

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION  
Harold R. Denton, Director

In the Matter of	)	
	)	Docket No. 50-498
HOUSTON LIGHTING AND POWER COMPANY	)	50-499
(South Texas Project, Units 1 and 2)	)	(10 C.F.R. 2.206)

DIRECTOR'S DECISION UNDER 10 C.F.R. 2.206

Mr. Lanny Sinkin, on behalf of Citizens Concerned About Nuclear Power, Inc. (CCANP), has filed a petition with the Nuclear Regulatory Commission (NRC) dated August 4, 1982. The petition principally seeks immediate suspension of construction at the South Texas Project (STP), which is being constructed by Houston Lighting and Power Company (HL&P) under construction permits issued by the Commission. CCANP bases its request for relief upon certain alleged design deficiencies in the project identified in a report prepared for HL&P by the Quadrex Corporation (Quadrex Report).<sup>1/</sup> The petition also requests an independent third party

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<sup>1/</sup> Quadrex was retained by HL&P in January 1981 to review the STP engineering design activities undertaken by the project's original architect engineer, Brown and Root. Quadrex's primary task was to determine the technical adequacy of the STP design. An exhaustive review of the design work was not feasible in the time allowed to complete the review. As a result, a sampling program was devised to determine Brown and Root's engineering response to known nuclear industry issues and problem areas. It was felt that this approach would give a representative indication to HL&P as to the status of the Brown and Root design. The Quadrex Report, issued to HL&P in May 1981, was highly critical of the STP design efforts.

HL&P announced in September 1981 that the construction management and architect engineering functions at the STP had been reassigned from Brown and Root to the Bechtel Power Corporation. Subsequently, Brown and Root was also replaced as the constructor by Ebasco Services, Inc.

review of the STP design, and the establishment of an Atomic Safety and Licensing Board to hold hearings on the alleged design deficiencies identified in the Quadrex Report. HL&P responded to the petition in a filing dated August 24, 1982. The petition, originally brought before the Commission, has been referred to the Director of the Office of Nuclear Reactor Regulation for consideration pursuant to 10 C.F.R. 2.206.

CCANP's request for immediate suspension of construction of the STP was denied by letter dated October 12, 1982 for the reasons stated therein, including my determination that review activities to date had not revealed findings that would warrant an immediate halt to construction activities. At that time I indicated that a detailed review of the STP design was being performed for HL&P by the Bechtel Power Corporation (Bechtel), with specific consideration being given to the findings of the Quadrex Report.<sup>2/</sup> I indicated that the Bechtel review was being closely

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<sup>2/</sup> In this regard, Bechtel undertook two separate analyses of the Quadrex findings. Acting upon HL&P's request to assess the Quadrex findings, Bechtel formed a special task force to evaluate the significance of the Quadrex findings and place the findings in perspective with regard to management and design activities necessary to permit timely resolution of the findings. The purpose of this first report was to provide an early qualitative assessment of the significance of the Quadrex findings in order that proper management and design actions could be taken. See Bechtel Power Corporation Task Force Report - An Assessment of the Findings in the Quadrex Corporation Report (submitted to NRC Region IV by letter from HL&P dated March 15, 1982).

Bechtel also engaged in an in-depth review of the construction and design work accomplished by Brown and Root on STP independently of the work of the special task force, so as to enable Bechtel to assume its role as the new architect engineer and construction manager of the project. The detailed results of that review were documented in engineering work packages. During the design review, Bechtel reviewed the applicable Quadrex findings, and using the task force report as guidance, identified actions necessary to review the status of and complete

monitored by an NRC regional inspector assigned to the Bechtel office in Houston, as well as other NRC Region IV personnel and technical reviewers from the Office of Nuclear Reactor Regulation at NRC headquarters.

My interim response also indicated that the Region IV office was conducting a review of the issues raised in the Quadrex Report, and had undertaken a special inspection program to monitor the transition from Brown and Root to Bechtel as architect engineer of the STP. The Region IV evaluation of the Quadrex Report, which includes assessment of the Bechtel review of the STP design,<sup>3/</sup> has been completed, and is contained in the Special Inspection Report of the Quadrex Corporation Report on Design Review of Brown and Root Engineering Work for the South Texas Project Units 1 and 2 (inspection report), issued as NUREG-0948 by the Commission in January 1983. This document, enclosed with this decision, is available for public inspection in the NRC public document room in Washington and in the local public document rooms for the South Texas Project.

The Region IV review was not intended to verify either the Quadrex Report findings or the technical adequacy of the STP as designed by Brown

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2/ (CONTINUED FROM PREVIOUS PAGE)

the STP design. Findings and intended actions were documented in appropriate engineering work packages. In addition, Bechtel assembled a Quadrex Compliance Work Package, EN-619, which summarized individual Quadrex findings, and provided an evaluation and disposition of each finding. This work package resolved generic Quadrex findings and findings related to specific technical disciplines that were not addressed in separate discipline work packages. See EN-619 - Quadrex Work Package (submitted to NRC Region IV by letter from HL&P dated August 26, 1982); Revision to Final Report, EN-619 - Quadrex Work Package (submitted to NRC Region IV by letter from HL&P dated October 18, 1982).

