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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

CAROLINA POWER & LIGHT)
COMPANY AND NORTH CAROLINA)
EASTERN MUNICIPAL POWER AGENCY)
(Shearon Harris Nuclear Power)
Plant, Units 1 and 2))

Docket Nos. 50-400 OL
50-401 OL

JOINT INTERVENORS RESPONSE TO APPLICANTS'
INTERROGATORIES AND REQUEST FOR PRODUCTION
OF DOCUMENTS TO JOINT INTERVENORS (FIRST SET)

Joint Intervenor hereby serve their Answers to Applicants'
First Set of Interrogatories.

GENERAL INTERROGATORIES

1(a). State the name, present or last known address, and
present or last known employer of each person known to Joint
Intervenor to have first-hand knowledge of the facts alleged,
and upon which Joint Intervenor relied in formulating allega-
tions, in each of the contentions which are the subject of this
set of interrogatories.

Joint Intervenor know of no such persons at this time

(b). Identify those facts concerning which each such
person has first-hand knowledge.

(c). State the specific allegation in each contention
which Joint Intervenor contend such facts support.

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2(a). State the name, present or last known address, and present or last employer of each person, other than affiant, who provided information upon which Joint Intervenors relied in answering each interrogatory herein.

The representatives of the Joint Intervenors discussed these interrogatories. The only other person who assisted in answering these interrogatories was David Martin, Physics Department, North Carolina State University, Raleigh, North Carolina.

(b). Identify all such information which was provided by each such person and the specific interrogatory response in which such information is contained.

General discussions and advice.

3(a). State the name, address, title, employer and educational and professional qualifications of each person Joint Intervenors intend to call as an expert witness or a witness relating to any contention which is the subject of this set of interrogatories.

At this time Joint Intervenors have made no arrangements for an expert witness on these contentions.

(b). Identify the contention(s) regarding which each such person is expected to testify.

(c). State the subject matter to which each such person is expected to testify.

4(a). Identify all documents in Joint Intervenors' possession, custody or control, including all relevant page citations, pertaining to the subject matter of, and upon which Joint Intervenors relied in formulating allegations in each contention which is the subject of this set of interrogatories.

Joint Intervenors relied on the FSAR and contentions of intervenors in other licensing proceedings, particularly the Catawba proceeding.

(b). Identify the contention(s) to which each such document relates.

Contentions IV, V, and VI.

(c). State the specific allegation in each contention which Joint Intervenors contend each document supports.

While these documents suggested the formulation of the contentions, it probably cannot be said that any of them directly "supports" the contention.

5(a). Identify all documents in Joint Intervenors' possession, custody or control, including all relevant page citations, upon which you relied in answering each interrogatory herein.

Joint Intervenors have neither possession, nor control of any documents, other than relevant portions of the FSAR.

(b). Identify the specific interrogatory response(s) to which each such document relates.

6(a). Identify any other source of information, not previously identified in response to Interrogatory 2 or 5, which was used in answering the interrogatories set forth herein.

None.

(b). Identify the specific interrogatory response(s) to which each such source of information relates.

7(a). Identify all documents which Joint Intervenors intend to offer as exhibits during this proceeding to support the contentions which are the subject of this set of interrogatories or which Joint Intervenors intend to use during cross-examination of witnesses presented by Applicants and/or the NRC Staff on each contention which is the subject of this set of interrogatories.

At this time, Joint Intervenors have identified no such documents.

(b). Identify the contention(s) to which each document relates and the particular page citations applicable to each contention.

INTERROGATORIES ON JOINT CONTENTION IV (TLDs)

IV-1(a). Describe in detail the additional personnel radiation exposure monitoring instruments (including range, sensitivity and qualifications) which Joint Intervenors contend are necessary in order to assure the protection of worker safety and health at the Harris Plant.

Joint Intervenors are still attempting to gather the detailed information sufficient to answer this interrogatory.

(b): State in detail all facts which support Joint Intervenor's contention that the instruments identified in the answer to the preceding interrogatory are necessary.

IV-2(a). Do Joint Intervenor's contend that thermoluminescent dosimeters ("TLDs") are inadequate to measure cumulative radiation doses as required by 10 C.F.R. Part 20?

Yes.

(b). If the answer to the preceding interrogatory is affirmative, state in detail all facts which support this allegation.

Plus or minus 30% is too inaccurate to assure compliance with each such limit, and also ALARA.

