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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

DOCKETED
USNRC

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In the Matter of)
CAROLINA POWER AND 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

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

NRC STAFF RESPONSE IN OPPOSITION TO
WELLS EDDLEMAN'S PROFFERED CONTENTIONS
65A AND 65B ON INTEGRITY OF CONTAINMENT CONCRETE

I. INTRODUCTION

On June 14, 1984, at the evidentiary hearing held in Raleigh, N. C. Mr. Eddleman served upon the Staff two proffered contentions, 65A and 65B.^{1/} The Staff's response in opposition to the admission of proffered Contentions 65A and 65B follows.

II. BACKGROUND

The Board's Order of September 22, 1982,^{2/} admitted Mr. Eddleman's Contention 65. The Board noted that the contention calls for ultrasonic analysis of the containment and base mat to detect possible voids. (September 1982 Order at 58). Mr. Eddleman's motion seems to incorporate

1/ New Eddleman Contentions 65-A etc. (Structural Integrity Questionable Due to Voids from Out of Specification Slump and Improper Vibration Technique and Inadequate Strength of Harris Containment Concrete), dated June 14, 1984.

2/ Memorandum and Order (Reflecting Decisions Made Falling Prehearing Conference) September 22, 1982.

DESIGNATED ORIGINAL

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Certified By AS - 0509

somehow an Affidavit of Charles A. Stokes, which is attached to Mr. Eddleman's reply to Applicants' Motion for Summary Disposition. At a Bench Conference during the recent hearings in Raleigh, N. C., Mr. Eddleman stated that, if the contentions were admitted, Mr. Stokes would appear as his expert witness. Discovery has proceeded upon Contention 65 among Mr. Eddleman, the Applicants and the Staff.

III. DISCUSSION

A. NRC Standards Applicable To Proffered Contentions

In order for Intervenor Eddleman's proffered concrete contentions to be admitted as matters in controversy in this proceeding, they must satisfy two standards. First, each contention must satisfy the Commission's requirement that the basis for the contention be set forth with reasonable specificity. 10 C.F.R. § 2.714(b). Second, since they are late filed contentions under the Commission's decision in Duke Power Company, et al. (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041 (1983), balancing of the five factors of 10 C.F.R. § 2.714(a) must favor admission of the contentions.

In order for proposed contentions to be found admissible, they must fall within the scope of the issues set forth in the Notice of Hearing initiating the Proceeding,^{3/} and comply with the requirements of 10 C.F.R. § 2.714(b) and applicable Commission case law. Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units Nos. 1 and 2), ALAB-107,

^{3/} Public Service Co. of Indiana, Inc. (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 NRC 167, 170 (1976). See also, Commonwealth Edison Company (Carroll County Site), ALAB-601, 12 NRC 18, 24 (1980); Portland General Electric Co. (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-290, n. 6 (1979).

6 AEC 188, 194 (1973), aff'd, BPI v. Atomic Energy Commission, 502 F.2d 424, 429 (D.C. Cir. 1974); Duquesne Light Co. (Beaver Valley Power Station, Unit No. 1), ALAB-109, 6 AEC 242, 245 (1973). Under 10 C.F.R. § 2.714(b) a petitioner for intervention in a Commission licensing proceeding must file a supplement to its petition:

... [w]hich must include a list of the contentions which petitioner seeks to have litigated in the matter, and basis for each contention set forth with reasonable specificity.

The purpose of the basis requirements of 10 C.F.R. § 2.714 are (1) to assure that the contention in question raises a matter appropriate for litigation in a particular proceeding,^{4/} (2) to establish a sufficient foundation for the contention to warrant further inquiry into the subject matter addressed by the assertion and, (3) to put the other parties sufficiently on notice " ... so that they will know at least generally what they will have to defend against or oppose." Peach Bottom, supra at 20. From the standpoint of basis, it is unnecessary for the petition to detail the evidence which will be offered in support of each contention.

4/ A contention must be rejected where:

- (a) it constitutes an attack on applicable statutory requirements;
- (b) it challenges the basic structure of the Commission's regulatory process or is an attack on the regulations;
- (c) it is nothing more than a generalization regarding the intervenor's views of what applicable policies ought to be;
- (d) it seeks to raise an issue which is not proper for adjudication in the proceeding or does not apply to the facility in question;
or
- (e) it seeks to raise an issue which is not concrete or litigable.

Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 (1974).

