UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

THE ATOMIC SAFETY AND LICENSING BOARD

Sheldon J. Wolfe, Esquire, Chairman
Dr. E. Leonard Cheatum, Member
Gustave A. Linenberger, Jr., Member

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

ORDER
(March 10, 1980)

I. Rulings Upon Admissibility Of Those Outstanding Contentions Submitted By Parties And Petitioners Who Had Initially Filed Contentions Either Pursuant To The Order Scheduling Special Prehearing Conference Dated August 14, 1978 Or Pursuant To The Order Scheduling Special Prehearing Conference Dated October 24, 1978.[1/]

A. Framsons' Contentions

[On April 13, 1979, Madeline B. and Robert S. Framson filed six contentions which they indicated were based upon findings in a recently translated West German Report and thus that these contentions were based upon evidence available only after December 1975. Apparently, as of April 13, these petitioners were unaware of the Appeal Board's

1/ Prior Orders granted party status to certain petitioners and admitted certain of their contentions. The instant Order does not discuss those admitted contentions. Further, as is evidenced by our Order dated November 19, 1979, during the course of the special prehearing conference held between October 15 and October 19 1979, certain contentions were withdrawn and various other contentions were admitte pursuant to stipulations. Except where necessary those contentions are not discuss herein.

decision, ALAB-535, dated April 4, 1979, and of our Memorandum and Order dated April 11, 1979. Be that as it may, pursuant to our Order of April 11, we will proceed to consider the admissibility of these contentions, taking into consideration the applicant's and NRC staff's responses respectively filed on April 30 and May 2, 1979.]

1-6. As reworded by the Board, we admit, as Framsons' Contention 1, the substance of Contentions 1-6 - viz. that the Final Environmental Statement (FES) is inadequate in failing to consider the possibility of and the consequences of a serious spent fuel pool accident caused by human or mechanical error, or by earthquake or tornados. We specifically reject as being an inadmissible portion of this admitted Contention 1, the allegation that, according to the West German Report 290, a reactor meltdown or any other postulated Class 9 accident might precipitate a spent fuel pool meltdown. In Offshore Power Systems (Floating Nuclear Power Plants), CLI-79-9, 10 NRC __ (September 14, 1979), in deciding that the Licensing Board should proceed to consider the environmental consequences of a Class 9 accident at floating nuclear plants, the Commission stated that it was not expressing any views on the question of environmental consideration of Class 9 accidents at land-based plants and that it intended to complete the rulemaking begun in 1971 and to re-examine Commission policy in this area. Since the existing policy not to consider Class 9 accidents at land-based reactors was not set aside by the Commission, this portion of the contention is inadmissible.[2/] Moreover, the Board

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2/ We note that in its Memorandum and Order of September 14, 1979, the Commission requested that the staff "In the interim, pending completion of the rulemaking on this subject, bring to our attention, any individual cases in which it believes the environmental consequences of Class 9 accidents should be considered". We await the staff's notification to the Commission whether ACNGS is one of those

cannot admit contentions which are (or are about to become) the subject of general rulemaking by the Commission. Potomac Electric Power Company (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85 (1974).[3/]

Contention 1, as reworded by the Board, is admitted as an issue in controversy, their petition for leave to intervene is allowed, and the Framsons are admitted jointly as a party.

B. Marrack Contentions

[On May 24, 1979, Dr. David Marrack filed a brief in support of his Contentions 2(b) and (c), 3, 4 and 6. Our Order of April 11, 1979, among other things, had granted leave to this petitioner to amend these contentions, giving the bases with reasonable specificity. The applicant's and staff's responses were filed respectively on June 8 and June 11, 1979.]

2(c). This subpart asserts that neither the FES nor the Final Supplement (FSFES) addresses the effects of transmission lines on migratory waterfowl. In defense of this contention (Tr. 1270-1283) Dr. Marrack

Footnote 2 (continued):

cases in which it believes the environmental consequences of a Class 9 accident should be considered, and if there is such a staff notification, we will reconsider our ruling.

3/ In a Supplement to contentions dated August 3, 1979, the Framsons, in the main, merely restated that which appeared in their submission of April 13, 1979. In addition, however, they alleged that "Applicant has not dealt adequately with the additional hazard involved in the possible storage of spent fuel in closer proximity than originally planned". Being purely speculative, this contention is inadmissible.

provided a basis for its admission. Further, we admit subpart III of proposed Contention 4 and include that subpart with subpart (c). Contention 2(c), as admitted, now reads that neither the FES nor the FSFES addresses the impact upon migratory waterfowl along the transmission routes beyond the plant site, nor considers that this impact could be minimized by constructing the power lines to follow the Brazos River to the south of the site, then east and then north to the O'Brien substation.

3. This amended contention asserts that neither the FES nor its supplement considers the secondary environmental impacts of the proposed action upon agricultural productivity, flooding and drainage, and water supply. Both the FES (Section 4) and the FSFES (Section 4) discuss the environmental effects of construction, and Dr. Marrack fails to specify wherein these discussions are inadequate. Further, the Partial Initial Decision, 2 NRC 776 (1975), reflects the Board's findings upon agricultural productivity (fdgs. 65-78), upon flooding and drainage (fdgs. 26-33) and water supply (fdgs. 37, 38 and 49). In his argument at the special prehearing conference (Tr. 1287-95), Dr. Marrack contended for the first time that, should the plant be constructed, developments, such as new businesses, industry and subdivisions, would cause further secondary effects on modes of living in the area. Since Dr. Marrack did not specify the nature of the adverse impacts of these alleged new occurrences, we give no weight to his argument. The contention is rejected.

4. This amended contention consists four subparts. (Subpart III is discussed under Contention 2(c), supra and Subpart IV is discussed under Contention 6, infra). Subpart I alleges that the FSFES does not

discuss the South Texas Project site as being a better alternative site for the proposed plant in that the use of STP transmission lines, which being in place, would not further adversely affect migratory waterfowl and would, at least in a certain area, provide a haven. These allegations are based upon a faulty premise because, as indicated at page 9-12 of the FSFES, if the plant were constructed at STP site, additional transmission lines would have to be constructed. This subpart also alleges that the FSFES did not consider alternative grid connections from the STP site to the HL&P grid. This is error since this was considered at page 9-12 of the Supplement. Finally, this subpart asserts that there would be no construction impact at the STP site because this impact has already occurred in constructing STP Units 1 and 2. However, obviously, to construct the proposed plant at the STP site would have some impact. The FSFES in Section 9.2 discusses this subject and Dr. Marrack does not challenge, other than in a conclusional way, the staff's discussion and conclusions. Subpart I is rejected.

Subpart II asserts that the FSFES should have treated the Trinity River Basin site in the same, if not greater, detail than that accorded to the STP site. This subpart is rejected. Dr. Marrack argues that page 9-3 of the Supplement reflects that the applicant rejected the TRB site on the basis of current rather than future power networks and thus that the analysis was inadequate. However, he did not explain why it was important that future power networks be considered and did not indicate what those projections might indicate (Tr. 1299). Further, Dr.

Marrack asserts in substance that it is inexplicable that the applicant did not consider the TRB as a site since the staff at page 9-2 of the FES considered it favorably from a population density standpoint. We have read Section 9.2.1.3.1. of the Environmental Report which indicates that applicant did consider the TRB as being suitable for power plant siting in light of its population density but rejected it because it was less desirable than the Brazos River Basin in that the Trinity River is a prime source of high quality water for Houston and in that generally the TRB consists of a heavily wooded area undergoing extensive recreational development. Finally, he urges that it is unclear why the FES (p. 9-5) does not include TRB as being one of the two reasonable alternative sites. The answer is clearly set forth at page 9-4 of the FES - since Houston considered the Trinity River a prime source of high-quality water, the staff concluded that utilizing the Trinity River for power plant cooling would not be desirable. (Parenthetically we note that, during the special prehearing conference, Dr. Marrack asserted, without bases, that the Brazos River is also a prime source of high-quality water, and that accordingly the FES and its Supplement are defective in not comparing the water rights on the lower Brazos with the water rights of the Trinity River (Tr. 1305). The short answer is that there was no need to make such a comparison. Section 5.2.1 of the FES and Section 5.2 of the Supplement reflect that a contract between the Brazos River Authority and applicant permits the latter to divert up to 176,000 acre-ft/year of water from the Brazos River and includes provisions to protect the rights of downstream users during periods of low flow.)

6. This contention asserts that, prior to the hearing, the FES and the Supplement thereto, which not only reflect discrepancies and inconsistencies but also may have to be amended to reflect new information with regard to impacts of the off-loading facility on the San Bernard River, should be incorporated into a single document and distributed (i.e. recirculated) for comment. (Tr. 1306-12). Similarly, subpart IV of Contention 4, supra, alleges that the additional data on alternative sites, which the staff advises will be published in another supplement to the FES (Tr. 1313), must be incorporated into a single document and distributed for comment. This contention and the aforementioned subpart IV are inadmissible. Pursuant to 10 C.F.R. § 51.52(b)(3),[4/] if the findings and conclusions in our Initial Decision differ from those reached in the FES[5/] and its supplements, the FES will be deemed modified to that extent. Public Service Company of Oklahoma, et. al. (Black Fox

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4/ 10 C.F.R. § 51.52(b)(3) provides:

> . . . an initial decision of the presiding officer may include findings and conclusions which affirm or modify the content of the final environmental impact statement prepared by the staff. To the extent that findings and conclusions different from those in the final environmental statement prepared by the staff are reached, the statement will be deemed modified to that extent and the initial decision will be distributed as provided in § 51.26(c). If the Commission or the Atomic Safety and Licensing Appeal Board in a final decision reaches conclusions different from the presiding officer with respect to such matters, the final environmental impact statement will be deemed modified to that extent and the decision will be similarly distributed.

5/ NRDC v. Morton, 337 F.Supp. 170 (1972), cited by Dr. Marrack, is distinguishable from the case at bar. In our adjudicatory hearing, all relevant evidence will be adduced and fully tested regarding admitted contentions alleging that the FES and its supplements are deficient and/or inconsistent. See Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), ALAB-262, 1 NRC 163, 197 n. 54 (1975). Greene County Planning Board v. F.P.C., 455 F2d 412 (1972), also cited by Dr. Marrack, is distinguishable from the instant case. In Greene County, contrary to NEPA, the FPC staff had not issued an environmental statement prior to the evidentiary hearing.

Station, Units 1 and 2), ALAB-573, 10 NRC __ (December 7, 1979); Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 29 n. 43 (1978), affirmed sub nom. New England Coalition v. NRC, 582 F2d 87, 94 (1978); Niagara Mohawk Power Corporation (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347, 371-372 (1975); Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), ALAB-262, 1 NRC 163, 197 (1975); Texas Utilities Generating Company (Comanche Peak Steam Electric Station, Units 1 and 2) ALAB-260, 1 NRC 51, 55 (1975); Vermont Yankee Nuclear Power Corporation (Vermont Yankee Nuclear Power Station), ALAB-179, 7 AEC 159, 172 n. 25 (1974). Further, there is no provision in the Council on Environmental Quality's Regulations on Implementing National Environmental Policy Act Procedures, 40 C.F.R. 1500-1508, which mandates that an FES and any supplement thereto must be consolidated and recirculated for comments. Thus, we see no reason for directing the staff to consolidate the FES and any supplements thereto into one document and to recirculate it for comment. It should be noted, that after the issuance of the supplement to the FES, if Dr. Marrack desires to submit contentions relating to the additional data on alternative sites contained therein, he may move for leave to file new contentions pursuant to 10 C.F.R. § 2.714(b).

Dr. Marrack's Contention 2(c), as reworded, supra, is admitted as an issue in controversy. Having accepted the stipulation agreeing to the admissibility in part of Dr. Marrack's Contention 2(b) and to its consolidation with Rentfro Contention 2 (see Order of November 19, 1979, footnote 2)

the Board herewith allows Dr. Marrack's petition for leave to intervene and admits him as a party.

C. Potthoff Contentions

[On May 25, 1979, Mr. F. H. Potthoff, III, filed four new contentions. In our Order of April 11, 1979, we had granted leave to this petitioner to amend Contention 1, giving the bases with reasonable specificity, and to assert any additional contentions he might have advanced but for the limitation in our Corrected Notice of Intervention Procedures of September 11, 1978, which the Appeal Board in ALAB-535 had found unwarranted. Thereafter, the petitioner filed new Contentions 5 and 6 on June 1, 1979. Applicant filed its responses on June 8 and June 18, 1979. Staff filed its responses on June 11 and June 18, 1979. In an undated submission docketed on August 2, 1979, the petitioner amended Contentions 1 and 2. Applicant and staff respectively responded on August 16 and August 22. Mr. Potthoff amended Contention 3 on August 20, 1979, and, in an undated submission docketed on August 29, 1979, he amended Contention 4. Staff's responses were filed on September 17, 1979, which applicant supported. In undated submissions docketed on October 16, 1979, petitioner amended Contentions 1 and 3 and amended Contention 4 in an undated submission received on October 9.]

1. This contention, as twice amended, asserts that the integrity of Category I civil structures cannot be successfully maintained because applicant's PSAR does not meet the requirements of Regulatory Guide 1.76 (Tr. 924). This is erroneous because Section 3.3.2 of the PSAR cites wind velocities that are consistent with those set forth in said

Regulatory Guide. In addition, petitioner alleged that winds up to 500 mph have occurred in Texas and could hurl construction type equipment which could damage important buildings. However, he did not present a basis supporting the allegation that winds of such velocity have occurred (Tr. 924-25). Accordingly, the contention is rejected.

2. Original and amendment withdrawn (Tr. 927-28).

3-4. In Contentions 3 and 4, which were twice amended, petitioner contends that the FES inadequately considered large windpowered generators and solar photovoltaic cells as viable alternatives to the proposed 1200 MWe ACNGS unit, and cites the Project Independence Report (1974) as support. However, as the staff points out, said report merely concludes that wind systems will be operational within a relatively short time and merely predicted that a minimum of 274 MW of active electrical power generation would be available nationwide in 1980. Further, as the staff correctly points out, said report merely indicates that predicted 1985 total solar photovoltaic power generating capability for the entire United States will be between 114 and 342 MW,[6/] which is significantly less than that of the ACNGS. Thus, these two purported alternatives could not be available on a large scale commercial basis in the time frame in question and could not produce electrical energy equivalent to the rated

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6/ To his amendment of October 1979, petitioner attached two excerpts from some unidentified document. These two pages reflect that the nationwide solar photovoltaic electric power supply by 1985 would range from a 758 MW peak (for a business as usual scenario) to a 1605 MW peak (for an accelerated scenario). Even the higher range peak power value, assuming it could be attained nationwide, does not offer applicant a practical substitute for the ACNGS in its service territory.

capacity of the proposed nuclear facility. These two contentions are rejected.

5. Citing two studies made in the Pacific Northwest, petitioner alleges that, contrary to the analysis in the FES, no new generating capacity would be needed if the applicant initiated a program of conservation. This new contention is rejected. Petitioner does not specify any portion of the staff's analysis of conservation in Sections S.8.2.3, S.8.2.4, S.8.2.5 and S.8.2.6 of the FES Supplement which he believes to be in error. Further, he makes no attempt to connect the two Pacific Northwest studies with the potential for conservation within applicant's service area and thus, contrary to 10 C.F.R. § 2.714(b), fails to provide a basis for this contention with reasonable specificity (See Tr. 930-31).

6. Petitioner contends that a marine biomass farm of a certain size (100,0000(sic) acres) is sufficient to yield an annual amount of energy comparable to the output of the ACNGS and that it would cost $578 million. He cites the Federal Energy Administration's "Project Independence Report", November 1974, as his basis. Petitioner further claims that such a biomass farm is environmentally preferable and requests denial of the construction permit.

In their written responses, applicant and staff recommend that we reject this contention. Applicant argues it is merely a broadside assertion and the staff notes that the petitioner offers no basis whatever

for his allegation of environmental superiority of biomass production over the proposed facility. Applicant's and staff's objections are well-taken. Neither in his contention nor during the special prehearing conference (Tr. 931-32) did Mr. Potthoff provide a basis for alleging that such a large scale marine biomass farm would be an environmentally superior alternative. The contention is rejected. As was held in Consumers Power Company (Midland Plant, Units 1 and 2), ALAB-458, 7 NRC 155, 162 (1978):

> . . . That Act [NEPA] requires us to consider whether there are environmentally preferable alternatives to the proposal before us. If there are, we must take the steps we can to see that they are implemented if that can be accomplished at a reasonable cost; i.e., one not out of proportion to the environmental advantages to be gained. But if there are no preferable environmental alternatives, such cost-benefit balancing does not take place.

Mr. Potthoff's petition for leave to intervene is denied and he is not admitted as a party. See Part III, infra.

D. Doherty Contentions

[In a submission dated May 25, 1979, Mr. John F. Doherty, an intervening party, filed an amended Contention 4, and new Contentions 9 [7/] through 38 pursuant to our Order of April 11, 1979. Applicant's and staff's responses were filed respectively on June 11 and June 27, 1979. On July 11, 1979, Mr. Doherty filed Additional Contention 39. Again on July 24, 1979, Mr. Doherty filed Additional Contention 40. Applicant

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7/ In our discussion, infra, we have renumbered new Contention 9 as being Contention 9a.

and staff respectively responded on August 8 and August 14. Also on July 24, he filed amendments to new Contentions 23, 24 and 26. Applicant and staff respectively responded on August 8 and August 14. On July 31, Mr. Doherty filed amendments to new Contentions 28, 34 and 38. Staff and applicant respectively responded on August 14 and August 15. On August 7, he filed amendments to new Contentions 12, 22 and 29, and applicant and staff respectively responded on August 17 and September 11. On August 10, he filed Additional Contention 41. Staff and applicant respectively responded on August 15 and August 16. Again on August 10, he filed amendments to new Contentions 19 and 33, and applicant and staff respectively responded on August 17 and September 11. On August 20, he filed Additional Contention 42, and applicant and staff respectively responded on August 25 and September 11. Also on August 20, Mr. Doherty filed amendments to new Contentions 15, 16, 21, 38 and 39. The staff and applicant respectively responded on September 11 and September 28. On September 14, 1979, he amended new Contentions 11, 20 and 36, and reamended 4, and also filed Additional Contentions 43 and 44. Applicant and staff filed responses on September 28, 1979.]