(c). If the answer to Interrogatory IV-2(a) is other than affirmative, explain in detail how your response is consistent with the allegations set forth in Joint Contention IV.

IV-3(a). Do Joint Intervenor's contend that portable pressurized ionization monitors are capable of measuring cumulative radiation doses as required by 10 C.F.R. Part 20?

Yes, if they have appropriate output recording equipment and are used continuously.

(b). If the answer to the preceding interrogatory is affirmative, state in detail all facts which support this allegation.

Joint Intervenor's are currently pursuing discovery on this.

(c). If the answer to Interrogatory IV-3(a) is other than affirmative, explain in detail how your response is consistent with the allegations set forth in Joint Contention IV.

IV-4(a). As discussed in FSAR §§ 12.5.3.2.2.2 and 12.5.3.6.1.1, self-reading dosimeters will be utilized, as necessary, for both specific job exposure evaluations and to indicate current individual exposure status. Do Joint Intervenors contend that these self-reading dosimeters do not provide workers with a real-time radiation exposure monitoring capability?

The FSAR does not describe the accuracy of, or the output from these self-reading dosimeters. If, in fact, the output is an easily interpreted analog or digital form, they may provide sufficient real-time monitoring. It is also necessary that the self-reading dosimeters be located on the individual's body at or near the point or points of maximum exposure.

(b). If the answer to the preceding interrogatory is affirmative, state in detail all facts which support this allegation.

(c). If the answer to Interrogatory IV-4(a) is other than affirmative, explain in detail how your response is consistent with the allegations set forth in Joint Contention IV.

IV-5(a). Do Joint Intervenors contend that the self-reading dosimeters, discussed in FSAR §§ 12.5.3.2.2.2 and 12.5.3.6.1.1, are inadequate to assure worker safety and health in radiation hazard areas?

See answer to interrogatory number IV-4(a).

(b). If the answer to the preceeding interrogatory is affirmative, state in detail all facts which support this allegation.

(c). If the answer to Interrogatory IV-5(a) is other than affirmative, explain in detail how your response is consistent with the allegations set forth in Joint Contention IV.

IV-6(a). Do Joint Intervenors contend that the monitoring ranges of the self-reading dosimeters, described in FSAR § 12.5.2.1.7.4, are inadequate to protect worker safety and health?

No, the ranges listed in the FSAR seem appropriate.

(b). If the answer to the preceding interrogatory is affirmative, state in detail all facts which support this allegation.

(c). If the answer to Interrogatory IV-6(a) is other than affirmative, explain in detail how your response is consistent with the allegations set forth in Joint Contention IV.

The fact that the monitoring ranges listed in the FSAR may be appropriate, in no way offers an assurance that the self-reading dosimeters will actually be capable of accurately measuring radiation in the ranges listed in the FSAR.

IV-7(a). Do Joint Intervenors contend that the self-reading dosimeters, discussed in FSAR §§ 12.5.3.2.2.2 and 12.5.3.6.1.1, are inadequate to corroborate the exposures indicated by TLDs?

Joint Intervenors have insufficient information about the self-reading dosimeters at this time with which to formulate an answer. The FSAR says they are used for different types of radiation than the TLDs.

(b). If the answer to the preceding interrogatory is affirmative, state in detail all facts which support this allegation.

(c). If the answer to Interrogatory IV-7(a) is other than affirmative, explain in detail how your response is consistent with the allegations set forth in Joint Contention IV.

INTERROGATORIES ON JOINT CONTENTION V
(AIR MONITORS AND SAMPLERS)

V-1(a). Would a commitment by Applicants to meet the provisions of NRC Regulatory Guide 8.25 (relevant pages attached hereto as Appendix 1) regarding calibration frequency satisfy Joint Intervenors' concerns with respect to the issue of the frequency at which the continuous air monitors and portable air samplers will be calibrated?

Probably not.

(b). If the answer to the preceding interrogatory is negative, state in detail the basis for Joint Intervenors' disagreement with the Regulatory Guide 8.25 provisions regarding calibration frequency.

ALARA requires minimization of exposure. Monitoring accuracy is necessary to provide assurances that ALARA will be achieved. Calibrations every sixth month are insufficient to assure this.

(c). If the answer to Interrogatory V-1(a) is affirmative, will Joint Intervenors voluntarily withdraw Joint Contention V? If not, explain in detail the basis for the answer.

