



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

HOUSTON LIGHTING AND POWER CO.

(Allens Creek, Unit 1)

X
X
X
X
X

Docket No. 50-466

NRC PUBLIC DOCUMENT ROOM

TEX PIRG'S RESPONSE TO H L&P'S SECOND SET OF INTERROGATORIES

Tex PIRG submits the following answers to the questions.

1. Building Allens Creek at the S. Texas construction site prevents environmental damages to the farm land, fresh water, wildlife, and nearby people and only 1/5th as many people would be exposed to the safety dangers from the plant within the 50 mile radius. The NRC staff says that 17,700 acre-ft per year would be saved.
2. Page 10.7 of S. Texas ES. Also Houston L&P would not be so dumb as to build a lake that was planned for 4 units if it did not know that it had enough water for four (not just 3) units.
3. Applicant owns 11,152 acres at Allens Creek site of which the bottomland portion (about 9,000 acres) is Prime-1 farmland and the upland portion (about 2,000 acres) is prime-2 farmland. (b) I didn't know.
4. Page S.9-11 of Allens Creek final Supplement.
5. The Harris-Galveston County Subsidence District requires present users of ground water to convert to surface water. A large amount of Brazos River is already being diverted for use in the Houston area by the Brazos River Authority, i.e. Oyster Creek Canal system.
6. Rice, sorghum, corn, cotton, hay, and other crops that could be grown on the Allens Creek land would have to be transported longer distances (at high freight rates that will increase as energy increases in cost) (b) I don't know and it is not important to the local people. In some other state the local utility is telling them that the lake flooding their land is an insignificant part of the national total because the Allens Creek site will grow their crops. (c) I don't know, but they now grow cotton, rice, etc that is grown at the Allens Creek site.
7. I read that large operating nuclear plants contain more radioactivity than 1,000 atomic bombs the size of those dropped on Japan.

8. They are higher than that of the Brazos River where the Applicant did limited sampling for heavy metals. (b) No.
9. Common sense acquired by observation, reading, and page S.5-13 of Final ES for Allens Creek.
10. Utilities always try to operate their large base load plants such as nuclear plants during their peak use season which in the Houston area is in the summer.
11. These details can be obtained from Gulf Coast Waste Disposal Authority and Browning and Ferris Corporation by applicant easier than from Tex PIRG.
12. Greg Skie
13. (a) Greg Skie. (b) Mr. Davies of Gulf Coast, head of Houston Solid Waste, and all Houston L & P management involved in not using solid waste.
14. We do not disagree with any of it. We believe that the capital cost of a nuclear plant is even higher, and that when fuel from refuse is added to other fuel instead of being burned alone that the cost per unit of electricity generated will be cheaper than that from nuclear power when all if the costs including environmental costs are considered.
15. (a) Not yet. (b) Mr. Greg Skie, not complete yet, we don't know yet. (c) We don't know details, but such factors should be considered in all generating plants. The amount assumed will be based on past experience and normal "learning curve" assumptions.
16. (a) Greg Skie concluded that after studying the matter. (b) Non-combustible materials such as metal are removed. (c) Prior studies. (d) That is a normal average for fossil fuel plants and refuse plants. (e) I don't know. (f) As of 1976, they were listed in our answer to question 5 of contention 5 of the Applicants First set of Interrogatories. I have no newer information yet.
17. I don't know his name, but he seemed to know what he was saying. Also the Houston Post recently indicated that the growth was even more. (b) experience, and the fact that all business assumptions of electrical growth, etc seem to project upon past fast growth in the Houston Area. For example a new business airport just opened up in Fort Bend County, and the City of Houston has just started planning for a new "Intercontinental" type airport near the Allens Creek site. (c) I don't know, partly because I don't know what the question was.

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18. The exact location is not yet known at least to the general public, The City will probably own the airport, the airport will be large like intercontinental, traffic will eventually be similar to that at intercontinental, the current status is that the City of Houston and the Chamber of Commerce both want the airport and are planning for it now.

19. 1,200 MWe, study by city of Seattle, Washington. (b) The annual demand for each of the years would be lowered by 10,512. thousand MWhr and the peak hour demand would be lowered by 1,200 MWe if only one half of the cost of Allens Creek was efficiently spent to cause conservation in the Houston area.

20. By talking with people at the City of Houston, and Gulf Coast Waste Disposal Authority, and reading the newspaper. (b) The companies would not be planning to generate their own electricity unless it was cheaper and more reliable.

21. No, but we hope that he will.

22. Not as of this time.

23. We have no documents, but strongly dispute any attempt or statement that claims that thousands of acres of rich farm land can be removed from production in a local area and not affect the production of crops in that local area.