4. (Amended on May 25 and reamended on September 14, 1979). Intervenor's original Contention 4, as amended by him in the cited submittals, asserts that applicant should be required to maintain flexibility of design in order to be able to adopt specific modifications to the ACNGS ultimately resulting from a resolution of the generic ATWS issue. In addition, the contention identifies numerous aspects of design flexibility. (Tr. 792-94). The intervenor appears to ignore staff's acceptance of

applicant's commitment to meet the staff's ultimate ATWS mitigation requirements (SER Supp. 2, § 15.2, p. 15-2), or, alternatively, intervenor fails to provide a basis for questioning the ability or the intent of the applicant to meet this commitment. Finally, the measures recommended to be taken by applicant to meet its obligations under its commitments are not litigable matters. This contention is rejected.

9a. This contention alleges that applicant's safety systems contain many nonsafety grade items of equipment not qualified under IEEE-279 that will compromise the ability of said systems to properly mitigate transients and that applicant thus violates General Design Criterion 29.[8/] Intervenor cites an NRR "Board Notification" document that raises concerns of the staff regarding nonsafety grade equipment. However, the staff's response to this contention identified the notification document (dated March 16, 1979) as dealing with nonsafety systems. The document thus does not support the contention, although the staff document does note that the staff is evaluating the need to increase safety margins through additional equipment surveillance, modification, or reanalysis of certain anticipated transients. Consistent with this position, the staff's SER Supp. 2 at page 15-2 notes that the applicant has identified certain nonsafety grade (i.e., not qualified under IEEE-279) systems or components used to mitigate certain transients, and that the applicant will be required at the operating license review to include this equipment in

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8/ During the special prehearing conference, intervenor asserted there was a discrepancy between the requirements of Regulatory Guide 1.29 and PSAR Table 3.9-4. This was an improper expansion of the scope of the contention (Tr. 807). However, this being a matter of potentional safety significance, we direct staff and/or applicant to present evidence in response to the following Board question: Should not control rods, control rod drives and their hydraulic control units (listed as Safety Class 2 in Table 3.9-4 of the PSAR) be treated as Seismic Category 1 in accordance with Regulatory Guide 1.29?

appropriate technical specifications that assure adequacy of the equipment.[8a/]

Intervenor al cites Table 3.10-1 of the PSAR, which lists a large number of components not qualified under IEEE-279; but he fails to acknowledge that this listing does not purport to deal with component criteria for safety systems. Nor does intervenor find any inadequacy with Section 7 of the PSAR that deals with the safety protection systems and their IEEE-279 qualification.

Thus, intervenor has provided no basis for questioning the applicant's ability or intent to conform to GDC #29 or to comply with the provisions of 10 C.F.R. § 50.35. The contention is rejected.

11. (Amended on September 14, 1979). This contention alleges that applicant has not provided adequate protection against the possibility of a loss of coolant accident (LOCA) in the ACNGS spent fuel pool; and therefore applicant should be required to arrange for off-site fuel storage so that each spent fuel load can be removed from the site as soon as safety of handling permits, but, in the interim, should be allowed only to store spent fuel in the containment building. The bases for this are intervenor's claims that:

a) Fuel pool cooling water supply and reactivity suppression measures are less reliable than the reactor's corresponding systems;

b) Evacuation of plant personnel due to a major incident at ACNGS Unit 1, South Texas Project, or Blue Hills facility would leave the fuel pool unattended even though the reactor may have been shut down and safely secured;

8a/ In light of a Board Notification of November 26, 1979 (BN-79-41), the staff shall present evidence as to the acceptability of using non-safety grade equipment for the mitigation of transients.

c) The unattended fuel pool could then experience coolant failure and coolant evaporation leading to criticality, overheating of fuel, fuel clad ignition, and the uncontrolled release of excessive radioactivity; a

d) Breakup of the pressure vessel (a Class 9 accident) could cause loss of water in the over-the-reactor spent fuel pool.[9/]

Applicant and staff would have us reject this contention because the bases are improbable and speculative. Applicant further notes that the evaporation of pool water would leave the spent fuel in a subcritical configuration. The merits are not before us in determining admissibility. We find this contention (exclusive of subpart (d)) to be admissible when rephrased to state that the applicant has not provided adequate design characteristics and operating safeguards to protect the integrity of stored spent fuel during unattended operation of the fuel storage pool or as the result of a design basis accident.

12. (Amended on August 7, 1979). It is claimed that the rod pattern control system proposed for the ACNGS is not reliable, thus possibly permitting a reactivity insertion accident during startup. The basis for this claim is alleged to be the large number of failures and malfunctions of such type systems at other BWR facilities, as reported in the literature.

Applicant and staff oppose the admission of this contention, both parties noting the lack of a basis for associating prior BWR rod control system problems with the ACNGS system. Staff also advises that a

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9/ As noted, supra, in the discussion of Framsons' Contentions 1-6, we are bound by the Commission's existing policy not to consider Class 9 accidents at land-based reactors. Accordingly, subpart (d) is inadmissible, and we do not have to reach and decide whether there are special circumstances making a Class 9 accident more probable here than elsewhere. In any event, no such showing has been made herein. (Tr. 812-15). However, as noted in footnote 2, supra, we may reconsider this ruling as to subpart (d).

different, improved system will be employed at the ACNGS. We do not consider the merits in deciding the admissibility of a contention. Intervenor's references to problems with earlier BWR systems (inclusive of an alleged reliability difficulty occasioned by foreign materials in the mechanism) are persuasive. This contention is admitted.

15. (Amended on August 20, 1979). It is claimed that the WIGLE code has been experimentally shown to be nonconservative with respect to estimating the energy from a power excursion accident. In the amendment, intervenor expands upon the experimental basis for his allegation. Thus, intervenor alleges that since applicant's lattice physics model gives results comparable to those from the WIGLE code, said model is also inadequate. Applicant and staff would reject this contention based upon their claims that the facts are otherwise. The merits of the contention are not before us. We find that this contention provides an adequate basis for intervenor's concern. The contention is admitted; however, we reject intervenor's advice regarding applicant's remedial options, if a problem is shown to exist, since this is not a litigable issue.

16. (Amended on August 20, 1979). Intervenor alleges that, especially in view of the high power density and high thermal output of the ACNGS core, the facility's ECCS will not perform effectively when needed because steam produced by hot fuel interacting with cooling water will blanket the fuel rods and prevent adequate transfer of heat away from the fuel. In so contending, intervenor either challenges the adequacy of the Commission's ECCS acceptance criteria (impermissible

before this Board) or he challenges the capability of the applicant's ECCS to meet these criteria, without providing any bases for questioning this capability. This contention is rejected.

21. (Amended on August 20, 1979). This contention is comprehensible to the Board if restated to allege that an overpressure transient in the ACNGS reactor may cause a sufficient degree of void collapse so as to generate a larger than expected reactivity excursion, the generic resolution of which could require significant modifications that ought to be considered at the construction permit review stage. The amended contention proceeds to allege that derating of the reactor will result from this resolution and that the construction of other facilities to make up the derated amount will be required.

The contention is rejected. Mr. Doherty merely speculates that derating may result from the resolution of this problem and that other facilities will have to be constructed. Further, he merely barrenly alleges that his environmental interests will be adversely affected by derating. Moreover, intervenor, although citing reports on reactor kinetics (Tr. 836), fails to establish any bases for his concerns about the magnitude of void collapse in the ACNGS and its impact on reactivity.

22. (Amended on August 7, 1979). The amended contention alleges that, because of greater fuel burnup, there may be sufficient neutron absorption in the ACNGS control rods to cause control rod cracking and

loss of effectiveness, thus necessitating prolonged plant shutdown for repair. Such shutdown, intervenor then claims, will adversely affect his environmental interest because other fuels will have to be used which will have more severe environmental impacts. Additionally, he alleged that a cold shutdown may not be achievable and thus endanger his safety.

The contention, as amended, is rejected because Mr. Doherty gave no bases in support of his allegation that cracked control rods will lose a sufficient amount of absorber material to prevent a cold shutdown. Further, he gave no basis for asserting that the duration of the repair shutdown would be so prolonged as to require applicant to resort to dirtier fuels. (Tr. 837-45).

23. (Amended on July 24, 1979). This contention as stated in intervenor's submittal of May 25, 1979, claims that a LOCA caused by a pressure surge or coolant flow blockage will not be adequately mitigated by the ECCS of the ACNGS. In his amendment to this contention, dated July 24, 1979, intervenor postulates the occurrence of such an event at a reactor power level 2% above licensed power level.

Intervenor conceded that this contention challenges 10 C.F.R. 50, Appendix K and advised that, as promptly as possible, he would file a petition for waiver or exception pursuant to 10 C.F.R. § 2.758 (Tr. 846-47). Inasmuch as intervenor has not so petitioned as of the date of this Order, we adjudge that he has abandoned this contention.

24. (Amended on July 24, 1979). Based upon his interpretation of a General Electric Report (NEDO-10527) and the PSAR for the Montague Nuclear Plant, intervenor alleges that a rod drop accident in the ACNGS

can produce a 2.5% reactivity increase resulting in an unacceptably high energy release. Intervenor then contends that the reactivity worth of each control rod in ACNGS must be limited to no more than 1.4% in order that a peak energy yield of less than 280 cal./gm of fuel will result from a rod drop accident. Intervenor fails to show how either a 2.5% or a 1.4% rod drop reactivity increase relates to the ACNGS design and accident analysis. Furthermore, his proposals as to how the applicant should achieve a limitation on rod reactivity worth are rejected.

However, intervenor has demonstrated a basis for concern about rod drop accidents. This contention is reworded to state that the applicant has not provided a basis for showing that the reactivity insertion from any dropped control rod will be sufficiently small to prevent the peak energy yield from exceeding 280 cal./gm of fuel. The contention, as reworded, constitutes a litigable issue and is admitted.

25. Citing the Fermi -1 accident and NUREG-0401, "Fuel Failure Detection in Operating Reactors", March 1978, as bases, the first part of this contention 10/ alleges that applicant's fuel flow blockage accident analysis should assume that coolant flow to more than one fuel assembly may be blocked either by loose parts or by a misaligned control rod. (Tr. 856-57). Presenting a safety matter that is of concern to the Board,

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10/ The second part of this contention was admitted during the special prehearing conference (Order of December 17, 1979).

even though the Fermi plant design may be dissimilar to that of ACNGS, this part of the contention is admitted.

27. Intervenor cites incidents at three reactor facilities (SL-1, Dresden, and Three Mile Island) as providing foundation for the allegation that the concrete in the pedestal beneath the ACNGS reactor may be sufficiently weakened by heat from a design basis accident to compromise the safety of the plant after its subsequent return to operation. Although intervenor has provided no explicit basis to establish any relevancy between the design of the ACNGS and the design of the three referenced facilities, he has provided a sufficient basis for questioning the interaction of the pedestal concrete with the structural integrity of the reactor vessel support. The contention is admitted.

28. (Amended July 31, 1979). This contention alleges that the ACNGS reactor can experience a control rod ejection event that would result in a more rapid reactivity insertion rate than would result from a rod drop accident because pressure from the containment and the scram discharge volume tank can forcefully eject a rod. Cracks in penetration welds are cited as a viable mechanism for causing this forced ejection, which allegedly would be followed by a reactivity excursion accident. Intervenor claims that applicant has not adequately analyzed the consequences of such an event nor designed for preventive measures.

The applicant would reject this contention based on design information that shows that these sources of pressure are not available to eject a rod. We do not consider the technical merits. Staff would also reject the contention as speculative and unclear. We find that

intervenor has presented an adequate basis for concern about the postulated occurrence. The contention is admitted.

29. (Amended August 7, 1979). As amended, this contention consists of the following two sentences: "Intervenor contends there is insufficient assurance that postulated failures would [not] lead to unacceptable blockage of the submerged intake canal. These insufficiencies present a risk of meltdown of core if residual heat removal system water is insufficient after a core damaging accident." 11/

Staff opposes the contention, stating that applicant has commited to a design that would be immune to unacceptable blockage. Applicant opposed the two sentence contention for lack of basis (Tr. 1057-66), whereupon intervenor offered, as his basis, staff's discussion in Supplement 2 of the SER, Section 2.5.4 (1). There, staff acknowledged applicant's design commitment but stated that staff's ultimate approval must await its own review of applicant's final design analysis, prior to permitting applicant to initiate excavation for the canal. We accept this as a sufficient basis to inquire further. The contention is admitted.

33. (Amended on August 10, 1979). The amended contention asserts that the negative reactivity effect from Doppler broadening on neutron behavior has been overstated because GE used experimental results based

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11/ During the special prehearing conference (Tr. 1065), the original Contention 29 was withdrawn as well as all of the amended contention except for the first two sentences.

upon particles of fuel dispersed in the reactor coolant rather than upon a contained, pelletized, oxide fuel form. This in turn is claimed to generate a potential safety hazard with respect to power excursions. Intervenor further prescribes remedial measures to accommodate this situation. (Tr. 1068-82).

Applicant and staff oppose on technical grounds. We do not consider the merits at this stage. Accordingly, we admit the contention as a litigable issue, exclusive of the prescribed remedial measures.

35. Intervenor alleges that, unless applicant is required to train welders, improper welds, costly rewelding, and potential safety hazards will arise. A partial basis for this contention is claimed to derive from unsatisfactory weld performance experience at STP. (Tr. 1085). This is a safety matter of concern to the Board. The contention is admitted.

36. (Amended on September 14, 1979).[12/] Intervenor contends that bypass leakage through the drywell wall penetration provided for vacuum breakers represents an unresolved safety issue citing the SER, as his basis. He notes staff's dissatisfaction with applicant's analysis of the matter because mass transfer effects were allegedly not considered. Bypass leakage is alleged to be most likely in the event of an inadvertant initiation of containment spray.

Applicant and staff recommend the rejection of this contention since the second supplement to the SER is said to have resolved this issue, and the nature of the resolution is discussed. At the special prehearing conference, intervenor offered no support for his contention. Accordingly,

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12/ During the special prehearing conference, the Board denied Mr. Doherty's request to submit a new Contention 36 as being untimely. Agreeing that it was a new contention, Mr. Doherty requested that we consider the admissibility of the contention as amended on September 14, 1979 (Tr. 1089-99).

it is rejected for lack of basis. However, having reviewed said discussion of the resolution of this issue, the Board requests that the staff respond to the following question during the evidentiary hearing:

> What is the technical basis for concluding that maintaining containment atmosphere temperature and relative humidity values within prescribed limits is a practical method for minimizing bypass leakage?

38A. Intervenor observes that rather than make the reactor heat removal system single-failure proof, applicant has provided what intervenor characterizes as an unnecessarily complex alternative system whose potential failure would involve a risk to intervenor's health, safety and economic interests. Intervenor contends that applicant should be required to design a system that is single-failure proof. Reference to pressure relief valve malfunctions in operating BWRs is offered as the basis for this contention.

Intervenor fails to show how pressure relief valve malfunctions at other facilities militate against applicant's proposed alternative operating mode for the heat removal system, nor how such malfunctions support intervenor's preference for a system that is single-failure proof. Nor does intervenor address any basis for postulating that the applicant's design does not meet Criterion 34-- Residual Heat Removal (10 C.F.R. Part 50, Appendix A), which does not require that the heat removal system without redundancies be single-failure proof. This contention is rejected for lack of specificity and adequate bases.

38B. (Submitted July 31, 1979; amended on August 20, 1979). This contention also addresses the reactor heat removal system, alleging that it fails to meet General Design Criteria 19 and 34 and is incapable of bringing the reactor to cold shutdown in 24 hours. We fail to see how Criterion 19 is relevant to the subject heat removal system, and indeed intervenor conceded it was irrelevant (Tr. 1112). Criterion 34 has been

addressed with respect to Contention 38A, supra. However, as intervenor points out, NUREG-0578 establishes the requirement that a cold shutdown be achieved in 24 hours. Accordingly, the contention is admitted to the extent that it asserts that contrary to NUREG-0578, the reactor cannot be brought to cold shutdown in 24 hours.

38C. (submitted July 31, 1979). Intervenor again expresses concern about the reactor heat removal system, focusing upon the path that the cooling water must take through various subsystems and valves, and the potential for a hazardous system interaction.

Since intervenor's concern is totally vague and speculative about the possibility of a hazardous interaction that could compromise the ability of the ACNGS to respond appropriately to a LOCA, the contention is rejected. However, the intervenor did refer to two letters wherein the ACRS evidenced concern about the RHR system (Tr. 1124). Staff and/or applicant shall present evidence either to establish that the concerns of the ACRS are not applicable to ACNGS or that these concerns have been obviated by remedial measures. The ACRS concerns shall be treated as a Board question.

39. (Amended August 20, 1979). The amended contention alleges that subsequent to a LOCA the ACNGS may experience ballooning (clad swelling) of the fuel cladding that will prevent adequate cooling and in turn will result in clad failure and result in doses in excess of 10 C.F.R. Part 100 guidelines. Intervenor cites as bases references to reports involving a preliminary assessment of what might have happened to the fuel in TMI-2.

Intervenor failed to establish a basis for concern that Part 100 dose limits would be exceeded, nor did he provide a basis for concluding that the TMI-2 incident resulted in doses exceeding said limits. Intervenor did not establish a basis for comparing possible accident conditions at ACNGS with conditions in the TMI-2 accident that may have resulted in fuel clad swelling. Nevertheless, the cited reports do provide cause for concern about whether the ACNGS fuel will remain in a coolable geometry following a LOCA. Clad swelling is specifically addressed in 10 C.F.R. Part 50, Appendix K, § I.B., "Swelling and Rupture of the Cladding and Fuel Rod Thermal Parameters". We quote the following from the appendix:

> B. SWELLING AND RUPTURE OF THE CLADDING AND FUEL ROD THERMAL PARAMETERS
>
> Each evaluation model shall include a provision for predicting cladding swelling and rupture from consideration of the axial temperature distribution of the cladding and from the difference in pressure between the inside and outside of the cladding both as functions of time. To be acceptable the swelling and rupture calculations shall be based on applicable data in such a way that the degree of swelling and incidence of rupture are not underestimated.

