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NUCLEAR REGULATORY COMMISSIONBEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
CAROLINA POWER & LIGHT COMPANY))	
AND NORTH CAROLINA EASTERN)	Docket Nos. 50-400 OL
MUNICIPAL POWER AGENCY)	50-401 OL
)	
(Shearon Harris Nuclear Power))	
Plant, Units 1 and 2))	

APPLICANTS' MOTION FOR SUMMARY DISPOSITION OF
JOINT INTERVENORS' CONTENTION VI (MONITORING SYSTEMS)

Carolina Power & Light Company and North Carolina Eastern Municipal Power Agency ("Applicants") hereby move the Atomic Safety and Licensing Board, pursuant to 10 C.F.R. § 2.749, for summary disposition in Applicants' favor of Joint Contention VI. For the reasons set forth herein, Applicants respectfully submit that there is no genuine issue as to any fact material to Joint Contention VI, and that Applicants are entitled to a decision in their favor on Joint Contention VI as a matter of law.

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This motion is supported by:

1. "Applicants' Memorandum of Law in Support of Motions for Summary Disposition on Intervenor Eddleman's Contentions 64(f), 75, 80 and 83/84," dated September 1, 1983;
2. "Applicants' Statement of Material Facts As To Which There is No Genuine Issue To Be Heard On Joint Contention VI" and
3. "Affidavit of Dr. William H. Wilkie and Ronald L. Shearin" and Attachments A through E affixed thereto.

I. STATEMENT OF FACTS AND PROCEDURAL BACKGROUND

Joint Contention VI asserts that:

The radiation detection and monitoring system of SHNPP is unable to assure that in-plant and off-site emergency response personnel receive timely and accurate information necessary to protect employees and the health and safety of the public under the ALARA standard. The monitoring system is not able to promptly detect the specific radionuclides and their amounts being released inside and outside the plant.

Due to the broad, general claims incorporated into Joint Contention VI, Applicants were unable to determine what specific aspects of their monitoring system were being challenged and what, if any, alternatives the Joint Intervenor would propose to correct any alleged deficiencies. Therefore, Applicants' first set of interrogatories, served January 31, 1983,

propounded questions designed to ascertain the precise nature of Joint Intervenors' concerns and especially to determine which portion of Applicants' multi-faceted detection and monitoring system was the subject of Joint Contention VI. "Applicants' Interrogatories and Request for Production of Documents to Joint Intervenors (First Set)," dated January 31, 1983. Specifically, Applicants asked whether Joint Intervenors alleged that the Area, Airborne and Process and Effluent Monitoring Systems were deficient and, if so, for a description of any alleged inadequacies. On March 18, 1983, the NRC Staff also propounded interrogatories to the Joint Intervenors. The Staff interrogatories on Joint Contention VI asked the Joint Intervenors to enumerate the radionuclides that allegedly would escape detection by Applicants' monitoring and detection systems, identify the equipment that Joint Intervenors allege could cure such deficiency, identify all alleged deficiencies in Applicants' program and explain the basis for Joint Intervenors' claims. "NRC Staff Interrogatories to Joint Intervenors," dated March 18, 1983.

On March 29, 1983, the Joint Intervenors responded to Applicants' first set of interrogatories. "Joint Intervenors Response to Applicants' Interrogatories and Request for Production of Documents to Joint Intervenors (First Set)," dated March 29, 1983. In response to Applicants' question about alleged deficiencies in the overall Radiation Monitoring System

("RMS"), Joint Intervenors replied that they were "still attempting to gather sufficient information to provide a specific response." Id. at Response to Interrogatory VI-1. In response to questions about the Process and Effluent Radiological Monitors, Joint Intervenors stated "at this time, Joint Intervenors have not completed their analysis of the Process in [sic] Effluent Radiological Monitors." Id. at Response to Interrogatory VI-4(b). In response to Applicants' inquiry about the need for modifications in the Area Radiation Monitoring System, Joint Intervenors reported that they were "still gathering the information necessary to fully respond." Id. at Response to Interrogatory VI-6(c). Finally, with regard to the alleged inadequacies in the Airborne Radiation Monitoring System, Joint Intervenors "ha[d] not yet completed their analysis." Id. at Response to Interrogatory VI-7(a).