3/ See supra note 2.

and Root. The purpose in reviewing the Quadrex findings was, however, threefold: to determine whether Commission reporting requirements regarding design and construction deficiencies had been met by HL&P; to assess Bechtel's resolutions to the problems raised by the Quadrex review; and to identify those Quadrex findings having safety significance and/or generic implications. To accomplish these goals, Region IV personnel examined every Quadrex Report finding. This effort, which produced 351 separate findings in eight technical areas and includes the generic findings, included review of Quadrex findings of particular concern to CCANP.<sup>4/</sup>

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4/ The petitioner classifies its concerns into six general areas:

- A. The basic conclusions of the Quadrex Report demonstrate a pervasive inadequacy of design that relates to ongoing and near term construction. Petition at 6.
- B. The design basis for the South Texas Project is poorly thought out and inadequately justified. Id. at 7.
- C. Brown and Root's design does not meet the single failure criterion. Id. at 8.
- D. The Brown and Root design violates ALARA requirements. Id.
- E. Brown and Root's distinctions between safety-related and non-safety-related aspects of the design may not be valid. Id. at 9.
- F. The Quadrex Report indicates serious deficiencies in all aspects of Brown and Root's design, including areas not specifically studied by Quadrex. Id. at 10.

The inspection report discusses these issues, as well as the more specific findings petitioner cites, at the following pages:

- Section A: NUREG-0948 at 33-34, 66-96, 230-48, 262-76, 334-71;
- Section B: id. at 37-38, 45-48;
- Section C: id. at 53-34, 41-42, 114-15, 334;
- Section D: id. at 59-60, 342;
- Section E: id. at 39-40, 49-50.

By continuously monitoring the Bechtel design review, Region IV has addressed the concerns raised by CCANP in section F of its petition. See infra text accompanying notes 5-6.

The conclusions reached by Region IV demonstrate that the issues raised by the petitioner regarding the Quadrex Report have been evaluated. The staff found that the design and construction deficiencies required to be reported to NRC had in fact been reported, NUREG-0948 at 2, 14-23, although two matters were not reported in a timely manner. Id. at 20. The staff also concluded that the Quadrex findings have been adequately resolved or dispositioned<sup>5/</sup> under the Bechtel plan approved by HL&P. Id. at 2, 26-27. Moreover, the staff determined that all issues important to plant safety have received adequate and timely attention. Id. at 2, 23-26. This has been done by either confirming the adequacy of work already performed or establishing procedures to perform detailed reviews and/or design changes subsequent to Bechtel's assumption of the role as architect engineer of the project. At the same time, the staff also believes that some of the Quadrex items are of sufficient importance to require additional review and follow-up. Consequently, the staff will monitor the specific areas that have been identified in Appendix A of NUREG-0948 as open items. These items include findings cited in the petition.<sup>6/</sup> Adequate consideration of the Quadrex Report findings identified by CCANP has been accomplished, and I see no need to suspend construction of the STP at this time.

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<sup>5/</sup> As explained in the inspection report:

[R]esolved means that the finding has or will be remedied by normal Bechtel design procedures already in place. Dispositioned items are those that require a specific action to take place before final resolution and correction; however, plans for resolution had been determined.

NUREG-0948, at 2. See also id. at 26.

<sup>6/</sup> See, e.g., NUREG-0948, Appendix A, at §§ 4.5, 4.8.

The petitioner also requested an independent third party review of the Brown and Root design of the STP. See Petition at 4, 12. Substantially similar action has been taken in this regard. When Bechtel was retained to assume architect engineer functions on the STP, HL&P required it to evaluate the entire design of the project. Review was not limited to the areas addressed by the Quadrex Report.<sup>7/</sup> Prior to assuming its role as architect engineer, Bechtel had not been involved in the design of the project. In addition, the NRC staff has closely monitored the design review conducted incident to replacement of Brown and Root as the architect engineer. Consequently, I have concluded that this effort serves the same essential purpose as would an independent third party review of the design. No additional design review appears necessary at this time.

CCANP further requested that an Atomic Safety and Licensing Board (ASLB) be established to consider the alleged design deficiencies at STP. See Petition at 12. The ASLB panel appointed in the pending operating license proceeding issued an order on December 16, 1981, which calls for a hearing on all aspects of the Quadrex Report. This action fulfills the relief sought by petitioner. In all events, where an adjudicatory board is presiding in a proceeding with jurisdiction to consider a particular issue, a party to that proceeding may not choose to avoid that forum by use of 10 C.F.R. 2.206. Pacific Gas & Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-81-6, 13 NRC 443, 446 (1981). As CCANP is a party in the pending operating license proceeding, the

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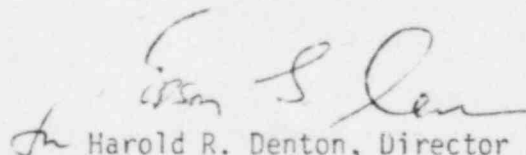
<sup>7/</sup> See supra note 2.

relief it seeks is more appropriately raised in that forum rather than by initiating some additional proceeding. Further, in the absence of some special circumstances, an office director will not interfere with the customary licensing process by instituting a proceeding to consider issues properly within the scope of the operating license review.

Public Service Company of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2), DD-79-21, 10 NRC 717, 720 (1979). It should also be noted that it is beyond the power of an office director to order an adjudicatory board to consider particular issues. See Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2), DD-79-10, 10 NRC 129, 130 n. 2 (1979).

For the reasons set forth in this decision and in my interim response to the petitioner, the request by CCANP for suspension of construction, accomplishment of an independent third party review of the STP design and referral to a special ASLB is hereby denied.

As provided by 10 C.F.R. 2.206(c), a copy of this decision will be filed with the Secretary for the Commission's review. This decision will constitute the final action of the Commission twenty-five (25) days after date of issuance unless the Commission, on its own motion, institutes a review of this Decision within that time.

  
Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland  
this 3rd day of March 1983.

Enclosure: NUREG-0948, Special Inspection Report