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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION '84 APR -9 P3:24

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

Glenn O. Bright  
Dr. James H. Carpenter  
James L. Kelley, Chairman

In the Matter of

CAROLINA POWER AND LIGHT CO. et al.  
(Shearon Harris Nuclear Power Plant,  
Units 1 and 2)

Dockets 50-400 OL  
50-401 OL

April 5, 1984\*

SUPPLEMENT TO PETITION FOR LEAVE TO  
INTERVENE OF INTERVENOR CHANGE  
REGARDING THE NORTH CAROLINA EMER-  
GENCY RESPONSE PLAN (FEB. 1984)  
IN SUPPORT OF SHNPP

Now comes Intervenor Chapel Hill Anti-Nuclear Group Effort (CHANGE) pursuant to 10 C.F.R. 2.714, and pursuant to the Board's order of 22 September 1982, and files the following supplement to its petition for leave to intervene showing the contentions sought to be litigated relative to the "North Carolina Emergency Response Plan (Feb. 1984) In Support of the Shearon Harris Nuclear Power Plant." As indicated in the above-referenced order, Id. at 4-7, Intervenor believes and submits to the Board that these contentions are timely filed as a matter of law and that therefore Intervenor need not make a showing of good cause as otherwise required by 10 C.F.R. 2.714. See Duke Power Co. (Catawba Nuclear Station) ALAB-687 (1982). Should the Board construe any of the following contentions as an attack on any rule or regulation of the Commission, Intervenor requests that the appropriate regulation

\* Timely filed pursuant to a two-day extension granted 3 April 1984 per telephone conversation with Chairman Kelley.

be identified and that Intervenor be permitted to seek an exception to such regulation in apt time.

Intervenor would respectfully show that the Applicants' application for licenses to operate the Shearon Harris Nuclear Power Plant (SHNPP) should be denied or appropriately conditioned, since there is no reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency, in contravention of the regulations of the Commission, to wit 10 C.F.R. 50.47. In support of the foregoing Intervenor contends:

1. There is no reasonable assurance that (a) the rumor detection system will result in timely reporting of rumors to the State Emergency Response Team (SERT) or (b) that SERT will be able to devise effective measures to overcome rumors. In the conditions of psychological stress and likely hysteria accompanying a major release of radioactivity (TMI), this inadequacy may have serious adverse impacts, e.g. panic in traffic, desertion of posts by emergency personnel, etc.
2. The principal source of public information concerning appropriate responses to emergency notifications and possible accident effects is a purported educational/emergency planning brochure. No such brochure is included in the "North Carolina Emergency Response Plan" noted above (hereinafter "the plan"), nor has Intervenor been, based on best information and belief, served with a copy of any document purporting to be such a brochure. Obviously, under the circumstances, the brochure is inadequate.
3. There is no reasonable assurance that the State Department of Transportation and municipal public works departments will be able to clear evacuation routes of such impediments as snow, ice, debris, or equipment in a timely manner so that evacuation times will be within time estimates. Even a minor snowfall presents a serious traffic problem for local facilities, and the likely overcrowding of highways and accidents attending

a snowstorm during an emergency evacuation make it virtually certain that the departments will not be able to complete their mission as described in the plan. This is made more likely by the location of most municipal and DOT equipment near the fringes or outside the emergency planning zone (EPZ), which means that equipment operators would have to head toward the plant in order to accomplish this mission. Furthermore, there is no reasonable assurance that even if such equipment were placed close enough to the plant, that its operators would be able to reach even a substantial number, let alone all, persons trapped in their driveways by snowfall.

4. The operators of affected State Department of Transportation and municipal public works departments equipment are not equipped with, or trained in the use of, radiation detection and protection equipment, and therefore there is no assurance that they will be to perform their tasks of clearing evacuation routes.

5. The provision of thermoluminescent dosimeters (TLDs) to "all State personnel who may be exposed to significant radiation" does not provide adequate assurance that these workers will in fact be able to leave dangerous areas in time or that RPS will be able to make timely and appropriate recommendations concerning the health and safety of the individuals concerned, since TLDs provide only an after-the-fact ability to measure dose.

