

NRC PUBLIC DOCUMENT ROOM

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD



In the Matter of §  
§  
HOUSTON LIGHTING & POWER COMPANY § Docket No. 50-466  
§  
(Allens Creek Nuclear Generating §  
Station, Unit 1) §

HOUSTON LIGHTING & POWER COMPANY'S  
SECOND SET OF INTERROGATORIES TO TEXPIRG

Pursuant to Section 2.740b and 2.741 of the Commission's Rules of Practice, Houston Lighting & Power Company (Applicant) propounds this Second Set of Interrogatories and Request for Production of Documents to the Texas Public Interest Research Group (TexPirg). Houston Lighting & Power Company incorporates herewith the instructions and definitions set forth in its First Set of Interrogatories and Request for Production of Documents to TexPirg.

INTERROGATORY NO. 1. In response to Interrogatory A4(a) of Applicant's First Interrogatories to TexPirg, TexPirg answered: "It would be obviously superior from both an environmental and safety impact." Specify each environmental and safety impact which you considered in answering this question, and specify exactly how much additional water would be consumed in the STP cooling lake by a third 1200 megawatt nuclear unit at the STP site.

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INTERROGATORY NO. 2. Specify the page numbers in the ACNGS Environmental Report or the South Texas Project Environmental Report which show that the Applicant will be able to contract for and receive sufficient water flows from the Colorado River to operate a third unit at STP.

INTERROGATORY NO. 3. (a) With respect to TexPirg's answer to Interrogatory A5(b) of Applicant's First Interrogatories to TexPirg, specify the number of acres of both prime and unique farm land located at the ACNGS site and provide the source of your answer. (b) Also specify the total number of comparable prime and unique farm land within the State of Texas.

INTERROGATORY NO. 4. With respect to TexPirg's answer to Interrogatory A6(a) of Applicant's First Interrogatories to TexPirg, specify where in the FES Supplement it states that significantly less water will be used by a 1200 megawatt nuclear unit located at the STP site rather than the ACNGS site.

INTERROGATORY NO. 5. With respect to your answer to Interrogatory A7(b) of Applicant's First Interrogatories to TexPirg, state whether you possess any documents or have conducted any studies which show that persons, corporations or other entities in the Houston area will be required to

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convert to surface water and will use the Brazos River as the source of their surface water.

INTERROGATORY NO. 6. (a) With respect to TexPirg's answer to Interrogatory A8(b) of Applicant's First Interrogatories to Texpirg, specify what crops are grown on the prime and unique farm land that you contend will be lost and specify which of these crops would have to be imported from California if this farm land is preempted by construction of ACNGS.

(b) With respect to the prime and unique farm lands referred to in answer to this Interrogatory, specify the total number of acres of comparable land in the United States. (c) Also, specify whether the "California farms that are being destroyed by salt deposits" have the same soil classifications as the soils found at the ACNGS site.

INTERROGATORY NO. 7. With respect to TexPirg's answer to Interrogatory A9(b) of Applicant's First Interrogatories to TexPirg, state how you determined that ACNGS Unit 1 "could emit more radiation than 1000 atomic bombs."

INTERROGATORY NO. 8. (a) With reference to TexPirg's answer to Interrogatory B7(d) of Applicant's First Interrogatories to TexPirg, specify the levels of heavy metals "in the Allens Creek discharge, Wallis, Sealy, and plant discharges", specifying exactly which heavy metals are in such discharges

and their concentration levels. (b) State whether TexPirg has retained Ms. Hinderstein, Mr. Saxion, Mrs. D. D. Hopkins or any other expert to testify on this subject.

INTERROGATORY NO. 9. In response to Interrogatory B8(a) of Applicant's First Interrogatories to TexPirg, TexPirg stated that the temperature change required for thermal shock "varies depending on the type of fish, rate of change and prior temperatures as well as other parameters." Specify the source of that answer.

INTERROGATORY NO. 10. With respect to the TexPirg answer to Interrogatory B8(b) of Applicant's First Set of Interrogatories to TexPirg, provide the basis for the statement that the plant will close in the winter months each year.

