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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:
Morton B. Margulies, Chairman
Gustave A. Linenberger, Jr.
Dr. Oscar H. Paris

In the Matter of	Docket Nos. 50-424-OL 50-425-OL
GEORGIA POWER COMPANY, ET AL.	(ASLBP No. 84-499-01-OL)
(Vogtle Electric Generating Plant, Units 1 and 2)	September 5, 1984

MEMORANDUM AND ORDER ON SPECIAL PREHEARING CONFERENCE HELD PURSUANT TO 10 C.F.R. 2.715a

Following the publication of a Notice of Opportunity for hearing on December 28, 1983, for the captioned operating license application proceeding, petitions to intervene and to hold a hearing were filed by Campaign for a Prosperous Georgia (CPG), Georgians Against Nuclear Energy (GANE) and Coastal Citizens for a Clean Environment (CCCE).

Applicants, represented by Georgia Power Company (GPC) acting for itself and as agent for Oglethorpe Power Corporation, Municipal Electric Authority of Georgia and City of Dalton, Georgia and the Nuclear Regulatory Commission Staff (Staff) filed responses concluding that CPG and GANE satisfied the interest requirements of 10 C.F.R. 2.714 and that each Petitioner would have to plead one admissible contention, as required by 2.714(b), for it to be afforded party intervenor status. They further concluded that CCCE failed to establish requisite interest.

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In a Memorandum and Order of March 9, 1984, we found that CPG and GANE had fulfilled the requirements of 10 C.F.R. 2.714 establishing that their respective interest to participate as intervenors in an adjudicatory proceeding and that full party status for each was dependent on the submission of at least one litigable contention. We further found CCCE had not shown that the action being challenged could cause injury in fact to any of its members and therefore had not submitted grounds for representative intervention.

A Special Prehearing Conference was ordered pursuant to 10 C.F.R. 2.751a to resolve, inter alia, the matter of standing and to pass upon any proposed contentions that would be submitted. Filings were to be made by Petitioners, through amendment or supplemental petition, by April 12, 1984.

CPG and GANE each filed 13 proposed contentions, the last nine of which were identical to each others. Nothing was received from CCCE. Responses to the proposed contentions were timely made by Applicants and Staff.

Prior to the holding of the Special Prehearing Conference on May 30, 1984, at Augusta, Georgia, Applicants, Staff, CPG and GANE conferred in an attempt to resolve differences on proposed contentions. This conference resulted in CPG withdrawing two of its contentions, rewording of others, and it submitted a new contention which was based on material drawn from one filed previously. It proposed to resubmit another contention upon receipt of additional information. At the special prehearing conference GANE altered some proposed contentions

previously filed and, like CPG, submitted the same additional proposed contention. No one opposed the submission of the additional contention by each petitioner.

A review follows of the proposed contentions submitted by Petitioners, as supplemented and amended, and of the responses of Applicants and Staff, with our respective rulings. Further, in this Memorandum and Order, we will set future scheduling and dispose of the CCCE petition.

Disposition of the CPG Proposed Contentions

Proposed Contention 1.

Withdrawn.

Proposed Contention 2.

> There is no reasonable assurance that the production capacity of Plant Vogtle will be needed, as required by NEPA (42 USC 4331-4335) and by NRC regs 10 CFR 50.42 and 10 CFR 51.52(c)(3).

CPG's proposed contention asserts that there is no need for the power from the subject plant. In support of its contention CPG sets forth that GPC incorrectly projected its annual electricity sales growth and peak demand. It alleges that the utility has overcapacity and had tried without success to sell this capacity to out-of-state utilities. Petitioner contends that if additional capacity were needed conservation, solar energy and other environmentally preferable alternatives would be the way to provide it.

Both Applicants and Staff responded that the proposed contention is inadmissible because 10 C.F.R. 51.53(c) specifically provides:

(c) Presiding officers shall not admit contentions proffered by any party concerning need for power or alternative energy sources for the proposed plant in operating license hearings.

That response in turn resulted in CPG filing on May 25, 1984, a request for a waiver of 10 C.F.R. 51.53(c) pursuant to 10 C.F.R. 2.758. The latter section provides that a party may petition that the application of a specified Commission regulation may be waived or an exception made for the particular proceeding. The sole ground shall be that there are special circumstances with respect to the subject matter of the particular proceeding which are such that application of the regulation would not serve the purposes for which the regulation was adopted.

The Commission in promulgating 10 C.F.R. 51.53(c), succinctly set forth its reasons at 47 Fed. Reg. 12940 (March 26, 1982). It stated:

* * *

> [t]he purpose of these amendments is to avoid unnecessary consideration of issues that are not likely to tilt the cost-benefit balance by effectively eliminating need for power and alternative energy source issues from consideration at the operating license stage. In accordance with the Commission's NEPA responsibilities, the need for power and alternative energy sources are resolved in the construction permit proceeding. The Commission stated its tentative conclusion that while there is no diminution of the importance of these issues at the construction permit stage, the situation is such that at the time of the operating license proceeding the plant would be needed to either meet increased energy needs or replace older less economical generating capacity and that no viable alternatives to the completed nuclear plant are likely to exist which could tip the NEPA cost-benefit balance against issuance of the operating license. Past experience has shown this to be the case. In addition, this conclusion is unlikely to change even if an alternative is shown to be marginally environmentally superior in comparison to operation of a nuclear facility because of the economic advantage which operation of nuclear power plants has over available fossil generating plants. An exception to the rule would be made if, in a particular case,

special circumstances are shown in accordance with 10 C.F.R. 2.758 of the Commission's regulations.

* * *

In the same Federal Register issuance at page 12942 the Commission commented that there had never been a finding in a Commission operating license proceeding that a viable, environmentally superior alternative to operation of the nuclear facility exists and that the Commission expects this to be true for the foreseeable future.

The Commission, in promulgating the restrictive regulation 10 C.F.R. 51.53(c), relied upon its conclusion found at 46 Fed. Reg. 39441 (August 3, 1981). It provides:

> Based on all of the above, the Commission believes that case-specific need for power and alternative energy source evaluations need not be included in the environmental evaluation for a particular nuclear power plant operating license. An exception would be made to this rule if, in a particular case, special circumstances are shown in accordance with 10 C.F.R. 2.758 of the Commission's regulations. Such special circumstances could exist if, for example, it could be shown that nuclear plant operations would entail unexpected and significant adverse environmental impacts or that an environmentally and economically superior alternative existed.

In its petition for waiver CPG contends that special circumstances now exist concerning the plant which justify a reconsideration of the need for its power at the operating license stage. It gives as a basis dramatically changed circumstances since the construction permit was issued in the areas of economics, electricity consumption patterns and availability of alternative energy.

The petition for a waiver is supported by an affidavit of Tim Johnson, executive director of CPG. His background qualifications in

the area of the subject of the affidavit are not given. The affidavit is virtually a verbatim repetition of the bases given in support of Proposed Contention 2.

Affiant reports that Georgia Power Company's average annual growth in territorial sales and peak demand through 1983 had been incorrectly forecast. The utility is stated to be already overbuilt. CPG names nine other generating units under construction along with the capacity of each. CPG claims this should compound GPC's overcapacity. Affiant reported further that the company had conceded to the Georgia Public Service Commission that it had tried without success to sell its overcapacity to out of state utilities.

Affiant's position is that even if additional capacity were needed, the facility would not be the best way to provide it. Johnson asserts conservation and solar energy are less injurious to the physical and human environment than Plant Vogtle would be. He claims that a solar water heating system could be installed on every household in Georgia at less cost than that of completing the nuclear facility. The proposed water heating system, it is alleged, would provide more energy and jobs and have less environmental impact than completion and operation of Plant Vogtle. Unnamed experts are relied upon in support of the propositions. Conservation and passive solar measures are stated to have essentially no operating costs. No figures are submitted by Petitioner to support any of its assertions as to cost comparisons. Georgia Solar Coalition, Inc., a non-profit organization, in a notarized letter of May 28, 1984, submitted a figure of 22 MBtu as the typical

yearly demand for delivered energy for an electrical resistance domestic water heater for a family of four; 15.4 MBtu is the average yearly savings that can result from energy conservation measures and a standard active solar flat plate collector domestic hot water system.

