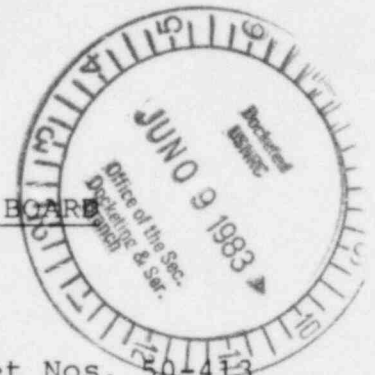


UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD



In the Matter of)
DUKE POWER COMPANY, et al.)
(Catawba Nuclear Station,)
Units 1 and 2))

Docket Nos. 50-413
50-414

June 6, 1983

PALMETTO ALLIANCE AND CAROLINA ENVIRONMENTAL
STUDY GROUP RESPONSES TO APPLICANTS
MAY 23, 1983 FOLLOW-UP INTERROGATORIES ON DES CONTENTIONS
11, 17, and 19

Intervenors P.A. and C.E.S.G. hereby respond to the Applicants' Follow-Up Interrogatories of May 23, 1983, on DES Contentions 11, 17, and 19.

CONTENTION 11

1. P.A. and C.E.S.G. contend that section 102(2)(c) of the National Environmental Protection Act, NRC regulations pursuant to this section in 10CFR 51, and Council on Environmental Quality Guidelines (Section 1508.7), requires the NRC Staff to consider the risks in the operation of the McGuire plant in assessing the environmental impact of Catawba operations. Specifically, 51.23(c) requires that "the draft environmental impact statement will include a preliminary cost-benefit analysis which considers and balances the environmental and other effects of the facility, and the alternatives available for reducing or avoiding adverse environmental and other

effects, as well as the environmental, economic, technical and other benefits of the facility." The regulations go on to mandate that the impact statement shall take account of "economic, socioeconomic, and possible cumulative impacts and such other fuel-cycle impacts as may reasonably appear significant."

Section 1502.7 of the CEQ Guidelines provides that "the cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." The McQuire Plant constitutes an important part of the pre-existing environment upon which the Catawba plant will impact, and hence must be accounted for. The fact that the Applicants own and operate both McQuire and Catawba stations, and that the NRC has regulatory responsibility for both of these plants, makes it even more evident that the sort of environmental statement required by Statute, NRC Regulations, CEQ Guidelines, must include an assessment of both the Catawba and McQuire plants.

2. CEQ Guidelines, Sections 1502.16, 1508.7, 1508.8, 150.8, 1508.25.

3. See response to interrogatory 1, above.

4. No.

5. At page 9-9 of the Catawba FES the Staff attempts to respond to Intervenor's criticism of the DES deficiencies re-

flected in DES contention 11. There, under the heading "Response to Comment No. 11" Staff derives its evaluation of McGuire risk on the basis of its projections of "the probability that the wind blows from McGuire to Charlotte," and its assumptions that the same "probability of a consequence versus distance from Catawba can be applied to McGuire...(In the absence of any other information..." P.A. and C.E.S.G. previously asserted at these "risk numbers" for Catawba early fatalities and latent cancers due to severe accidents are "faulty;" and, that the "wind sectors" impacted by the likely variable winds blowing a radioactive plume in the event of a severe accident are also faulty. A more realistic model, which expands to adjacent wind sectors to encompass the Charlotte population and the path of variable winds under accident conditions will significantly increase the effect of "McGuire risks."

6. As reflected in Palmetto Alliance and C.E.S.G.'s May 2, 1983, responses to interrogatories 14, 15, 16 and 17 on this contention Staff's calculations made at page 9-9 of the Catawba FES response to comment no. 11 is that which Intervenor's have characterized as "superficial." The basis for this view are expressed in response to interrogatory 5, above.

7. No. Please see response to individual interrogatories for Intervenor's position as to the inadequacy of the Staff's environmental evaluation.

8. The doubling of a realistic assessment of Catawba impacts in order to reflect the risk of concurrent McGuire operation would represent the bounding case which would be reasonable to assume for purposes of any NEPA impact analysis.

9. P.A. and C.E.S.G. reject this definition of risk because it implies that if the number that results from multiplying probability and consequences is "low" then the benefits of a project outweigh the attendant risks. P.A. and C.E.S.G. reject this for three reasons. First, the process of quantifying probabilities is, of necessity, speculative. If one concludes that the chances of undesirable consequence X occurring is one in one thousand, there is a non-zero chance X will occur next week. Second, analysis is often incomplete. That the NRC staff did not consider effects of variable winds in computing the risks posed by the concurrent operation of the McGuire and Catawba plants illustrates this point. The narrow cost-benefit calculations employed by the NRC Staff also tend to be incomplete in that non-quantifiable, less tangible factors tend to be omitted. Thirdly, the NRC's definition of risk implies that there is some "scientific" criterion that determines whether or not a risk is acceptably low or unacceptably high, that some risk number can decide this issue. We contend that this is simply false. The criterion that establishes what is acceptable or unacceptable risk is a political criterion, not a scientific one. Even if the NRC Staff's risk numbers were a more or less correct approximation of the probabilities of

undesireable consequences, even if these risk numbers were too high, P.A. and C.E.S.G. insist that the citizenry might still legitimately conclude but because the consequences of malfunction at a nuclear plant are so undesirable any non-zero probability of an accident is too high. P.A. and C.E.S.G. believe that defining risk as "probability times consequences" obfuscates these important issues.