In this context, we narrow the scope of this contention and restate it to allege that the applicant has not provided an adequate showing that the degree of swelling and incidence of rupture are not underestimated. So restated, this contention is admitted.

42. (Submitted August 20, 1979). This contention alleges that, to prote the health and safety interests of intervenor, applicant should be required t provide ACNGS reactor operators with unambiguous information regarding the po

tions of power operated relief valves and safety valves. The TMI-2 Lessons Learned Report (NUREG-0578) is cited as a basis. The contention acknowledges applicant's commitment of August 9, 1979 to comply with the NUREG-0578 recommendations but notes that the method of accomplishment has not been described. Staff recommends the rejection of this contention on the basis of applicant's commitment, albeit unparticularized, because said commitment satisfies 10 C.F.R. § 50.35(a). This section, however, also speaks to reasonable assurance that an unresolved safety question will be satisfactorily resolved. To the Board, this means that it is appropriate during the construction permit hearing to inquire into the reasonableness of ways and means to accomplish the commited objective prior to the latest date for completion of construction of the proposed facility. Intervenor has established a legitimate concern and the contention is admitted.

E. Tex Pirg Additional Contentions 13/

[Subsequent to our Order of April 11, 1979, Texas Public Interest Research Group (PIRG), an intervening party, submitted Additional Contentions 1 - 43 and 45 - 50 on May 16, 1979. In our discussion, infra, we have renumbered these as being Additional Contentions 7 - 55. Applicant's

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13/ Inadvertently footnote 5 in our Order of November 19, 1979 failed to reflect that PIRG withdrew Additional Contentions 5, 14, 19, 21, 23, 24, 27, 28, 29, 31, 37 and 40. (Tr. 1050-51). These withdrawn Additional Contentions as renumbered by the Board are identified as follows: 11, 20, 25, 27, 29, 30, 33, 34, 35, 37, 43, and 46. Further, initially, said footnote erroneously reflected that applicant, staff and PIRG had stipulated to the admissibility of PIRG's Additional Contention 3 and that the Board had accepted the stipulation, but then correctly noted that said contention had been withdrawn.

and staff's responses were filed respectively on May 31 and June 5, 1979. In a submission filed on June 15, 1979, PIRG amended certain of its additional contentions which, as renumbered above, are Additional Contentions 34, 44, 46, 48 and 55. The staff and applicant filed responses respectively on July 6 and July 10, 1979. In a submission filed on September 12, 1979, PIRG amended certain of its additional contentions. Therein, PIRG deleted Additional Contentions 8, 14 and 48 (which had been so renumbered by the Board) and replaced them with an Additional Contention which we have renumbered as No. 8; it amended Additional Contentions 9, 12, 22, 31 and 32 (which had been so renumbered by the Board). Applicant and staff responded on September 28, 1979.]

7. There are three subparts to this contention. First, it is alleged that the FES Supplement is inadequate because it addresses only one unit whereas applicant ultimately plans to have at least two and eventually four nuclear units at the proposed site as evidenced by the claim that the cooling lake is too large for one unit.[14/] This subpart is rejected because, even assuming that at some time in the future applicant may apply for a permit to construct one or more additional units at the site, the pending application is for a license to construct only one unit. In Kleppe v. Sierra Club, 427 U.S. 390, 409-410 (1976), the Supreme Court explained that Section 102(2)(C) of NEPA may require a comprehensive impact statement in certain situations where several proposed actions are pending at the same time - i.e., ". . . when several proposals for coal-related actions that will have cumulative or

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14/ During the special prehearing conference, PIRG argued that the cooling lake for only one unit was too large and thus, to avoid adverse environmental impacts, its size should be reduced (Tr. 1449-52). However, PIRG failed to point to any inadequacies in the FSFES analyses regarding lake size and environmental impact.

synergistic environmental impact upon a region are pending concurrently before an agency, then environmental consequences must be considered together". Further, at page 410 n. 20 of its opinion, after observing that respondents appeared to seek a comprehensive impact statement covering contemplated projects in the region as well as those that already have been proposed, the Supreme Court noted that:

> ". . . The statute, however, speaks solely in terms of proposed actions; it does not require an agency to consider the possible environmental impacts of less imminent actions when preparing the impact statement on proposed actions. Should contemplated actions later reach the stage of actual proposals, impact statements on them will take into account the effect of their approval upon the existing environment; and the condition of that environment presumably will reflect earlier proposed actions and their effects . . ."

In subpart two, PIRG alleges that, contrary to NEPA, the FES does not sufficiently consider (a) alternative sites, (b) the effects on the Houston population from a core melt or steam explosion at other sites, and (c) alternative ways to transport the pressure vessel to each of the alternative sites. This subpart is rejected. As is apparent from our discussion of subpart IV of Marrack amended Contention 4, supra, with regard to allegations (a) and (c), the FES need not be physically amended to include either the additional data on alternative sites (which we understand the Staff will present in a supplement to the FES) or alternative ways to transport the pressure vessel to the alternative sites (which we assume will be dealt with in the supplement to the FES). To the extent our findings and conclusions in the Initial Decision differ

from or add to those reached in the FES, the FES will be deemed modified to that extent. Again, as is apparent by our discussion of Marrack Contention 6, supra, not only is there no requirement to physically amend the FES, there is no requirement for the recirculation of such a modified FES. With regard to allegation (b), Class 9 accidents need not be considered (see our discussion of Framsons' Contentions 1-6, supra). Further, PIRG's advertence to such accidents that might occur at other sites is clearly irrelevant and speculative.

In subpart three, PIRG contends that the FES and Supplement are not sufficiently detailed and leave for further study, for example, the effects of chlorine discharges into the lake, the effects of heavy metals in the lake, and the impact upon fish in the lake, and thus the FES must be amended and circulated. These examples have been placed into issue in PIRG's admitted Contention 2, will be litigated, and as discussed previously, the FES need not be physically amended or circulated. This subpart is rejected.

8. (PIRG's Additional Cententions 2, 8, and 42 were replaced by Amended Additional Contention 1 on September 12, 1979. Said Amended Additional Contention 1 was admitted by the Board (Tr. 1596), and has been renumbered as PIRG Additional Contention 8).

9. (This was PIRG's Amended Additional Contention 5 which we have renumbered as Additional Contention 9). Intervenor asserts that neither the PID nor the FSFES examined in adequate depth the vertical distribution of temperature in the ACNGS cooling lake; that in the summer most game

fish will not have access to good oxygen supply in the upper layers of water, because the water will be intolerably warm for them, and thus the fish will suffer from inadequate oxygen. Support for this contention cites "performance reports" by the Texas Parks and Wildlife Department for Lake Livingston and Lake Conroe, and the NRC staff evaluation of the proposed Blue Hills nuclear plant in east Texas.

Both applicant and staff oppose this contention, since it is based on the assumption that the temperature of the lake will be stratified, contrary to the studies of both applicant and staff which concluded that the vertical temperature mix would be essentially uniform in the operating mode of the plant. It was further pointed out that the lakes cited by PIRG were deep water lakes and not comparable to the shallow ACNGS lake with depth varying from 13 ft. at low water to 18 ft. at high water levels (FES - Supplement, Fig. S.3.6; staff response 9/28/79, applicant response 9/28/79).

At the prehearing conference PIRG failed to provide any bases for challenging the validity of either applicant or staff arguments in opposition to the contention, or the adequacy of the cited studies of vertical temperature distribution which lead to staff's and applicant's conclusions (Tr. 1435-49). The contention, lacking bases, is rejected.

10. PIRG asserts that the once-through cooling system for the ACNGS is in violation of Sections 301, 306 and 316 of the Federal Water Pollution Control Act, and seems to imply that the NRC should require more stringent standards than EPA has imposed in its issuance of a permit

to the applicant for discharge into the ACNGS cooling lake (Final Supplement to the FES). However, the intendment of Section 511(c)(2) of the Water Act is to leave the substantive regulation of water pollution in EPA's hands, and, thus, the NRC may not undercut EPA by undertaking its own analyses and reaching its own conclusions on water quality issues already decided by EPA. Tennessee Valley Authority (Yellow Creek Nuclear Plant, Units 1 and 2), ALAB-515, 8 NRC 702 (1978). Thus, we lack jurisdiction to set more stringent standards than EPA has imposed. Moreover PIRG has provided no basis for the assertion that "even one unit will prevent game fish from propagating". Intervenor further argued that since the NRC is responsible for the FES, it has to decide whether the requirements of the Section 316 permit are going to be met by the applicant, and whether the applicant can do so is still an open question which the NRC must decide (Prehearing Conf. Tr. 1469-72). We find this argument unpersuasive. Issuance of the permit is evidence of EPA's position that the applicant must meet the water quality standards imposed. Responsibility for enforcing compliance with these standards is not within the jurisdiction of this Board. Accordingly, the contention is rejected.

12. (PIRG's Additional Contention 6 was amended and combined into PIRG's Amended Additional Contention 2, which the Board has renumbered as PIRG Additional Contention 12. The contention was admitted (Tr. 1596)).

13. Intervenor contends that cooling towers are superior to the cooling lake because (a) they use much less farm land and fresh water, (b)

the cooling lake is not a recreational benefit, (c) applicant now plans cooling towers for its Fort Bend county coal plant and (d) use of the cooling lake is contrary to the "Clean Water Act". This contention is not in compliance with our April 11, 1979 Order which permitted the filing of only those contentions which could have been filed but for restrictions in the corrected Notice of Intervention Procedures dated September 1, 1978. Furthermore, PIRG has submitted no new evidence in support of this contention (Tr. 1523-29) sufficiently substantial to disturb our ruling previously rejecting a similar PIRG contention (Board Order, February 9, 1979, p. 5). The contention is therefore inadmissible.

14. (PIRG's Additional Contention 8, which has been renumbered as 14 by the Board, was replaced by Amended Additional Contention 1 on September 12, 1979. See PIRG Additional Contention 8, supra.)

15. PIRG asserts that the applicant will not be able to meet the EPA standard for the uranium fuel cycle (40 C.F.R. 190) at the site boundary, that direct radiation from the plant alone when added to the other radiation from the plant could exceed the standard even without

accidents. Essentially this contention repeats PIRG's earlier Additional Contention 2 which was denied admission by this Board (Order Ruling on Intervention Petitions, February 9, 1979, pp. 10-12). During the course of oral argument (Tr. 1529-32), in substance, PIRG urged that, while operational levels of radioactive emissions will meet the NRC and/or EPA requirements, no consideration or analysis has been made as to the extent of and the effect of spent fuel being stored or of an accident occurring on site during the transport of radioactive wastes. Such an argument changed the scope of the contention and it is accordingly rejected as untimely. However, we request that the staff respond to the following Board questions:

> Is there an opportunity for the permissible site boundary radiation level to be exceeded by virtue of a gap in NRC and/or EPA regulations, whereby an on-site transportation accident gives rise to a radiation field which, when added to the ambient radiation level from normal plant operation (including radiation from stored spent fuel), might then result in a higher than permissible site boundary radiation level? If not, why not? If so, does this constitute an oversight in the staff's FES analysis?

16. Intervenor contends that the applicant cannot meet the requirements of 10 C.F.R. Part 50, Appendix E and 10 C.F.R. Part 100 because: (a) the proposed reactor is much larger than those considered when the regulations were issued; (b) the reactor is a new, untested design; (c)

the reactor is expected to release much more radiation than most plants; (d) the Houston area population growth projection east of the plant is such that more than 500 people per square mile will live within 30 miles of the plant during later stages of plant operation; (e) traffic is very heavy now and expected to get worse, such that it would be impossible to evacuate even a majority of the people expected to be affected by radioactivity from a maximum design basis accident; (f) Texas does not have an NRC approved evacuation plan; (g) frequent rains in the Houston area would increase danger from radioactive fallout; (h) because of these rains the proposed exclusion area and low population zone are not large enough to meet NRC requirements; and, (i) because of the large and growing Houston population, the population center distance should be much larger than normally required.

Both applicant and staff oppose admission of this contention and have stated their reasons in detail for each of the nine statements purporting to support the contention. No bases have been provided in support of subparts (a) and (b). Further, there are no regulatory specifications or restrictions on reactor size, and there is no regulation prohibiting the licensing of a reactor of new design. Regarding subpart (c), there is no regulatory requirement that radiation releases from ACNGS be as low as any other plant providing the applicant meets the dose limits established in Appendix I to 10 C.F.R. Part 50, and 10 C.F.R. Part 20, and PIRG failed to provide any basis to support its allegation that applicant cannot meet the requirements of these regulations. In addition,

subparts (g) and (h) appear to challenge this Board's findings in the Partial Initial Decision (2 NRC 776) on meteorology (fdgs. 131-133) without presenting "newly discovered evidence or a material change in circumstances" as required by the Appeal Board (ALAB-535, pp. 15-16). Accordingly, these subparts are rejected.

With respect to subparts (d), (e), (f) and (i), we are aware of the Commission's recently stated proposal to amend its emergency planning regulations, wherein it requested public comments upon certain contemplated amendments to 10 C.F.R. Part 50 and to Appendix E thereto and wherein it noted that it anticipated that its final rule would be published in early 1980. 44 Fed. Reg. 75167 (December 19, 1979). At this time we do not rule upon the admissibility of these subparts. After the issuance of the Commission's final rule, we will either rule upon admissibility or permit PIRG to amend said subparts.

17. Intervenor contends the applicant cannot devise a plan to protect the public's health and welfare against external or internal sabotage, in support of which it cites recent incidents at the Surry Plant, and in Argentina and France. There has been no showing of how these incidents demonstrate that the applicant will not be able to implement the security provisions required by 10 C.F.R. § 73.55 (Tr. 1539-40). Furthermore, PIRG has apparently ignored the ruling of this Board (Order Ruling Upon Intervention Petitions, February 9, 1979, pp. 13-14) dismissing PIRG's similar contention on the ground that there is no regulation requiring an applicant at the construction permit stage to consider and

specify the exact measures to be taken in implementing security plans for the plant. For these reasons the contention is again rejected.

18. The contention is that the NRC has failed to protect the public health and safety as well as the environment in limiting its consideration to design basis accidents rather than considering that which occurred at TMI-2. PIRG has failed to show any basis for asserting that a TMI-2 type of accident would have more severe consequences than the design basis accidents analyzed by applicant and staff. (Tr. 1541-43). Accordingly, the contention is rejected.

19. The first part of this contention asserts that the FES does not discuss the options available in the event the spent fuel pool becomes filled due to the lack of reprocessing plants and permanent storage facilities. We rejected a similar contention, Framsons' Contention 4, in our Order of February 9, 1979. The decision in Northern States Power Company, et. al. (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41 (1978), cited in our February 9th Order, was appealed. In State of Minnesota v. USNRC, 602 F2d 412 (1979), while remanding the ALAB-455 decision to the Commission for clarification and consideration in light of a related proceeding and other current developments, the Court of Appeals did not set aside or stay the license amendments, it rejected the claim of need for an adjudicatory proceeding, and it agreed that the Commission could properly consider the complex issue of nuclear waste disposal in a "generic" proceeding such as

rulemaking, and then apply its determinations in subsequent adjudicatory proceedings. In a Notice of Proposed Rulemaking, in response to the decision of the Court of Appeals, the Commission initiated a generic proceeding to reassess its degree of confidence that radioactive wastes produced by nuclear facilities will be safely disposed of, to determine when any such disposal will be available, and whether such wastes can be safely stored until they are safely disposed of. The Commission decided, however, that the issues being considered in the rulemaking proceeding should not be addressed in individual licensing proceedings. 44 Fed. Reg. 61372 (October 25, 1979). We are bound by the Commission's decision, and, accordingly, this part of the contention is rejected.

The second part of this contention asserts that the FES does not consider a spent fuel pool meltdown. Being a Class 9 contention, it is rejected for the same reason we rejected a portion of Framsons' Contentions 1-6, supra.

23. PIRG asserts that rupture of the existing liquid petroleum gas pipeline could cause an explosion near the plant sufficient to damage plant safety equipment and workers at the plant, and that either the pipeline or the plant must be moved. Both applicant and staff oppose admission of this contention on the grounds that applicant is committed to relocation of the pipeline if it cannot demonstrate acceptable resolution of the matter by the time it applies for an operating permit (SER, Supplement 2, p. 2-9). During the special prehearing conference, the Board indicated its concern about deferring the resolution of this issue. (Tr. 1546).

At the forthcoming hearing, applicant shall either advise that it commits to relocating the LPG pipeline as soon as possible after the time it may be granted a construction permit, or it shall establish that the extant LPG pipeline will not preclude a safe shutdown of the plant. The contention is admitted.

24. The contention is that the soils at the ACNGS site are unsuitable to support safely the heavy reactor building and that the South Texas Project reactor has already sunk eighteen inches. The contention is rejected because, contrary to 10 C.F.R. § 2.714(b), the basis for it has not been set forth with reasonable specificity. Other than relying upon third-hand hearsay, PIRG provided no basis for alleging that the STP reactor has sunk to the extent asserted (Tr. 1553-58). While PIRG made a minimal showing of the similarity of surface soils at STP and ACNGS, it did not show any basis for the ultimate inference that applicant's foundation design is in any way inadequate. Accordingly, the contention is rejected.

26. Intervenor asserts that the computer program used to calculate the stresses on the reactor and containment during the design basis and safe shutdown earthquakes is defective because first, it subtracts forces that should be added, and, secondly, because it uses the square root of the sum of the squares to add the stresses when the actual sum should be used as a worst case. In support of the first part of the contention, PIRG asserts that such a computational error has been made previously, resulting in the shutdown of five plants. A matter of concern to the Board has been raised and we admit this portion of the contention.