Petitioner states that it is clear that Plant Vogtle is not needed to meet increased energy needs or to replace older, less economical generating capacity. Affiant asserts that operating costs of the facility will exceed the total costs of many environmentally preferable alternatives, including co-generation using existing industrial process steam, conservation measures consisting of increased insulation of homes and applications of solar energy for water and space heating. No details or figures are furnished.

Petitioner also relies in the matter on a statement made by a Commissioner of the Georgia Public Service Commission that unnamed experts are questioning whether large scale generating plants should continue to be constructed and are of the position that an era of co-generation, combined cycle generation, photocell or light cell and fuel cell generation is being entered and that alternative sources of generation should be studied.

Applicants filed a response on June 11, 1984, alleging Petitioner had failed to make a prima facie case for waiver as provided in 10 C.F.R. 2.758 and ask that the request be denied. The pleading was supported by an affidavit from Georgia Power Company's senior vice president of marketing who is experienced in planning and marketing of bulk power resources for the utility.

Affiant noted that Georgia Power Company's currently available capacity includes only approximately one third of the new capacity additions which the Company had planned to construct a decade ago, achieved in part through cancelling units and selling interests in others under construction. He further pointed out that the Company's generating capacity is predominantly fossil fueled and that under normal procedures Plant Vogtle's capacity will be utilized in preference to fossil-fueled generation because its fuel costs will be lower. Affiant also reported that the majority of households in Georgia Power Company's service area use natural gas to provide hot water heating.

Among other points, Applicants further asserted CPG makes no attempt to show that Plant Vogtle would not be used to replace older, less economical generating capacity, a vital requirement for making a prima facie case for waiver. Nuclear Regulatory Commission Staff took the same position in its response. Three of the owners, other than Georgia Power Company, now own a majority interest in the plant.

Based upon the foregoing record, we find that CPG has not made a prima facie showing that should result under 10 C.F.R. 2.758(d) in a certification of whether the regulation should be waived. Under 10 C.F.R. 2.758(c), if the presiding officer determines that the petitioning party has not made a prima facie showing, the presiding officer may not further consider the matter.

A formidable burden is placed on one seeking a waiver of 10 C.F.R. 51.53(c). See Duquesne Light Company, et al., (Beaver Valley Power Station, Unit 2), LBP-84-6, 19 NRC 393, 401-403 (1984). Here Petitioner

failed to make a prima facie showing that the Vogtle facility will not be needed to meet increased energy needs. It provided no probative information bearing on what will be the electrical energy requirements of Georgia Power Company and its 3 partners who hold a majority interest, and their production capacity during the expected life of the facility. Without such information it cannot be determined whether the proposed operating plant will represent needed or excessive capacity.

The fact that Georgia Power Company erroneously estimated it annual electricity sales growth and peak demand for a preoperational period does not establish that the power of the plant will not be needed during its planned life. The providing of the names and capacities of additional facilities Georgia Power Company has coming on line and making known that Georgia Power Company had unsuccessfully attempted to sell electricity out of state does not establish that Vogtle, when ready, will represent over-capacity. Applicants' affiant has furnished information showing that Georgia Power Company reduces planned capacity when the situation warrants. CPG has not provided sufficient information to provide a comprehensive picture of what electrical needs will be during the projected life of the plant and whether Vogtle will represent needed or excess capacity. Because CPG has failed to establish that the subject plant will not be needed for increased energy needs, it has not provided a basis for waiver of 10 C.F.R. 51.53(c) and its petition must fail.

Equally as fatal to its waiver claim is CPG's failure to show that the facility would not be used to replace older, less economical

generating capacity. The Commission's regulation barring need for power as an issue in an operating license application proceeding is based on the presumption the new nuclear plant would be used in that manner. Applicants' affiant states it will be so used. Petitioner has made no showing to overcome the presumption and the evidence that the plant would not be so used. Petitioner has not sustained its burden of proof on this aspect of the waiver petition which must therefore be denied.

CPG has not made a prima facie case that an environmentally and economically superior alternative exists to the proposed Vogtle plant which could tip the NEPA cost benefit balance against issuance of the operating license.

To be a viable alternative power source for the subject plant the substitute must be capable of serving the consumers in an equivalent manner that the power from the Vogtle plant could be used. Consumers must be able to utilize the power from the substitute source in whatever varied ways they see fit.

Petitioner has not offered an alternative power source for the proposed plant. It proposes conservation and installation of solar water heating systems. Neither of these offers the consumer an alternative power source in the manner indicated. Petitioner only offers conservation in various forms, which the Commission concludes does not negate a need for the new plant. The Commission stated in its rulemaking on need for power at 47 Fed. Reg. 12941:

> If conservation lowers demand, then utility companies take the most expensive operating plants off-line first. Thus a completed

nuclear plant would be used as a substitute for less economical generating capacity.

For the sake of argument, even if one were to consider conservation and the solar water heating system an alternative energy source, Petitioner has offered nothing convincing and probative that they are environmentally and economically superior to the Vogtle plant. All that are offered are conclusional statements without factual support. The figures given by Georgia Solar Coalition, Inc. do not support the assertions made. Had the affiant been qualified as an expert in the subject matter under discussion, which he had not been, Petitioner's prima facie case still would not have been made because what was offered were unsupported conclusions.

Petitioner makes us aware that there are potentially beneficial energy sources other than from nuclear and fossil fuels and that research is being conducted on their use and more is being called for, but this does not meet the regulatory requirement of showing any of them to be currently environmentally and economically superior as an alternative to the Vogtle plant. Its request for waiver of 10 C.F.R. 51.53(c) therefore must be denied.

Having found that Petitioner has not made a prima facie showing for a waiver of 10 C.F.R. 51.53(c), under the provision of 10 C.F.R. 2.758(c) we cannot consider the matter further. Consideration of the matter in Proposed Contention 2 being denied to us, the proposed contention is not litigable and is therefore dismissed.

Proposed Contention 3.

> There is no reasonable assurance that Georgia Power Company and co-owners will have the financial ability to safely operate Plant Vogtle for the period of the license or to permanently shut down the facility and maintain it in a safe condition, as required by 10 CFR 50.40(b), and other applicable laws, rules and regulations.

Petitioner expects Georgia Power Company and the plants co-owners will be subjected to hardships to the extent that their financial ability to safely operate the plant for the period of the license and to properly decommission it is questionable.

The Commission promulgated on March 31, 1982 regulations, 10 C.F.R. 50.33(f)(1) and 10 C.F.R. 50.40(b) that eliminated as an issue the financial qualifications of an electric utility as an applicant in an operating license application proceeding.

Applicants, in their response to Petitioner, pointed out that the Commission's rule barring financial qualifications in an operating license proceeding had been the subject of a recent remand by the U.S. Court of Appeals for the District of Columbia Circuit in New England Coalition on Nuclear Pollution v. NRC, No. 82-1581 (D. C. Cir. February 7, 1984) and the Commission had undertaken a rulemaking proceeding to revalidate the proscription. Their position is that because the matter of financial qualifications is the subject of rulemaking it is an inappropriate subject for a contention in the proceeding and at the very least the issue should be deferred pending Commission guidance to the licensing boards.

Staff in response noted that the Commission had met on April 26, 1984 to discuss policy guidance on financial qualification litigation

and it recommended that the matter be deferred pending a statement by the Commission.

Staff subsequently reported that on June 7, 1984, the Commission issued its Statement of Policy which concludes:

> Accordingly, the March 31, 1982 rule will continue in effect until finalization of the Commissions response to the Court's remand. The Commission directs its Atomic Safety and Licensing Board Panel and Atomic Safety and Licensing Appeal Panel to proceed accordingly.