24. (a) We have no copy of what Mr. Doherty said about Chlorine discharges since you will not let either Mr. Doherty or anyone else have a copy of his deposition to read. Mr. Doherty does not work for Tex PIRG any more, and was not authorized to say that Tex PIRG was not concerned about chlorine discharges that are twice the levels allowed by the board in the 1975 partial Initial Decision. Tex PIRG is as concerned as it ever was, very, about the level of chlorine discharges. WE are concerned about the bad effects on the fish and other aquatic life in the cooling lake for the same reasons that the NRC staff expressed in 1975. Only Mr Doherty, if anyone, said they were not concerned. (b) It does not, for the reasons stated above plus the fact that NEPA requires studies before action, not studies after it is too late to do anything about the bad results learned. The study results must go in the ES.

25. Yes, Houston Lighting and Power or NRC should fund or carry out an experiment to confirm both the amount of chlorine needed to keep the plant "clean", and what fish can tolerate.

It is amazing that plants could have operated for years, and yet the claim is stated that we still do not know these things. In fact it is known that such concentrations are harmful to fish and the Applicant does not wish to admit this. The Final ES clearly shows the harmful affects on page S.5-16,17,18,19. Since the chlorine harms the environment, the burden is on the applicant to find alternative ways to reduce the impact.

26. The staff of the NRC could find no such data, therefore the Applicant has not met his burden of proof that requires him to show that no harm can happen due to thermal shock.

27. Many organisms that Texas game fish feed on are affected by chlorine levels below 0.002 ppm, and fish are directly killed by levels as low as 0.004 ppm according to the information on page S.5.18 of the Final Supp of Allens Creek ES.

28. (a) Not now, but can replace about half of its capacity such that a single coal plant could replace it now. Also as the Houston area grows it will generate more waste and within the next 20 years it could replace the whole plant with waste alone. Also if all the waste in the Houston area was sent to one location then there would be enough to replace the plant by 1987 with a waste fired plant alone. (b) It is not in error, but considers only the present trash at what is now only one site in East Harris County.

29. We don't have any documents now, but everyone including the "Light Company", and the federal government encourage the public to conserve. For example by turning down the air conditioner control so that the temperature does not drop below 80 degrees in the summer can save huge amounts of electricity at no cost. Caulking cracks in windows and doors is almost free and a huge conservation benefit. Even the installation of insulation and solar water collectors(heaters) is said to have a rapid "payback" because of the reduced fuel bills.

30. I don't know what Mr. Doherty stated. He may have meant that burning trash causes some air pollution such as oil and coal. Or he may have meant good effects such as reduced radiation dangers such as those caused by nuclear plants.

31. The barge when loaded with the reactor vessel, the river will not be deep enough to go up the length of the river. This is especially true near the mouth of the river. (b) Dredging will change character of river such that it will cause destruction of much of the life in the river. Construction of the unloading dock will damage both the land and water near the site. Transportation of vessel along the roads to the Allens Creek site will destroy the roads and bridges. (c) Jim Scott (d) none yet.

32. (a) Meet that criteria. Many other plants approved by the same NRC did not meet that criteria under operating conditions. (b) I don't have any of those documents. Some of the reactors with similiar problems are: Dresden 1, Oyster Creek 1, Nine mile Point 1, LaCrosse, Elk River, Humbolt Bay 3, Dresden 2, Quad Cities 1 and 2, Millstone 1, Peach Bottom 3, Monticello, and Duane Arnold. (c) Jim Scott. (d) none yet.

33. The five reactors are Millstone 1, Pilgriam, Monticello, Dresden, and Quad Cities. Applicant has the burden to show that his system will work. (b) Jim Scott (c) None yet.

34. We have no such calculation, and don't need one. (b) "Manning's roughness factor" is the n in the Manning formula for hydraulic flow which is Velocity equals $1.49/n$ times (hydraulic radius) $^{2/3}$ times (Slope of channel) $^{1/2}$. (c) Over 35 psi (d) Not done (e) The excess pressure will destroy the drywell so that the pressure reduction from the surpression pool will not be achieved allowing the pressures inside the containment to rapidly reach levels much in excess of 15 psig. (f) The containment will not crumble at small pressures above 15 psi, but will at the excessive pressures generated during accidents. (g) Jim Scott (h) None.

35. (a) The SER. ~~(b)~~ A SCRAM such as that used in the N reactor at Hanford Washington should be used. (b) Jim Scott (c) None.

36. (a) Tests on similiar systems. (b) The cables are arranged and composed of materials similiar to those that failed the tests. (c) Each cable must be seperated far enough from all other cables such that fires from one can't spread from cable to cable nor jump from one cable to another. Also each cable must be fireproof. An automatic redundant spray system of different design must be able to reach the full length of all cables. (d) I don't know. (e) Jim Scott (f) None.

Served on all parties. June 6, 1973.
Secretary and Chairman Wolfe.

James M. Scott, Jr.

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