975. This classification system is compatible with the requirements of RG 1.26. Components of safety-related systems are similarly classified if the component is necessary to support the safety-related function of the system.

2.2.1.2 The STP Q-List is the master control document that identifies the structures and systems that are safety-related. Each structure, system, and component is analyzed to determine whether it should be designated as a Q-List item.

The Q-List is subdivided by structures, components, and systems. When the definition of boundaries is appropriate, reference is made to a document which defines the boundary. In addition, a "Q" designator is assigned for identification of equipment and components within a system. A "Q" designator is also assigned to each structure for identification of design and materials that are part of the structure.

The Q-List is updated as the design progresses. Detailed Q-sorts of other material and equipment lists or equipment are being developed to provide more depth and detail as system and equipment identification progresses.

The Q-List does not include each instrument component, pipe spool, or other individual equipment items within a system. These are identified on suitable drawings, detailed lists, indices, or documents.

Currently under development is the Master Parts List (MPL) which will give even more detail. The MPL is a computerized compilation of all permanent STP plant equipment and/or components tagged and listed on piping and instrumentation diagrams, and equipment indices. The MPL will not include equipment such as pipe, pipe supports, or pipe hangers. The MPL provides a list of the individual parts or items that comprise each of the components and/or equipment to the level of detail to which replacement and maintenance or repair of the equipment is expected to occur. The Q-List will be included for identification of safety-related equipment, components, and parts. All Q-List data entered into the MPL shall be controlled, reviewed, and design verified in accordance with ANSI N45.2.11. Control of the MPL will be covered by written procedures.

2.2.1.3 Written instructions are required for plant activities. As part of the preparation and approval of these instructions, a check is made for the proper procedures appropriate to the equipment classification. Procedures provide instructions to plant personnel for assigning a safety classification to maintenance work requests, and operating, maintenance, and surveillance procedures.

2.2.1.4 Procedures for equipment classification and documentation and the results are subject to regular audits. Audit findings that require corrective action are identified to the appropriate level of authority. Audits for verification of corrective action will follow.

2.2.1.5 Technical requirements including appropriate design verification and qualification testing are specified for procurement of safety-related components. Any new equipment, spare parts,

materials, or services shall have quality requirements greater than or equal to the original.

STP has established an Equipment Qualification Program to assure that safety-related electrical and mechanical equipment and replacement equipment are environmentally and seismically qualified for the specified safety-service conditions and functions in accordance with NRC guidelines.

2.2.1.6 Certain non safety-related structures, systems, and components have been designed and are maintained in a manner consistent with their importance to plant safety and operation. Some examples include the fire protection system, radioactive waste system, and portions of the post-accident monitoring and radiation monitoring systems which have additional quality assurance requirements.

2.2.2 INPO formed a Nuclear Utility Task Action Committee (NUTAC) to address the handling of vendor technical information. This program, Vendor Equipment Technical Information Program (VETIP), was submitted to the NRC staff for review in March 1984. HL&P intends to implement the recommendations in VETIP for the South Texas Project prior to scheduled fuel load. As a part of this program, HL&P intends to be an active participant in the NPRDS and SEE-IN programs established by INPO. Furthermore, HL&P fully supports the program enhancements recommended by VETIP.

Westinghouse, the NSSS supplier for STP, has a technical bulletin system in place. This system requires that HL&P acknowledge to Westinghouse that a bulletin has been received. The system also requires that, each year, Westinghouse distribute a list of all technical bulletins issued. This index enables HL&P to verify that all bulletins have been received.

In addition, HL&P is a participant in the Westinghouse Owners Group.

3.1 Post-Maintenance Testing (Reactor Trip System Components)

3.1.1 Post maintenance testing of the parts of the reactor trip system which are required to trip the reactor, will be conducted under the same program as other safety-related components. See item 3.2.1.

3.1.2 Inclusion of vendor and engineering recommendations in test and maintenance procedures for reactor trip system

components will be handled in the same manner as other safety-related components. See item 3.2.2.

3.1.3 Elimination of test requirements which degrade safety will be considered for reactor trip system components in the same manner as for other safety-related components. See item 3.2.3.

3.2 Post-Maintenance Testing (All other Safety-Related Components)

3.2.1 The Post-Maintenance Test Program will identify required post-maintenance testing for safety-related components following maintenance. The completed post-maintenance tests will demonstrate that the equipment is capable of performing its safety function before being returned to service.

The Post-Maintenance Test Program will be in place prior to fuel load.

3.2.2 The STPEGS Technical Specifications have been submitted to the NRC for review. The test and maintenance procedures are currently being developed. Appropriate test guidance based on vendor and engineering recommendations will be included where required.

3.2.3 The STPEGS Technical Specifications have been submitted to the NRC for review. The NRC will be notified if any post-maintenance test requirements are perceived to degrade rather than enhance safety.

4.1 Reactor Trip System Reliability (Vendor-Related Modifications)

The reactor trip breakers used on the STPEGS are Westinghouse Model DS-416. HL&P has been informed by Westinghouse that a design discrepancy had been identified in the undervoltage attachment and that Westinghouse intended to replace the undervoltage attachments on DS-416 reactor trip switchgear. Field change notices have been issued by Westinghouse for installation and adjustment of the replacements. Modifications made will be in compliance with Westinghouse specifications. Completion of the work for STPEGS Unit 1 is scheduled to be completed before fuel load. The work for Unit 2 will be completed before fuel load in that unit.