The Commission's finding that the rule continues in effect proscribes us from considering the issue of financial qualification of utility applicants in an operating license application. The proposed contention is therefore dismissed.

Proposed Contention 4.

Withdrawn.

Disposition of the Initially Identical Proposed Contentions of CPG and GANE

Proposed Contention 5.

> The applicant has not properly assessed the geology of the site and has not properly considered the geology of the site in the engineering design of the project, especially in light of new data made available by the U.S. Geological Survey. This violates NRC rules on seismic standards described in 10 CFR Part 100, Appendix A.

In their separate submittals of April 11, 1984, CPG and GANE cited U.S. Geological Survey (USGS) information released in 1982 relating to a postulated Millett fault about 7 miles from the Vogtle site (USGS Open-File Report 82-156 (1982)), and to a USGS letter (J. F. Devine to R. E. Jackson, November 16, 1982) indicating that its investigations of

the 1886 Charleston Earthquake do not justify confining an event of that magnitude to the immediate environs of Charleston. We address each USGS matter separately.

By the time the prehearing conference was held on May 30, 1984, CPG had amended proposed Contention 5 (submitted May 25, 1984) to delete inclusion of the postulated Millett fault, whereas GANE retained the Millett fault as part of its contention (Tr. 18). Applicants and Staff, in their submittals on May 7 and May 14, 1984, respectively, opposed including the Millett fault on the grounds that its existence is only speculative, and that the extent of overlying, undisturbed sediments provides reason for not considering it to be a capable fault. At the prehearing conference, CPG stated that recent discussions (about one week prior to the conference) with a USGS staff member indicated that the Millett fault lacked significance. GANE offered no basis in support of its allegation that the Millett fault exists, is capable and should be considered. Accordingly, we dismiss any consideration of the postulated Millett fault within the scope of Contention 5, because no adequate basis for its inclusion has been provided. The above action restores proposed Contention 5 to an identical status for CPG and GANE involving only the Charleston earthquake. However, the Board is mindful of two considerations not addressed by the participants in the proceeding:

a) Board Notification 82-122A of December 30, 1982 (prompted by the USGS reconsideration of the 1886 Charleston Earthquake) wherein the Staff recommended that certain studies be undertaken as the result of this revised USGS position; and,

b) The issuance in April 1984 of NUREG/CR-3756, "Seismic Hazard Characterization of the Eastern United States: Methodology and Interim Results for Ten Sites," which considers ten sites including the Vogtle site and which appears to be the first report on certain of the studies recommended in BN 82-122A.

In its letter of July 12, 1984, the Board asked the Staff to comment upon this matter as it relates to the proposed contention. The Staff's response of July 23, 1984 indicated that it will discuss the impact upon Vogtle of its reassessment of the Charleston event in the Vogtle SER, currently scheduled to issue in June of 1985. Further, the Staff suggested that the Board's ruling on admissibility of this proposed contention be deferred until after the Vogtle SER issues.

Other participants were also invited to comment upon the Board's inquiry. CPG filed comments on July 26, 1984 to include recognition of the recommended reassessment program identified in BN 82-122A as well as recognition of the issuance of NUREG/CR-3756. CPG alleged that these matters constitute new information that justifies admission of the proposed contention. GANE did not respond. The Applicants, on July 27, 1984, filed comments in which they concluded that the publication of NUREG/CR-3756 did not cure the lack of a basis for the proposed contention and maintained that it should not be admitted.

We find merit to the Staff's position regarding deferral. Accordingly, Petitioners are advised that within 30 days following issuance of the SER they may amend this proposed contention if they consider that the SER contains a basis for such an amendment. Applicants and Staff will have the usual prescribed time for responses.

Absent the filing of an amendment by either Petitioner in accordance with these instructions, proposed Contention 5 (limited to the Charleston earthquake) will be ruled on by the Board.

Proposed Contention 6.

> The applicant cannot guarantee the safe operation of the reactor for the life of the plant due to unresolved questions of thermal shock effects on irradiated reactor vessels as required by 10 CFR 50 Appendices A, G, and H and other applicable laws, rules, and regulations.

Applicants and Staff both opposed the admission of this contention for reasons that include lack of a showing that a specific basis exists for concern about pressurized thermal shock effects on the Vogtle reactor vessel, failure to show that the Applicants' analyses of thermal shock are flawed, and failure to justify inclusion of this unresolved safety issue in the Vogtle proceeding. Petitioners' concern about the existence of copper and phosphorous in the reactor vessel alloy was not shown to relate to accelerated embrittlement. Finally, Petitioners' concern about the cost to Applicants should the pressure vessel need to be heat treated during the operating lifetime of the Vogtle plant is beyond the scope of this proceeding. During the prehearing conference discussion, Petitioners offered no additional information that would negate the objections raised by Applicant and Staff. We agree with the position of Applicant and Staff; accordingly, the admission of proposed Contention 6 is denied on the grounds that it lacks a sufficiently particularized basis.

Proposed Contention 7.

> Applicant has not adequately addressed the value of the groundwater below the plant site and fails to provide adequate assurance that the groundwater will not be contaminated as required by 10 CFR 51.20(a), (b), and (c), 10 CFR 50.34(a)(1), and 10 CFR 100.10(c)(3).

Petitioners contend that the Tuscaloosa aquifer, which they state is located approximately 300 feet below the Plant Vogtle site, is a valuable regional resource of excellent quality water that supplies domestic water to many cities and communities across east central Georgia and the South Carolina coastal plain. They point out that the Tuscaloosa aquifer provides water for 15,000 people in Richmond County and most of the drinking water for residents of Girard, located five miles from the plant, and of McBean, which is 13 miles from the plant. (GANE Supplement, April 11, 1984 at 15).

In addition to the Tuscaloosa aquifer, Petitioners state that the Lisbon Sand Formation located approximately 200 feet below the Plant Vogtle is another valuable groundwater source. They contend that this aquifer is important as an existing source of drinking water and to future development along the Savannah River. They state that Plant Vogtle's cooling system make-up water wells penetrate and obtain water from both the Lisbon Sand Formation and the Tuscaloosa aquifer. (Ibid.)

Finally, there is a water table aquifer located directly below the surface at Plant Vogtle, and while Petitioners acknowledge that this aquifer is not as extensive as the two deeper aquifers discussed above, they contend that the water table aquifer is used in Burke County to supply water for agriculture and commercial establishments. (Ibid.)

Petitioners contend that any release of radioactive water on site would quickly contaminate the water table aquifer because at the site the soils are sandy and permeable and there is little runoff. They argue that radioactive contamination of the water table aquifer could endanger the public health and cause economic hardship (Id., at 15-16). They argue, further, that contamination of the water table acquifer could result ultimately in contamination of the L sbon Sand Formation and the Tuscaloosa aquifer, by vertical movement of contaminated water through fractures in the clay separating the aquifers, or through permeable sections of the clay. (Id., at 16.)

In a GANE filing of June 13, 1984, Mr. W. F. Lawless discusses at length various sources of contaminants at the Savannah River Plant (SRP). He also states that the Tuscaloosa aquifer has produced contaminated water in at least five wells, including two drinking water supply production wells. The contaminants appear to have been chlorinated hydrocarbons, however, not radioactive material. (GANE filing, June 13, 1984 at 13). The hydrocarbons, however, conceivably could have come from the M-Area at SRP. (Id., at 13-14.) Mr. Lawless alleges, further, that ground water above the Tuscaloosa aquifer is severly contaminated. (Id., at 18).

