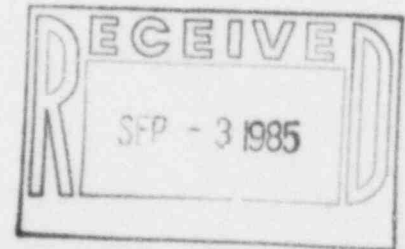


The Light company

Houston Lighting & Power P.O. Box 1700 Houston, Texas 77001 (713) 228-9211

August 30, 1985
ST-HL-AE-1346
File No.: G25, G4.2

Mr. Robert D. Martin
Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011



South Texas Project
Units 1 & 2
Docket Nos. STN 50-498, STN 50-499
Review of the HL&P v. B&R Litigation Record

Dear Mr. Martin:

Enclosed for your information and comment is a program document describing Houston Lighting & Power Company's (HL&P) review of the litigation record in the lawsuit by the Owners of the South Texas Project (STP) against Brown & Root, Inc., (B&R) and its parent, Halliburton, Inc., which was tentatively settled on May 30, 1985. I advised you of the settlement and our intent to conduct such a review in my letter of June 5, 1985 and subsequent discussions.

The enclosed document describes the scope and methodology of the program which we have initiated this week. We welcome NRC involvement in this work to the maximum degree consistent with the Commission's resources, including attendance by NRC Staff at one or more of the training sessions for participants in the review. In addition, program procedures, criteria, and guidelines will be available for review by the NRC, as well as qualification statements for the engineers involved in the review program.

The objectives of the review are: (1) to examine the litigation record (portions of which were under seal by protective order of the trial court prior to the settlement) to determine whether it discloses any previously unidentified safety-related deficiency in the systems, structures or components (SSC) of the STP or their associated design or quality documents; and (2) to document the review process and its results in an auditable form.

It is important that this review program be considered in light of the history of the STP. Design work was begun by B&R in 1972; the Owners of the STP executed a contract in 1974 with B&R to perform architect/engineering,

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construction management and construction services for the Project. Initial construction activities under a Limited Work Authorization began in 1975 and construction permits were issued later that year. Initial work, mostly of a civil/structural nature, progressed satisfactorily. By 1979, however, significant questions arose regarding the ability of B&R's engineering to support construction. Later that year the NRC began an investigation of the STP construction QA/QC activities (the "79-19 investigation") which culminated on April 30, 1980, in an Order to Show Cause why construction should not be suspended, as well as the imposition of civil penalties in the amount of \$100,000.

The NRC's enforcement action, and certain construction related QA problems identified earlier by HL&P and B&R, resulted in the shutdown of essentially all safety-related construction work in late 1979 and early 1980. Little safety-related construction work was performed in the period thereafter until August, 1982. Design work was also essentially brought to a halt when B&R was replaced as architect/engineer in September, 1981. Production scale engineering and construction work did not resume until mid-1982. B&R was terminated as architect/engineer in September, 1981; it withdrew as constructor in November, 1981. Bechtel assumed responsibility for architect/engineering and construction management in September, 1981, and Ebasco Services took over construction in February, 1982.

In the period 1980 to mid-1981, STP was subjected to exhaustive construction reviews and inspections. The bulk of the construction work in place - soils, concrete, and welding - was scrutinized by separate engineering task forces and in each area a panel of "blue ribbon" third-party experts oversaw and evaluated the work. Where repairs were needed, they were made in accordance with approved procedures. Significant measures were undertaken to establish and correct the root causes of these construction and construction-related QA problems. After reviewing this record, The Atomic Safety and Licensing Board concluded that "there is reasonable assurance that the structures in place at the STP are in conformity with applicable regulatory requirements."

Further reviews of in-place construction were undertaken by Bechtel and Ebasco after they assumed their responsibilities, including "walkdowns" to check installed construction against drawings and related examinations of QC records. They also re-examined accessible safety-related welds and their associated quality documentation (radiographs, etc.).

In addition, a comprehensive review of the STP design was undertaken when Bechtel replaced Brown & Root as architect/engineer in late 1981. Bechtel divided the design into about 200 "work packages" which contain relevant design descriptions, drawings, diagrams, vendor data, specifications and calculations. Depending on the nature of the package, Bechtel evaluated design assumptions, methods of analyses, checked on the adequacy of design verification and reviewed design drawings and calculations for accuracy. NRC resident engineers oversaw Bechtel's work.

In short, the Project was placed under the closest scrutiny for about two years while its hardware and documentation were thoroughly evaluated by third-party experts and new contractor personnel. It is fair to say that no commercial nuclear power facility in the United States has been subjected to greater and more intensive review. An understanding of these facts is essential in considering the review being undertaken by HL&P of the litigation record in HL&P v. B&R.

