UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety & Licensing Board

In the Matter of HOUSTON LIGHTING & POWER COMPANY (Allens Creek Unit 1)	Docket 50-466 Nov. 2, 1979

TEX PIRG'S FIFTH SET OF INTERROGATORIES

Pursuant to the Rules of Practice and Procedure of this Commission, Intervenor TexPIRG herein submits a fifth set of interrogatories to Applicant, Houston Lighting & Power Company.

Applicant is requested to respond to the attached interrogatories, including all sub-parts thereto, and is further requested to name any specific witness or witnesses who will testify as to the subject matter of each inquiry wherever possible.

WHEREFORE, PREMISES CONSIDERED, Te PIRG requests timely response to this request for information.

Respectfully,

James Scott, Jr.
Counsel for TexPIRG

CERTIFICATE OF SERVICE

I, Clarence Johnson, certify that this instrument has been served upon the Licensing Board, NRC Staff, J. G. Copeland, J. Newman, R. Lowerre, J. Doherty, D. Marrack, Carro Hinderstein, E. McCorkle, and J. Rentfro by deposit in the U.S. mail on or before Nov. 5, 1979.

1. At page 5.1-16 of the Environmental Report for ACNGS, Applicant states: "Upon consideration of mean and maximum [delta] T's and the probable rate of temperature decrease likely to result from plant or makeup water pumping shut down, no mortality of Brazos River fish is expected as a result of shutdown." Respond to the following which relate to this statement and the question of the effects of cold shutdown on biota:

(a) Does Applicant believe this statement applies to fish in the cooling pond during winter shutdown?

(b) If (a) is yes, what are mean and maximum changes of temperature and the probable rate of temperature decrease during winter shutdown for <u>both</u> the cooling pond and the Brazos River, as used in asserting this conclusion?

(c) If (a) is no, what is the estimate of fish mortality in the cooling pond? [At a minimum, respond for a winter shutdown circumstance]

(d) Provide the parameters for rates of temperature change which will produce mortality for indigenous and stocked game fish utilized in the above-cited conclusion in the ER.

(e) Did the definition of fish mortality utilized in the ER analysis include delayed deaths due to reduced resistance to disease or predators resulting from the temperature change? If so, explain how it is included in the analysis.

(f) Does this analysis of temperature decrease assume or account for any interactions between temperature change and chemical additions to the water (such as chlorine) as the interaction may affect fish survival rates? If so, explain the assumptions. If not, explain the reasons for not accounting for such interactions.

2. Since system electrical load for HL&P is higher in summer than winter, is it correct to assume that refueling will occur in the winter for ACNGS? How long will such refueling last? And have the months preferred for refueling been selected? If so, what is the month preferred for refueling of the reactor?

3. In response to #1 of TexPIRG's fourth set of interrogatories, HL&P stated that the information requested which relates to barging of the reactor vessel is contained in response to Hinderstein's interrogatories. However, the cited Hinderstein interrogatories' responses did not contain a reference to the tons per inch emersion factor for the barge. In computing or calculating whether the barge loaded with the reactor vessel would be able to navigate the San Bernard River, was the tons per inch emersion factor determined for the particular barge?

4. If response to #3 is "yes," state what that figure (tons per inch emersion factor) is? Is that an assumed figure, and if so, what is the basis of the assumption? [i.e., is the figure "assumed" based upon some average or calculation for most barges, or is it based upon a specific barge that has been selected already?]

5. If a negative response is given to #3, state or explain the technique HL&P uses to prove that the barge will meet the draft characteristics assumed and stated in the response to Hinderstein's interrogatory?

6. Gulf Coast Waste Disposal Authority has proposed a refuse-to-energy facility utilizing Houston's trash. Houston City Council, in studying that proposal, has stated that they would like to receive proposals from other sources, i.e. Has HL&P considered making such a proposal to city council? Does HL&P plan to propose a refuse-to-energy facility to the city council? Please state what documents or memoranda in HL&P's possession relate to such consideration or proposals.

7. Does HL&P plan to purchase steam or electricity from the GCWDA refuse burning facility mentioned in #6 above? Has HL&P been contacted regarding the purchase of such energy? Please state

what documents or memoranda in HL&P's possession relate to such purchases or contacts.

8. Has HL&P ever considered constructing a nuclear power plant in a foreign country, such as Mexico? If so, provide the following information:

(a) To what stage of planning did such a proposal go, or is at right now?

(b) Was the consideration given for the purpose of replacing the Allen's Creek Unit 1 or 2 with a foreign-sited facility?

(c) Was a site selected in the foreign nation, and if so where is that site?

(d) If the proposal was serious enough to receive consideration by HL&P, why was the possibility of a Mexico site excluded from the Teknekdro Teknekron Site Study?

9. Has HL&P discussed waste-to-energy production related to supplying the needs of Greenway Plaza? If so, explain the nature and outcome of those discussions. Please lists all documents and memoranda relating to such discussions, and make such material available for inspection.

10. The following questions relate to the Applicant's electrical demand forecasting model described on p. S.8-6 of the Final Supp. FES.

(a) Regarding the industrial demand model (after first five years), what variable, if any, explicitly accounts for industrial size? In particular, is "dollar of value added per unit output," "energy intensiveness per dollar added per unit output," or "employment" utilized to measure industrial size (production)?

(b) Regarding the commercial demand model, what variable if any explicitly accounts for the size of the commercial user? Is "floor space" explicitly accounted for?

(c) Is the forecasting model better described as "enumerative (engineering)" or "econometric" in concept?