Applicants discuss the water table aquifer and the Tuscaloosa aquifer, but do not acknowledge a Lisbon Sand Formation acuifer between

the two.[1] Applicants state that a 60- to 70-foot thick marl formation makes contamination of the Tuscaloosa aquifer unlikely. They acknowledge that an accidental release could contaminate the water table aquifer, but state that spillage at the plant would eventually make its way to Mathes Pond via the water table aquifer and from there by a stream to the Savannah River. (Applicants' Response, May 7, 1984 at 42-43; Tr. 139-142)

The Staff objects to the admission of Contention 7 on the grounds that Petitioners have raised no new facts to call into question the assessment of ground water problems at the construction permit proceeding. In addition, Staff has difficulty in discerning the gravamen of the contention, or whether it addresses normal operation or accident conditions. (Staff Response, May 14, 1984 at 12)

The Board has no difficulty in discerning the gravamen of the contention: it is that the Petitioners are concerned that an accidental spill of radioactive water on the site could result in radioactive

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1 Applicants do state that there is a third aquifer in the region, which they characterize as the "principal artesian aquifer"; because the principal artesian aquifer is not hydraulically isolated from the Tuscaloosa aquifer, however, Applicants elect to refer to the combination as the Tuscaloosa aquifer. (Applicants' Response, May 7, 1984, n. 27 at 42-43). It is not clear whether the principal artesian aquifer is distinct from , or synonymous with, the Lisbon Sand Formation aquifer. GANE refers to the principal artesian aquifer, also, but characterizes it as being "a major regional water supply aquifer" located just south of Plant Vogtle, and GANE seems to suggest that in that region the clay that separates the water table aquifer from the deeper aquifer changes to a permeable limestone (GANE Supplement, April 11, 1984 at 16).

contamination of the shallow, and possibly the deeper, aquifers under Plant Vogtle, all of which are used as public water supplies. Moreover, from the information provided in the pleadings and at the Special Prehearing Conference, we are not convinced that radioactive contaminants that might get into the water table aquifer could not get into deeper aquifers. We believe that the Petitioners have, indeed, raised new information concerning contamination of the Tuscaloosa aquifer; this fact, if true, suggests to us that the Tuscaloosa aquifer may not be as isolated from the surface as Applicants would have us believe. In addition, we feel we need to determine whether there are one or two deep aquifers, and whether these are hydraulically connected anywhere in the vicinity of the plant.

For the foregoing reasons we conclude that the Petitioners have raised a litigable issue in Contention 7. Therefore Contention 7 is accepted for litigation in this proceeding.

Proposed Contention 8.

> Applicant has failed to enforce a quality assurance program in the construction of Plant Vogtle that provides adequately for the safe functioning of diverse structures, systems and components, as required by 10 CFR Appendix B.

In their separate submittals of April 11, 1984, both Petitioners originally proposed the same identical contention (as stated above) and offered identically worded bases to support it. These bases included a discussion of standby diesel generator problems, which topic both Petitioners proposed to exclude from this contention and to include same in a new Contention 14 proposed by each Petitioner. Staff and

Applicants offered no objection to this change (Tr. 62-63). New proposed Contention 14 will be addressed below.

CPG, in its filing of May 25, 1984, revised its Contention 8 to read as follows:

> Applicant has not and will not implement a quality assurance and quality control program which will function as required by 10 CFR 50 Appendix B. By restricting quality assurance methods to explicitly designated procedures in disregard to more comprehensive standards of engineering practice, the Applicant has undermined confidence in the critical functioning of welds in both the reactor coolant and containment systems of Plant Vogtle.

CPG stated that its revised contention is restricted to a consideration of welds (Tr. 41) and that the contention faults both the quality assurance program and its implementation (Tr. 62), as they apply to the adequacy of welds. The supporting basis of this revised contention cites certain irregularities involving weldments. During the prehearing conference, CPG explained that it was not complaining about the adequacy of specific welds, per se, but rather that the methodology of the quality assurance program and its implementation do not generate confidence that welding practices generally meet the professional standards intended by the NRC regulations and ASME code requirements (Tr. 41-43).

By contrast, GANE, at the prehearing conference stated that it had also modified its proposed contention, but in a different manner than CPG. GANE promised a copy of its revised language (Tr. 48), but the Board is unaware of its having been submitted. Thus, we assume that GANE is adhering to the original statement of the contention cited

above. By way of amplification, GANE stated that "systemmatic quality assurance deficiencies have existed and continue without resolution in the following areas . . ." (Tr. 49). Those areas were identified by GANE (Tr. 49) as "[p]roper welding, vendor surveillance, inspection, testing, implementation of procedures and procurement." The Board is thus now confronted with two different proposed Contentions 8 from CPG and GANE.

Applicants' submittal of May 7, 1984 presents a lengthy detailed rebuttal supporting the adequacy of their QA program in which they make, in summary, the following points:

- No violations were more severe than severity levels IV and V;
- Applicants identified and voluntarily corrected many of the anomalous conditions adverted to;
- NRC SALP and I&E reports commended the Applicants' QA program; and
- Intervenors' identification of several anomalous matters does not impugn the adequacy of Applicants' QA program but rather evidences a lack of appreciation of how a QA program functions. (Applicants' Response, May 7, 1984, at pp. 46-63).

The Staff, in its May 14, 1984 response found the original proposed contention broad and lacking in specificity; and judged the contention not to be susceptible to focused litigation (Staff Response at pp. 12-13). During discussion at the conference, Staff counsel opined that CPG's amended and narrowed contention approaches admissibility. However, Staff still considers the GANE contention to be too broad to be admitted (Tr. 56-57).

Despite the representations of Applicants and Staff, the Board is concerned about the possible impact upon the operational safety of the Vogtle plant in view of the many instances of noncompliance that have been cited. Thus, we feel that an evidentiary inquiry is justified to determine whether Applicants have formulated and implemented an adequate QA program. Although we do not decide the merits of these two proposed Contentions 8 at this time, we are mindful of the concerns of Applicants and Staff with respect to what a focused litigation might comprise: they and we have a right to know more specifically what is to be litigated. Accordingly, the Board now instructs Applicants, Staff, CPG and GANE to confer about the language of these contentions with the objective of rewording them in a manner that is susceptible to more focused ligation; and the Petitioners should consider consolidating the two contentions. The results of such a conference (be it a stipulation as to acceptable wording or statements of positions regarding the reasons for continued disagreement) are to be reported to the Board 30 days after service of this Memorandum and Order subsequent to which we will rule upon its acceptability. Proposed Contentions CPG 8 and GANE 8 are admitted to the extent indicated.

Proposed Contention 9.

> Novel design features must be discussed and described adequately in the PSAR and FSAR as required by 10 CFR 50.34. The Applicant has embarked on the implementation of the reactor coolant system primary loop at Plant Vogtle using a pipe restraint system design that differs substantially from that currently required. Although assertions of the effectiveness of this new design have been issued, substantiating mechanical modelling and empirical justification have been withheld. The Applicant has therefore failed to provide even

the minimal information required to understand and assess the safety repercussions of this innovative design.

At the Special Prehearing Conference Applicants agreed to provide Petitioners with additional information on the matter under a protective proprietary agreement. CPG agreed that within 30 days after receiving the document it would either decide to amend or withdraw the proposed contention. GANE agreed that it would follow suit. By letter dated July 26, 1984, CPG notified the Board of its withdrawal of proposed Contention 9. No separate expression was received from GANE. Based on Petitioners' taking identical positions for the handling of the proposed contention at the Special Prehearing Conference, we consider it withdrawn from the proceeding.

Proposed Contention 10.

> Applicant has not shown that safety-related electrical and mechanical equipment and components will be environmentally qualified at the onset of operations and throughout the life of the plant as required by General Design Criteria 1, 2 and 4 of 10 CFR 50, Appendix A and other applicable NRC rules.

In their submittal of May 7, 1984, Applicants used the identical supporting discussions of CPG and GANE to identify eleven specific subcontentions; Applicants then addressed the admissibility of each. At the prehearing conference Staff and the Petitioners agreed to this breakdown into eleven subcontentions as the basis for determining admissibility and the scope of any litigation of this contention. Staff's request to comment upon each of these was granted (Tr. 77-78). We now discuss each subcontention.