10. Risk should be defined in such a way that it refers not simply to a probability number, but to the consequences as well. Risk is the chance of injury, damage, or loss (dangerous chance).

11. Previously asked and answered. Please see May 2, 1983, responses and those above.

12. Yes. To the extent that such demonstration is required, P.A. and C.E.S.G. will so demonstrate at time of hearing.

13. As explained in response to interrogatory 24 of May 2, 1983, the NRC Staff analysis referred to is the same assessment of Catawba impacts which is at issue in this contention.

CONTENTION 19

1. 10CFR 51.23(c) requires that "the impact statement shall take account of economic, socioeconomic, and possible cumulative impacts and such other fuel cycle impacts as may reasonably appear significant." Any reasonable person would conclude that an accident in the handling and storage of spent fuel casks, or a loss of onsite/offsite power resulting

in breakdown of the cooling trains, would raise the likelihood of a significant impact on the environment. Because such accidents, which would likely entail pool water boil off and possibly criticality, are made more likely by the increased number of fuel assemblies to be stored at Catawba (see Palmetto Alliance contention 16) an environmental statement conforming to NEPA guidelines must consider the environmental costs of operating Catawba as a storage facility for spent fuel from other Duke facilities.

2. Such an analysis would evaluate: impact of the doubling of the fuel pool capacity and resultant increased heat load and radiation inventory from Oconee and McQuire spent fuels; loss of fuel pool cooling due to loss of on-site and/or offsite power; cask drop damage and possible criticality incidents from crushed fuel assemblies; accidents involving mishandling of casks including inadvertant unshielded removal of cask lids; the probability of cask drop accident; and external threats such as aircraft crashes.

3. It is P.A. and C.E.S.G.'s position that we have already demonstrated that the DES/FES's treatment of the environmental effects of storing Oconee and McGuire spent fuel fails to satisfy 10CFR 51. Especially relevant is 10CFR 51.23(c). When Duke Power doubles the amount of spent fuel to be handled and stored at Catawba we believe that something more than the NRC Staff's cursory treatment of this issue is required by NEPA, as implemented in 10CFR 51.

4. Palmetto Alliance and CESG's contentions go beyond whether or not routine releases of radiation from Oconee and McGuire fuels have been considered. In so far as we understand this question we believe it has been answered elsewhere. Please clarify.

5. The DES/FES evaluation is deficient because it does not adequately address the environmental risks associated with storing a much larger number of spent fuel assemblies. See earlier responses for details.

6. See Palmetto Alliance April 19, 1983, Response to Interrogatory no. 6 on contention 16, Palmetto Alliance May 27, 1983 Further Supplementary Responses to Applicant Interrogatory no. 13 on contention 16, and Palmetto Alliance May 27, 1983 Responses to Applicants' Follow-Up Interrogatories on Contention 16.

7. P.A. and C.E.S.G. do not contend that there is any fundamental difference between Catawba spent fuel and Oconee/McGuire spent fuel such that one results in a greater heat load than the other. We are contending that if Catawba receives spent fuel from Oconee and McGuire as well as its own spent fuel, this will result in an expanded heat load and radiation inventory.

8. See the responses cited in response to interrogatory 6, above.

9. See the responses cited in response to interrogatory 6, above.

10. See the responses cited in response to interrogatory 6, above.

11. See the responses noted in interrogatory 6, above.

As with interrogatories 7,8,9, and 10 above, the Applicants seem to attribute to P.A. and C.E.S.G. the view that the origin of the spent fuel has an effect on how dangerous to the environment it is, or how likely it is to escape into the environment. It is obvious from our previous statements and responses that P.A. and C.E.S.G. do not make such an absurd contention.

12. See responses to Applicants interrogatories 1, 2, 3 and 5, above. See also P.A. and C.E.S.G. May 2, 1983 responses to Applicants Interrogatories and Request to Produce regarding DES contentions 11, 17, and 19, particularly interrogatories 1, 2, 3, 4, 5.

13. P.A. and C.E.S.G.'s response to Applicants interrogatory 1 (May 2, 1983 P.A. and C.E.S.G. responses) and the elaborations of these issues contained in Palmetto's responses to Applicant's and Staff's interrogatories regarding contention 16 summarize the deficiencies of the DES/FES analysis.