To the extent that Joint Intervenors did set forth alleged inaccuracies, they claimed that the wiring and computerware could prevent the RMS from carrying out its function during accident conditions and that Applicants' micro-processors can only withstand 1000 rads and are thus incapable of withstanding accident conditions. Id. at Responses to Interrogatories VI-2(a) and VI-6(b) and (c). These claims, however, were explicitly excluded from the scope of Joint Contention VI by the Board Order admitting a portion of the original contention. Memorandum and Order (Reflecting Decisions Made Following Prehearing Conference), LBP-82-119A, 16 N.R.C. 2069 (1982).

Joint Intervenors' responses to the Staff's interrogatories provided little more information about the nature of their contention or the support therefor. Joint Intervenors merely reiterated their belief that Applicants' system cannot detect specific radionuclides released from the plant. "Joint Intervenors' Response to Staff Interrogatories," dated August 31, 1983 at Response to Interrogatory Nos. 27, 29 and 32. In response to questions about proposed corrective measures, Joint Intervenors stated that analysis was incomplete. Id. at Response to Interrogatory Nos. 34 and 35. Joint Intervenors also alleged that Applicants should be required to use pressurized ionization monitors ("PICs") to give direct readout of specific radionuclide releases. Id. at Response to Interrogatory Nos. 30 and 35.

On May 27, 1983, the Joint Intervenors propounded their first set of interrogatories to Applicants. "Joint Intervenors' Interrogatories to Applicants on Contentions IV, V, and VI (First Set)," dated May 27, 1983. Although Joint Intervenors stated that six of the specific interrogatories contained in that set were pertinent to Joint Contention VI, as well as to either Joint Contention IV or Joint Contention V, the set actually contained only two non-objectionable interrogatories concerning Joint Contention VI.^{1/} Joint Intervenors chose not

^{1/} Joint Intervenors refused, even after a specific request from Applicants' counsel, to propound separate, relevant inter-

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to propound any specific interrogatories on Joint Contention VI to the Staff.

After supplying Joint Intervenor with the information sought in their interrogatories, Applicants served their second set of interrogatories on the Joint Intervenor. "Applicants' Interrogatories and Request for Production of Documents to Joint Intervenor (Fourth Set)," dated October 12, 1983. These interrogatories were designed to clarify the vague concerns alluded to in Joint Intervenor's discovery requests and responses and to follow up on those areas in which Joint Intervenor had been unresponsive during the first round of discovery. Rather than responding, or even objecting, to those interrogatories, the Joint Intervenor chose simply to ignore Applicants' discovery requests.

As explained in Applicants' motions for summary disposition of Joint Contentions IV and V, Applicants received no response or other communications from the Joint Intervenor. Applicants therefore took the initiative to contact counsel for Joint Intervenor and offer an extension of time. The Joint

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rogatories for Joint Contentions IV, V and VI. Thus, it was necessary for Applicants to subdivide Joint Intervenor's interrogatories in such a way that they could be answered with respect to individual contentions. See "Applicants' Responses to Joint Intervenor's General Interrogatories and Interrogatories on Contentions IV, V, and VI to Applicants Carolina Power & Light Company, et al. (First Set)," dated August 1, 1983.

Intervenors refused Applicants' offer and stated, through their counsel, that they would be unable to respond to discovery requests until after the environmental hearing, then scheduled to begin on January 24, 1984. At that point, Applicants were forced to file a motion to compel discovery from the Joint Intervenors. "Applicants' Motion to Compel Discovery on Applicants' Interrogatories and Request for Production of Documents to Joint Intervenors (Fourth and Fifth Sets)," dated November 17, 1983. The Board granted Applicants' motion on November 29, 1983, and ordered Joint Intervenors to respond to Applicants' interrogatories by December 9, 1983. "Memorandum and Order (Ruling on Discovery Disputes Between Applicants and Joint Intervenors)," dated November 29, 1983. On December 12, 1983, Applicants received a copy of a letter from counsel for Joint Intervenors, dated December 9, stating that "Joint Intervenors have been unable to comply with the Board's Order of November 29, 1983, regarding Discovery on Joint Contentions IV, V and VI." "Unfortunately, the press of other business prevented us from preparing a response." Letter of M. Travis Payne, dated December 9, 1983.^{2/} As of this date, Joint Intervenors have

