

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

OFFICE OF SECRETARY
OF LICENSING & SERVICE
BRANCH

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

Wells Eddleman's Motion Concerning DCRDR Information

As detailed in the additional DCRDR contentions filed herewith, and the other contentions based solely on CP&L's "DCRDR" and NUREG-0737 Rev. 1, the earliest of which I saw is 12-14-82, the information in CP&L's so-called "DCRDR" is inadequate to evaluate control room design. The report itself has a body of iv+14 pages, and the appendices, e.g., give only 2 of some 35 HERSs referred to in it. However, the "DCRDR" appendix A lists a huge amount of information in the possession of CP&L which has not been provided to me, or to other intervenors.

Now here's a Catch-22: I can get that information by discovery on my contention 132, but NRC rules won't let me formulate a contention based on information which must later be obtained by discovery. Therefore, I join with Dr. Wilson's motion ("Response" dated Jan 6 '83) that late-filing of contentions not be considered to apply to these based on specific HEDs, HERS, DER file, and other records listed in said Appendix. CP&L has conceded that the DCRDR is a document not available to intervenors prior to the deadline for submitted contentions in this case.

And the failure to include and supply information is clearly CP&L's and their contractor Essex Corporation's, not mine.

If in the alternative the Board decides to apply the late-filing criteria to such contentions, I argue (based solely on that assumption) that under 10 CFR 2.714(a)(1) there is good cause for failure to file on time, because Applicants withheld the information necessary to formulate the contentions, and are still withholding it so far; further, the NUREG-0737 Rev. 1 and other basis did not exist 5-14-82; There are no other means to protect my interest in this matter since no other party has more rights than I do to file contentions based on deficiencies in the DCRDR and the control room's compliance with NRC rules, and intervenors file contentions as a matter of right. Staff review is no substitute for this right, nor for litigation. See ALAB-298, Perry, 2 NRC 730 at 736-7 (1975). Control rooms ~~design~~ design and procedures, and emergency planning concerns tied to the control room and accurate reporting of plant data, are too complex to allow a ~~x~~ simple judgment by the Staff as to whether the Applicants meet NRC licensing requirements. Perry, supra, ibid.

Given the sparse nature of what CP&L has filed so far re DCRDR and the qualifications of its control room reviewers, it is clear that litigation of this issue can help in developing a sound record. I have training in systems and can ask good questions on these points. But the basic help to the record is getting the information before the Board. The Board acknowledges the control room is an important issue, and has admitted my contention 132 thereon.

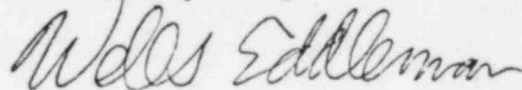
As shown above, no other party can represent my interests in this unless they have rights I don't. Applicants are clearly adverse to my interests in this matter, as shown e.g. by their slowness to file even the thin documentation they have re control room design review. (See MacDuffie CP&L letter to Denton NRC 7 Dec '82 saying CP&L was

filing this now, though it had been revised last in Sept 1981, to "expedite" this case.) Staff, as noted above, cannot represent my interests under the test of Perry.

This matter of additional contentions re control room design will not broaden the issues much, if at all, since a control room contention is already admitted. Indeed, contentions based on later revealed documents may focus and narrow the control room issues to be heard. Moreover, we are 20 months from hearing now, according to NRC's new Harris licensing schedule of December 1982, so the admission of such contentions cannot act to delay the proceeding significantly.

Finally, such contentions should be allowed because to do otherwise would encourage applicants in this and other licensing proceedings to withhold information from intervenors in the hope of preventing them from framing contentions upon important safety and environmental concerns, such as the adequacy of control room design for accident conditions (public health and safety) and for providing data for emergency response (ditto).

Written this 8th day of January 1983



Wells Eddleman

Attached: contentions based solely on new information received on & after ~~xxx~~ December 14, 1982 re control room design. Note that CP&L distribution of the document is spread over 10 days. The LPDR in Raleigh did not have the DCRDR document as late as 12-22-82 according to my search and to the reference librarian, L. Hickman.

Additional contentions of Wells Eddleman based on "DCRDR" I got 12-14-82

132B The design of the Harris Unit 1 control room does not comply with the requirements of NUREG-0737, revision 1, dated 12-17-82, particularly the Safety Parameter Display System (SPDS) requirement.