14. See responses noted in Applicants interrogatory 6, above.

15. See response to Applicant's interrogatory 11, above.

16. See responses to Applicants interrogatory 11, above.

17. The threats to the environment of storing Oconee, McGuire, and Catawba spent fuel are greater than the threats to the environment of storing only Catawba spent fuel at Catawba. For the details of this contention see the responses cited in the response to Applicants' interrogatory 6, above.

18. See P.A. Further Supplementary Responses to Applicants' Interrogatories regarding contention 6 (May 27, 1983), response to interrogatory 13.

DES CONTENTION 17

1. Absence of explicit data reflecting such consideration.
See DES p.5-35 and FES p.9-12.

2. See May 2, 1983 response to Interrogatory 2.

3. P.A. and C.E.S.G. believe that NEPA and implementing regulations generally require that the NRC take full account of the impact of this licensing action. Such impact should include an evaluation of the worst case.

4. In the absense of explicit statements by the NRC Staff, P.A. and C.E.S.G. are unable to identify any other factors, calculations and/or data used in the DES/FES which may be "incorrect and/or render the DES/FES incorrect."

5. Please see response to Interrogatory 10 regarding Contention 11, above.

6. P.A. and C.E.S.G. do not know.

7. Yes, in part.

8. Yes.

9. The NRC Staff has made available some information to C.E.S.G. with respect to this matter; however, our examination of this information is incomplete.

11. Please see May 2, 1983 responses to Interrogatories 13 and 18 of this contention.

12. Please see response to Interrogatory 9, above.

13. P.A. and C.E.S.G. assert that general NEPA authority requires such consideration of worst case impacts as well

as the NRC's own policy statement with respect to consideration of severe accidents.

14. Common sense and personal experience.

15. Common sense and personal experience of the resident of the Charlotte area.

16. The absence of an explicit statement to the contrary.

17. The probabilities of severe accidents, radiation exposure, and damage are understated by the Staff as in DES Figures 5.3, 5.4, 5.5, 5.6, and 5.7. The DES recognizes only one serious accident after 400 reactor years of operation, TMI-2, p. 5-46.

In this period there were two other serious accidents, the partial meltdown at Fermi, p. 5-30, and Browns Ferry I and II, not referenced. The releases at Browns Ferry were not monitored. A meltdown was averted by improvisation, not by following established guidelines. The Fermi meltdown was limited by the time of scrambling. A somewhat more delayed scram would have resulted in more extensive meltdown and increased the probability of a substantial release period. The actuality has been three accidents of a potentially very serious sort in 411 reactor years, a probability of 1 per 133 years of reactor operation. The DES understates serious accident probability in relying on the Reactor Safety Study, NUREG-75/104. The NRC Staff has failed to adequately assess the impacts of serious accidents at the facility, beyond design basis. And seriously underestimates the probability and consequences of plainly

credible site-specific serious accidents.

The probabalistic analysis employed in the Reactor Safety Study (WASH 1400) has been so seriously criticized as to make its use in licensing proceedings as a basis for decision-making entirely inappropriate. "The consequence model used in WASH 1400 should be substantially improved, and its sensitivities explored before it is used in the regulatory process." (NUREG/CR 0400, "Risk Assessment Review Group Report to the U.S. Nuclear Regulatory Commission, H.W. Lewis, chairman").

18. This scenario would be "devastating" to the citizens exposed downwind, particularly those in the Gastonia-Charlotte area, who live to the north and northeast of the plant site.

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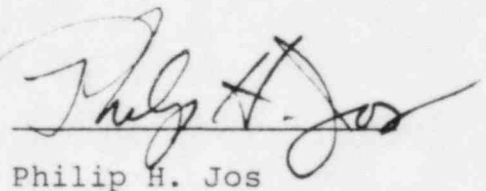
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AFFADAVIT OF PHILIP H. JOS

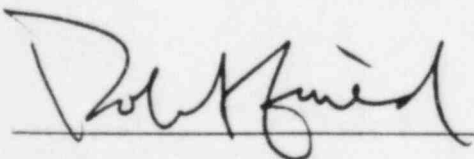
I, Philip H. Jos, do affirm as follows:

I am duly authorized to participate in answering interrogatories on behalf of Palmetto Alliance and CESC on DES Contentions 11, 17, and 19 and I affirm that the responses given are true and complete to the best of my knowledge.


Philip H. Jos

AFFIRMED AND SUBSCRIBED

BEFORE ME THIS 6TH DAY OF JUNE, 1983.



Notary Public of South Carolina

My Commission Expires:

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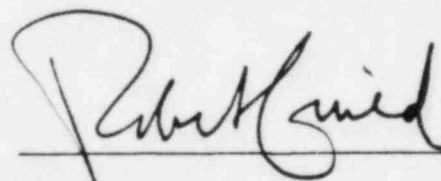
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A handwritten signature in dark ink, appearing to read "Robert Guild", written over a horizontal line.

Robert Guild
Council for Palmetto Alliance