With respect to the second part of this contention, staff refers to Section 3.8 of Supplement 2 of the SER where it states its requirement that, but with one current exception, the absolute summation method is required to calculate stresses on systems and components, and that applicant in Amendment 49 of the PSAR has committed to apply the absolute summation method. The exception relates to stresses in the reactor coolant boundary and its supports. Since this exception, permitted by the staff, has not been specifically addressed by PIRG with a showing as to why it may be inadequate (Tr. 1559-61), the second part of the contention is rejected as vague and without basis.

31. (PIRG's Additional Contention 25 was replaced by Amended Additional Contention 3 on September 12, 1979, which has been admitted (Tr. 1596), and has been renumbered by the Board as being PIRG's Additional Contention 31).

32. (This was PIRG's Additional Contention 26, which was replaced by PIRG Amended Additional Contention 4, which we have renumbered as PIRG Additional Contention 32). PIRG asserts that applicant is not financially qualified to construct ACNGS because of overruns at STP, because of investors' increasing reluctance to invest, because of PUC's position on requested rate increases, and because of an anticipated decreased consumer demand. The instant contention is admitted for the reasons stated in admitting Baker Contention 1, infra, and these contentions as well as Cumings' Contention 1, infra, are consolidated.

39. This contention alleges that, in the light of unresolved generic safety issue A-11 regarding fracture toughness of reactor pressure vessel

materials, there is no reasonable assurance that the ACNGS can be constructed and operated prior to the resolution of this issue without endangering the health and safety of the public.

We have reviewed the discussions of Task A-11, addressing all reactors, in NUREG-0371, November 1978, and also in NUREG 0510, January 1979. Both documents indicate that the staff's concern lies with older, operating PWRs having potentially low toughness reactor vessel materials, not with new plants not yet licensed to operate. For this latter category of plants, NUREG-0371 states that "current licensing criteria are adequate to ensure suitable safety margins throughout design life . . ." (NUREG-0371, p. A-11/1). This same document then states: "However, the need exists to reconsider these current criteria in light of new methods that may be developed in the evaluation of low toughness materials <u>and to appropriately augment or refine these present criteria to include these new aspects and maintain NRC licensing consistency</u>" (ibid, emphasis added). This language, in our view, does not unequivocally eliminate the applicability of the low toughness problem to new BWRs. Applicant's response did not object to the admissibility of the contention. Staff recommended the rejection of the contention on the basis that Task A-11 is applicable only to operating reactors, a point not substantiated by a portion of the language of NUREG-0371 quoted above. Thus we find a basis for inquiring further (we note that this contention was not discussed at the special prehearing conference). The contention is admitted.

41. (Amended June 15, 1979). This amended contention questions the adequacy of protection of the reactor vessel against over-pressurization. It alleges in part that applicant's relief valve system and high pressure scram signal characteristics permit pressure in the reactor vessel to approach too closely for public safety (within 2.9 percent - Tr. 1564) the allowable limit of the ASME Boiler and Pressure Vessel Code. It also alleges that there are inaccuracies of ± 5.4 percent in the BWR high-flux instrumentation systems that may be called upon to initiate a scram. Thus, PIRG's concern is that a reactor transient could result in an unallowable over pressurization of the reactor vessel. Citing Supplement 2 to the SER, applicant and staff urge that over-pressurization could not occur for the reasons stated therein. We do not consider the merits at this stage, and, accordingly, the contention is admitted.

42. Intervenor alleges that applicant's emergency evacuation plan is inadequate to cope with the evacuation of the public from the Houston area - i.e. evacuation plans should be extended to a fifty mile radius from the proposed site (Tr. 1568). At this time we do not rule upon the admissibility of this contention. See our discussion regarding subparts (d), (e), (f) and (i) of PIRG's Additional Contention 16, supra.

45. It is alleged that there is inadequate redundancy in applicant's spent fuel pool cooling system to maintain its functional integrity over long periods of time. The contention refers to the reactor residual heat removal system in parallel with the pool cooling system as an inadequate form of redundancy; and the contention would require an additional system

to support cooling of the pool in the fuel handling building as well as to support the cooling of the fuel pool in the containment building.

Intervenor offers no basis for believing that a fully redundant system is necessary; shows no awareness of the extent to which the proposed system is or is not redundant; and offers no basis for questioning whether the proposed system meets 10 C.F.R. Part 50, Appendix A, General Design Criterion 61 (Tr. 1574-79). The contention is rejected.

47. It is claimed that intervenor's economic interests will be imperiled unless applicant undertakes a better survey of growth faults in the area of the proposed ACNGS site to prevent a compromise to the structural integrity of the plant. During the course of the special prehearing conference, PIRG stated that it was not challenging the PID's findings upon the issue of growth faults. (Tr. 1579). However, it argued that the PID had merely accepted staff's and the Geological Survey's agreement that applicant's subsidence monitoring program was feasible and had not made an independent finding that said program was adequate.

The contention is rejected for two reasons. First, economic harm absent an environmental relationship is not an issue cognizable by licensing boards. Tennessee Valley Authority (Watts Bar Nuclear Plant, Units 1 and 2), ALAB-413, 5 NRC 1418, 1421 (1977). Second, in finding 120 of the PID, the Board specifically found that "evidence of record demonstrates that the applicant's monitoring program could detect subsidence long before such subsidence presented a safety hazard. (Testimony of J. W. Mitchell, pp. 51-54, fol. Tr. 104)".

48. (PIRG's Additional Contention 42, which had been renumbered as 48 by the Board, was replaced by Amended Additional Contention 1 on September 12, 1979. See PIRG Additional Contention 8, supra.)

49. It is claimed that a design basis tornado-generated missile can sufficiently damage the off-gas charcoal system delay tanks so as to release an unacceptable amount of radioactivity. Intervenor alleges that applicant has offered no basis for concluding that such a release will result in a small fraction of 10 C.F.R. Part 100 guideline dose.

Applicant and staff oppose this contention and note that applicant's PSAR at Section 15.1.36 and Table 15.1 of the SER address the acceptability of the radiological impact of accidents involving total failure of the off-gas system. Neither in his contention nor during the special prehearing conference (Tr. 1588-89) did intervenor offer any basis to fault these analyses. Accordingly, this contention is rejected for lack of supportive bases.

50. This contention alleges that radioactivity in the vicinity of the ACNGS can cause a malfunction of aircraft electronic guidance systems, thereby increasing the likelihood of a crash that might damage the facility. Two crashes in the vicinity of nuclear plants (one of which purportedly may have been caused by nuclear radiation affecting guidance systems) are cited as the basis for this claim. While intervenor fails to establish a causal mechanism or plausible relationship between nuclear plant emissions and guidance system malfunctions, it did cite a newspaper article wherein an aircraft company executive purportedly stated that the crash of a military plane may have been caused by a "latching"

phenomenon. The contention is admitted.

55. (Amended on June 15, 1979). This contention alleges that rapid depressurization of the ACNGS reactor subsequent to a steam line break would result in liquid coolant replacing steam bubbles in the core which in turn would lead to a reactivity increase too rapid to be overridden by the response of the scram system. An Idaho Nuclear Engineering Laboratory report (IN-1370, 1970, p. 104) on BWR performance during a LOCA is cited in the contention as the basis for this allegation. During the special prehearing conference, intervenor cited publications that seemed to support this mechanism for achieving a reactivity increase (Tr. 1589-91). Intervenor contends that applicant should provide assurance that the ACNGS scram system will be capable of preventing an unacceptable reactivity increase from this kind of coolant behavior. The contention presents the essentials of a litigable issue and is admitted.

II. Ruling Upon Admissibility Of Contentions Filed By Petitioners Who Filed Contentions Pursuant To The Order Scheduling Special Prehearing Conference August 6, 1979, And Upon Other Matters.[15/]

A. Baker Contentions

[Mr. Bryan Baker submitted undated contentions which were served

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15/ A distance of fifty miles between the city of residence and the plant site will not preclude a finding of standing based upon residence in that city. Tennessee Valley Authority (Watts Bar Nuclear Plant, Units 1 and 2), ALAB-413, 5 NRC 1418, 1421 n. 4 (1977). All petitioners considered herein stated or indicated they resided within fifty miles of the proposed facility. All petitioners (except for Mr. Van Slyke whose lack of standing is discussed hereinafter) proceeded to show clearly in their petitions and/or in oral argument during the special prehearing conference that they satisfied the two tests for standing specified in Portland General Electric Company (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 613 (1976). First, said petitioners alleged some injury that has occurred or will probably result from the action involved, and, second, they alleged an interest arguably within the zone of interests protected by the statutes this Commission enforces.

on September 18, 1979 and added supportive material on September 29, 1979. Applicant and staff respectively responded on October 5 and October 9, 1979.]

1. Petitioner contends that applicant does not meet the requirements of 10 C.F.R. § 2.104(b)(1)(iii) and of 10 C.F.R. 50.33(f) with respect to financial responsibility. His basis relies largely upon information taken from applicant's application to the Texas Public Utilities Commission (PUC) for a rate increase, and from newspaper accounts of testimony during a portion of the PUC hearings. This information has lead petitioner to question the availability of adequate funding to enable applicant to construct the facility. Whereas the regulations do not require that a construction permit applicant must demonstrate the availability of secure funding (as argued by applicant and staff), the Commission, in the Seabrook proceeding, held "that the applicant must have a reasonable financial plan in light of relevant circumstances". Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2) CLI-78-1, 7 NRC 1, 18 (1978). The Board views this contention to be adequately framed, and to have a sufficiently particularized basis to justify its admission as an issue in controversy. We expect Mr. Baker and PIRG re: Additional Contention 32 to carefully read and be guided by the Seabrook Memorandum and Order with respect to financial qualifications. Baker Contention 1 is consolidated with PIRG Additional Contention 32, supra, and with Cumings' Contention 1, infra.

2. Petitioner contends that, because an unrealistically high plant availability factor of 80% is assumed, applicant's analysis of nuclear energy versus alternative sources of energy and its overall NEPA balancing of costs and benefits are unacceptably biased in favor of the proposed ACNGS. Petitioner cites a published analysis of historical plant availability data to support his thesis that a significantly lower and more realistic value of 50.4% should have been used. As applicant's written response reflects, petitioner fails to acknowledge that the FSFES (Table S.D. 14) compares generating costs of coal fired units with generating costs of nuclear units over a range of capacity factors that extends as low as 50%. This comparison finds nuclear plants more economical than coal plants even when operating at such a low capacity factor. The FES (Section 9.1.2.2) concludes that coal is the only feasible alternative fuel for comparison with nuclear fuel. The FSFES (pg. S.11-8) indicates that the staff makes no significant change to this conclusion. Petitioner provides no basis for challenging the staff's analyses. (Tr. 891-95). Accordingly, this contention is rejected.

Mr. Baker's petition for leave to intervene is granted, and he is admitted as a party.

B. Bishop Contentions

[On September 13, 1979 Mr. and Mrs. J. Morgan Bishop filed their contentions. Applicant and staff respectively responded on October 5 and October 9, 1979.]

1-3. The Bishops assert that the applicant has underestimated the population growth rate of Houston, and the rate it will spread toward the

ACNGS site; that applicant has grossly underestimated population growth in the area of the plant (Contention 2); that based on information supplied in the EIS, there will be a larger population within 50 miles of the ACNGS during its lifetime compared with other plants which applicant considered, i.e., North Anna, Calvert Cliffs, Susquehanna, Peach Bottom, Oyster Creek (Contention 3).[16/] Applicant and staff opposed. Petitioner answered applicant's and staff's objections by giving the following bases: (1) there is now rapid residential development westward of Houston consisting of at least 70 subdivisions, (2) Houston city limits have been extended westward 10 miles since 1970, (3) applicant stated the Houston residential area is expected to extend within 20 miles of the plant by 2020 A.D., whereas the residential areas are already within 20 miles of the plant site, (4) in the population sector between the Town of Katy and City of Houston, applicant estimated there would be 2300 people by 1985, and 4900 in the year 2020, whereas there are more people now in this sector than applicant projected 40 years from now, (5) applicant's county sector population projections for the year 2020 were based erroneously on percentages of the total population in that sector in the 1970 census because applicant assumed that all areas within the county will grow at the identical rate. A 1978 study of the Rice Center for Community Design was cited in support of these bases. (Tr. 910-13).

16/ The Board combines into 1, the three contentions summarized, supra, since they are based on one underlying assertion: namely, the applicant's methodology of population projection is in error (Tr. 911, 951-52).

Without reaching the merits, the Board determines petitioners have given an adequate basis for questioning applicant's methodology in arriving at its population projections and that in light of new population data, a reassessment of this matter is desirable in terms of meeting the requirements of 10 C.F.R. Part 100 in site suitability. Stated thus, the Bishops' Contentions 1, 2, and 3 are combined as Bishops' Contention 1, which is admitted.

4-5. Petitioners assert in Contention 4 that the proposed rerouting of the Texas Utilities Company's 24-inch natural gas pipeline will place said pipeline closer to a subdivision of a nearby city with a resultant increase of danger to residents that applicant has not adequately evaluated. Petitioners assert in Contention 5 that the proposed rerouting would bring said pipeline closer to the bank of the Brazos River where less stable soil conditions and potential changes of location of river channel increase the likelihood of pipeline rupture, with an attendant potential increase of danger to residents and property. Petitioners contend that each of the above considerations justifies requiring applicant to choose another, less dangerous route for the pipeline. Applicant and staff would have us deny both of these contentions because the relocated pipeline must satisfy state and federal criteria regarding safety and hence is not a matter within this Board's jurisdiction, and because the contentions are speculative and lack bases. The Bishops at oral argument (Tr. 956-64) asserted the following bases: that the relocated pipeline would lie about one mile closer to a nearby subdivision

(about 3 miles as currently located as compared to about 2 miles as proposed); that the relocation would result from approval of the proposed ACNGS plant and hence is a matter for the Board's attention; and that the Brazos River has moved about 500 feet westward (presumably toward the proposed pipeline route) from 1957 to 1972, a matter apparently not assessed for its pipeline safety implication. But for the construction of ACNGS, the pipeline in question, as far as we are aware, need not be relocated. While the enforcement of pipeline safety regulations is beyond our reach, applicant's obligation with respect to safety is not beyond our reach. Thus, in the interest of improved plant safety, applicant is not at liberty to take actions that might compromise the safety of residents of nearby communities. We, like petitioners, are unaware that the safety implications of relocating the pipeline have been assessed. The contentions are admitted.

6. Petitioners contend that the applicant has not dealt adequately with the possibly adverse impact upon the proposed facility of the rupture of a liquified petroleum gas (LPG) pipeline that is located in the vicinity of the proposed plant. This contention is similar to PIRG Additional Contention 23 and, as admitted, is consolidated therewith.

During the special prehearing conference (Tr. 969-977), petitioner argued that products other than propane and/or butane might be transported in the pipeline, rendering the explosion impact analysis inadequate. While we deem this to be an impermissible broadening of the scope of this contention, the Board requests that the applicant address the following question:

> Has it been definitively established whether said pipeline might carry potentially more dangerous materials such that, following a pipeline rupture, safe shutdown of the plant could be precluded?

7. Petitioners claim that the ACNGS cooling lake dam is inadequately designed to withstand explosion or erosion from rupture of the 24-inch natural gas pipeline (identified in Contentions 4 and 5) that will be

relocated near said dam, resulting -- in the event of pipeline rupture -- in flooding, loss of life, property damage, and loss of cooling water for the plant. For these reasons, petitioners would require either re-routing of the pipeline or redesign of the dam.

Staff and applicant cite finding 85 of the PID as evidence of prior litigation and a contrary finding regarding this issue. They further cite Supplement 2 of the SER wherein the staff has subsequently further analyzed the safety of the rerouted pipeline and found it acceptable. Both parties would have us reject this contention as lacking adequate bases.

The Board notes that the citation in finding 85 of the PID ("Testimony of Gammill, et al., p. 7 (fol. Tr. 303)") appears to be in error, since said testimony does not refer to pipeline safety. There is reference to pipeline safety by applicant's witness James Mitchell, at pages 5 and 6, following Tr. 104, wherein the safety of the "proposed station" is addressed, but without explicit reference to the dam. Likewise, the SER supplement referred to does not address an interaction between pipeline and dam.

During the special prehearing conference (Tr. 964), petitioners claimed that applicant's PSAR (citation not given) states "that a crater 97 feet in diameter and 18 feet deep could be generated by the detonation of a methane cloud, which they calculate could be generated from a break in the line." Petitioners view this as a threat to the integrity of the dam and the Board deems this consideration to be an adequate basis for inquiring further. Contention 7 is admitted.

8. Withdrawn (Tr. 977).

9. Petitioners claim that applicant has underestimated the effects on the plant from detonation of gas released from the pipeline considered in Contention 7, above, by virtue of having based the effects analysis upon conjectural assumptions. Petitioners contend that applicant should reevaluate these assumptions and the ability of the plant to withstand detonation forces. In recommending rejection of this contention, staff and applicant offer the same objections summarized in Contention 7, above. The staff's reanalysis of this matter (SER, Suppl. 2) involves the merits of the issue which we do not consider.

In appending bases to this contention during the special prehearing conference (Tr. 977-982), petitioners alleged that applicant's analysis assumed that pure methane would be the only product in the pipeline, whereas the possibility of the presence of other compounds resulting in more energetic explosions should be considered. Petitioners expressed concern that inadequate consideration has been given to the possibility that a gas cloud (following pipeline rupture) may drift toward parts of the ACNGS and engulf buildings, requiring that the center of detonation be considered as being at the plant itself. Petitioners also question applicant's assumptions about how promptly a pipeline leak might be detected and how quickly thereafter applicant could get the pipeline operator to valve out the leaking section of the line.

While we do not consider the merits of the staff's reanalysis of this matter in Supplement 2 of the SER, we do note that petitioners

fail to identify any basis for faulting this analysis other than through a challenge to the assumption of pure methane in the pipeline, which is of potential concern. There is also a basis for concern regarding the promptness in detecting a serious leak and in subsequently deactivating the pipeline. We deem that finding 85 of the PID is less than dispositive regarding these two concerns. Witness Mitchell, cited above, only offered the conclusional observation that the applicant's analysis of pipeline safety was adequate. Accordingly, the Board admits Contention 9 regarding the adequacy of pipeline safety analyses to the extent that it addresses the safety impact of two concerns: effective detection and deactivation of a leaking section of the pipeline; and, the potential for a greater than anticipated detonation energy release due to other than pure methane being discharged from a leak or rupture.