^{2/} Joint Intervenors' failure to comply with the Board order is clearly grounds for sanctions, including dismissal of the contentions at issue. Statement of Policy on Conduct of Licensing Proceedings, CLI-81-8, 13 N.R.C. 452, 454 (1981); see also Wisconsin Electric Power Company (Point Beach Nuclear Plant, Unit 1), ALAB-719, 17 N.R.C. 387 (1983); Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), LBP-83-20A, 17 N.R.C. 586, 590 (1983). Sanctions are espe-

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not made any further effort to respond to Applicants' second round of discovery on Joint Contention V or to supplement their incomplete responses to Applicants' first set of requests.

II. TIMELINESS

A motion for summary disposition may be filed at any time in the course of a proceeding. Wisconsin Electric Power Company (Point Beach Nuclear Plant, Unit 1), ALAB-696, 16 N.R.C. 1245, 1263 (1982); see also 10 C.F.R. § 2.749(a). In the instant case, Joint Intervenors have had more than 17 months in which to conduct discovery on the issues raised in Joint Contention VI. Yet, as discussed above, they have failed to take advantage of their opportunity to propound a second round of interrogatories to Applicants and have abdicated their own discovery obligations by failing to respond to Applicants' interrogatories, even when ordered to do so by the Board. Furthermore, Joint Intervenors have known since February, 1983 that Applicants intended to file for early summary disposition

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cially appropriate here where after months of discovery it is still impossible for Applicants to ascertain the scope or nature of Joint Intervenors' claims. Applicants have moved for summary disposition rather than imposition of sanctions because, notwithstanding Joint Intervenors' egregious failure to fulfill their discovery obligations, it is manifestly clear at this time that no genuine issue of material fact exists with respect to Joint Contention V

on this contention. See "Memorandum and Order (Ruling on Discovery Dispute Between Applicants and Joint Intervenors)," dated November 29, 1983. Thus, the instant motion is timely and the subject contention is ripe for summary disposition.

III. ARGUMENT

Joint Contention VI alleges that Applicants' radiation detection and monitoring system is inadequate to protect the health and safety of plant employees and the public because it is unable to detect specific radionuclides released inside and outside the plant. As stated, the contention is quite broad and general. Therefore, it was imperative that Applicants obtain specific information during the discovery process that would allow them to interpret and refute Joint Intervenors' claims. As discussed above, however, Joint Intervenors provided inconclusive and incomplete answers to the discovery requests of Applicants and the Staff or none at all. Thus, Applicants have little indication of what Joint Intervenors perceive the scope of this contention to be and specifically have not been able to determine which portion of the detection and monitoring system is being challenged and upon what basis this challenge is premised.

To rebut Joint Intervenors' claims, whatever they may be, Applicants have submitted the Affidavit of Dr. William H. Wilkie and Ronald L. Shearin in support of this motion for

summary disposition ("Wilkie/Shearin Affidavit"). Dr. Wilkie and Mr. Shearin are experts in the field of radiation health physics; Dr. Wilkie holds a Ph.D. in nuclear engineering while Mr. Shearin has a masters degree in radiological health. Each of these men has extensive experience with health physics programs at nuclear facilities and is thoroughly familiar with the radiation health program at the Shearon Harris Nuclear Power Plant ("SHNPP"). See Wilkie/Shearin Affidavit at ¶¶ 1, 2 and Attachments A and B thereto. Because it is impossible to discern the focus of Joint Intervenors' concern, Dr. Wilkie and Mr. Shearin have described each component of Applicants' radiation detection and monitoring system and have demonstrated that each subsystem meets all applicable regulatory guidelines and recommended standards. The Wilkie/Shearin Affidavit addresses Joint Intervenors' claim concerning the system's inability to detect specific radionuclides in great detail, because it was this portion of the proposed contention that was accepted explicitly by the Board. Memorandum and Order (Reflecting Decisions Made Following Prehearing Conference), LBP-82-119A, 16 N.R.C. 2069 (1982). Joint Intervenors' assertion that Applicants should use PICs to detect each radionuclide that could be released also is specifically refuted in the Wilkie/Shearin Affidavit. In summary, the affidavit demonstrates that, as a matter of law, there is no material issue of fact with respect to Joint Contention VI.