6. No guidelines are provided for determining when self-reading dosimeters are to be issued, other than issuance will take place when external exposure "could exceed" 10% of the protective action guidelines (PAGs) for emergency personnel. Reliance on this sort of entirely subjective, second- or third-hand decision is no substitute for issuance of self-reading dosimeters to all emergency personnel.

7. There is no adequate assurance that sophisticated monitoring will be adequate, since only two fully equipped RPS teams are available during the first 24 hours of an accident. If the wind changes once during the 24 hour period, the teams may have to relocate to other areas within or outside the EPZ, and there is no assurance that they will be able to correctly and adequately monitor, estimate, plot, and inform RPS of plume direction, content, or other information under such circumstances.
8. There is no assurance that in the event of a major accident, in which total thyroid exposure is "suspected" to reach 15 rems from inhalation or ingestion of radioiodine that distribution of potassium iodide to emergency workers and institutionalized persons will be able to be accomplished in view of the likely traffic problems and other likely consequences of an accident.
9. No provision is made in the State plan for the potential adverse reaction on the part of the general populace from the administering of potassium iodide to emergency workers and institutionalized persons, and not the general populace.
10. No estimates are made in the plan of the amount of uncontaminated clothing, food, and bedding that may be needed for evacuees in the event of an evacuation. The plan thus does not provide for adequate emergency facilities and support materiel.
11. The lack of sufficient RPS monitoring teams means that there is no assurance that ground level dose rates, cloud movement and direction, cloud characteristics, and other vital information cannot be quickly and correctly measured and analyzed to timely and accurately assess and monitor the offsite release and prepare appropriate emergency response.



12. The State EOC and the alternate EOC are both in the Raleigh area, and both are located in a zone representing about 20° of arc measured from the plant site and within 20 miles of the plant site. In the event that a cloud moves northeastward from the plant through the above zone and beyond the EPZ, there is no provision for an alternative EOC site in another quadrant or elsewhere in a different direction from the plant, and therefore there is inadequate assurance that the SERT will be able to properly perform its functions,

13. There is no adequate assurance in the event of an accident at the plant site that local organizations will be able to provide special emergency assistance at the site, such as ambulance, medical, hospital, fire and police services. This is true because (1) there is <sup>no</sup> assurance that emergency personnel will be able to reach the plant, either because of traffic problems, or radioactive contamination and (2) there is no assurance that these services will be staffed by persons willing to go to the plant site following a major release of radioactivity from the plant.

14. The plans for recovery and re-entry into contaminated areas are inadequate because (1) there is no provision for financial support adequate for such cleanup, (2) there are no adequate provisions for removing dead livestock, humans, and wildlife sufficient to ensure reasonably safe sanitary conditions, (3) there are no provisions for testing water supplies for contamination by dead livestock, humans, and wildlife, (4) no provision is made for the removal or suppression of radioactive dust in hot summer weather, and (5) there are no adequate facilities for the safe disposal of large amounts of contaminated materials within a reasonable distance of the plant site (nearest at Barnwell, SC).

15. There are no adequate provisions for the control of the movement of contaminated wildlife, particularly birds, into non-contaminated areas, and for protection of crops in non-contaminated areas from such indirect contamination.

16. There are no adequate provisions for the registration and/or segregation of contaminated humans in areas outside the contaminated area. If these measures are taken at the edge of the contaminated area, it is likely to be in the form of roadblocks or traffic checkpoints, which will impede evacuation flows.

17. There is no assurance that warning sirens would (1) be heard by all citizens within the threatened area because of hearing impairments, loud stereos, thunderstorms, etc., (2) provoke prompt response by citizens hearing them. The recent tornado disaster in North Carolina is clear evidence that such warnings are often not heeded, even when they do reach most of the population.

18. There is no assurance that in the event of a loss of off-site power as the result of an accident at the plant that significant numbers of the population would not be without radio, television, or other means of receiving emergency information.

19. The plan states that radio and TV broadcast provides assurance that 100% of the affected population will be able to receive emergency information. This assertion does not address (1) whether 100% of the population in the affected area have radio or television and (2) whether if even if they did such notification would be efficacious at times when large percentages of the population are not listening to either medium, as particularly between the hours of 10 p.m. and 6 a.m. The plan is therefore inadequate; it is further inadequate because there is no provision for closed-caption messages for deaf residents.