The litigation record in the custody of the court and released as a result of the lifting of the protective order in HL&P v. B&R includes three major categories of documents containing factual information related to issues in the lawsuit: (1) interrogatory responses; (2) expert reports; and (3) depositions and related exhibits. HL&P will examine these three categories of documents to the extent they bear on the design and construction of the STP to search for any safety-related deficiencies in SSC (or their associated design or quality documents) which might have escaped detection during the intensive two-year review process performed by Bechtel, Ebasco, HL&P and third-party experts discussed above. The relevant interrogatory responses, expert reports, and depositions will be reviewed, line-by-line, in accordance with procedures, criteria and guidelines by experienced, professional engineers. Exhibits to depositions will be reviewed to the extent necessary to understand the depositions.

The review will be conducted by S. Levy, Inc., (SLI) under contract with HL&P. Approximately 40 engineers will work as Reviewers, Discipline Specialists, Overview Specialists, Team Leader or Team Leader designees. HL&P engineers will participate in the review effort by monitoring the work as well as providing assistance to the SLI engineers in obtaining necessary information from the Project.

Engineers who are designated as Reviewers will review the relevant litigation materials to identify assertions of deficiency in STP SSC. Assertions will be recorded and passed on to more senior Discipline Specialists who will identify those which are safety-related and determine whether they have been corrected or have been identified for correction by the Project. If they are unable to make that determination and the assertion cannot be shown by positive evidence to be erroneous, it will be transmitted to HL&P on a Deficiency Evaluation Form (DEF) for evaluation in accordance with the applicable Project procedure (PLP-02) pursuant to 10 CFR 50.55(e). Each assertion determined by a Discipline Specialist not to be safety-related will be referred to a multi-disciplinary Overview Specialist who will review the assertion or group of assertions to determine whether, in light of possible systems interactions or multi-disciplinary characteristics, the assertion should be treated as safety-related. If the Overview Specialist determines that an assertion is safety-related, it will be subject to the same additional screening process described above.

The SLI Team Leader and his designees will perform supervisory reviews of approximately 10% of the work of each Reviewer, Discipline Specialist, and Overview Specialist for procedural compliance and substantive correctness. The Team Leader shall have the authority to assign and reassign documents

being reviewed; to require, as necessary, that further reviews of documents be performed; to correct errors in the preparation of review documents; and to order that work being performed incorrectly be halted. The Team Leader will also review the DEFs to be transmitted to the Project to ensure that they are correctly prepared and to be cognizant of the nature of the deficiencies reflected on the DEFs.

Both SLI and HL&P will conduct surveillance of the review work using QA personnel. Day-to-day surveillance of the review will be provided by SLI QA personnel who do not report to the SLI Team Leader for this review. They will check on the qualifications of personnel, the processing and control of documents, records collection and storage, and compliance with applicable SLI litigation review procedures. The HL&P Nuclear Assurance Department will have at least one full-time representative at the SLI offices to conduct continuous surveillance; observations and reports will be recorded in accordance with HL&P's STP QA procedures.

A three-member Senior Advisory Panel will also monitor the work to provide independent judgment as to whether the program is proceeding in accordance with its procedures and objectives.

Personnel working on the review will receive orientation and training by SLI, HL&P technical staff, and HL&P legal counsel. A training manual setting forth applicable review procedures, criteria, guidelines, and QA requirements is being distributed and reviewed at these training sessions.

Data developed in the review will be maintained in hard copy and also be computerized, and will be fully auditable by NRC and others.

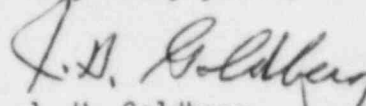
Given the extraordinary review to which B&R work was subjected over a period of two years, it is not likely that previously unidentified safety-related deficiencies will be found. Nevertheless, the program will be pursued vigorously. All of the individuals performing the review will be engineers experienced in the nuclear industry. Reviewers examining documents for assertions of deficiency will have at least 3 years experience in the industry. Discipline and Overview Specialists will have at least 7 and 10 years of such experience, respectively. The SLI Team Leader and his designees will have more than 10 years of technical management experience related to nuclear plant engineering, design, or construction.

We estimate that these experienced personnel will require approximately 26,000 man-hours of effort, exclusive of HL&P review, surveillance, and oversight activities, between September, 1985, through March, 1986, to complete the review. The SLI review will be completed by December 31, 1985. A draft report will be produced by SLI in January, 1986. We expect to submit a final report to the NRC not later than March 1, 1986.

The review team will also be instructed to note any judgmental references to NRC and its performance. In addition, an index to the pleadings will be prepared to facilitate review by NRC legal personnel.

Again, we welcome NRC's comments. This litigation review program will be managed by Mr. M. R. Hisenburg, Manager of the Nuclear Licensing Department. Questions and comments may be directed to him at (713) 993-1330.

Very truly yours,



J. H. Goldberg
Group Vice President, Nuclear

JHG/MRW:as

Enclosure: South Texas Project Litigation Review Program

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