10. This contention alleges the existence of numerous pipelines on the Brazos River upstream from the plant that carry flammable and/or corrosive materials which, postulating a pipeline rupture, could enter the river and the ACNGS cooling lake and ultimately pose a hazard to the plant. Petitioners contend that applicant should redesign the plant or relocate the pipelines to eliminate this hazard.

As stated, this contention lacks sufficient bases to be acceptable, and applicant and staff recommend its rejection. During oral discussion, however, (Tr. 982-984) petitioners identified several such pipelines, alleging that the source of this identification primarily

came from applicant's own submittals (unidentified). Petitioners failed to identify any deficiency in applicant's treatment of these pipelines. Applicant's written response alleges that this subject was resolved in the PID at finding 87, and need not be relitigated. The PID citation supporting finding 87 references the same testimony noted above in the discussion of Contention 7, and again appears to be an incorrect citation not dealing with nearby industrial facilities, but rather with geology, soils, and seismology. Applicant's witness James W. Mitchell (prepared testimony, pages 5 and 6, following Tr. 104) presented a conclusional statement based upon applicant's PSAR supporting the absence of any pipeline safety considerations, but left in question whether the specific pipelines referred to in this contention had been considered. Mitchell's testimony identified several small industrial facilities in Wallis (four miles from the plant) which, he testified, would pose no safety hazard; but he offered no basis for that conclusion. This testimony did not deal with the large crude oil storage facility in Sealy (six miles from the plant) that is mentioned in finding 87 of the PID as posing no hazard.

Although this contention is borderline with respect to bases for admissibility, the Board is concerned that the PID may lack the evidentiary support needed to justify its conclusion regarding pipeline safety. Accordingly, Contention 10 is admitted.

11. Petitioners claim that periodic flooding of the Brazos River can change the course of the river and cut off the supply of cooling water to the proposed ACNGS, requiring shutdown. For this reason, it is

contended that applicant should be required to relocate the plant. Staff and applicant would have us reject this contention as being conjectural and without bases, especially since no safety consideration is raised. During oral discussion (Tr. 984-990), petitioners cited indications that the Brazos River channel shifts with time and repeated their concern that the effect of a flood could rather quickly eliminate the availability of river water, but did not view this as a safety problem. This being conceded, there is no litigable issue and the contention is rejected.

12. Petitioners contend that applicant has not adequately estimated the amount of contaminated water and radioactive material that will seep from the cooling lake into the Evangeline aquifer thus affecting drinking water of area residents. Both applicant and staff object to this contention as being without basis. In reply to objections (Tr. 990-1010) petitioners argued that the assumption of staff and applicant that the concentration of radioactive material in the subsurface will be equal to or less than the concentration of radioactive material in the cooling lake is erroneous, that build up of this material in the lake bottom, along the shoreline, and on walls of the numerous wells drilled by applicant in the lake bottom area and along the walls of possible fault cracks, will result in more highly contaminated seepage water reaching the aquifer than has been assumed. We have reviewed the pertinent sections of the FES and of the FSFES and concluded that this alleged concentration phenomenon has not been definitively discussed. Accordingly, we

admit the contention.

14. Petitioners contend that applicant's decision to build a nuclear plant rather than a coal fired plant at Allens Creek was based on inaccurate cost and environmental data, and had proper data been used, a coal plant would have been preferable. Staff and applicant opposed on the basis that the contention lacked specificity and provided no basis for challenging staff's and applicant's conclusions. Petitioners addressed these objections at the conference (Tr. 1019-24) and we admit the contention rephrased as follows: The FSFES § 9.1.2.3 is deficient in that (a) the environmental costs of coal were overestimated because these costs were based on a nationwide rather than on a source specific analysis, i.e., on an analysis of the Powder River Basin as the source of coal, using a coal slurry pipeline for delivery, and (b) the economic costs of constructing and fueling nuclear plants are escalating more rapidly than costs for constructing and fueling coal plants.

We admit this reworded contention because NEPA requires us to consider whether there are environmentally preferable alternatives to the instant proposal and, if there are, we must determine whether they can be accomplished at a reasonable cost - i.e., one not out of proportion to the environmental advantage. Consumers Power Company (Midland Plant, Units 1 and 2), ALAB-458, 7 NRC 155, 162 (1978).

15. Petitioners contend that health and safety of the public in the area of the proposed plant will be endangered by applicant's failure to: (1) adequately determine if surface faulting is present at

the site, (2) adequately determine what forces are present in the subsurface that might activate faults at the site, and (3) adequately design the plant to withstand forces due to earth movement along fault planes at the site.

Both staff and applicant oppose this contention since no basis was supplied for challenging the conclusions reached by applicant and confirmed by staff that faults underlying the site are nontectonic and pose no threat of surface displacement. Petitioners addressed these objections by arguing (Tr. 1011-18) that the vibroseis data on deep subsurface faulting were taken on too broad a grid pattern to conclusively rule out faulting at the site, that a "3-D technique" using a 50 to 100 meter grid should have been used for a conclusive determination on subsurface faulting. No new information on this matter was provided by the petitioners, and the Board finds no reason to reopen this subject since the matter was thoroughly considered and resolved in the Partial Initial Decision, fndgs. 108-112 (2 NRC 776). The contention is rejected.

16. This contention asserts that applicant has not adequately evaluated the impacts on safety due to the simultaneous occurrence of a probable maximum hurricane with an upper bound flood or a probable maximum flood, and due to erosion during flooding. Responses of both applicant and staff cited finding 91 of the PID as dispositive of this issue and recommended rejection of the contention. Neither the contention nor petitioners' discussion of the objections to it (Tr. 1024-1027) offers any bases for faulting the analyses that supported the PID. The Board again notes the same apparently erroneous citation in finding 91 that

refers to testimony of Gammill, et al., whereas it appears that the proper citation should have been the prepared testimony of applicant's witness James W. Mitchell, following Tr. 104, at pages 14-17. This testimony discusses the various combined effects of wind and flood actions that could produce the highest (extreme) water and wave conditions that might occur, albeit unreasonable to anticipate. The testimony further reports a commitment by applicant to provide watertight closures to an elevation higher (146.0 feet above MSL) than the maximum water elevation reached by waves (142.7 feet above MSL). Accordingly, the Board finds that the record adequately supports the PID conclusion regarding the safety impact of flooding. Since petitioners offer no basis for faulting that record, that portion of this contention dealing with floodwater, per se, is rejected. Petitioners' contention also includes a mention of adverse erosion effects due to flooding. That portion of the contention is devoid of any basis for support, nor did petitioners allude to erosion during the special prehearing conference. Thus the erosion part of this contention is also rejected as being without basis, as well as being speculative. Thus, the entire contention is rejected.

17. Petitioners claim that applicant has underestimated the adverse impact on the ACNGS of railroad accidents involving the release and/or detonation of train car loads of TNT, chlorine and other hazardous materials.

Both applicant and staff recommended rejection of this contention on the basis of an adequate record to the contrary supporting the PID, findings 85 and 87, wherein transportation safety and hazard considerations were found not to preclude site acceptability. At the special prehearing conference (Tr. 1027-1032), petitioners acknowledged applicant's commitment

to monitor for and take protective measures against the encroachment of chlorine, and in effect withdrew that portion of the contention. The remaining concerns were expressed with respect to two considerations: that the TNT explosion analysis dealt with the detonation of only one carload of TNT, whereas there might be several; and that hazardous materials other than chlorine might be carried by rail that could develop into threats to plant safety that have not been assessed. The complaint of petitioners stemmed from their inability to find evidence that applicant and/or staff had determined what quantities of hazardous cargoes are in fact carried by rail in the vicinity of the proposed plant site. Having reviewed the evidence presented in the earlier proceeding, this Board makes two observations: there appears to be no evidence regarding the type and amount of potentially hazardous cargoes that are carried on the rail line; and there again appears to be the same citation error wherein the reference to staff witness Gammill, et al., following Tr. 303 should have referred to applicant's witness Mitchell, following Tr. 104. Petitioners are deemed to have established a basis for further inquiry. Accordingly, this contention, with the deletion of consideration of a threat from chlorine, is admitted.

18. Petitioners claim that applicant should have designed the facility to withstand an airplane crash despite the fact that the nearest airport is more than ten miles from the proposed site. It is contended that a high likelihood exists for the near future siting of a commercial airport close to the plant for which reason applicant should relocate the site or redesign the plant. Staff offered no

objection to the admission of this contention if it were consolidated with TexPIRG's similar Contention 6, previously admitted by the Board (Board's Order, February 9, 1979). Applicant recommended the rejection of this contention on the basis that the issue has been previously litigated (PID, fdg. 86) and that no reason was provided for reopening the record. We note that the same apparent citation error commented upon numerous times previously obtains in finding 86 of the PID, since the testimony of Gammill, et al., following Tr. 303 does not address transportation considerations or aircraft crashes. At Tr. 304, following this testimony, Mr. Gammill, summarizing the staff's position, stated that the staff has found no transportation considerations that would preclude site acceptability. The prepared statement of applicant's witness Mitchell, whose testimony follows Tr. 104, does include transportation considerations but is silent about airports and aircraft crashes. Mr. Mitchell's summary of his testimony at Tr. 105-106 states that no transportation considerations were found that would preclude site acceptability. We have reviewed the Allens Creek SER (November 1974) wherein, at Section 2.2.2, the staff reported the results of its review of airports in the area, the closest commercial airport being about 14 miles SW of the proposed site. The staff there stated that based on previous studies they found no need for special design or operational provisions to mitigate aircraft crash effects, thus supporting finding 86 of the PID.

During discussion of this contention at the special prehearing conference (Tr. 1032-1035), petitioners claimed that information from

the Houston office of the FAA indicated that there are two airports "on the drawing boards", one of which is to be at Sealy, within 10 miles of the plant. The Board deems this to be an adequate basis for admitting this contention. We concur with the staff's recommendation for its consolidation with TexPIRG Contention 6, and we so direct.

19. Petitioners contend that the cooling lake will result in fogging that will cause visibility hazards to transients and residents in the area, that applicant's calculations of fogging conditions are not correct for all cases, that the impacts could be significantly greater than indicated by the applicant, and that applicant should redesign the cooling facilities to eliminate these impacts. Applicant and staff opposed on grounds that no information was provided to challenge their conclusions that fogging impacts would be minimal. In response (Tr. 1036-38), petitioners stated that applicant's calculations did not take into account periods of calm winds in which more fog would be generated, and it would be preferable to use natural draft cooling towers which would produce less fog.

The potential for ground fogging was specifically considered in both the FES (Section 5.6.8) and in the Supplement thereto (FSFES Section 5.6.1) and petitioners cited no studies, nor new information on this question. Furthermore, alternative cooling systems including natural draft cooling towers were considered by this Board and we concluded that the cooling lake is the preferred alternative (2 NRC 776, fdg. 64). The contention is rejected for lack of basis.

20. Petitioners claim that the ACNGS plant design does not offer adequate safety protection against lightning strikes, to which the Allens Creek area is susceptible. Applicant and staff recommended the rejection of this contention as vague and unsubstantiated. Applicant further noted that petitioners offered no reason for discrediting the proposed lightning protection described in the PSAR, Section 2.2.3.8.

Petitioners (Tr. 1038-1039) indicated that the PSAR lacks enough detail to permit an assessment of the effectiveness of the protective measures proposed by applicant, in turn giving rise to concerns about plant safety if critical components are damaged by lightning. However, we note that the cited PSAR provides the guiding criteria to be used for lightning protection measures, and further references the applicable National Fire Protection Association's "Lightning Protection Code - NFPS No. 78", with which the protective measures must conform. For petitioners to allege that, because of a lack of detail, he is unable to critique the protective measures falls far short of framing a litigable issue. The contention is rejected.

21. Petitioners assert that the cooling lake will contain radioactive material that will increase over time and be hazardous to health of people using the lake, particularly to children and expectant mothers; that the lake should not be built but that a cooling tower should be used as a preferable alternative. Both applicant and staff opposed as being without basis. Petitioners answered by alleging that radioactive material will build up in the sediment of the lake, that bottom feeding fish will

accumulate more radioactivity than applicant calculated, and that human consumption of fish will lead to larger doses of radiation than are allowed by 10 C.F.R. Part 50, Appendix I (Tr. 1039-44). While Section 5.4.2.2 of the FSFES reported the maximum individual dose to be 1.4 millirems per year, well within the criteria in 10 C.F.R. Part 50, Appendix I, the alleged concentration phenomenon has not been definitively discussed. This portion of the contention is admitted. However, petitioners have provided no basis for reassessing this Board's findings on alternative cooling systems (PID 2 NRC 776, fdgs. 63, 64) and that portion of the contention is rejected.

22. It is asserted that the proposed ACNGS cooling lake is larger than needed for one nuclear plant, thus causing larger unfavorable impacts upon land use and the environment than is necessary. Staff and applicant recommended the rejection of this contention because no unfavorable impacts have been identified. Their additional objections deal with the merits of the issue and are not considered.

During the discussion of this issue (Tr. 1045-1046), petitioners stated that it is their understanding that applicant has intentionally sized the lake to be larger than needed. The basis for this understanding was requested but not provided. Petitioners' position, based upon this unsupported understanding, was that no unnecessary loss of food production and trees and no unnecessary reduction in scenic beauty should he allowed. This contention is not supported by adequate bases and is rejected.

23. Petitioners contend that (a) the South Texas site, (b) an offshore site, (c) a site near the Gulf of Mexico which could use either salt water, or water from the Colorado or Brazos rivers for cooling, and (d) the Lower Mills Creek site would be preferable to the Allens Creek site. According to the petitioners, proximity of Allens Creek to the westward growth of Houston justifies preference for the identified sites since they are farther removed from dense population areas.

In its response applicant opposed this contention in the main but agreed to the admissibility of the STP site alternative portion if consolidated with TexPIRG's admitted Contention 1. Staff would accept the STP site portion if consolidated as above, and the Gulf of Mexico land based site portion, if consolidated with Hinderstein's admitted Contention 5. Staff opposed admission of the offshore site portion of this contention on grounds that such a "unique siting option -- has not yet been licensed by the NRC" and there is no assurance such an option would be available in the time frame in which the ACNGS is needed. It opposed further consideration of the Lower Mills Creek site alternative on the ground that it had given full consideration to this site alternative and concluded (FES Section 9.1.2.1.3) that it offered no advantages over Allens Creek. Petitioners agreed to the consolidation of those portions (a & c) of this contention with similar previously admitted contentions as described, supra, (Tr. 1046), and presented no substantive rebuttal to staff's position on either the offshore or Lower Mills Creek alternatives (Tr. 1046-47).

The Board concurs with the staff's position on this contention; accepts alternative sites (a) and (c) as litigable issues and consolidates (a) with PIRG's admitted Contention 1 and (c) with Hinderstein's admitted Contention 5; and rejects parts (b) and (d) of this contention as being without sufficient bases for litigation.

Their petition for leave to intervene is granted, and Mr. and Mrs. Bishop are jointly admitted as a party to this proceeding.

C. Conn Contentions

[On September 12, 1979, Ms. Caroline Conn filed her contentions. Applicant and Staff respectively responded on October 5 and October 9, 1979].

1. Petitioner contends that coal is preferable to uranium as a fuel for generating electric power at Allens Creek because recent studies show coal is comparable in cost to nuclear plants with less risk to the public, and that a newly developed scrubber system for coal effluents pays for itself and reduces environmental problems of coal. Staff and applicant opposed because the petitioner failed to provide a basis for challenging the staff's conclusions on the environmental preference of nuclear v. a coal fired plant (FSFES Section 9.1.2.3 and Appendix S.D). Representing Ms. Conn, Mr. Doggett requested adoption of the bases advanced by Mr. Bishop in his support of Bishops' Contention 14 as they applied to coal v. nuclear fuel (Tr. 1477). We agree with staff's and applicant's objections, the Bishops' bases did not relate to scrubbers, and, accordingly, we deny the contention.

2. Petitioner contends the location of the STP site in Bay City is a more desirable site than the Allens Creek site near Wallis due to

a superior water supply at Bay City and because it is farther from the expanding population of Houston. We admit the contention in light of the bases given. On behalf of Ms. Conn, Mr. Doggett agreed with staff and applicant to consolidate this contention with PIRG's Contention 1 (Tr. 1160) and we so direct.

3. Petitioner asserts that because of the ACNGS there will be unacceptable health hazards due to accidents associated with the transportation of radioactive material through highly populated areas.

The applicant and staff recommend rejection of this contention because the Board's purview does not extend beyond the generic transportation impacts addressed in Table S-4. During the special prehearing conference (Tr. 1160), petitioner's case was represented to rest upon the assertion that such accident impacts should be included in the NEPA balancing of costs and benefits. However, transportation accidents are dealt with in the FSFES (Section 5.4.3.3), and petitioner offers no basis for questioning whether the cost-benefit balancing has been properly struck. Further, there is no showing of special circumstances (pursuant to 10 C.F.R. § 2.758) for questioning the adequacy of Table S-4. Southern California Edison Company (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-268, 1 NRC 383, 399-400 (1975). Accordingly, the contention is rejected.

4. Petitioner contends that no nuclear plants should be authorized until the problem of permanent storage of radioactive material has been resolved. The contention is rejected. See our discussion of the first part of PIRG Additional Contention 19, supra.

Ms. Conn's Contention 2 is admitted and consolidated with PIRG Contention 1, her petition for leave to intervene is granted, and she is admitted as a party.