V-2(a). If the answer to Interrogatory V-1(a) is negative, identify the frequency at which Joint Intervenors contend that the portable air samplers and continuous air monitors must be calibrated.

One month, unless the drift of any monitor is more than plus or minus 5% after one month; in which case more frequent calibration should be required.

(b). State in detail all facts which support Joint Intervenors' contention that the portable air samplers and continuous air monitors must be calibrated at the frequency identified in the answer to the preceding interrogatory.

To be assured of maintaining plus or minus 5% accuracy, frequent calibration is required.

V-3(a). Do Joint Intervenors contend that the portable air samplers and continuous air monitors are required to be accurate within plus or minus 5%?

Yes.

(b). If the answer to the preceding interrogatory is affirmative, state in detail all facts which support this allegation.

ALARA requires them to be as accurate as possible. Plus or minus 5% is an appropriate range and reasonably achievable.

(c). If the answer to Interrogatory V-3(a) is other than affirmative, explain in detail how your response is consistent with the allegations set forth in Joint Contention V.

V-4(a). Do Joint Intervenorers contend that NRC Regulatory Guide 8.25 is inadequate in allowing for a cumulative error in airflow calibrations of less than 20%?

Yes.

(b). If the answer to the preceding interrogatory is affirmative, state in detail all facts which support this allegation.

See response to interrogatory number V-3(b)

(c). If the answer to Interrogatory V-4(a) is other than affirmative, explain in detail how your response is consistent with the allegations set forth in Joint Contention V.

INTERROGATORIES ON JOINT CONTENTION VI
(RADIATION DETECTION AND MONITORING)

VI-1. FSAR § 11.5.2.5 describes the types of radiation detectors to be used in the Harris Plant Radiation Monitoring System ("RMS"). With respect to each detector type identified therein, identify any alleged inadequacies of the detector type in question.

Joint Intervenorers are still attempting to gather sufficient information to provide a specific response with respect to each detector type.

VI-2(a). Do Joint Intervenors contend that the alleged inadequacies identified in the answer to the preceding interrogatory will prevent the RMS from carrying out its intended function?

Not determined yet (see response to interrogatory number VI-1); however, the wiring and computer hardware and software employed in the RMS could prevent it from carrying out its intended function regardless of the detectors. (See FSAR Section 11.5.2.3.1)

(b). If the answer to the preceding interrogatory is affirmative, state in detail all facts which support this allegation.

(c). If the answer to Interrogatory VI-2(a) is other than affirmative, explain in detail how your response is consistent with the allegations set forth in Joint Contention VI.

VI-3(a). FSAR § 11.5.2. also identifies the types and amounts of radiation which will be monitored by each type of detector. Do Joint Intervenors contend that other specific radionuclides must be identified and monitored by the RMS?

Joint Intervenors contend that FSAR section 11.5.2 does not describe the radionuclides for monitoring readouts except for iodine and . Other than I-131 and Cs-137, this section of the FSAR does not identify specific radionuclides.

(b). If the answer to the preceding interrogatory is affirmative, identify each specific additional radionuclide which Joint Intervenors contend must be identified and monitored by the RMS.

All those not identified in FSAR section 11.5.2 which are listed in 10 CFR 20, Appendix B.

(c). For each specific radionuclide identified in the answer to the preceding interrogatory, state

(i). the basis for Joint Intervenors' contention that such radionuclides must be identified and monitored; and

10 CFR Part 20 limits exposure to the public and to employees.

(ii). the additional protective actions which could be undertaken based upon knowledge of the concentration and/or release of each such radionuclide beyond those actions which would be initiated based on information derived from the RMS as currently designed.

These must be based on the particular radionuclide and plant conditions, consistent with ALARA.

VI-4(a). FSAR § 11.5.2.7 describes the Process and Effluent Radiological Monitors, monitor locations and associated read-outs and alarms. Do Joint Intervenors contend that additional monitors are required in order to determine process and effluent radiological concentrations and/or releases?

Yes.

(b). If the answer to the preceding interrogatory is affirmative, identify the type and proposed location of the additional monitors which Joint Intervenors contend are required.

At this time, Joint Intervenors have not completed their analysis of the Process in Effluent Radiological Monitors.

(c). State in detail all facts which support Joint Intervenors' contention that the additional monitors identified in the answer to the preceding interrogatory are required.