10.1 Integrated Dose vs Dose Rate

This subcontention alleges that Applicants' testing methods are inadequate because the Applicants only use high levels of radiation or integrated dose. Petitioners cite research performed at Sandia Laboratory for the proposition that many materials, including polymers found in cable insulation and jackets, seals, rings and gaskets at Vogtle may experience greater damage from lower dose rates. In its submittal of June 27, 1984 (affidavit accompanying same) Applicants' affiant quotes Regulatory Guide 1.131 as limiting the qualification test exposure rate to 10^6 rad/hr. Neither Applicants nor Staff (in its June 20, 1984 submittal) object to this subcontention if it is restricted to the polymers identified in the Sandia study report NUREG/CR-2157, "Occurrence and Implications of Radiation Dose-Rate Effects for Material Aging Studies," June 18, 1981. With this restriction to the particular polymers so identified, Subcontention 10.1 is admitted for litigation.

10.2 Synergism

This topic deals with another Sandia study examining the effects of synergism. Petitioners state that this Sandia study (NUREG/CR-2156, "Radiation-Thermal Degradation of PE and PVC: Mechanism of Synergisms and Dose-Rate Effects," June 1981) examined the combined effects of radiation, heat, and (in some experiments) oxygen concentration and determinated that "the greatest amount of degradation was found upon exposure to heat followed by exposure to radiation." Petitioners further allege that the existence of synergistic effects established by this report have not been considered by the Applicants.

The Staff does not object to admitting this subcontention (Staff Supplemental Response, June 20, 1984). However, the Applicants, in their May 7, 1984 Response, note that the Vogtle FSAR does address synergistic effects in cables. The Board's review of the FSAR indicates that the results of cable testing (cables are said (without reference) to be the only component in which synergism has been identified) will not be available until testing has been completed. Thus cables, at least, are being tested for synergistic effects, an example that Applicants point out seems to have been ignored by Petitioners. Nor can we find that Petitioners have identified any other equipment or components which they believe to be susceptible to synergistic effects, despite the Sandia report's identification of PE and PVC as possibly susceptible materials.

We find this subcontention to lack a specific basis and we deny its admissibility.

10.3 Cable in Multiconductor Configurations

Again, Petitioners cite a Sandia study (not identified) for the proposition that in tests of EPR cable material, multiconductor configurations performed "substantially worse" than single conductor configurations and that qualification testing impling only single conductors may not be representative of multiconductor performance. Petitioners further allege that the results of this report have not been considered in Applicants' testing program. The Staff does not object to the admission of this subcontention, nor do Applicants. Based on the foregoing reasons, we admit Subcontention 10.3.

10.4 Terminal Blocks

Applicants' affiant states that there are no terminal blocks associated with safety-related applications that will be exposed to, and therefore need to be qualified in, a steam environment (Affidavit attached to Applicants' letter response of June 27, 1984). In its letter response of July 26, 1984, CPG withdrew this subcontention. Although Staff had previously offered no objection to the admission of this subcontention and GANE has not responded to Applicants' affidavit, there appears to be no basis for its support. We deny its admission.

10.5 Solenoid Valves

This subcontention challenges the qualification of solenoid valves used at Vogtle. The contention is based upon test results performed by ASCO and Franklin Research Center and upon an NRC Board Notification issuance. The Staff and the Applicants do not object to the admission of this subcontention. Having found a sufficient basis for, and no opposition to, the admission of this subcontention, the Board deems it to be acceptable for litigation.

10.6 Limitorque Motor Operators

Petitioners cite IE Notice 81-29 for the proposition that motor operators manufactured by Limitorque has exhibited failures upon exposure to steam spray. Further tests by Westinghouse confirmed the unacceptability of the motor design. Applicants' affiant (citation above) stated that new motors designed by Westinghouse and Limitorque had been successfully qualified in a 420°F steam environment, and that these new motors have been ordered as replacements. This would seem to

moot this matter; and, indeed, CPG, by letter of July 26, 1984, advised that CPG will not raise this issue. Although GANE has not replied, we consider this issue to be mooted and we deny admission of the instant subcontention.

10.7 Hydrogen Recombiners

Petitioners have presented three ingredients in this subcontention:

a) Rockwell catalytic recombiners have components that did not pass certain environmental qualification tests;

b) The entire recombiner system, as a unit, has not been qualified; and

c) A recombiner with unqualified transducers was delivered to another nuclear facility.

The Applicants' responses have mooted (a) and rebutted (c) by pointing out that a Westinghouse electric recombiner is to be used in the Vogtle plant (Applicants' Response, May 7, 1984, at p. 69), and by stating through its affiant that no pressure transducers are contained in the Westinghouse unit (Affidavit accompanying Applicants' letter response of June 27, 1984). Petitioners do not clarify whether item (c), above, exclusively relates to pressure transducers; nor do Applicants make clear that there are no transducers of any type present in their recombiner. Furthermore, although the attachments to the above cited affidavit indicate that radiation testing of certain recombiner components have been performed, these attachments have been expurgated in a manner that does not report nor permit a critique of some of the test results. For this reason, it is difficult to determine whether a radiation-hot steam environmental test of the overall recombiner unit is

appropriate. The Staff does not oppose the admission of the portion of this subcontention dealing with the radiation testing of transducers.

We believe further inquiry is necessary in the areas embraced by the following questions:

> Are there any types of transducers or sensors important to the proper functioning of the Vogtle electric type hydrogen recombiner in an accident environment that require environmental qualification testing in an accident environment; if so, what testing is planned or completed and with what results?
>
> If environmental qualification testing in an accident environment of an entire prototype recombiner is not required, what is the basis for this conclusion? If such testing is planned or has been completed, what is the nature of the test and what criteria exist for assessing the adequacy of the test results?

The Board deems the subcontention to be acceptable for litigation.

10.8 Fire Protection

Petitioners contend that Applicants have not satisfied 10 C.F.R. 50.48 with respect to a showing that in the event of a fire the Vogtle plant can be safely shut down. They cite the lack of an NRC testing program on the qualification of safety equipment against fire, and a challenge by the Union of Concerned Scientists of the adequacy of NRC's fire protection requirements. There is no such NRC testing program and no regulatory requirement that Applicants' safety equipment satisfy an NRC testing program. Nor have Petitioners identified any portion of the Vogtle plant wherein specific safety features, equipment or components have not met applicable regulatory requirements. Applicants and Staff would have us deny this subcontention as lacking any specific or particularized basis. Applicants further allege that the subcontention

challenges the Commission's regulations regarding environmental qualification and fire protection. We find that the lack of an adequate basis is sufficiently compelling to justify denial, without addressing the question of an attack upon the regulation. Thus, the Board denies admission of Subcontention 10.8.

10.9 Seismic Qualifications

Intervenors cite NUREG-0606 (Unresolved Safety Issues Summary, August 20, 1982) for the proposition that design criteria and methods for seismic qualification of equipment in nuclear plants have undergone significant change, requiring a reassessment of Vogtle. However, they fail to note that USI-46 (Seismic Qualification of Equipment in Operating Plants), which we assume to be the focus of their attention, is addressed to the question of the need for any backfitting of operating plants. No nexus to Vogtle is offered nor is any specific Vogtle plant equipment or component alleged to have not met seismic qualification requirements. We agree with Applicants and Staff that this subcontention lacks an adequate basis. We deny the admission of Subcontention 10.9.

10.10 Shortcomings to Qualification Methodologies

This subcontention is vaguely based upon a Sandia Laboratory consideration of the adequacy of qualification methodologies applied to the testing of safety equipment. Petitioners identify no methods applied to components or equipment associated with Vogtle that would cast doubt upon any safety feature of the plant. Absent more, we again must agree with Staff and Applicants that there is an insufficient basis

to define or support a litigable issue. We deny the admission of Subcontention 10.10.

10.11 Accident Parameters

Petitioners cite post TMI-2 accident investigation issues raised in 1979 for the proposition that accident parameters and post-accident functionality requirement times for Vogtle safety features have not been given proper consideration. Again, no specific Vogtle inadequacies have been identified that fail to meet the Commission's upgraded (1983) qualification requirements; and again we agree with Applicants and Staff that no definitive basis has been provided to support a litigable issue. We deny admission of Subcontention 10.11.