D. Cumings Contentions

[Ms. Elinore Cumings filed a petition for leave to intervene on July 11, 1979. During the special prehearing conference on October 17, 1979, Ms. Cumings' attorney argued that good cause existed for the failure of her petition to state, as required by the Supplementary Notice of Intervention Procedures dated June 12, 1979, that she had not filed a petition for leave to intervene pursuant to the Board's Notice of May 31 and September 11, 1978 because of the restrictions on permissible contentions contained therein - viz. that the good cause was the fact that she had not moved into the area until December 1978 and thus, having been unaware of these Notices, she could not state that she had been inhibited by the restrictions therein (Tr. 1163-64). We accept this as showing good cause for her omission and treat her letter of July 11, 1979 as being a petition for leave to intervene. Petitioner's counsel proceeded to argue that for the same reason she had shown good cause for not filing on a timely basis - i.e. by October 11, 1978. (Tr. 1164). In Carolina Power and Light Company (Shearon Harris Nuclear Power Plant, Units 1-4), ALAB-526, 9 NRC 122, 124 (1979), agreeing that such an explanation for a tardy filing cannot carry the day, the Appeal Board stated that the question comes down to whether the other factors set forth in Section 2.714(a) weigh sufficiently heavy in petitioner's favor to overcome the absence of a satisfactory excuse for the lateness. While the staff did not object that the petition had been untimely filed (Tr. 1171), applicant, citing Nuclear Fuel Services, Inc., et. al. (West Valley Reprocessing Plant), CLI-75-4, 1 NRC 273 (1975), argued that petitioner's

superficial analysis of the four factors in Section 2.714(a) did not begin to carry the day (Tr. 1173). As to the first factor, we agree with petitioner that a limited appearance is not an adequate alternative for party status. (Tr. 1166). As to the second factor, petitioner's attorney barrenly asserts that petitioner is a "well educated person who has research ability", but conceded that Ms. Cumings has no scientific expertise. (Tr. 1167). We resolve this factor adversely to petitioner. We assess the third factor adversely to petitioner - her interest will be represented by existing parties. As to the fourth factor, her participation at this stage will not broaden the issues or delay the proceeding. After weighing these factors, we allow the petition. We proceed to consider Ms. Cumings' contentions filed on September 12, 1979. Applicant and staff respectively responded on October 5 and October 9, 1979.]

1. Petitioner alleges that applicant lacks financial qualification to construct the proposed ACNGS, based upon recent hearings requesting a rate increase. (Said hearings are unidentified in the formal statement of the contention.)

The written responses of applicant and staff recommend rejection of this contention because it lacks the basis for a litigable issue. During the special prehearing conference, petitioner's representative noted the similarity of this contention to Baker's Contention 1, above, and requested that petitioner be allowed to adopt, as her own augmented bases, the bases of the said Baker contention, but stated that petitioner does not adopt the Baker contention itself (Tr. 1175-1178). We accept

Mr. Baker's bases as supportive of this contention and find nothing of substance distinguishing the two contentions. Accordingly, this contention is admitted and consolidated with PIRG Additional Contention 32 and Baker Contention 1, and we also expect Ms. Cumings to be guided by the Appeal Board's Memorandum and Order in the Seabrook case.

2. Petitioner contends that applicant's and staff's assessment of need for power is inaccurate due to, (a) failure to take into account large lignite plants being built north of Houston, (b) failure to account for the impact of energy conservation, (c) failure to consider alternate price designs, (d) failure to provide for complete internalization of all significant external costs so that total cost of electricity is charged to the users. Acting for Ms. Cumings, Mr. Doggett dropped part (d) of this proposed contention (Tr. 1181-82), and sought to answer staff's and applicant's objections to parts (b) and (c) which cited staff's analysis of the potential impacts of conservation (FSFES Section 8.2.3) and alternative price designs (Section 8.2.4). Petitioner presented no information challenging the adequacy of these analyses. We concur with applicant and staff and reject parts (b) and (c) of this contention. With respect to part (a), the two lignite plants referred to appear to be two coal plants north of Houston which staff included in its need for power assessment and referred to as Undetermined 1 and 2 (FSFES, Table S.8.13). Applicant confirmed that the two plants in question were intended by applicant to be lignite plants and therefore had been taken into account in

staff's analysis (Tr. 1180-83). We reject this contention for lack of specificity and as being without bases for litigation.

3. Petitioner asserts the staff made no analysis of the radiological impact associated with the use of Brazos River water which will be contaminated by radioactive effluents from the plant and thus endanger the health of those using the water. Both staff and applicant opposed for the reason that petitioner failed to present any information challenging their analyses of dose commitments based on the use of both the cooling lake and Brazos River water.

At the prehearing conference, Mr. Doggett, on behalf of petitioner, requested that he be allowed to adopt the arguments on Bishops' Contention 12, as rebuttal to applicant's and staff's objections (Tr. 1184-1186). We have compared these two contentions and concur with staff and applicant that they are substantially different, that the supporting arguments for the Bishop's Contention 12 were not specifically identified, and therefore Mr. Doggett's request for their adoption is refused.[17/] Since we find no litigable basis for Cumings' Contention 3, it is rejected.

4. Petitioner alleges the Bay City site to be superior to Allens Creek because of an existing cooling water supply and lower projected

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17/ Considerable discussion developed among applicant, staff, Mr. Doggett and the Board over the question of the Board's permitting one petitioner to adopt the whole of another petitioner's supporting arguments for a contention alleged to be similar by Mr. Doggett on behalf of one of his clients. The Board ruled this procedure to be impermissible unless Mr. Doggett specified the particular parts of arguments he considered as providing specific basis for the subject contention. (Tr. 1184-1195).

population growth at the Bay City (STP) site, and because of land subsidence at ACNGS. Staff and applicant accepted this contention providing it was consolidated with PIRG's Contention 1. Mr. Doggett agreed to this consolidation (Tr. 1198). Since the bases were set forth with reasonable specificity, the Board admits the contention which is consolidated with PIRG Contention 1.

5. Withdrawn (Tr. 1198)

6. Petitioner addresses four alternative forms of generating energy, contending that inadequate consideration has been given to each. Part (a) contends that the oilfield practice of burning by-product gas has not been considered for the production of steam energy. Part (b) contends that the combustion of solid wastes to produce energy is a viable alternative already in use in the U.S. and in Europe. Part (c) alleges that solar energy is becoming practical and contends that the ACNGS would not be needed if 20% of applicant's customers obtained 50% of peak load needs from passive solar methods. Part (d) dealing with water and wind power alternatives was withdrawn (Tr. 1199).

The written responses of staff and applicant first recommend rejection of this contention as being too speculative to represent a litigable issue. Applicant then notes that Part (b) is similar to PIRG's Contention 5, previously admitted in our February 9, 1979 Order Ruling Upon Intervention Petitions, and states that applicant will not object to the consolidation of these two similar issues. Staff also subsequently notes this similarity, to the same end, although erroneously identifying PIRG's Contention 4 as the previously admitted similar

contention. Staff further offers no objection to Part (c), above, being consolidated with PIRG's Contention 7(d), previously admitted in our Order cited above. We concur with staff. Part (a) of petitioner's contention offers no basis in support of the feasibility of deriving an amount of energy from flared gas released by oilfields, on a scale that can substitute a substantial amount of energy for the ACNGS. During the discussion of this contention at the special prehearing conference (Tr. 1198-1199), petitioner's representative offered only the observation that the matter was not considered by applicant and staff. We reject Part (a) of Contention 6. Bases having been provided, Parts (b) and (c) are admitted and consolidated with PIRG's Contentions 5 and 7(d) respectively.

7. Petitioner contends that the NEPA analysis showing that nuclear power is less costly than coal, both financially and environmentally, is in error because "TOTAL" costs of nuclear power as shown by studies are not fully taken into account. Applicant and staff oppose since petitioner provides no specific challenge to the cost-benefit analysis performed by staff on the coal v. nuclear fuels question (FSFES Sections 9.1.2.1 and 9.1.2.3, and Appendix S.D). The Board rejects this contention as being conclusional, and lacking bases.

8. Petitioner raises the issue of the lack of a permanent waste storage site, which may require on-site storage of more fuel than was originally planned for. Applicant and staff recommended rejection

because this contention cannot be litigated in individual licensing proceedings. (See our discussion re: the first part of PIRG Additional Contention 19, supra). While petitioner's representative agreed, he argued that the health hazard of on-site storage of more fuel than was originally planned should be considered in the cost-benefit analysis. (Tr. 1201). However, this Board is authorized only to consider the existing application for a construction permit to install a spent fuel storage pool having a capacity of 1710 spent fuel assemblies (5 years normal batch discharges plus a full core reserve). PSAR § 9.1.2.1.2. Should applicant at some later date desire to enlarge the spent fuel pool, it would have to request a modification to its license which would be the subject of a licensing action separate from the instant proceeding. Accordingly, the contention is rejected.

9. Petitioner asserts that the effects of low level radiation have not been adequately assessed, including the possibility of hidden genetic damage that may not manifest itself for a long period of time. Staff and applicant view this as a challenge to the Commission's regulations and recommend its rejection, since there has been no showing of special circumstances in accordance with 10 C.F.R. § 2.758. Petitioner's representative accepted this objection but claimed that low level radiation (we assume meaning radiation levels below that permitted by the regulations) should be included in the NEPA balancing of costs and benefits (Tr. 1202).

We defer ruling upon the admissibility of this contention at this time because in Public Service Company of Oklahoma, et al. (Black Fox Station, Units 1 and 2)), ALAB-573, 10 NRC ___ (December 7, 1979), the Appeal Board certified the following question to the Commission:

> "Where routine emissions from a nuclear plant will be kept as'low as is reasonably achievable' in accordance with Appendix I, is litigation of the health effects of those emissions in an adjudicatory proceeding involving initial licensing barred by 10 C.F.R. § 2.758 as an impermissible attack on Commission regulation?"

Ms. Cumming's petition for leave to intervene is granted, and she is admitted as a party.

E. Doggett Contentions

[In an undated submission served on September 12, 1979, Stephen Doggett, Esq., filed his contentions. Applicant and staff respectively responded on October 5 and October 9, 1979].

1. Petitioner alleges that applicant has not adequately assessed the availability, economic costs, and environmental impacts of various specific alternative energy sources, including the full potential of conservation, that could render the building of the ACNGS unnecessary. Specifically, the intervenor's discussion of the bases of the contention is arranged in three categories, as follows:

Availability	Economic Costs	Environmental Impacts
Heavy crude	Heavy crude	Coal, oil
Oil and tar sands	Oil and tar sands	Solar, incl. wind
Gasahol	Biomass combustion	Hydroelectric
Solar power	Hydroelectric	Biomass combustion
Coal	Uranium vs coal	Radiation effects
Biomass combustion	(cost and supply)	Land use
Hydroelectric		
Conservation		

Within each of these categories, the advantages of the above listed alternatives are discussed, supported in some instances by literature and news media citations, and in other instances by conclusional statements.

The applicant recommends that the entire contention be rejected because it is speculative and it lacks acceptable bases. The staff would admit only the conservation portion of the contention which it recommends be consolidated with PIRG's similar Contention 7, previously admitted by our Order Ruling Upon Intervention Petitions, dated February 9, 1979.

During the special prehearing conference discussion of this contention (Tr. 1244-1269), petitioner stated that he expected that none of these alternatives (presumably including coal), taken singly, would eliminate the need for the ACNGS, but that several such alternatives, taken together, could accomplish this.

Availability

Except for coal and conservation measures, none of the alternative energy sources discussed were supported by adequate substantiation to justify inquiry into their availability to the applicant on a commercially viable basis in the time frame for which energy from the ACNGS will presumably be needed. For example, hydroelectric power from low-head dams is claimed by petitioner to be a viable alternative to the ACNGS. Petitioner cites an article purporting to show that this represents a

significant potential energy source to be developed. He acknowledged that said article applies to the U.S. as a whole, rather than to the State of Texas. Nor did he offer any underpinning to the thesis that hydroelectric development represents a practical option for applicant to adopt in order to satisfy the energy demands of its service territory. Coal is purportedly available now from a 300 year domestic supply reserve, per news magazine citations. Except for the discussion of cost considered below, petitioner offers no justification for criticizing the coal-vs-nuclear comparisons of applicant and staff. On the basis of applicant's own publications regarding energy saving measures, petitioner cites specific conservation measures as currently offering an enormous, untapped potential, and alleges that applicant has failed to fully avail itself of all practical measures to tap said potential.

Comparative Economic Costs

Petitioner cites the staff's FSFES to support his claim that staff used too small an escalation rate for the price of uranium compared with a considerably higher escalation rate allegedly reported in two national news magazines. For this reason, petitioner claims that staff's cost comparison of coal against nuclear fuel is erroneous. Petitioner made only qualitative and speculative observations that alternative fuel forms (other than coal) are becoming increasingly economical.

Petitioner mentions a study performed by the Los Alamos Scientific Laboratory that concludes that several small power plants are more economical than one large plant, without explaining whether this conclusion applies to coal and/or nuclear plants, without any showing that the starting assumptions for the study might apply in applicant's service region, and without giving any specific basis to challenge the general practice of the utility industry to move toward larger plants. Additionally, petitioner cites a 1979 publication of the Texas Energy Advisory Council to support his allegation that the costs of waste storage and of decommissioning are likely to be highly expensive. However, no bases are given to question either applicant's business judgment or staff's assessment of applicant's cost analysis.

Environmental Impact

All alternative fuel forms are claimed to offer environmental advantages over nuclear plants, but no bases are offered to challenge the adequacy of the staff's analysis of environmental costs and benefits. Radiation effects from normal and accidental releases from nuclear plants are characterized, in a wholly conclusional manner, as risks to the populace. He fails to provide any basis for suggesting that applicant can not operate the plant in accordance with applicable regulations. Thus the entire environmental impact challenge fails to frame a litigable issue.

We are left with two aspects of this contention that merit evidentiary consideration:

(a) Has a dispositive assessment been made of the energy demand reduction potential that might derive from conservation measures available to applicant?

(b) Has staff's coal versus nuclear analysis accurately taken into account the rate of escalation of the price of uranium?

All other portions of this contention are rejected.

2. Petitioner asserts that the STP site, already committed to nuclear power, is superior to that of the proposed site of ACNGS, is environmentally preferable because of a lower population density, and would decrease land and water use and preserve the Allens Creek site for other purposes. In their comments, applicant and staff noted the essential similarity of this contention with admitted PIRG Contention 1, and had no objection to its admission if consolidated with PIRG Contention 1. At the special prehearing conference Mr. Doggett agreed to this consolidation (Tr. 1257) and to amending the wording to conform with that of PIRG. Since the contention is supported by adequate bases, we concur and admit the contention as consolidated.

3. Petitioner cites examples of alleged quality assurance problems at applicant's STP as the basis for alleging that similar problems will plague the ACNGS project, rendering the proposed plant inimical to the public's and his own health and safety.

Applicant's written response recommended the rejection of this contention. The staff's response recommended its acceptance provided that it is consolidated with PIRG's Additional Contention 31, supra.

At the special prehearing conference (Tr. 1257), applicant advised that it had agreed to the admissibility of the similar PIRG

contention, and petitioner offered no objection to consolidation. Since bases have been given, the Board admits this contention and directs that it be consolidated with PIRG's Additional Contention 31.

4. This contention alleges that the applicant is not financially qualified to construct and operate the proposed facility. Petitioner cites as bases newspaper and magazine articles concerning alleged financial difficulties at the South Texas project and the effect of Three Mile Island on obtaining financing. Petitioner further alleges, without bases, that numerous other causes of cost increase may plague the ACNGS project in the future. Written responses of applicant and staff describe this contention as speculative, as lacking factual basis, and as making no showing of nexus between STP and ACNGS. Accordingly, they recommend its rejection. During discussion at the special prehearing conference, petitioner elaborated upon the contention by explaining that his concern lies with the possibility that the impact of financial problems would result in the ACNGS not being constructed in a safe and proper manner (Tr. 1257-1258).

As reflected, supra, we have admitted and consolidated PIRG Additional Contention 32, Baker Contention 1, and Cumings' Contention 1 which question whether applicant has reasonable assurance of obtaining the funds necessary to construct the facility. We note that the intervenors in Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1 (1978), took a step further and argued that there is a direct relationship between safety

and applicant's financial condition. In the Seabrook opinion, at page 19, the Commission stated that ". . . apart from the seemingly tenuous link between safety and financial qualifications, particularly for a large regulated utility, other considerations lead us to believe that a utility cannot provide more than a reasonable assurance that funds will be available through the course of a multiyear construction project" and that "The resulting limited usefulness of the financial qualifications inquiry underscores the importance of ongoing inspections of reactor construction projects". However, in Seabrook, the Commission did not expressly preclude such a contention and specifically observed at page 18 that there was no evidence in the present record that applicants would be likely to engage in substandard construction should they ever run short of funds. Accordingly, this contention, as clarified and limited,[18/] is admitted.

5. It is asserted that the issuance of a construction permit will be inimical to the health and safety of the public and of petitioner because in the event of a major accident it would be impossible to evacuate major portions of the Greater Houston Area population. Petitioner then cites certain conditions that he claims support the perceived

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18/ This contention is consolidated with Perrenod Contention 1, infra, pursuant to 10 C.F.R. § 2.715a. Applicant has the burden of establishing that it will not engage in substandard construction practices in the event it ever experiences a shortage of funds. Staff is requested to advise whether its inspection efforts are affected by the financial condition of an applicant.

difficulty of such an evacuation. Finally, the contention prescribes alternative measures that applicant might adopt to eliminate the need for evacuation. At this time we do not rule upon the admissibility of this contention. See our discussion regarding subparts (d), (e), (f) and (i) of PIRG's Additional Contention 16, supra.

Mr. Doggett's petition for leave to intervene is granted and he is admitted as a party.

F. Griffith Contentions

[Ms. Robin Griffith filed her contentions on September 14, 1979. Applicant and staff respectively responded on October 5 and October 9, 1979].

1. Petitioner contends that over the life of the plant, low level radiation, since it is cumulative, will have adverse effects on plants and animals and on health of humans from embryos to adults, "even though the applicant will comply with the standards set by the Nuclear Regulatory Commission". Both applicant and staff opposed admission of this contention because it constituted a challenge to adequacy of the Commission's regulations limiting exposure to radiation (10 C.F.R. Part 50, Appendix I and 10 C.F.R. Part 20). Acting on behalf of Ms. Griffith, Mr. Doggett agreed to the validity of these objections but interpreted the contention to mean that risk to the health, however low, even if in compliance with regulations, should be considered in the cost-benefit balance (Tr. 1207).