INTERROGATORY NO. 11. (a) Describe the large scale refuse combustion facility being planned by the Gulf Coast Waste Disposal Authority described in TexPirg's answer to Interrogatory D1 of Applicant's First Set of Interrogatories to TexPirg providing the following information: (1) the feed stock (fuel) for the facility; (2) the source of the feed stock; (3) the amount of the feed stock; (4) the amount of feed stock to be stored on site; (5) the amount of feed stock consumed per day; (6) the facility's total steam yield; (7) the capacity of the project for production of electricity; (8) the cost per kilowatt hour of electricity that would be generated from the plant; (9) the supplemental

fuel source, if any, for operating the plant and the cost of producing power from the plant when operating with the alternative fuel source; (10) the amount of power required for processing the feed stock prior to its use as fuel for steam generation. (b) Provide the information requested in a(1)-(10) above, for the Browning Ferris project, which is also referenced in answer to Interrogatory D1.

INTERROGATORY NO. 12. Specify who prepared each of TexPirg's answers in response to Interrogatories D1 through D9 of Applicant's First Interrogatories to TexPirg.

INTERROGATORY NO. 13. (a) Provide the name of the person who made the following statement in answer to Interrogatory No. D1 of Applicant's First Interrogatories to TexPirg: "It is my understanding from Mr. Davies that Houston Power & Light was well aware of the proposed facility and in fact HL&P made it clear to Mr. Davies that electrical power generated from even a modest refuse combustion facility would not be allowed into the electrical system under HL&P's control."

(b) Provide the names of any person who, to TexPirg's knowledge, can testify in support of TexPirg's assertion that HL&P has demonstrated a "lack of cooperation at even the study phase of a refuse combustion system for the Houston area."

INTERROGATORY NO. 14. At page S.9-5 of the Final Supplement to the Final Environmental Statement the Staff concludes

that "the capital cost of a refuse-burning-only steam-electric plant is very high, the base load operating and maintenance costs are high, and the cost of the refuse fuel is relatively low." Specify every fact upon which TexPirg will rely in showing that this statement is in error.

INTERROGATORY NO. 15. (a) State whether Dr. Jack Matson has now been retained as an expert witness. (b) In answer to Interrogatory No. D6 of Applicant's First Interrogatories to TexPirg, TexPirg stated that it was in the process of preparing an estimate as to the cost of electricity generated by a solid waste facility which would be located in Houston. State who is preparing this estimate, whether the estimate has been completed, and who is going to testify on this subject. (c) In addition, state whether the foregoing cost analysis will include an assumption as to the availability and capacity factors for a refuse combustion plant, and if so, provide the source of those assumed factors.

INTERROGATORY NO. 16. With respect to TexPirg's answer to Interrogatory No. D7 of Applicant's First Interrogatories to TexPirg, answer the following: (a) On what basis do you calculate that 80% of the refuse collected at two Houston landfills are combustible? (b) How is this refuse "pretreated"? (c) On what basis do you assert that the combustible refuse collected from two Houston landfills will yield 10,000 Btu

per pound? (d) On what basis do you calculate that a refuse combustion electrical power plant will be 40% efficient? (e) What is the highest efficiency rating among the electric generation plants listed in the reports by the EPA and the National Center for Resource Recovery? Identify the source of your answer. (f) Identify all solid waste electric power generation plants in the operational, design, or planning stage with a capacity equal to or greater than 4,000 tons per day.

INTERROGATORY NO. 17. (a) In answer to Interrogatory No. E4(a), TexPirg answered "FAA". State the name of the person at the FAA who told TexPirg that large plane traffic has increased at least thirty percent in the last three years. (b) With respect to the answer of E4(b), state the basis for the assumption that airplane traffic will continue to increase thirty percent every three years for the next 40 years. (c) With respect to the answer to Interrogatory No. E4(e), provide the name of the person on the NRC Staff who provided this information and provide the name of the book alleged to be in the University of Houston Library.

INTERROGATORY NO. 18. At the prehearing conference in this proceeding held on November 17 and 18, 1978, counsel for TexPirg stated that plans were "well underway" to build another airport west of Houston. (Tr. 418-419). Identify

the exact location of this new airport and provide the name of the owner of the airport, the type of airport proposed, the amount of air traffic predicted for the airport, and the current status of the airport.