Proposed Contention 11.

In its amended supplemental petitions filing of May 25, 1984, CPG altered its version of proposed Contention 11. At the May 30, 1984 prehearing conference, GANE stated that it agreed with this change. Thus, the proposed contention now reads as follows:

> Applicants' failure to consider defects in the Vogtle steam generator system constitutes an undue risk to public health and safety in violation of 10 CFR 50.34(b) and 20 CFR 50 Appendices A and B.

Petitioners cite an NRC summary of Unresolved Safety Issues (August 20, 1982) for the proposition that Westinghouse PWR steam generator tubes have shown evidence of degradation from several causes. Thus Petitioners have safety concerns about Vogtle, during normal operation and under accident conditions, that they allege Applicants have not considered. Petitioners cite the following causes of steam generator

tube degradation: "corrosion induced wastage, cracking, reduction in tube diameter, degradation due to bubble collapse water hammer and vibration-induced fatigue cracks." (Supplement to Petition, filed April 11, 1984, p. 26, and CPG's Second Amendment to Supplement, filed June 13, 1984, p. 1).

Applicants cite Vogtle FSAR references wherein specific measures are described to protect against water hammer effects and corrosion effects that include denting and stress corrosion cracking. Petitioners have not indicated in what specific manner any of these measures adopted by Applicants are inadequate.

Applicants do not, however, address bubble collapse nor vibration-induced fatigue cracking mechanisms for tube degradation that could contribute to accidents associated with tube failure occasioned by these mechanisms. The Board concludes that an evidentiary airing of a selected portion of this contention is appropriate. Hence we admit for litigation proposed Contention 11 restated and narrowed in scope as follows:

> Applicants have not demonstrated their basis for confidence that no unacceptable radiation releases will occur as the result of steam generator tube failures occasioned by vibration-induced fatigue cracking and by bubble collapse within the Vogtle steam generators.

Proposed Contention 12.

> The applicant has not properly assessed the amount of salt and chlorine gas release from the cooling towers and the extent of consequent adverse agricultural and environmental damage in the area of Plant Vogtle.

The gravamens of this contention are that (1) the expected salt drift from the Plant Vogtle cooling towers is in the range that can damage vegetation; and (2) chlorine gas will also be released from the cooling towers, and no consideration was given this fact in the Vogtle CP-FES or the OL Environmental Report (OL-ER). Petitioners point out that the CP-FSAR estimates salt drift to be at the annual rate of 305 pounds per acre within one mile of the plant, and they state that in the OL-ER this rate of salt deposition "is admitted to be presently considered to be in the range of potential damage to vegetation." (GANE Supplement, April 11, 1984, at 29) In fact, their citation to the OL-ER referred to a question from Staff to Applicants relating to the conclusion in the CP-FES that a deposition of 305 lbs/acre/year would be negligible. The Staff indicated that such a rate of deposition is now considered to be damaging to plant communities. (OL-ER, Ouestion E290.3, Amend. 1, 2/84) With regard to chlorine, Petitioners argue that chlorine gas will be injected into the circulating water system at a maximum rate of 10,000 pounds per day; consequently there is the potential for the release of thousands of pounds of chlorine gas per day from the cooling towers. They argue that the released chlorine may have an adverse environmental effect, and its impact has not been assessed.

Applicants responded by stating that the impact of the expected salt drift was assessed in the CP-FES and determined to be negligible.[2] Further, Applicants stated that in the OL-ER the estimate has been revised downward to 31 lbs/acre/year on-site and 21 lbs/acre/year off-site. (Applicants Response, at 78-80) With regard to chlorine, Applicants acknowledged that chlorine would be used to prevent bio-fouling of the cooling towers, and Applicant's counsel commented on the chemical behavior of chlorine in the cooling tower water. (Tr. 91-93)

Petitioners challenged the revised salt drift estimates during the Special Prehearing Conference, and stated that the NRC Staff had suggested that the calculation might have to be redone. Petitioners alleged, further, that the OL-ER did not describe how the recalculation was performed. (Tr. at 88-89) Our own inspection of the OL-ER, supplied to us by the Applicants subsequent to the Special Prehearing Conference, revealed that the Applicants' reassessment of salt deposition was based on the salt deposition reduction ratio obtained from data on salt drift deposition at Susquehanna. No detailed

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2 At first glance it might appear that the Staff's finding in the CP-FES that a deposition rate of 305 lbs/acre/year would have a negligible impact is contradictory to the Staff's statement in Question 290.3 of the OL-ER. We note, however, that in Question 290.3 Staff stated that 305 lbs/acre/year is "presently considered" to be potentially damaging to vegetation, and we assume that the apparent change in position by Staff resulted from information accrued since the CP-FES was prepared.

information about the reassessment was presented, however. (OL-ER, Response to Question 451.17, Amend. 1, 2/84)

The Staff opposes this contention on the grounds that the Petitioners have shown no new information that has become available since the CP stage. (Staff Response, at 15) In response to a question from the Board, Staff counsel stated that he believed that the technical Staff was working on another salt drift calculation. (Tr. 94)

Applicants' reassessed salt drift estimates are certainly new. contrary to Staff's assertion that the Petitioners have failed to show that new information has become available since the CP stage of this proceeding. Applicants point out that it would be ludicrous to assert an order of magnitude reduction in the estimates as a basis for re-opening this question. We would agree, were it not for the fact that the Staff apparently is still working on its own calculations of salt drift or still working on its review of Applicants' reassessment, or both. We are unwilling to accept as dispositive the meager information about the reassessment contained in responses to questions in the OL-ER, absent an evalution of the reassessment by Staff. We desire a more definitive estimate and a determination of whether that amount will be damaging to vegetation. Moreover, we are also dissatisfied with the record on the effects of chlorine; more definitive information is required on this matter as well.

We conclude that the Petitioners have raised issues in this contention that need to be litigated. Therefore proposed Contention 12 is admitted.

Proposed Contention 13.

> Petitioner contends that Applicants' proposed emergency plan fails to ensure that protective measures can and will be taken in the event of a radiological mishap at Plant Vogtle as required by 10 CFR 50.33, 50.47, 50.54 and Appendix E to Part 50.

Prior to the holding of the Special Prehearing Conference on May 30, 1984, CPG, GANE, Applicants and Staff met and it was agreed Petitioners would refile Proposed Contention 13 based upon information contained in emergency plans of Richmond and Burke Counties, expected sometime in the fall of 1984. It has been agreed by the participants, in which we concur, that the revised contention is not to be considered a late filing subject to the provisions of 10 C.F.R. 2.714(a)(1) pertaining to tardy filings, if filed within the time prescribed for its submission.

Applicants have a target date of October 1, 1984 to revise their emergency plans. It was represented that the revision is to contain the Richmond and Burke County emergency plans. Based upon the foregoing, issuance of Applicants' emergency plans should provide the basis for measuring the time from when the revised proposed contention is due. Petitioners have 30 days from the issuance of Applicants' emergency plan in which to respond. Applicants and Staff are given the time prescribed in the regulations in which to reply.

Proposed Contention 14.

> There is no reasonable assurance that the emergency diesel generators manufactured by TDI to be used at Plant Vogtle will provide a reliable and independent source of on-site power as required by 10 CFR Part 50, Appendix A General Design Criteria #17, in that adequate design, manufacture and QA/QC have resulted in substandard engines which are subject to common mode failures.

The bases for the proposed contention were contained in three paragraphs which were originally a part of CPG's Proposed Contention 8 and an identical GANE contention. Prior to the holding of the Special Prehearing Conference on May 30, 1984 they were removed and made the bases for Proposed Contention 14.

We find the proposed contention has adequate bases for a litigable contention. CPG stated that Applicants were made aware of problems with the diesel generators manufactured by Transamerican Delaval, Inc. as early as December 1981. Applicants reported problems on two occasions with components that could result in the nonavailability of engines. Another defect was reported as late as September 1983.