We defer ruling upon the admissibility of this contention at this time for the same reason we deferred ruling upon Cumings' Contention 9, supra.

2. Storage of nuclear wastes is alleged to be detrimental to the finances, property, health and other interests of petitioner. The contention is rejected for the same reasons we rejected the first part of PIRG Additional Contention 19, Conn Contention 4, and Cumings' Contention 8, supra.

3. Withdrawn (Tr. 1209)

4. Petitioner asserts that the proposed ACNGS cooling lake will be useless as a recreational facility because of excess algal growth caused by waste discharges from the towns of Wallis and Sealy and from the nuclear plant. Both applicant and staff opposed the contention as written but would accept it if limited to correspond with PIRG Contention 2 and McCorkle 2, which have been consolidated and admitted previously by the Board, and if limited to challenging the viability of the lake as a recreational fishery. (Board Order February 9, 1979). Mr. Doggett, on behalf of Ms. Griffith, agreed to the proposed limitation and consolidation of this contention (Tr. 1209-10). On terms of this agreement among the parties, and finding supportive bases, we admit this contention

Ms. Griffith's Contention 4, as limited, is consolidated with PIRG Contention 2 and McCorkle Contention 2, her petition for leave to intervene is granted, and she is admitted as a party.

G. Johnston Contentions

[Mr. Leotis Johnston's undated contentions were served on September 18, 1979. Applicant and staff respectively responded on October 5 and October 9, 1979].

1. Petitioner contends that he and his family will be adversely affected by radioactive emissions from the plant due to its proximity to his home. Applicant and staff oppose admission of this contention on grounds it appears to challenge the Commission's regulations setting limits to population doses as set forth in 10 C.F.R. Part 50, Appendix I, and 10 C.F.R. Part 20. Mr. Doggett, representing Mr. Johnston, recognized the objections but stated that any health risk, however low, should be considered in the cost-benefit balance (Tr. 1210). We defer ruling upon the admissibility of this contention at this time for the same reason we deferred ruling upon Cumings' Contention 9, supra.

2. Petitioner claims that an interstate highway near his home will be used to transport radioactive waste (presumably) from the ACNGS, and that the population density (presumably around his residence) is high enough to cause concern about transportation accidents and radiation leakage. This contention is similar to Conn Contention 3, supra, as are the arguments advanced in support thereof (Tr. 1211). Therefore, it is rejected.

3-4. These two contentions are combined since they both claim that available indemnification is inadequate: the Price-Anderson Act imposes a too low limitation on liability compared with an alleged Rasmussen Report worst-case estimate of damage; and adequate insurance coverage should be available through the open market, not as a government subsidy.

Applicant and staff recommend the rejection of these contentions, citing in part this Board's rejection of Anderson's Contention 3

(Order Ruling Upon Intervention Petitions, February 9, 1979, page 28) insofar as the Price-Anderson limitation is concerned. Both parties further observe that since private coverage is available, the balance of the claim is in error.

At the special prehearing conference, petitioner's representative acknowledged the Board's prior decision (unquestioned by the Appeal Board) and its validity (Tr. 1212-1214). Rather than withdraw the contentions, he attempted to salvage them by broadening the contentions' thrust to include accident impacts within the balancing of costs and benefits (Tr. 1213-1214). Our prior holding, cited above, supports our rejection of the Price-Anderson challenge; government subsidy versus coverage by private insurers is outside of this Board's adjudicatory purview; and questioning the adequacy of the cost-benefit analysis represents a broadening of the scope of the contentions that is impermissible. Accordingly, both contentions are rejected.

5-1. (Because there were two Johnston contentions numbered 5 and two numbered 6, at the special prehearing conference they were renumbered 5-1, 5-2, 6-1 and 6-2 in the order in which they were submitted).

This contention asserts that the ACNGS should not be licensed until the permanent waste storage problem has been resolved. It is rejected for the same reasons the first part of PIRG Additional Contention 19, Conn Contention 4, Cumings' Contention 8, and Griffith Contention 2 were rejected, supra.

5-2 and 6-1. These contentions, combined at Tr. 1216, assert that the South Texas site is superior to the Allens Creek site because of lower population density at STP, greater abundance of water, and need to preserve agricultural land in the Allens Creek area. Applicant and staff did not object to admission of this contention provided it were consolidated with PIRG's admitted Contention 1. Representing Mr. Johnston, Mr. Doggett agreed to consolidation (Tr. 1215-16). The Board, finding adequate bases, admits this contention and consolidates it with PIRG Contention 1.

6-2. Petitioner claims that a solid waste storage facility could possibly meet the energy needs of Houston and that such should be considered as a possible alternative to building the ACNGS. (We assume that petitioner's intent is to address the combustion of solid waste). The written responses of applicant and staff find this contention devoid of qualifying bases but offer no objections to its consolidation with PIRG's Contention 5, previously admitted by our Order Ruling Upon Intervention Petitions of February 9, 1979.

At the special prehearing conference, petitioner's representative accepted the fall-back positions of applicant and staff, noted above, but offered no basis to militate in favor of admitting the contention (Tr. 1215). We find no basis supporting the admissibility of this contention. It is barren and speculative. Accordingly, the contention is rejected.

Mr. Johnston's petition for leave to intervene is granted and he is admitted as a party.

H. Lemmer Contentions

[Ms. Rosemary Lemmer filed her contentions on September 12, 1979. Applicant and staff respectively responded on October 5 and October 9, 1979].

1. Petitioner asserts that the proposed site is unsuitable because of the rapid population growth in the area. As requested by petitioner (Tr. 1477) with respect to this contention, we permit her adoption of Bishops' bases for their Contentions 1-3. Since the instant contention and the adopted bases challenge applicant's methodology of population projection, we admit this contention and consolidate it with Bishops' Contentions 1-3.

2. Petitioner contends the Bay City site (STP) is superior to Allens Creek as an alternative site for a nuclear plant. Neither applicant nor staff object to admission of this contention providing it is consolidated with PIRG's admitted Contention 1. For Ms. Lemmer, Mr. Doggett agreed to this consolidation (Tr. 1217), and because supporting bases were given, the Board admits this contention as consolidated.

3. Petitioner contends that the Allens Creek facility should not be constructed because there are no facilities for the permanent storage of high-level wastes. As basis for this contention, petitioner alludes to news media reports of leakage from temporary facilities, which leaks might endanger local citizens.

Applicant and staff, in their written responses to this contention, recommend its rejection. Petitioner's representative (Tr. 1217)

acknowledged these objections, offered nothing in support of the contention, but declined to withdraw it. Our reason for the rejection of the first part of PIRG's Additional Contention 19, above, is applicable here. Thus, the contention is rejected.

4. This contention claims that applicant's support of a number of conservation oriented measures could obviate the need for the ACNGS. Examples of these measures are cited but no bases are offered to indicate that any such measures represent viable, substantive options for the applicant. The written response of applicant recommends the rejection of this contention, whereas the staff -- noting the lack of a particularized basis for the contention -- would accept its consolidation with PIRG's similar Contention 7.

Petitioner's representative acknowledged the arguments of applicant and the acquiescence of the staff; but further argued that, if the construction permit is denied, applicant would then be compelled to adopt non-nuclear options and perhaps to place greater emphasis on conservation (Tr. 1218-1220). This additional argument, in broadening the scope of the original contention, is impermissible. The contention is barren and speculative and is rejected.

5. Petitioner contends that low level radiation is possibly a more serious health hazard than usually supposed and that a ban on licensing new nuclear plants should be imposed until a consensus among experts can be reached resolving this question on low level radiation effects.

Applicant and staff oppose the contention as a challenge to Commission regulations on radiation dose limits. We defer ruling upon the admissibility of this contention at this time for the same reason we deferred ruling upon Cumings' Contention 9, supra.

6. Withdrawn (Tr. 1220).

Two of her contentions having been consolidated with those of other parties, Ms. Lemmer's petition for leave to intervene is granted, and she is admitted as a party.

I. Perez Contentions

[In an undated submission docketed on September 20, 1979, Mr. Charles Perez filed his contention. Applicant and staff respectively responded on October 5 and October 9, 1979].

1. Petitioner contends that testing of the drywell (of the ACNGS's Mark III containment) at its design pressure is not adequate to insure its integrity in the event of a loss-of-coolant accident, thus posing a potential threat to the health and safety of the public. An alleged overpressure incident at another facility (having a different GE containment design) was cited as the basis for this concern.

Both applicant and staff, in their written responses, noting that petitioner failed to develop any meaningful connection between the ACNGS and the facility at which the cited incident occurred, recommended that the contention be rejected for lack of a basis. At the special prehearing conference, petitioner did not establish a connection between the ACNGS and the above-cited facility to support the basis for his

contention, but argued that in the interest of safety, the drywell should be pressure tested at higher than design pressure. He cited the SER for another facility having a Mark III containment as stating that pressure testing at 115% of design pressure would be undertaken (Tr. 1481-1498). At a later session of the conference, applicant's counsel stated that the ACNGS drywell will be tested at 115% of design pressure (Tr. 1625) and in a letter dated October 30, 1979, reaffirmed this statement. We accept this as a commitment which moots the issue raised, and accordingly reject this contention. However, we advise applicant and staff that the Board expects them to verify this commitment during the evidentiary portion of this proceeding.

Mr. Perez's petition for leave to intervene is denied and he is not admitted as a party. See Part III, infra.

J. Perrenod Contentions[19/]

[In an undated letter served on July 24, 1979, Mr. W. Matthew Perrenod submitted one contention.[20/] Applicant filed a response on July 27, 1979].

19/ As noted in our Order of November 19, 1979, Mr. Perrenod did not appear at the special prehearing conference.

20/ Paragraph 5 of the letter specified the sole contention.

1. In effect petitioner asserts that hazards would arise because applicant would cut corners on safety due to its inability to provide reasonable assurance that it can obtain necessary funds to cover the estimated costs of construction and related fuel cycle costs, as required in Section 50.33(f) and Appendix C to 10 C.F.R. 50. While applicant argues that the contention was filed untimely in that it could have been raised in response to the Board's notices of May 31 and September 11, 1978, applicant concedes that it appears to be founded on relatively recent developments, and thus we conclude the untimeliness argument is not well taken.

Since the contention is similar to Doggett Contention 4 which, as limited, we have admitted, supra, the instant contention is admitted and is consolidated with Doggett Contention 4. See footnote 18, supra. Mr. Perrenod's petition for leave to intervene is granted, and he is admitted as a party.

K. Piepmeier Contentions 21/

[In an undated letter served on July 23, 1979, Mr. James Piepmeier generally asserted that (1) since humans make mistakes, the proposed plant will leak radiation, (2) less costly and safer windmills and solar energy should be utilized in lieu of nuclear energy, (3) cost overruns can be expected to occur in the construction of the proposed facility which will increase his utility bills, and (4) insurance companies do not want to insure people against the hazards associated with a nuclear

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21/ As noted in our Order of November 19, 1979, Mr. Piepmeier did not appear at the special prehearing conference.

accident. On August 1, 1979, the staff and applicant responded.]

Our Rules of Practice, 10 C.F.R. § 2.714(b), require the bases for each contention shall be set forth with reasonable specificity. The petitioner has not complied. Instead his contentions are barren, conclusional and speculative. Accordingly, his contentions are rejected, his petition for leave to intervene is denied, and he is not admitted as a party. See Part III, infra.

L. Schuessler Contentions

[In a submission dated August 8, 1979, Mr. William Schuessler filed his contentions, and on September 12, 1979, filed additional contentions. Applicant and staff respectively responded on October 5 and October 9, 1979.]

1. Petitioner claims that the proximity of the proposed ACNGS to his home would impair his ability to sell or rent his property and thus would injure his financial, property, and other (unspecified) interests.

In its written response, staff recommended the rejection of this contention since financial interest is cognizable in these proceedings only if it is environmentally related. The applicant also recommended rejection of petitioner's Contention 1 as well as Contentions 2 through 5 and Contention 8 for a common, but different, reason -- that petitioner either challenged the adequacy of the Commission's regulations governing radiological releases, or else challenged the applicant's ability to comply, noting a lack of a showing of special circumstances (per 10 C.F.R. § 2.758) or a lack of a supporting basis to defend either position.

At the special prehearing conference, petitioner asserted that newspaper accounts of "near-misses" at nuclear plants supported his concern about safety and damage to his home (Tr. 1325-1326), and for the first time, argued that, since his home is his environment, his financial concern is environmentally related (Tr. 1326). Obviously, petitioner had amended his contention in an effort to allege an economic harm which had an environmental relationship. However, contrary to 10 C.F.R. § 2.714(b), he failed to set forth the bases for this contention with reasonable specificity - i.e., he failed to particularize the "near-misses" which might occur at the instant proposed nuclear plant and thus would threaten his home environment. Accordingly, the contention is rejected.

2. Since the proposed ACNGS is 35 miles west of his home, and since most weather activity approaches the Houston area from the west, petitioner contends that any radioactive material released from the plant may reach his home within minutes. Applicant and staff oppose admission of this contention as an unsupported assertion or a challenge to Commission regulations governing normal or accidental releases without a showing of special circumstances as required by 10 C.F.R. § 2.758. In defending the contention Mr. Schuessler stated his dissatisfaction with the staff's term of "normal operations" in connection with releases, and "worst

possible meteorological conditions" which staff had analyzed. His concern was with the "worst possible radioactivity conditions" (Tr. 1327-28) following a severe accident. We must reject this contention for several reasons. It consists of a statement of concern barren of any supporting information which could be weighed in opposition to staff's analyses and conclusions on radiological releases and their health effects. These analyses covered normal operations, accident conditions (FSFES Section 7) and an analysis of effluent dispersions under varying meteorological circumstances (SER Supplement 2, Section 2.3). Mr. Schuessler indicated that he had not challenged those analyses because he had not reviewed them, was unfamiliar with what constituted a Class 9 accident (Tr. 1329), and did not know what is required to show special circumstances in support of a challenge to the Commission's rules or regulations as required by 10 C.F.R. Section 2.758 (Tr. 1330-31). In short, we can find no basis for admitting this contention as a litigable issue.

3. Petitioner claims that sufficient historical instances of a large variety of inadvertent mishaps at nuclear power plants exist to indicate a finite probability of a radioactive release from the ACNGS that will cause injury to his financial, property, health and other (unspecified) interests. Examples of the types of such mishaps are listed as:

- accidents, faulty workmanship, human error and bad judgment, corner-cutting by contractors, faulty equipment and materials, poor design, and inadequate standards and regulations.

The applicant's written response recommended rejection of this contention for the same common reasons mentioned under Schuessler Contention 1, above. The staff opposed this contention and combined its written opposition to this contention with its opposition to petitioner's Contentions 4 and 5 for the following reasons:

(a) No basis has been provided to place in question the adequacy of the staff's accident analyses presented in the FES and its Supplement;

(b) If a Class 9 accident is postulated, no showing has been made as to why its environmental impact should be considered; and,

(c) If the thrust of the contention is that any radiological release is unacceptable, then no showing of special circumstances, pursuant to 10 C.F.R. § 2.758, has been made to support such a challenge to the Commission's regulations.

During the special prehearing conference, petitioner discussed Contentions 3, 4 and 5 jointly and offered the following supportive observations as being common to all three contentions:

- The history of mishaps at nuclear plants gives petitioner the feeling that a serious accident is waiting to occur, perhaps at the ACNGS;

- There is no gain or benefit to offset a risk to petitioner's home environment; and

- The Class 9 proscription and the showing of special circumstances are matters about which he is unknowledgeable and are matters seemingly designed to deny petitioner an opportunity to protect his interests (Tr. 1328-1331).

While we appreciate petitioner's concerns, we find that his defense of this contention falls far short of providing the necessary support or bases for its admission. We are in agreement with the opposition of applicant and staff, and we reject the contention.

4. This contention claims that a serious accident, resulting in the release of a large amount of radioactivity, would require petitioner and his family to abandon their home and would result in the total loss of all real and personal property; hence the ACNGS should not be licensed.

The opposition from applicant and staff to Contentions 3, 4 and 5 has been described above, as has petitioner's responses. We are faced with an inadequately supported contention that petitioner's efforts at the special prehearing conference (see previous Contention 3) failed to cure. The contention is rejected on the same rationale as was the preceeding contention.

5. and 8. In Contention 5, petitioner contends that, should a serious catastrophic accident occur at ACNGS, he and his entire family would be exposed to large amounts of radiation which would affect health, increase costs for medical care, and cause other financial damage. In Contention 8, petitioner contends that radioactive materials may be released from ACNGS in circumstances less serious than in the more

severe accident, but that radiation in such smaller amount would still result in cell injury of the type known to cause cancer, leukemia and genetic defect.

In general, both of these contentions suffer the same infirmities noted in our rejection of Contention 2, supra. They are without supporting bases. Further Contention 5 appears to be an impermissible challenge to Commission regulations regarding Class 9 accidents (which will be the subject of a rulemaking proceeding) and Contention 8 challenges the radiation dose limits established in 10 C.F.R. Part 100 for accidental releases. Without a showing of special circumstances pursuant to 10 C.F.R. Section 2.758, such challenges cannot be entertained by this Board. Said contentions are rejected.

6, 14. These two contentions are combined and assert that, should a serious accident occur at the ACNGS, effective emergency evacuation of the Houston area would be impossible to achieve because of population density, population growth rate, traffic congestion, and the lack of current state and county preparedness. (Tr. 1331-37). At this time we do not rule upon the admissibility of these combined contentions. See our discussion regarding subparts (d), (e), (f) and (i) of PIRG's Additional Contention 16, supra.

7. Petitioner alleges that, absent the existence of a permanent waste storage facility, the storage of radioactive waste at the ACNGS or the transportation of this waste elsewhere will probably cause injury to his financial, property, health and other (unspecified) interests.