(d). If the answer to Interrogatory VI-4(a) is other than affirmative, explain in detail how your response is consistent with the allegations set forth in Joint Contention VI.

VI-5(a). Do Joint Intervenors contend that the read-outs and alarms associated with the Process and Effluent Radiological Monitors are inadequate?

No, the alarms seem loud enough, and the LED readouts seem able to be read.

(b). If the answer to the preceding interrogatory is affirmative, state in detail all facts which support this allegation.

(c). If the answer to Interrogatory VI-5(a) is affirmative, identify the additional read-outs and alarms for the Process and Effluent Radiological Monitors which Joint Intervenors contend are required.

(d). If the answer to Interrogatory VI-5(a) is other than affirmative, explain in detail how your response is consistent with the allegations set forth in Joint Contention VI.

The readouts and alarms on each individual monitor appear appropriate.

VI-6(a). FSAR § 12.3.4.1 describes the Area Radiation Monitoring System, monitor locations and associated read-outs and alarms. Do Joint Intervenors contend that the Area Radiation Monitoring System is inadequate to accomplish its intended purposes, as set out in FSAR § 12.3.4.1.1?

Yes.

(b). If the answer to the preceding interrogatory is affirmative, state in detail all facts which support this allegation.

The accuracy of radiation records is not specified, not radionuclides identified (FSAR p. 12.3.4-1). The information for radiation surveys is not specified (FSAR p. 12.3.4-2). The micro-processors can only withstand 1,000 rads, so long term post-LOCA monitoring is not assured. (FSAR p. 12.3.4-4). The locations of monitors do not assure detection of all movements of radioactivity in the plant (FSAR p. 12.3.4-1 and 2).

(c). If the answer to Interrogatory VI-6(a) is affirmative, describe in detail all modifications to the Area Radiation Monitoring System which Joint Intervenors contend are required.

Joint Intervenors are still gathering the information necessary to fully respond to this interrogatory; however the monitors appear unable to operate accurately for extended periods after LOCA.

(d). If the answer to Interrogatory VI-6(a) is other than affirmative, explain in detail how your response is consistent with the allegations set forth in Joint Contention VI.

VI-7(a). FSAR § 12.3.4.2 describes the Airborne Radiation Monitoring System, monitor locations and associated read-outs and alarms. Do Joint Intervenors contend that the Airborne Radiation Monitoring System is inadequate to accomplish its intended purposes, as set out in FSAR § 12.3.4.2.1?

Joint Intervenors have not yet completed their analysis of the Airborne Radiation Monitoring System.

(b). If the answer to the preceding interrogatory is affirmative, state in detail all facts which support this allegation.

(c). If the answer to Interrogatory VI-7(a) is affirmative, describe in detail all modifications to the Airborne Radiation Monitoring System which Joint Intervenors contend are necessary.

(d). If the answer to Interrogatory VI-7(a) is other than affirmative, explain in detail how your response is consistent with the allegations set forth in Joint Contention VI.

REQUEST FOR PRODUCTION OF DOCUMENTS

Applicants request that Joint Intervenors respond in writing to this request for production of documents and produce the original or best copy of each of the documents identified or described in the answers to each of the above interrogatories at a place mutually convenient to the parties.

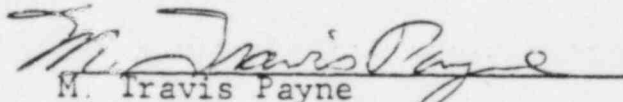
The only documents relied upon by Joint Intervenors are the portions of the FSAR cited by Applicants in these interrogatories, and copies of proposed contentions of

intervenorors in other licensing proceedings. If Applicants do not have access to these documents, Joint Intervenorors will provide them to Applicants.

I, M. Travis Payne, have prepared the responses to Applicants' Interrogatories to Joint Intervenorors (First Set). These answers are true and correct to the best of my knowledge.

This the 29 day of March, 1983.

So sworn,


M. Travis Payne
Attorney for Kudzu Alliance

CERTIFICATE OF SERVICE

I hereby certify that copies of this filing were served
this 22 day of March 1983, by deposit in the United States MAR 31 10:39
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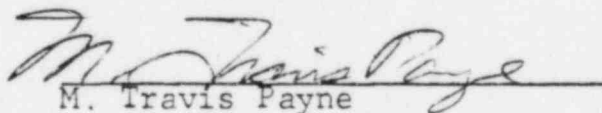
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