Petitioner further asserts Applicants should have made a general assessment of the suitability of the Transamerican Delaval, Inc. diesel generator for this important emergency function and alleges that its failure to do so has brought Applicants' own quality control capabilities into question, undermining confidence in the safe functioning of its operating plant in contradiction to NRC QA requirements.

At the Special Prehearing Conference both Applicants and Staff stated that they had no objection to the contention.

We find Contention 14 to be admissible and it is so admitted.

Disposition of the Gane Proposed Contentions

Proposed Contention 1.

> Applicant has not adequately nor correctly assessed the potential release of radionuclides from Plant Vogtle during normal, transient, and accident conditions, nor the somatic, teratogenic and genetic effects of the ionizing radiation. Applicant thus fails to meet the requirements of 10 CFR 50.34, 50.36, 20.103, 20.203 and Appendix I of Part 50, and, further, underestimates the human cost of the project in the cost-benefit analysis required by 10 CFR 51.21, 51.20(b) and (c) and 52.23(a).

The Board cannot discern a basis for this contention. GANE argues: that the existing radiological burden of people residing in the area resulting from releases at the SRP has not been considered by the Applicants; that low-level radiation has a cumulative effect (citing J. Goffman); that doses to which pregnant and lactating women would be exposed and the effects of those doses have not been assessed; that the risk of releases to the food chain (including the human food chain) has not been considered; and that radiocesium released into the Savannah River will pose an unacceptable threat to persons consuming fish from the river. (GANE Supplement, April 11, 1984 at 1-3). These assertions might be considered sub-contentions, but they fail to inform us on what basis GANE believes the estimates of releases have not been adequately or correctly assessed.

Applicants, who oppose admission of this contention, point out that GANE has failed to explain why it believes the estimates contained in the Vogtle Final Safety Analysis Report (FSAR) are incorrect. Applicants argue, further, that the environmental assessments and cost benefit balancing required by 10 C.F.R. Part 51 are the responsibility of the NRC Staff and not the Applicants. (Applicants' Response, May 7, 1984 at 10-21).

Staff also opposes admission of this contention on the grounds that GANE has not stated with adequate specificity the bases for its concerns. Staff characterizes the contentions as a "generalized discussion stating that operation of the plant will involve environmental impacts without specifying what these impacts will be." (Staff Response, May 14, 1984 at 4).

At the Special Prehearing Conference held in Augusta, Georgia, on May 30, 1984, the Board expressed its reservations with regard to the vagueness of the contention and the lack of bases for it. The Board provided GANE's representatives an opportunity to shore up the contention by an oral presentation. GANE responded by stating that it lacked the engineering and scientific expertise to really assess the data in the FSAR, but that it "just seems that there are [radiation] levels that are in question." Tr. at 100-101.

The Board agrees with the position of the Staff. GANE's Contention 1 is not specific enough to put the Applicants on notice as to what they must defend against, nor has GANE set forth any specific bases for the contention, as is required by 10 C.F.R. 2.714(b). Further, the

Applicants are correct in stating that compliance with the requirements of 10 C.F.R. Part 51, which sets forth the NRC's policy and procedures for complying with the National Environmental Policy Act of 1969 (NEPA) (83 Stat. 852), is the responsibility of the NRC Staff and not the Applicants. NEPA requires that all agencies of the Federal Government conduct a careful consideration of environmental aspects of any major agency action which might significantly affect the quality of the human environment. (See 10 C.F.R. 51.1 (a) and (b).) No such requirement is placed on the Applicants by NEPA, although 10 C.F.R. 51.20 does require an applicant to submit an environmental report with an application for a construction permit or an operating license.

For the foregoing reasons, we conclude that GANE's Contention 1 must be dismissed.

Proposed Contention 2.

> Applicant has failed to assess the environmental and public health effects of the addition of Plant Vogtle within 20 miles of the SRP and to quantify this factor in its consideration in violation of 10 CFR 20.103, 50.34(a)(4), 51.21, 51.23(b), 104, 105, 106 and 201.

GANE argues that Applicants have failed to adequately address the cumulative impact on health and safety, and on the environment, of radioactive releases projected for Plant Vogtle plus those from the SRP. GANE places particular emphasis on the proposed reactivation by the Department of Energy (DOE) of the L-reactor at SRP; it alleges that DOE has failed to make an adequate assessment of the impact of again operating the L-reactor, and that therefore it is impossible for

Applicants to accurately assess the cumulative impact of Plant Vogtle and the SRP facilities. (GANE Supplement, April 11, 1984 at 3-7)

At the Special Prehearing Conference GANE stated that within the week preceding the conference, additional new information had become available as a result of the issuance of the environmental impact statement for the reactivation of the L-reactor and the release by DOE of documents that apparently had been previously classified. GANE argued that this information had not been, but should be, considered by the Applicants in assessing the cumulative impact of Plant Vogtle and the SRP facilities. (Tr. 109-110)

Counsel for Applicants stated that Applicants have addressed the cumulative effects in the CP-FSAR, but GANE's representative stated that the new information indicated that the SRP releases are greater that those estimated at the time of the Vogtle construction permit. (Tr. 110-111). Applicants maintained, further, that because the proposal to reactivate the L-reactor occurred after the proposal to construct Plant Vogtle, the responsibility for considering the cumulative effects of releases from the two plants fell on DOE, not Applicants. (Tr. 112) Counsel for Applicants indicated that the final environmental impact statement for the L-reactor did assess the cumulative effects of SRP, Plant Vogtle, and other potential facilities in the area; he stated that he thought the tritium estimate was higher but other estimates were lower. (Tr. 113)

Counsel for Staff argued that the only incremental impact open for litigation in this proceeding was that from Plant Vogtle. Staff argues that other facilities contributing to the cumulative effect must be accepted as a given for this hearing because this Board and the NRC has licensing authority over only Vogtle. (Tr. 116-117)

Subsequent to the Special Prehearing Conference, GANE filed an amplification to its bases in support of Contention 2.[3] (GANE filing, June 13, 1984). The GANE filing consists primarily of a discussion of

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3 GANE's untitled document containing amplified bases for Contention 2 was filed on June 13, 1984. (GANE filing, June 13, 1984 ,at 1-2.) In it, GANE addressed the five factors which must be considered pursuant to 10 C.F.R. 2.714 (a)(1) when a party seeks admission of a late-filed contention. Staff stated that this effort by GANE was misplaced; Staff has never asserted that the "amended" contention is late-filed. Indeed, Staff pointed out that in the Staff Response dated May 14, 1984, it had suggested that GANE consider information available to it and either explain why the information is inadequate or why it shows some specific indication of harm to the public. (Staff Response, June 27, 1984 at 4).

The Applicants, on the other hand, took the position that the tardy filing could only be accepted upon a showing that the five factors set forth in 10 C.F.R. 2.714(a)(1) militate in favor of the Petitioner. Applicants argued that none of the five factors should be decided in favor of the Petitioner and urged us to disallow the late-filed document.

GANE's filing consists of a document prepared by W. F. Lawless, who gave an oral presentation of bases to support Contention 2 at the Special Prehearing Conference. (Tr. 118-121) We view the material contained in GANE's filing as providing essentially an amplification of the material contained in the oral statement of Mr. Lawless. We agree with Staff that we need not apply the criteria set forth in 10 C.F.R. 2.714 1(a)(1) for considering a late-filed contention. Therefore we have accepted and considered the GANE filing.

June 13, 1984). The GANE filing consists primarily of a discussion of radioactive releases from SRP facilities and groundwater contamination resulting from SRP releases. The filing fails to address, except in vague, unmeaningful terms, the incremental impact of Vogtle. Nor does it attempt to show how or why the assessment of SRP releases contained in the Vogtle FSAR is in error or needs to be reexamined. Consequently the filing fails to provide support for Contention 2.