20. The plan provides inadequate assurance for prompt and safe evacuation by failing to provide special measures for controlling, evacuating and otherwise dealing with large numbers of North Carolinians who have consumed large quantities of alcohol or other drugs, which is likely to cause traffic and other control problems, particularly on Friday and Saturday nights, or pleasant weekends at Jordan Lake.

21. The plan provides inadequate assurance that should an evacuation be ordered on Sunday morning that churches in the affected area will be timely warned and evacuated. Provision should be made for alarms at all area churches.

22. The plan does not provide adequate assurance that the area around the State Fairgrounds in Raleigh can be adequately and safely evacuated if an accident occurs during the State Fair on a weekend when N.C. State University is playing a home football game at Carter-Finley Stadium. Although the Fairgrounds area is outside the ten-mile area, the annual traffic tie-ups which occur at such times are a matter of public record and special plans need to be made to clear the area quickly in the event of an evacuation required by a cloud moving toward the area from the plant site. Provision must also be made for notifying fairgoers and football attendees of the existence and nature of such plans.

23. The plan is inadequate because there is no indication therein that "the exact size and configuration" of the EPZ has been "determined in relation to local emergency response needs and capabilities" as mandated by 10 C.F.R. 50.47(c)(2).

24. Applicants have been fined in the past for among other things failure to conduct tests required by Commission regulation, failure to properly dispose of radioactive waste in accordance with Commission regulations, and failure to maintain proper security in restricted areas in accordance with Commission regulations. This history of failure to comply with Commission regulations, along with other management inadequacies, and the natural public relations reluctance to announce an emergency at the plant, render the proposed reliance of the plan on timely notification by Applicants of emergency conditions inadequate to provide reasonable assurance of timely notification to the public.

24A. Because of the inadequacies alleged in 24 supra, the plan is inadequate because it does not provide for independent on- and off-site continuous monitoring systems capable of instantaneous warnings and independent of Applicants' control.

25. The plan is inadequate because it fails to address the problem of families with one private vehicle, which private vehicle is used to drive the principal wage-earner to work, leaving dependents at home. This situation is critical in low-income areas especially during the working day and particularly should an evacuation be ordered in the mid-afternoon, after approximately three o'clock, when many schoolchildren ordinarily have already been delivered to their homes by their school buses.

26. The plan is inadequate because school bus drivers are expected to transport children from schools. These buses are driven for the most part by high-school students, many of whom, based on information and belief, are less than 18 years old. There is no reasonable assurance that these drivers (1) will perform their function in an emergency, particularly if that involves driving to elementary schools, (2) are qualified under Commission regulations to operate in areas where exposure to significant amounts of radiation is likely, or (3) will be able to adequately supervise their passengers under emergency conditions.

27. The plan is inadequate because school buses are not equipped with dependable two-way radios for providing evacuation drivers with information and allowing these inexperienced individuals to obtain clarification on their duties in an accident situation.

28. The plan is inadequate because commercial buses are supposed to evacuate non-school, patient, and prison populations. There are insufficient such buses located in sufficient proximity to the plant to assure that evacuation of such individuals will take place in a timely manner.



29. The plan is inadequate because it assumes that parents will allow their children to be evacuated from schools and ignores the likely reaction of many parents who will upon notification of an emergency drive to the school to pick their children up.

30. The plan is inadequate because local rescue squad members have to date received no training in handling radiological emergencies and because the training such squads will receive is not specifically described. Intervenor has talked with such persons and spouses of such persons about this problem. Intervenor also believes that rescue squad leaders occupy merely titular posts and do not possess sufficient authority over the members of their squads to assure continuing participation in emergency activities in the event of a radiological emergency.

31. The plan is inadequate because no provision is made for increased telephone traffic during the early stages of an emergency, which will tend to hamper notification efforts, and delay evacuation and other response times. The recent tornado disaster in North Carolina showed an increase of approximately 25% in telephone traffic; however this was, based on information and belief, over a period of approximately 24 hours; a more dramatic increase in the shorter time immediately following a sudden emergency would result in serious communications problems.