Subsequent to the Salem event, Westinghouse issued three Technical Bulletins affecting reactor trip switchgear and one related to a potential undetectable condition which could result in the failure of the solid state protection system (SSPS) to actuate. The bulletins and their status are summarized below:

82-02, Rev. 1	DB-50 RTB Maintenance	Not applicable to STP
83-03	DB and DS Circuit Shunt and Undervoltage Coils	Appended to PIP Vol. 9-1, Section 11, "Rod Control System"

84-01	Potential Undetectable Failure in SSPS	Field change notice for circuit modification to be issued by W
84-02	DS/DSL Breakers Potential Wire Damage	Appended to Reactor Trip Switchgear Instruction Book

In summary, all vendor-related modifications affecting reactor trip system reliability are being tracked and scheduled for implementation prior to fuel load.

4.2 Reactor Trip System Reliability (Preventative Maintenance and Surveillance Program for Reactor Trip Breakers)

4.2.1 The program of periodic maintenance for the reactor trip switchgear and breakers will incorporate the Westinghouse recommendations contained in the "Westinghouse Maintenance Manual for the DS-416 Reactor Trip Circuit Breaker". This manual has been prepared for the Westinghouse Owners Group (WOG) and contains a comprehensive maintenance program that is designed to maintain the DS-416 circuit breaker in a state of operational readiness.

In response to the Request for Additional Information:

The periodic maintenance program for reactor trip breakers, to be conducted at the end of the first six month period (or when 500 breaker operations have been counted, whichever comes first), will include the following:

1. General inspection to include checking of breaker's cleanliness, all bolts and nuts, pole bases, arc chutes, insulating link, wiring and auxiliary switches;

2. The retaining rings inspection, including those on the undervoltage trip attachment (UVTA) and shunt trip attachment;

3. Arcing and main contacts inspection as specified by the Westinghouse Maintenance Manual;

4. UVTA check as specified by the Westinghouse Maintenance Manual, including replacement of UVTA if dropout voltage is greater than 60% or less than 30% of rated UVTA coil voltage;

5. Shunt trip attachment check as specified by the Westinghouse Maintenance Manual;

6. Lubrication as specified by the Westinghouse Maintenance Manual;

7. Functional check of the breaker's operation prior to returning it to service.

Subsequent inspections and tests in the periodic maintenance program for reactor trip breakers are to include, on a refueling interval basis (or when 500 breaker operations have been counted, whichever comes first), the items listed above as well as the following:

1. Pre-cleaning insulation resistance measurement and recording;

2. RTB dusting and cleaning;

3. Post-cleaning insulation resistance measurement and recording, as specified by the Westinghouse Maintenance Manual;

4. Inspection of main and secondary disconnecting contacts, bolt tightness, secondary wiring, mechanical parts, cell switches, instruments, relays and other panel mounted devices;

5. UTVA trip force and breaker load check as specified by the Westinghouse Maintenance Manual;

6. Measurement and recording RTB response time for the undervoltage trip;

7. Functional test of the breaker prior to returning to service as specified by the Westinghouse Maintenance Manual.

A caution statement will be included in appropriate maintenance procedures warning personnel against performing undocumented adjustments or modifications to reactor trip breakers.

4.2.2 A trending procedure will be developed which requires a review of the historical records of reactor trip breaker parameters. Trended parameters will include items such as main and arcing contact gap measurements, trip lever force, breaker trip load, undervoltage device drop-out voltage, breaker response time for undervoltage trip, breaker insulation resistance, and shunt trip attachment pick-up voltage.

In response to the Request for Additional Information:

Nuclear Plant Operations Department (NPOD) will collect and trend this data. The trends will be analyzed after each new data set is taken, which will be each refueling or every 500 breaker operations, whichever comes first. NPOD will specify changes to the periodic maintenance program based upon trend analysis results.

4.2.3 Westinghouse has prepared a draft report, "Report of the DS-416 Reactor Trip Breaker Undervoltage and Shunt Trip Attachments Life Cycle Tests". HL&P endorses the conclusions of this report and will implement the recommendations identified therein.

4.2.4 HL&P will monitor reactor trip breaker life cycles and establish component replacement guidelines that are consistent with the recommendations of the life cycle test report prepared by Westinghouse. (See 4.2.3 response.)

4.3 Reactor Trip System Reliability (Automatic Actuation of Shunt Trip Attachment for Westinghouse and B&W Plants)

HL&P has accepted a proposal from Westinghouse to provide automatic reactor trip system actuation of the breaker shunt trip attachments. The automatic shunt trip modification is based on the generic design developed by Westinghouse under the sponsorship of the Westinghouse Owners Group. This generic design was submitted to the NRC on June 14, 1983. A Safety Evaluation Report was issued on August 10, 1983, which endorsed the proposed design. The modification provides for automatic actuation of the reactor trip breaker shunt trip mechanism on any signal which activates the undervoltage trip. Plant specific information regarding the modification will be provided no later than October 1, 1985.

Technical Specification changes recommended by Generic Letter 85-09 have been incorporated into the Draft STPEGS Technical Specifications submitted by letter dated June 17, 1985 (ST-HL-AE-1271).

4.4 Reactor Trip System Reliability (Improvements in Maintenance and Test Procedures for B&W Plants)

This is not applicable to the South Texas Project.

4.5 Reactor Trip System Reliability (System Functional Testing)

4.5.1 On-Line functional testing will confirm the independent operability of the undervoltage and shunt trip devices of each main reactor trip breaker.

4.5.2 Capability for on-line functional testing of the reactor trip system will be provided.

4.5.3 WCAP-10271, "Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System" has been provided by the Westinghouse Owners Group to the NRC for review. This document, along with Supplement 1 and the information submitted to the NRC in defense of WCAP-10271, provides the information requested by this item. The STPEGS Technical Specifications have been developed with Westinghouse input, and have been submitted for NRC review.