Finally, it appears to this Board that GANE's primary concern is with the radioactive releases and environmental contamination resulting from the operation of the L-reactor and other facilities at the SRP. This Board and the NRC have no responsibility or authority over the SRP. GANE may want to address its concerns about the L-reactor and other SRP facilities to DOE, the agency responsible for those facilities.

For the foregoing reasons, we find GANE Contention 2 inadmissable for litigation in this proceeding.

Proposed Contention 3.

> Applicant fails to show that the fear caused by living adjacent to a nuclear facility will not threaten the security and well-being of the community, in violation of various laws and rules and regulations.

The gravamen of the proposed contention is that Applicants fail to address the alleged psychological impact of the threat of nuclear contamination or nuclear explosion upon the public. Petitioner asserts that laws, which were unspecified, require Applicants to do so. To the contrary, the law does not place any such requirement upon any of the parties.

The Commission in 1982 instructed Licensing Boards not to entertain psychological stress contentions absent evidence of a "unique and traumatic" nuclear accident in the vicinity of the plant. Consideration of Psychological Stress Issues; Policy Statement, 47 Fed. Reg. 31762 (1982). There is no allegation that there has been a "unique and traumatic" nuclear accident in the vicinity of Vogtle. The rule prohibits consideration of the proposed contention.

More recently, the U.S. Supreme Court, in Metropolitan Edison Company v. People Against Nuclear Energy, -U.S.-, 102 S. Ct. 1556 (1983) held that the National Environmental Policy Act does not require the Nuclear Regulatory Commission to consider whether risk of accident might cause harm to psychological health and community well-being of residents of the surrounding area, in deciding whether to permit a company to resume operations. The case held that NEPA must address environmental effects of federal action; and the effects must have a close connection to the physical environment, which stress, a psychological condition, does not meet.

Proposed Contention 3 does not present the Board with a matter that it can consider. It is therefore dismissed.

Proposed Contention 4.

> The Applicant has underestimated the danger to lives and health of human, livestock and plants exposed to the electromagnetic radiation of the proposed 500 KV transmission lines from plant Vogtle in violation of 10 CFR 51.20 and 51.21 and the National Environmental Policy Act of 1969, 42 USC 4321 et seq.

Petitioner cited several authorities for the alleged proposition that non-ionizing electromagnetic radiation is injurious to health in general; and, in particular, that Applicants' proposed 500 kv transmission lines will produce undesirable health effects. In their responses of May 7, 1984 and during the prehearing conference, Applicants provided information demonstrating that, taken in full context, none of the cited authorities in reality provides a substantive basis of support for this contention. Additionally, Applicants hold that GANE has not identified any inadequacies in Applicants' and Staff's construction permit evidentiary assessment. Petitioners countered that there have been incidents (unspecified and undetailed in nature) of farmers having been knocked off of their tractors while working in the vicinity of transmission lines. No attempt was made to relate such incidents to conditions that might obtain around Vogtle type transmission lines, accepted by the prior Board at the CP stage. Applicants and Staff both find the basis for this contention to be inadequate. We concur, and we deny admission of proposed Contention 4.

Admitting CPG and GANE as Party Intervenors

Based upon the foregoing we find CPG and GANE have each submitted at least one allowable contention as required by 10 C.F.R. 2.714(b) and they have otherwise fulfilled the requirements to be admitted as party intervenors in the proceeding. We therefore admit them as party intervenors.

The CPG and GANE contentions we have admitted are identical or one fully encompasses the other. Obviously it is to everyone's interest not to treat these in a repetitious and cumulative manner. To that end it would be appropriate for CPG and GANE to look to consolidating their efforts in the manner discussed in 10 C.F.R. 2.715a. It may well prove more effective for a single Intervenor to be wholly responsible for an individual contention. The Intervenors shall advise the Board how they intend to proceed as to this matter within 20 days of service of this Memorandum and Order. This may obviate the need to issue orders under 10 C.F.R. 2.715a and 2.757.

Disposition of the CCCE Petition

In our unpublished Memorandum and Order of March 9, 1984, we found that CCCE had provided no basis for intervention in the subject proceeding in its petition of January 27, 1984. As an organization seeking representative participation, it had not shown that the action being challenged could cause injury in fact to one of its members.

Petitioner was given the opportunity to cure the deficiency in its filing and to submit a contention for litigation by April 12, 1984. It failed to make an attempt to do so, nor did CCCE appear at the Special Prehearing Conference on May 30, 1984, as directed.

On the basis of the foregoing, we deny and dismiss its petition. CCCE is ineligible to become a party intervenor having failed to establish that its interest may be affected by the subject proceeding and to submit a litigable contention, as required by 10 C.F.R. 2.714. Its failure to appear, as directed, at the Special Prehearing Conference

on May 30, 1984, provides an additional ground under 10 C.F.R 2.707 to deny it entry to the proceeding.

Procedural Matters

The Parties have been able to stipulate to the following discovery schedule:

1. There will be two rounds of discovery consisting of an initial round of discovery requests and responses and a follow-on of requests and responses. Additional discovery shall be had only as provided in paragraph 6 below.

2. All initial round discovery requests shall be served within 60 days after the date of the Licensing Board's order allowing the contention to which the discovery request is addressed.

3. Responses to initial round discovery requests, shall be served within 30 days after service of the request.

4. Follow-on discovery requests shall be served within 120 days after the Licensing Board's order allowing the contention to which the request is addressed.

5. Responses to follow-on discovery request, shall be served within 30 days after service of the request.

6. Further discovery shall be had only (a) by agreement of the affected parties or (b) by order of the Licensing Board for good cause shown.

We find it acceptable and adopt it as the discovery schedule for the proceeding.

As to the matter of future locations for the holding of conferences and hearings, the decision will be made as each occasion arises and will be appropriate to the circumstances. Each participant has expressed their views extensively on the matter. We are fully aware and appreciative of the various positions and will take them into account in

making our determination. No further information is desired on this issue.

ORDER

Based upon all of the foregoing, it is hereby Ordered that:

1. Petitioner CCCE is not admitted as a party intervenor in this proceeding.

2. Petitioners CPG and GANE are each admitted as party intervenors in this proceeding.

3. GANE's proposed Contentions 1 and 4 are withdrawn as well as CPG's and GANES's proposed Contention 9.

4. CPG's proposed Contentions 2 and 3 are dismissed as well as CPG's and GANE's proposed Contentions 6, 10.2, 10.4, 10.6, 10.8, 10.9, 10.10 and 10.11.

5. GANE's proposed Contentions 1, 2, 3 and 4 are dismissed.

6. CPG's and GANE's proposed Contentions 7, 8, 10.1, 10.3, 10.5, 10.7, 11, 12 and 14 are admitted, in the manner stated.

7. The Board defers further ruling on CPG's and GANE's proposed Contention 5 for the reasons stated.

8. Intervenors may refile their proposed Contentions 13, as discussed.

9. The discovery schedule contained in the Memorandum shall be followed. The period for discovery, as set forth, will commence immediately with the service of this Order.

10. The Board shall be advised by Intervenors within 20 days of service of this Order of their intended course on consolidating the contentions and how they will assume responsibility for handling them.

11. This Order shall control the subsequent course of the proceeding unless modified by further order of the Board. Under 10 C.F.R 2.751a(d) objections to this Order may be filed by a party within five (5) days after service of the Order, except that the Staff may file objections within ten (10) days after service. See 10 C.F.R 2.710.

12. This Order is appealable by Applicants, Staff and CCCE under the provisions of 10 C.F.R. 2.714a to the Atomic Safety and Licensing Appeal Board within ten (10) days after service of the Order. See 10 C.F.R. 2.710.

THE ATOMIC SAFETY AND
LICENSING BOARD

Morton B. Margulies

Morton B. Margulies, Chairman
ADMINISTRATIVE LAW JUDGE

G.A. Linenberger

Gustave A. Linenberger, Dr.
ADMINISTRATIVE JUDGE

Oscar H. Paris

Dr. Oscar H. Paris
ADMINISTRATIVE JUDGE

Dated at Bethesda, Maryland

this 5th day of September, 1984.