32. The evacuation time estimates are totally unrealistic in that they do not take into account (1) the effect of winter weather, or (2) the likelihood of delaying accidents on the two-lane highways which provide most of the evacuation routes from the plant.

33. Local hospitals have plans to treat only approximately 85 patients. This is clearly inadequate, as is evident from comparison of the probabilistic risk estimates in the FEIS. This inadequacy is exacerbated by the fact that the hospitals

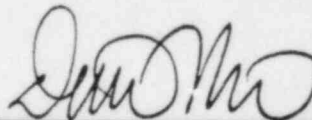
are located at various directions from the plant, so that some of them may only be reached from the opposite side of the EPZ or a contaminated area by long and/or circuitous routes. The hospital plan is also inadequate in that no provision is made for the likely increased number of arriving patients likely to have been injured in evacuation traffic accidents and/or home-care patients who have not made prior arrangements to evacuate elsewhere.

34. There is no reasonable assurance that SEOC will be able to continue to operate in the event of major contamination of the Raleigh area.

35. There is no reasonable assurance that the projections in the plan will be realized in the event of a real-life accident. No full scale evacuation exercises are planned, only occasional carefully structured and limited scenarios. This is clearly evidenced by the NRC'S own consultations during the TMI accident.

36. The plan is inadequate because much information is apparently contained on a purported operations map at Annex I thereof. No such map is included in the materials served on Intervenor.

WHEREFORE, having submitted this supplement to its petition for leave to intervene, Intervenor requests an opportunity to be heard upon the above contentions, and that the Applicants' request for licenses to operate the SHNPP be denied or otherwise appropriately conditioned.



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Daniel F. Read  
5707 Waycross Street  
Raleigh, NC 27606

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of CAROLINA POWER & LIGHT CO.  
et al., Shearon Harris Nuclear Plant, Units 1 & 2

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50-400,  
50-401

CERTIFICATE OF SERVICE

I hereby certify that copies of Supplement to Pet. for Leave to Int. re  
NC Emergency Response Plan in Support of SMNP were served this 5th day  
of April, 1984, by deposit in the U.S. Mail, first-  
class postage prepaid, upon all parties whose names appear  
below, except those whose names are marked with an asterisk,  
for whom service was accomplished by hand delivery (Payne, Runkle),  
state courier (Little, Gruber)

James L. Kelley, Esq./Mr. Glenn O. Bright/Dr. James Carpenter  
Atomic Safety & Licensing Board (one each)  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Office of the Executive Legal Director  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Docketing and Service Section  
Office of the Secretary  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Thomas Baxter, Esq.  
SP&T  
1800 M St NW  
Washington, DC 20036  
Dr. Phyllis Lotchin  
108 Bridle Run  
Chapel Hill, NC 27514

\* Mr. John D. Runkle  
Conservation Council of North Carolina  
307 Granville Road  
Chapel Hill, NC 27514

\* M. Travis Payne, Esq.  
Edelstein and Payne  
P.O. Box 12463  
Raleigh, NC 27605

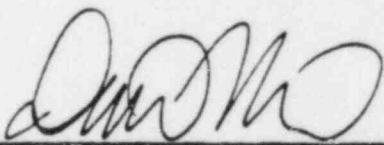
Mr. Wells Eddleman  
718-A Iredell Street  
Durham, NC 27705

Dr. Richard D. Wilson  
729 Hunter Street  
Apex, NC 27502

Patricia/Slater Newman  
CANP  
2309 Weymouth Ct.  
Raleigh, NC 27612

\* Robert P. Gruber, Dir.  
Public Staff, NCUC  
PO Box 991  
Raleigh NC 27602

\* Linda Little  
Gov's Waste Mgmt Bd.  
513 Albemarle Bldg.  
325 N. Salisbury St. Raleigh 27611

  
Daniel F. Read  
President  
Chapel Hill Anti-Nuclear  
Group Effort  
P.O. Box 524  
Chapel Hill, NC 27514

DANIEL F. READ  
5707 WAYCROSS ST.  
RALEIGH, N. C. 27606