INTERROGATORY NO. 19. (a) With respect to TexPirg's answer to Interrogatory No. F7 of Applicant's First Interrogatories to TexPirg, TexPirg states that "if half of the cost of ACNGS were spent on conservation then the use of solid waste would eliminate the need for any nuclear plant." Explain exactly how much load could be reduced on HL&P's system by expenditure of half the cost of the ACNGS for conservation measures, and provide the source of your answer. (b) Specify the revisions in the annual and peak hour demand shown in FS-FES Table S.8-8 for the years 1985, 1986 and 1987 which would result from incorporation of TexPirg's conservation measures.

INTERROGATORY NO. 20. (a) With respect to the answers to Interrogatories Nos. F7 and F8 of Applicant's First Interrogatories to TexPirg, state how TexPirg determined that Dow Chemical, Amoco, Shell, Exxon, Browning Ferris and Monsanto are planning self-generation of their electricity requirements. If this information was obtained directly from the foregoing companies, provide the name of the person at each company who communicated such information to TexPirg. (b) With respect to TexPirg's answer to Interrogatory No. F9,

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state whether TexPirg has any documents or studies showing that HL&P's industrial customers can generate electricity more cheaply and more reliably than HL&P. If TexPirg has no such information state the basis for the answer provided in response to Interrogatory No. F9.

INTERROGATORY NO. 21. State whether Dr. Wells has been retained at this time to testify on behalf of TexPirg.

INTERROGATORY NO. 22. State whether any further work is being done to provide answers to Interrogatory Nos. F13 and F14 of Applicant's First Interrogatories to TexPirg, and if so, by whom.

INTERROGATORY NO. 23. Paragraph No. 78 of the Partial Initial Decision issued in this proceeding on November 11, 1975 states that "The records show that there will be sufficient crop land available to meet projected agricultural needs through the year 2020. Various studies project differing land requirements necessary for agricultural production during the life of the ACNGS but the authorities agree that availability of land will not be a limiting factor on agricultural production in the United States in the foreseeable future...." Provide copies of any documents upon which TexPirg intends to rely in demonstrating that this conclusion is erroneous and/or based on studies which are so speculative as to be unreliable.

INTERROGATORY NO. 24. (a) Referring to the discussions between counsel and Mr. Doherty set forth at pages 87 through 94 of John F. Doherty's Deposition dated March 26, 1979, state whether TexPirg now regards the limitations on chlorine discharge set forth in the EPA permit for the Allens Creek project as satisfying TexPirg's concern with respect to chlorine discharges into the lake, and if not, why not and who within TexPirg so concluded. (b) In addition, state whether TexPirg has concluded that the chlorine minimization study described in the EPA permit satisfies TexPirg's contention with respect to chlorine discharges into the lake and, if not, state the reasons why and who within TexPirg who so concluded.

INTERROGATORY NO. 25. State whether TexPirg believes that the chlorine minimization study referenced in Interrogatory No. 23 hereof should be done prior to plant operation, and if so, how the study could be done prior to plant operation.

INTERROGATORY NO. 26. Specify the amount of temperature change required to induce thermal shock for the different types of game fish normally found in lakes in Texas. Provide the source of your answer.

INTERROGATORY NO. 27. Provide the lethal level of chlorine for the type of game fish normally found in lakes in Texas. Provide the source of your answer.

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INTERROGATORY NO. 28. (a) State whether Applicant can generate enough electricity through solid waste combustion to replace the 1200 megawatt ACNGS. (b) If your answer is affirmative, state whether TexPirg's answer to Interrogatory No. D7 of Applicant's First Interrogatories to TexPirg is now in error, and if not, why not.

INTERROGATORY NO. 29. Provide copies of any documents showing that the average Houston homeowner could, through the addition of conservation retrofits to his home, reduce his utility bills by an amount sufficient to justify purchasing of the conservation retrofits.

INTERROGATORY NO. 30. At page 138 of Mr. Doherty's deposition he stated that there would be environmental effects from burning garbage for generation of electricity. Specify those environmental effects and provide the source of your answer.