BASIS: the Detailed Control Room Design Review and its recommendations, prepared by Essex Corp. for CP&L in 1980-81, including the details thereof of CP&L/Ebasco's control room design for Harris 1, e.g. Figure 1, p.10, make no reference to the SPDS and show no SPDS equipment nor location for same. Thus, it is clear the SPDS isn't in the design as of 1980 by Ebasco, nor in the design as being updated in accord with the Essex DCRDR of 1981.

132C Applicants have not established that the Essex Corp review team had the appropriate multidisciplinary qualifications required ~~xxx~~ section 5.1.b.(1) by NUREG-0737, Rev. 1 of 12-14-82 and the ability to use accepted human engineering principles, ~~xxxxxxx~~ in the DCRDR.

BASIS: the 12-7-82 dated document CP&L styles a DCRDR, section 1.1 (p.1) makes no reference to any established (or other) human engineering principles used in this review. Nor does the rest of Section 1. 1.2's complete
Section ~~xxxxxxxxxxxxxxxx~~ description of the team's qualifications is as follows: "The evaluation team was composed of six Essex Corporation employees permanently located in Raleigh and two CP&L employees. The Raleigh Essex staff were human factors specialists made up of two research scientist and four research associates. CP&L personnel functioned as contract administrators, operations specialists, plant liaison, and evaluation process expeditors." This says nothing of the CP&L people's qualifications, if any, and does not address the question of appropriate multidisciplinary qualifications except to say that all the Essex people are "human factors specialists". This says nothing of their specific qualifications of multidisciplinary knowledge or abilities. Nothing further on this is in the "DCRDR".

132C CP&L's "DCRDR" and control room design fail to comply with NUREG-0737, Revision 1, sections 5.1(b)(ii),(iii) and (iv), 5.1(c) and 5.1(d) in at least the following ways:

(1) no function and task analysis was performed in the DCRDR, which itself states (p. iii, item f) "The procedures for SHNPP-1 have not been developed; ..." Section 2.0, p. 3, begins with this: "2.1 For a plant under construction, such as SHNPP-1, certain control room and equipment parameters cannot be evaluated. These parameters include such elements as noise, light, control board components yet to be acquired, and procedures yet to be written." By contrast, NUREG-0737 Rev 1 5.1.b.(ii) requires the use of function and task analysis that had been used as the basis for developing emergency operating procedures technical guidelines and plant specific emergency operating procedures. Yet CP&L's "DCRDR" sec 6.3 p. 13 states, (end of part (b)) "None of the problems mentioned in paragraph 6.2b were identified from these task flows". No other part of the "DCRDR" states that such function and task analysis was used to identify problems.

(2) No comparison of the display and control room requirements of NRC with any inventory is in the "DCRDR". Sec. 2.1 quoted above says this hasnot been done.

(3) the "DCRDR" does not address the usefulness of audible alarm systems, information recording and recall capability at all. With respect to layout, the proposal arranges control and display cabinets such that they block or impede view of some others. (See Fig. 2, p.12, where view of/ from panels 8,9,10&11 is obscured by #s 12,13,14 and 15 from #'s 6,7, and 1,2,3,4 and 5. #6 and 7 are hidden from operators by 1 and 2 (as well as ~~ex~~ 3,4, and 5) #'s 16 and 17, the incore instrumentation and ~~incore~~ nuclear instrumentation system are almost totally behind the 2 blocks 1 thru 5 and 6-7 with respect to the

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radiation monitor equipment panels 12 thru 15, the 8-11 block (startup and generator) and the 1-5 block's sections 1 thru 4 and possibly 5. Operator inability to see, read accurately, or integrate the info on these panels can imperil public safety in an accident.

The "DCRDR" does not provide the HERS (specifications) for lighting and visual alarms, though section 2.3 says there are 17 of them (p.3): P.4 is missing from the copy of the "DCRDR" I have to make these contentions from, but Appendix G, the HERS for emergency procedures (and for procedures), the only ones given in the "DCRDR", are mainly typesetting and format guides and do not explain how accepted human factors principles are incorporated into them.

This is a basis for presuming the other 15 HERS are likewise deficient in explaining the accepted human factors principles involved in them. Without seeing them it is silly to ask me to predict this, so more contentions may follow if the other 15 HERS are produced by CP&L.