The applicant and the staff, in their written responses, recommended the rejection of this contention for reasons primarily relating to the Commission's announced plans for rulemaking regarding the generic waste storage issue (44 Fed. Reg. 61372, October 25, 1979). At the special prehearing conference, petitioner acknowledged this objection but explained that his contention does not go explicitly to the lack of a permanent waste storage facility, but rather to things that could go wrong during the storage of wastes at the ACNGS or during the transportation of wastes from the ACNGS to another site. The staff explained to petitioner that both the FES and its Final Supplement deal with normal and accidental releases of radioactivity associated with the on-site storage of spent fuel, said releases having been found to be within acceptable limits set by NRC regulations. The petitioner was silent with respect to alleging any inadequacies of these analyses, nor did he offer basis for challenging the adequacy of Table S-4 of 10 C.F.R. Part 51 regarding transportation accidents (Tr. 1337-1342). We reject this contention because of its lack of particularized bases.

9. Petitioner alleges that his financial and other (unspecified) interests will probably be injured because the high costs of construction and operation of the ACNGS will unfairly require him to partially capitalize the venture and to pay unnecessarily high electric rates, compared with (unidentified) less costly alternatives.

Applicant and staff recommend the rejection of this contention for the reason that financial or economic interests are not a cognizable

issue within the zone of interests protected by the Atomic Energy Act. At the special prehearing conference, petitioner failed to provide any basis for overcoming such an objection (Tr. 1349-1356). The contention is rejected since it fails to frame an issue within the purview of this proceeding.

10. Petitioner alleges that, if applicant would connect with out-of-state utilities, power could be purchased for resale in Texas, and such an interstate connection would provide an economically and environmentally preferable alternative to building the ACNGS. For his principal basis, petitioner alluded to hearings before the Federal Energy Regulatory Commission (FERC) that he claimed are likely to require such an intertie.

The applicant's written response would have us reject this contention as speculative and without sufficient basis, since the FERC hearings are not for the purpose of bringing available excess power into Texas. Staff notes that it has not opposed a similar issue raised by PIRG and that it does not oppose the admission of this contention if it were consolidated with PIRG's similar contention (Additional Contention 12). Staff does not address the question of whether this contention is by itself properly framed for admission.

At the special prehearing conference (Tr. 1357-1362), petitioner stated that he had no knowledge of existing interconnections and was not aware of the existence of any surplus energy out of state that might be available to the applicant. Irrespective of its possible similarity to other contentions (e.g., PIRG Additional Contention 12 - Doherty

Contention 30, supra, admitted by stipulation at the special prehearing conference), this contention is not adequately supported and it is rejected.

11. Petitioner contends that neither applicant nor staff has given adequate consideration to coal or lignite as alternate energy sources. The contention is supported by citing a new scrubbing process which removes sulfur dioxide from coal gasses and combines residue with other chemicals to produce a high grade fertilizer which can be profitably marketed for agricultural use. Applicant objected, pointing out that its and staff's analyses of health and economic costs of coal vs nuclear fuel assumed the use of low sulfur western coal which does not require the installation of scrubbers; hence the balancing that found in favor of nuclear fuel compared to western coal would only be more favorable to the nuclear option if the cost of scrubbers were included. Staff objected to the inclusion of coal in this contention citing petitioner's failure to challenge any part of the staff's analysis of the coal alternative as set forth in the FSFES, Sections 9.1.2.1, 9.1.2.3 and Appendix S.D. It noted the Board's question (Board Order, February 9, 1979) regarding availability of lignite and the environmental costs of its use, and stated it had no objection to the participation of Mr. Schuessler on that issue. During the prehearing conference, in response to a question from staff, Mr. Schuessler replied that he had not read the staff's analysis in the FSFES, and therefore could not reply to the staff's objections (Tr. 1364). We find the petitioner's reference

to scrubber technology to be an insufficient basis for admission of this contention; there was no showing of the inadequacy of either staff's or applicant's analyses on this question. Since the question on lignite will be heard, Mr. Schuessler's interest in this question will be preserved as it may relate to availability and environmental considerations of its use. We conclude that he has made no persuasive case for the admission of this contention, and it is rejected.

12. Petitioner cites four sources of energy allegedly already planned for and available to applicant that could obviate the need for the ACNGS:

(a) 500 MW of excess electricity from the City of Austin, already contracted for by applicant;

(b) 1500 MW lignite plant being built by applicant north of Houston;

(c) 1200 MW from the STP, representing the combined shares of power that the cities of Austin and San Antonio would consider selling to applicant because of cost overruns at STP; and

(d) 500 MW that the City of Houston is considering generating from the combustion of wastes.

The applicant's written response jointly addresses Contentions 12 and 13, controverts (c), above, finds this contention to be speculative, and recommends its rejection. The staff holds that to the extent that (a) and (b), above, are alleged not to have been given adequate

consideration, this portion of the contention is admissible. The remainder of the contention the staff would have us reject as speculative and without basis regarding the availability of these specific sources of energy in an appropriate time frame.

At the special prehearing conference (Tr. 1365-1366), applicant noted, and we have verified, that the FSFES, Section 8.3.2, takes cognizance of (a), above, and states that this source of energy has been contracted for only in the years 1980 and 1981. With respect to subpart (b) above, we noted in our discussion of Cumings' Contention 2, supra, that the applicant's proposed lignite plants north of Houston have been taken into account by staff in their FSFES. Petitioner added nothing in support of the speculative allegations contained in subparts (c) and (d). Thus petitioner's contention lacks sufficient bases for the proposition that any of the suggested sources of energy represents a feasible substitute for the ACNGS or for even a sizable fraction of the energy to be derived therefrom. Accordingly, this contention is rejected.

13. Listing six possible financial adversities that applicant may encounter, petitioner contends that applicant will be unable to provide reasonable assurance that such adversities will not compromise applicant's dedication to safety, as reflected in the requirements of a construction permit.

Applicant characterizes this contention as being wholly conjectural and recommends that it be rejected. The staff characterizes the contention as being speculative, notes that it offers no basis for faulting applicant's proposed plan for financing the ACNGS, and

recommends that the contention be rejected.

During the discussion of this contention at the special prehearing conference (Tr. 1365-1369), petitioner's only effort to supply bases in support of this contention was to categorically adopt the previous arguments of Bryan Baker in support of Baker's Contention 1, regarding financial responsibility. However, petitioner was unable to identify which of Bishop's bases support this contention, and indeed none do. We reject this unsupported contention.

15. Petitioner asserts that neither applicant nor staff has sufficiently considered the aesthetic impact of the proposed plant, terming it "an unnatural forbidding hulk -- visible for perhaps twenty miles -- totally out of place in this unique grassland area", and suggests that the plant be built at a less aesthetically critical site or that a substantial part of the plant be built below ground level. Applicant and staff oppose the contention as being without basis since Mr. Schuessler has neither referred to nor challenged any of the staff's analysis of visual impacts and conclusions on this question as set forth in the FES (Section 5.6. and the FSFES (Section 5.6.1). In defending this contention (Tr. 1368-70), Mr Schuessler admitted he had never seen a nuclear plant, but believed their gener appearance to be displeasing and even ugly; that he had heard that one plant had been rejected for aesthetic reasons and thus aesthetic considerations should be fully considered in this case. In response to a question by staff, Mr. Schuessler stated he had not read the staff's

referenced analysis of visual impacts (Tr. 1369-70). We reject this contention for lack of a litigable basis.

As indicated above, we have rejected all of Mr. Schuessler's contentions except combined Contentions 6 and 14. After the issuance of the Commission's final rule upon emergency evacuation, we will either rule upon the admissibility of the combined contentions or permit Mr. Schuessler to amend them. At that subsequent time, should we reject said combined contentions and deny his petition for leave to intervene, Mr. Schuessler's right is preserved to appeal to the Atomic Safety and Licensing Appeal Board within ten (10) days after service of such an Order wholly denying his petition for leave to intervene.

M. Van Slyke Standing

As indicated in footnote 15, supra, we conclude that Mr. Van Slyke has failed to establish standing and thus his petition for leave to intervene is denied.[22/] His petition dated July 15, 1979 generally alleged that his interests would be injured by the construction and operation of the proposed plant and by the increased radioactivity and physical harm to the environment caused by the construction. Contrary to 10 C.F.R. 2.714(a)(2), these allegations were not sufficiently particularized to afford a basis for standing. In his supplement of September 13, 1979 and during the special prehearing conference (Tr. 1376-7), petitioner attempted to establish his interest - viz. that his health and

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22/ Accordingly, we do not reach and decide either whether Mr. Van Slyke timely filed his petition or whether he has validly asserted that previously he had not filed a petition for leave to intervene because of the restrictions in the Notices of May 31 and September 11, 1978.

safety would be threatened because applicant's security plan, in failing to distinguish between "industrial sabotage" and peaceful demonstrations opposing nuclear power at the plant site, could result in applicant's security personnel using unlawful force against him and other peaceful demonstrators, and because said security plan is inadequate to insure that security personnel will not engage in illegal surveillance and intelligence gathering against such peaceful demonstrators. The petitioner has failed to satisfy the two tests for standing specified by the Commission in Portland General Electric Company (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 613 (1976). In alleging that there has been a pattern of unwarranted actions taken by security personnel at some nuclear plant sites, the petitioner has not alleged that, at any time, applicant has infringed upon any of his Constitutional rights or that it has given any indication that it would violate his civil liberties in the future - he merely speculated that such incidents would probably occur at the proposed facility. Further, other than barrenly alleging that his interest (i.e. that of being assured that his health and safety will not be endangered during or as a consequence of peaceful demonstrations) is one that is protected by both the Atomic Energy Act and by the National Environmental Policy Act (Tr. 1377), Mr. Van Slyke does not show that these two statutes and their legislative histories indicate any legislative concern for the protection of peaceful demonstrators. Since indeed these Acts are barren of the slightest manifestation of such a legislative concern, one would have to conclude that protection of such an interest was far removed from the contemplation of the sponsors of these two statutes. Certainly, petitioner's asserted interest is not arguably within the zone of interests protected by said

statutes since the provisions thereof are directed toward ensuring radiological health and safety, the common defense and security of the United States, and protecting the environment. See Long Island Lighting Company (Jamesport Nuclear Power Station, Units 1 and 2), ALAB-292, 2 NRC 631, 638 (1975). Thus, the petitioner lacks standing to intervene as a matter of right.[23/]

However, in the Pebble Springs case, supra, the Commission has directed that, in determining in a particular case whether or not to permit intervening by petitioners who do not meet the tests for intervention as a matter of right, adjudicatory boards should exercise their discretion based on an assessment of all the facts and circumstances of the particular case. The factors to be considered are set forth in 10 C.F.R. § 2.714(a) and (d):

(a) Weighing in favor of allowing intervention -

(1) The extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record;

(2) The nature and extent of the Petitioner's property, financial, or other interest in the proceeding;

(3) The possible effect of any order which may be entered in the proceeding on the petitioner's interest.

(b) Weighing against allowing intervention -

(4) The availability of other means whereby petitioner's interest will be protected.

23/ Our ruling does not condone violence directed against peaceful demonstrators. Texas law enforcement authorities, of course, have at least primary jurisdiction over violations of State criminal law. Public Service Company of Oklahoma, et al. (Black Fox Station, Units 1 and 2), ALAB-498, 8 NRC 315, 317 (1978).

(5) The extent to which the petitioner's interest will be presented by existing parties, and

(6) The extent to which petitioner's participation will inappropriately broaden or delay the proceeding.

None of the factors weigh in favor of allowing intervention inasmuch as Mr. Van Slyke's interest, which, besides being purely speculative, is more importantly not cognizable under the two statutes that the Commission enforces. Factors (b)(4) and (b)(6) weigh against allowing intervention because State law protects his interests, however speculative, and because his participation would inappropriately broaden the proceeding inasmuch as his interest is not one which is protected by the governing statutes. Accordingly, discretionary intervention is denied. See Part III, infra.

N. Waters Contentions 24/

[On August 6, 1979, Mr. Ron Waters filed his contentions. On August 17, 1979, the staff responded and on August 23, 1979, the applicant responded.]

1. In substance, petitioner alleges that inasmuch as a core-melt is a real possibility, the application should be denied. This contention is rejected for the same reasons we rejected the Class 9 accident portion of Framsons' Contentions 1-6, supra.

2. In substance, petitioner contends that, in the event of a serious accident, any emergency evacuation would be hindered. The contention is rejected. Petitioner does not set forth any basis for this allegation. His contention is barren and conclusional, and thus does not comply with our Rules of Practice, 10 C.F.R. § 2.714(b), which requires that the bases for each contention shall be set forth with

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24/ As reflected in our Order of November 19, 1979, Mr. Waters did not attend the special prehearing conference to present oral arguments in support of his contentions.

reasonable specificity.

3. Petitioner contends that the planned transportation of nuclear waste on Highway I-10 from the proposed facility to the Barnwell storage facility in South Carolina is unsafe. If petitioner is contending that the transportation of radioactive wastes from the proposed nuclear plant would have an unacceptably excessive environmental effect, he is challenging the values set forth in Summary Table S-4 of 10 C.F.R. Part 51. A regulation of the Commission is not subject to attack absent a showing (not herein made) of special circumstances. 10 C.F.R. § 2.758; Southern California Edison Company, et. al. (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-268, 1 NRC 383, 399-400 (1975). On the other hand, if he is alleging that he may be physically injured, such an allegation is purely speculative in nature, being predicted on the tenuous assumptions that the nuclear waste will be shipped by trucks on the named highway and that an accident might occur in the area proximate to his residence. Exxon Nuclear Company, Inc. (Nuclear Fuel Recovery and Recycling Center), LBP-77-59, 6 NRC 518, 520 (1977). This contention is rejected.

4. Petitioner contends that the proposed facility is designed to emit 35,000 curies of radiation per year during normal operation, which will make it the "dirtiest" plant ever built. Contrary to § 2.714 of our Rules of Practice, which requires that the bases for each contention be set forth with reasonable specificity, Mr. Waters has neither given the basis for the alleged annual emission nor specified any error in the analysis in the FSFES, where, in Section 5.4.4, the staff concluded that

there will be no measurable radiological impact on man from routine operations of the ACNGS. The contention is rejected.

Accordingly, Mr. Waters' petition for leave to intervene is denied and he is not admitted as a party. See Part III, infra.

O. Wilson Contentions

[On September 11, 1979, Ms. Connie Wilson filed her contentions. The applicant and staff respectively responded on October 5 and October 9, 1979.]

1. Withdrawn (Tr. 1236).

2. Petitioner contends that the area west of Houston should be left free of such hazards as a nuclear plant so that residential developments in progress could proceed free of the plant hazard; that Bay City is a more appropriate site for the plant since a contaminating nuclear plant is already under construction there, and that the nuclear plant would deprive the Brazos River of surface water. While staff would not object to admitting this contention if consolidated with PIRG Admitted Contention 1, we agree with applicant that no bases are given with reasonable specificity. Accordingly, the contention is rejected.

3. Petitioner contends that (a) the license should be denied because to date there has been no solution for storage of high-level waste and of spent fuel and (b) the transportation on Highway I-10 of radioactive materials is too risky and should not be permitted. Part (a) is rejected for the same reasons PIRG Additional Contention 19 was denied, supra. Part (b) is rejected for the same reasons Waters' Contention 3, supra, was rejected.

4. Petitioner asserts that a solid waste plant would be more suitable than a nuclear plant at Allens Creek for it would conserve resources and can take care of part of Houston's garbage problem. Applicant opposes admission of this contention as excessively vague and without a supporting basis. Staff did not object if the contention were consolidated with PIRG's similar Contention 5 which has previously been admitted by the Board. (Order February 9, 1979). Applicant's characterization of this contention is well-taken, and the contention is rejected.

5. Withdrawn (Tr. 1238).

Ms. Wilson's petition for leave to intervene is denied and she is not admitted as a party. See Part III, infra.

III. Right of Appeal

Pursuant to 10 C.F.R. § 2.714a, within ten (10) days after the service of this Order, any individual, whose petition for leave to intervene has been denied herein, may appeal to the Atomic Safety and Licensing Appeal Board on the question whether the petition should have been granted in whole or in part.[25/]

Further, pursuant to said section and within the aforementioned time limitation, a party other than the petitioner may appeal to the Appeal Board on the question whether any petition for leave to intervene should have been wholly denied.

IV. Discovery and Other Preparation For 10 C.F.R. § 2.752 Prehearing Conference

Discovery upon all contentions admitted herein shall be initiated immediately and be completed within one hundred twenty days after the service of the

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25/ Pursuant to 10 C.F.R. § 2.715(a), any individual may make a limited appearance statement at a time and place to be noticed at a later date.

instant Order.[26/]

Pursuant to 10 C.F.R. 2.715a, whenever the Board has consolidated substantially similar contentions of two or more parties, such consolidation shall be for all purposes. Said parties shall agree and advise the Board which one shall conduct discovery, present evidence, cross-examine, and submit briefs, proposed findings of fact, conclusions of law and argument upon said contentions. If there are other substantially similar contentions which perchance have not been consolidated by the Board, the involved parties shall agree upon consolidation and advise which one will conduct discovery, etc., or, if there is disagreement concerning consolidation, the parties shall request a resolution by the Board.

In preparation for the forthcoming § 2.752 prehearing conference, to the extent possible, applicant and staff shall confer with the individual parties in an effort to arrive at succinctly worded contentions, other than those contentions already rephrased by the Board.

IT IS SO ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

G A Linenberger

Gustave A. Linenberger, Jr., Member

E Leonard Cheatum

Dr. E. Leonard Cheatum, Member

Sheldon J. Wolfe

Sheldon J. Wolfe, Esquire, Chairman

Dated at Bethesda, Maryland
this 10th day of March, 1980.

26/ This discovery schedule also applies to Dr. Marrack's Contention 2(b), which, in part, had previously been admitted in the Order of November 19, 1979.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document(s) upon each person designated on the official service list compiled by the Office of the Secretary of the Commission in this proceeding in accordance with the requirements of Section 2.71 of 10 CFR Part 2 - Rules of Practice, of the Nuclear Regulatory Commission's Rules and Regulations.

Dated at Washington, D.C. this
11th day of March 1980.

Peggy K. Dawning
Office of the Secretary of the Commission

POOR ORIGINAL

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
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	)	
	)	
(Allens Creek Nuclear Generating Station, Unit 1)	)	
	)	

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