INTERROGATORY NO. 31. (a) Specify every reason why TexPirg believes that Applicant cannot barge the reactor vessel up the San Bernard River without channelizing the river. Provide all assumptions used in answering this question (i.e, weight, length, and width of the reactor vessel; length, width and depth of the barge; width and depth of the San Bernard River at the point where TexPirg alleges the river will have to be channelized; etc.). (b) Specify all

adverse environmental effects which TexPirg alleges will result from Applicant's plan to move the reactor pressure vessel to the site by barging to an unloading point on the San Bernard River and transporting the reactor vessel overland to the site from that point. (c) State who answered this interrogatory. (d) Provide the name of TexPirg's expert witness on this contention.

INTERROGATORY NO. 32. (a) With respect to TexPirg Contention 10, explain what, in your view, Applicant must do in order to demonstrate compliance with 10 CFR Part 50, Appendix A, Criterion 31, with regard to intergranular stress, corrosion and cracking. In so doing, explain why the current metal content provided in the ACNGS design will not withstand excessive oxygen levels, superposed loads, and residual stresses. (b) Identify any documents relating to the NRC investigation of stress, corrosion, and cracking problems at other BWR units and identify the specific portions of those documents which indicate that similar problems may occur at ACNGS. (c) State who answered this interrogatory. (d) Provide the name of TexPirg's expert witness on this contention.

INTERROGATORY NO. 33. (a) With respect to TexPirg Contention 11, specify the basis for your assertion that Applicant has not adequately assessed the effects of flow-induced vibration on jet pumps, spargers, fuel pins, core instrumentation, and fuel rods. In so doing, identify the five

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BWR units which experienced feed water sparger failures from 1975 to 1976 as a result of flow-induced vibration and state whether the feed water spargers on those plants are exactly the same as those planned for ACNGS. (b) State who answered this interrogatory. (c) Provide the name of TexPirg's expert witness on this contention.

INTERROGATORY NO. 34. (a) With respect to TexPirg Additional Contention 6, provide the calculation used in determining that the water within the weir wall will not clear the first row of vents before the differential pressure exceeds 28 psi. (b) Define "mannings roughness factor" and identify the source of this factor as included in your calculation of drywell differential pressure during a LOCA. (c) What do you calculate to be the peak differential pressure reached during this accident? Provide the calculation that shows this value. (d) Show that portion of the calculation demonstrating that a proper accounting for the mannings roughness factor delays the time to clear the first row of vents by 0.5 seconds. (e) Provide the calculation that shows that the sequence of events postulated in TexPirg Additional Contention 6 will lead to a containment vessel pressure in excess of 15 psig. (f) Provide the basis for the statement that a containment vessel pressure in excess of 15 psig will cause the containment vessel to crack. (g) State who answered this interrogatory. (h) Provide the name of TexPirg's expert witness on this contention.

INTERROGATORY NO. 35. (a) With respect to TexPirg Contention 8, explain the basis for the statement that Applicant only has a manually operated SCRAM system as its redundant system. In so doing, specify the exact changes that need to be made in the Applicant's SCRAM system in order to provide a sufficiently redundant SCRAM system. (b) State who answered this interrogatory. (c) Provide the name of TexPirg's expert witness on this contention.

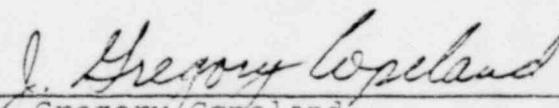
INTERROGATORY No. 36. With respect to TexPirg Contention 12, answer the following: (a) On what basis do you assert that ACNGS electrical wiring is susceptible to fast flaming? (b) What features of the cable configuration and fire protection systems simulated in the U.L. test do you contend are similar or identical to the ACNGS design? (c) What modifications to the Commission's fire protection criteria do you contend are necessary? (d) Define the term "fast flaming." Provide in your definition all quantitative values for flame propagation. (e) State who answered this interrogatory. (f) Provide the name of TexPirg's expert witness on this contention.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Houston Lighting & Power Company's Second Set of Interrogatories to TexPirg in the above-captioned proceeding were served on the following by deposit in the United States mail, postage prepaid, or by hand-delivery this 18th day of May, 1979.

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