(d) Does the model differentiate end uses for the electricity and energy consumption within each user class (e.g., space heating, refrigeration, food freezing, etc.)? Please list each end use accounted for by user class (residential, commercial, and industrial).

(e) S.8-6 of the FS-FES notes that the model makes assumptions as to multi-family and single family composition, Are similarly separate assumptions made with respect to mobile homes? Generally, do individually metered multi-family housing units use less electricity per capita than single family detached units?

(f) Does HL&P's model establish sub-categories of types of commercial users? What are those sub-categories?

(g) State which of following are explicitly included

an/
as independent variable in the forecasting model, and note if the variable is used only with respect to forecasting one or two user classes: population; household size and number; housing by type; industry by type and size; commercial building by type and size; gross product of service area; sales; employment; interest rates; income; price and income elasticities of demand, by customer class and by end use; appliance/equipment data; energy efficiencies; thermal integrity of structures; fuel prices; cross elasticities of demand, by customer class, by end use for alternative forms of energy; meterology; rate structure.

(h) What additional independent variables, if any, are included in the demand model?

(i) What is the assumed increase in the price of electricity through 1987 as used in this model? Has HL&P revised the figure for price of/ electricity since the FS-FES was published? If so, what is the revised figure?

(j) Does the electricity price figure(s) stated in (i) include the effects of most recent projections of price escalation at South Texas Project and ACNGS? Does the price forecast assume that Construction-Work-in-Progress will be allowed by the PUC this year, the next year, and/or any following years?

(k) Assuming all other variables constant, what is the effect of a one percent increase in electricity prices on the demand for electricity?

11. HL&P personnel have stated that an analytic [illegible] program called "Progen" is used in determining the production expansion planning required to meet forecasted demand. With regard to the "Progen" model, respond to the following:
    (a) Does the model consider environmental factors? If so, does it operationalize environmental factors as planning constraints, additional costs in construction or operation of mitigation methods, or in summing "social costs?"
    (b) Does the model consider or account for the geographic siting of production facilities?
    (c) Does the model consider the costs of transmission facilities associated with production facilities?
    (d) Is the reserve margin figure entered as a predetermined figure in this program, or does the model itself determine the appropriate reserve margin?
12. List and produce any studies within the possession of Applicant relating to the effects of interconnection on HL&P, the state of Texas, and/or the region.
13. In testimony before the Texas Public Utility Commission, Mr. D.D. Jordan stated that HL&P has decided to increase its targeted reserve margin. What are the reasons for increasing the targeted reserve margin?
14. When taking into account likely purchases of power revealed by HL&P in Turner/Oprea testimony at the PUC, will HL&P have a reserve margin of 27-28 % by 1988 or 1989? If not, what will be the correct figure?
15. Accounting for likely purchases of power, will HL&P have a reserve margin in excess of 30 % before 1990?

16. Does the present interconnection between Texas Utilities Company and HL&P enable Applicant to utilize TU's capacity on a fulltime, as well as emergency basis? Describe the nature of any obstacles to such usage.

17. Is HL&P attempting to purchase a power plant from Texas Utilities Company? Is the purchase for a permanent ownership? If not, how long would HL&P own the facility?

18. Produce and make available responses by HL&P to interrogatories relating to interconnection filed by parties to the South Texas Project anti-trust hearing.

19. Regarding the failure of the STP auxiliary mechanical building to meet specificatinns, what was the date:

    (a)That the building's frame and foundation were completed?

    (b)That HL&P QA Division first discovered the failure?

    (c)That HL&P reported the deficiency to the NRC?

20. What caused the auxiliary mechanical building to be built one foot too short?

21. Regarding the failure of the gantry crane to meet bid specifications relating to tornado force winds, what was the date:

    (a) That the gantry crane was installed in place?

    (b) That HL&P's QA Division first discovered the deficiency?

    (c) That Brown & Root's QA Division first reported the deficiency?

    (d) That the deficiency was first reported to the NRC?

22. Who or what division, department or contractor was responsible for drawing up the bid specification for the STP gantry crane?

23. How was the bid specification error made (re: #22 above)?

24. Did any department or division of HL&P review the bid specification on the gantry crane prior to its transmittal to the subcontractor? What department or division of HL&P received a copy of the bid specifications prior to transmittal to the subcontractor?

25. Mr. D.D. Jordan testified before the Texas PUC that HL&P believedthe engineering work at STP was 60 % complete at the time of the issuance of a construction permit, but in fact it was only 10 % complete. On what basis did HL&P assume the engineering work to be 60 % complete at the time of the construction permit issuance? When and how did HL&P learn that the work was, in fact, only 10 % complete?

26. Did HL&P have any method or manner of independently verifying the completeness of Brown & Root's engineering work at STP prior to issuance of a construction permit? If so what was that method? How does HL&P verify the completeness of Ebasco's engineering work in this proceeding?

27. What percentage of the enginneering work has been completed on Allen's Creek Nuclear Generating Station?

28. Does HL&P have on-site QA personnel at STP?

29. List each presently operable natural gas generating station along with its it's normally expected lifetime, it's date of first year operation, it's MWe capacity, and it's date of expected phase-out under the Industrial Fuel Use Act.

30. Produce a copy of GE Topical Report NEDO 10466 (including

revisions) entitled "Power Generation Control Complex Design Criteria and Safety Evaluation."

31. Produce any graphic depictions, drawings, or photographs of the control room design and power generation control complex, (either for ACNGS or GE standard design).