(4) the "DCRDR" fails to select design improvements that will correct discrepancies that are significant in human engineering terms. E.g. section 3.2(f) and (g), p.5, provide that concerns were evaluated using the Harris simulator checklists, as deemed applicable to SHNPP-1, but were referred to engineering or startup personnel if not resolved. At p. 6 (3.3 c) a total of 143 HED reports are noted, 25 of which became HERSs and ³⁰ ~~42~~ of which were judged inapplicable since they refer to the simulator. That leaves 88 unaddressed. In all of this and throughout the "DCRDR" there is no indication of how significance of human engineering concerns re the control room were determined, or if they were, or how the proposals will correct the discrepancies. Referral to startup, or making a recommendation, is not enough; and there are 88 HED reports (not listed or described further in the "DCRDR") that seem to have fallen through the cracks.

(5) the "DCRDR" does not verify that each selected design improvement will provide the necessary correction, as NUREG-0737

Rev. 1 5.1(d) requires. Indeed, the report by Essex has as its first result, quoted above (1, supra, ref. section 2.1, p 3) that this has not and cannot be done for several important areas.

132 D The "DCRDR" for SHNPP utterly fails to comply with the requirements of NUREG-0737 Rev. 1 with respect to Harris Unit 2. The design of the Harris 2 control room does not comply with the requirements of that document.

BASIS: CP&L's "DCRDR" addresses unit #1 only. No mention of unit 2 is made in it. CP&L has not ^supplied a DCRDR for Unit 2 yet. However, NUREG-0737 Rev. 1, section 5.2f provides that for applications with an SSER dated after June, 1983, Control Room Design Review will be required prior to licensing. According to NRC's 12-28-82 "Schedule Change Milestones for Shearon Harris Unit 1", the SSER for Unit 1 was scheduled for Jan 9, 198~~3~~⁴, now is slated for 4-2-84, a 3 month ^slippage. Both these dates are beyond June 1983, and Unit 2 cannot be finished ~~before~~ before Unit 1. No schedule of Unit 2 SSER has yet been provided by NRC, but it must be after Unit 1's.

Although emergency planning contentions are deferred, I think it prudent to file the following emergency plan contentions now also, based on NUREG-0737, Rev. 1 of 12-17-82:

Contention 142: CP&L's meteorological monitoring at SHNPP is unable to accurately represent meteorological conditions within 10 miles of the plant.


BASIS: Wind patterns, patterns of rain, snow and other precipitation differ considerably between SHNPP and nearby sites, e.g. NC State U and Raleigh-Durham airport, where meteorological data is taken regularly. The SHNPP site is characterized by highly variable winds with a nearly circular wind rose and frequent changes of wind direction.

Contention 143: CP&L's Emergency Operations Facility, alternate EOP, Emergency Operations Procedures (EOPs), Technical Support Center (TSC), Operational Support Center (OSC) and required communications between and among these are inadequate to protect the public health and safety adequately and do not comply with the requirements of NUREG-0737, REV. 1, 12-17-82, particularly those of Table 1, and sections 7, 6 and 8 thereof.

BASIS: These facilities are either incomplete or unbuilt now, the communication lines do not exist and have not been tested, and NRC has not assessed CP&L's compliance with NUREG-0737 Rev. 1 as required prior to SHNPP operation.

Contention 144: CP&L's emergency and security personnel levels do not meet the requirements of NUREG-0737, REV. 1, Table 2.

BASIS: The security plan isn't complete, and is unavailable for review until security experts have been qualified, which is being held up by Applicants' objections. The staffing levels shown in the FSAR are insufficient to meet the requirements for ~~w~~ one damaged and ~~on~~ one undamaged unit.


Wells Eddleman

written Jan 8 '83, served Jan 10

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the matter of CAROLINA POWER & LIGHT CO. Et al.)
Shearon Harris Nuclear Power Plant, Units 1 and 2)

Dockets 50-400
and 504401 O.L.

CERTIFICATE OF SERVICE

I hereby certify that copies of W.E. motion concerning DCRDR info
and additional contentions based solely on documents acquired on &
after 12-14-82
HAVE been served this 10th day of January 1983, by deposit in
the US Mail, first-class postage prepaid, upon all parties whose
names are listed below, except those whose names are marked with
an asterisk, for whom service was accomplished by _____

Judges James Kelley, Glenn Bright and James Carpenter (1 copy each)
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