In-plant monitoring at SHNPP is performed by Applicants' Radiation Monitoring System ("RMS"). Wilkie/Shearin Affidavit at ¶ 4. The RMS is composed of three component systems that are designed to complement each other so as to completely ensure the health and safety of plant workers. The components that comprise the RMS are: 1) the Area Radiation Monitoring System, which detects and monitors trends and sudden changes in gamma radiation fields; 2) the Airborne Radiation Monitoring System, which detects and monitors trends in the concentration of airborne particulates, noble gases and iodines; and 3) the Process and Effluent Radiological Monitoring System, which monitors major pathways by which radionuclides could be released to the environment. Id. at ¶¶ 4, 5, 6, 7, 8. The RMS is designed to meet all applicable regulatory criteria as set forth in 10 C.F.R. Part 20, 10 C.F.R. Part 50, and General Design Criteria for Nuclear Power Plants Numbers 60 and 64. Wilkie/Shearin Affidavit at ¶ 4. The systems are designed in accordance with the applicable recommendations contained in Regulatory Guides 1.21, 1.45, 1.97, 1.109, 4.15, 8.2, 8.8, NUREG-0472, NUREG-0737, ANSI/ANS-HPSSC-6.8.1-1981 and ANSI N13.10-1974 and the safety-related portion of the system complies with IEEE 279-1971, IEEE 308-1974, IEEE 323-1974, IEEE 336-1971, IEEE 344-1975 and IEEE 384-1974. Id. 3/

3/ The Staff has approved all portions of Applicants' radiological health program that are relevant to this contention. Safety Evaluation Report (NUREG-1038) at §§ 11.5.2, 12.3.4.2.

Contrary to Joint Intervenors' claims, the health and safety of SHNPP workers would not be enhanced if any or all components of the RMS performed on-the-spot analyses for the concentration of each radionuclide that could be released into the plant or the environment. As explained in the Wilkie/Shearin affidavit, decisions regarding protection of plant personnel during emergency conditions can be made adequately on the basis of analyses of types or groups of radionuclides.

The Area Radiation Monitoring System detects all gamma radiation activity. Id. at ¶ 6. The risk of external radiation exposure is determined by establishing the total exposure rate, not by calculating exposure from individual nuclides. Id. The Airborne Radiation Monitoring System provides qualitative information on gamma emissions from groups of radionuclides such as noble gases, particulates and iodines. As with the Area Radiation Monitoring System, it is neither necessary nor desirable for this system to have the capability for monitoring individual nuclides within these groups. Id. at ¶ 7.

Concentration of individual nuclides is simply irrelevant. The Process and Effluent Radiological Monitoring and Sampling System actually does detect significant specific nuclides. However, in formulating responses to emergency situations, rapid calculations are made on the basis of conservative assumptions about the mixture of radionuclides. The precise mix is irrelevant. Protective measures are undertaken on the basis of

calculations made from conservative assumptions about the mix of various types of radionuclides. Id. at ¶ 9.

In summary, whether Joint Intervenor's concerns focus on the Area Radiation Monitoring System, the Airborne Radiation Monitoring System or the Process and Effluent Radiological Monitoring and Sampling System, it is not necessary to measure concentrations of all specific radionuclides during the initial phase of an emergency. The simple fact is that no additional protective measures would be taken as a result of the availability of such information.

The in-plant detection and monitoring provided by the RMS is augmented by the Radiological Environmental Monitoring Program which measures radiation in the vicinity of the SHNPP site. Id. at ¶ 10. This system verifies the effectiveness of the in-plant system and provides a further check against unanticipated buildups of radiation in the environment. The Radiological Environmental Monitoring Program meets the requirements of Regulatory Guide 4.1, Revision 1, and NUREG-0472. Id.

In the event of an emergency, the Applicants' Emergency Environmental Monitoring Field Teams are fully equipped to provide analyses of emergency releases of radionuclides. Id. at ¶ 12. These teams are supported by the laboratory at the Harris Energy and Environmental Center as well as by mobile laboratories. Id. at ¶ 13. These laboratories are capable of

detecting specific radionuclides. However, this capacity is not used for initial emergency response decisions but may be used to provide greater detail should follow-up actions be required.

Finally, Joint Intervenors' belief that the use of PICs would enhance Applicants' radiation detection and monitoring systems demonstrates a total lack of understanding of the operation of PICs. PICs cannot identify specific radionuclides. Id. at ¶ 14.

In summary, Joint Intervenors have failed to articulate any basis for Joint Contention VI. Applicants' radiation detection and monitoring system complies with all regulatory standards and with the recommendations of recognized authorities in the field. The RMS and Radiological Environmental Monitoring Systems are designed and will be operated in such a manner that significant radionuclides and groups of radionuclides will be detected and analyzed for concentration, thus ensuring that appropriate protective measures are taken to ensure the health and safety of SHNPP personnel and the public.

CONCLUSION

Based upon the foregoing and upon the facts set forth in the Wilkie and Shearin Affidavit and Applicants' Statement of Material Facts, Applicants submit that their motion for summary

disposition should be granted and that Joint Contention VI
should be decided in Applicants' favor.

Respectfully submitted,

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Dated: March 9, 1984

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APPLICANTS' STATEMENT OF MATERIAL
FACTS AS TO WHICH THERE IS NO GENUINE
ISSUE TO BE HEARD ON JOINT CONTENTION VI

Pursuant to 10 C.F.R. § 2.749(a), Applicants state, in support of their Motion for Summary Disposition of Joint Contention VI in this proceeding, that there is no genuine issue to be heard with respect to the following material facts:

1. Joint Contention VI alleges that Applicants' radiation detection and monitoring system is inadequate to ensure the health and safety of plant workers and the public because it cannot promptly detect the amounts of specific radionuclides released inside and outside the plant.

2. Applicants' Radiation Monitoring System ("RMS") is composed of the Area Radiation Monitoring System, the Airborne Radiation Monitoring System and the Process and Effluent Radiological Monitoring and Sampling System. Affidavit of Dr. William H. Wilkie and Ronald L. Shearin (hereinafter "Wilkie/Shearin Affidavit") at ¶ 4.

3. Each of the component systems that are included in the RMS, and the RMS itself, is designed to meet all applicable regulatory requirements of 10 C.F.R. Part 20, 10 C.F.R. Part 50, and General Design Criteria for Nuclear Power Plants Numbers 60 and 64. Wilkie/Shearin Affidavit at ¶ 4.

4. The Area Radiation Monitoring System provides information concerning exposure rate from gamma radiation. Wilkie/Shearin Affidavit at ¶ 6.

5. The knowledge of specific nuclides contributing to the field of gamma radiation is not necessary to determine external radiation exposure hazard. Id.

6. The Airborne Radiation Monitoring System provides information concerning the net exposure from groups of radionuclides such as noble gases, particulates and iodines. Id. at ¶ 7.

7. Knowledge of the specific concentration of a specific radionuclide within a group is not necessary to determine radiation hazard. Id.

8. The Process and Effluent Radiological Monitoring System detects all gamma emitters in liquid streams and all noble gases, particulates and iodines as groups in gaseous streams. Id. at ¶ 8.

9. During emergency conditions, the Process and Effluent Radiological Monitoring System will provide information about total activity that will then be used in conjunction with conservative assumptions about radionuclide mix to calculate dose rates. Id.

10. No additional or different protective measures would be recommended if the RMS or any component thereof provided information about releases of specific radionuclides. Id. at ¶ 16.

11. Applicants' Radiological Environmental Monitoring Program provides measurements of radiation and radioactive materials in the proximity of Shearon Harris Nuclear Power Plant. Id. at ¶ 10.

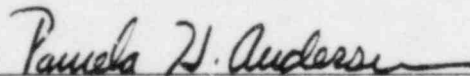
12. Applicants' Radiological Environmental Monitoring Program complies with Regulatory Guide 4.1, Revision 1 and NUREG-0472. Id.

13. The Radiological Environmental Monitoring Program is supported by the Harris Energy and Environmental Center laboratory and by a portable field laboratory. Id. at ¶ 13.

14. The Radiological Environmental Monitoring Program can detect specific radionuclides in the environment, but such capacity is not necessary to ensure that appropriate protective measures are taken during the initial phases of an emergency period. Id.

15. Pressurized ionization chambers cannot identify specific radionuclides. Id. at ¶ 14.

Respectfully submitted,



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