Mississippi Power & Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 426 (1973). Furthermore, in examining the contentions and the bases therefor, a licensing board should not reach the merits of the contentions. Houston Lighting and Power Company (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542, 548 (1980); Duke Power Co. (Amendment to Materials License SNM-1773 - Transportation of Spent Fuel From Oconee Nuclear Station for Storage at McGuire Nuclear Station), ALAB-528, 9 NRC 146, 151 (1979); Peach Bottom, supra at 20; Grand Gulf, supra at 426.

As the Appeal Board instructed in Alabama Power Company (Joseph M. Farley Nuclear Plant, Units 1 and 2), ALAB-182, 7 AEC 210, 216-217 (1974), in assessing the acceptability of a contention as a basis for granting intervention:

[T]he intervention board's task is to determine, from a scrutiny of what appears within the four corners of the contention as stated, whether (1) the requisite specificity exists; (2) there has been an adequate delineation of the basis for the contention; and (3) the issue sought to be raised is cognizable in an individual licensing proceeding. (Footnotes omitted)

This applies equally to a contention proffered by an intervenor as well as by a petitioner to intervene. If a contention meets these criteria, the contention provides a foundation for admission "irrespective of whether resort to extrinsic evidence might establish the contention to be insubstantial."^{5/} The question of the contention's substance is for

^{5/} However, the proposed contentions should refer to and address relevant documentation, which is relevant to the Harris plant. See, Cleveland Electric Illuminating Company, et al. (Perry Nuclear Power Plant, Units 1 and 2), LBP-81-24, 14 NRC 175, 181-184 (1981).

later resolution - either by way of § 2.749 summary disposition prior to the evidentiary hearing ... or in the initial decision following the conclusion of such a hearing." Farley, supra, 7 AEC at 217. Thus, it is incumbent upon Mr. Eddleman to set forth contentions and basis therefor which are sufficiently detailed and specific to demonstrate that the issues they purport to raise are admissible.

On June 30, 1983 the Commission reviewing ALAB-687, 16 NRC 460 (1982) issued its decision in Duke Power Company, et al. (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041 (1983). This decision considered the standards to be applied to contentions premised upon information contained in licensing-related documents not required to be prepared early enough so as to enable an intervenor to frame contentions in a timely manner in accord with the provisions of 10 C.F.R. § 2.714(b). In Catawba the Commission determined that it is reasonable to apply the late-filing criteria in 10 C.F.R. § 2.714(a)(1) and the Appeal Board's three-part test for good cause^{6/} to contentions that are filed late because they depend solely on information contained in institutionally unavailable licensing-related documents.^{7/} Id. at 1045. Further, the Commission determined that the institutional unavailability of a licensing-related document does not establish good cause for filing a contention late if information

^{6/} 16 NRC at 1045.

^{7/} The Commission believes that the five factors together are permitted by Section 189a of the Act and are reasonable procedural requirements for determining whether to admit contentions that are filed late because they rely solely on information contained in licensing-related documents that were not required to be prepared or submitted early enough to provide a basis for the timely formulation of contentions. Id. at 1045 and 1050.

was otherwise available early enough to provide the basis for timely filing of that contention.^{8/} Id., at 1048.

The factors which must be balanced in judging the admissibility of a late-filed contention are:

- (i) Good cause, if any for failure to file on time.
- (ii) The availability of other means whereby the petitioner's interest will be protected.
- (iii) The extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record.
- (iv) The extent to which the petitioner's interest will be represented by existing parties.
- (v) The extent to which the petitioner's participation will broaden the issues or delay the proceeding.

10 C.F.R. § 2.714(a)(1). With respect to the good cause factor, the Commission adopted the Appeal Board's test to determine whether good cause exists for late filing of a Contention. Catawba, supra, 17 NRC at 1045. Under that test good cause exists if a contention: 1) is wholly dependent upon the content of a particular document; 2) could not therefore be advanced with any degree of specificity (if at all) in advance of the public availability of that document; and 3) is tendered with the requisite degree of promptness once the document comes into existence and is accessible for public examination. Id. at 1043-1044. The Appeal Board has recently discussed the showing necessary to cause the third factor to weigh in favor of the admission of a late petitioner for leave to intervene.

^{8/} The Commission set out in its decision the fundamental principles upon which it bases its conclusion that Intervenors are required diligently to uncover and apply all publicly available information to the prompt formulation of contentions. Id. at 1048-1050.

Washington Public Power Supply System, et al. (WPPSS Nuclear Project No. 3) ALAB-747, 18 NRC, 1167 slip op. at 18 (1983). In WPPSS the Appeal Board reasserted a standard it had set forth in Mississippi Power & Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-704, 16 NRC 1725, 1730 (1982). As the Appeal Board stated:

Almost a year ago, we observed that, because of the importance of the third factor, "[w]hen a petitioner addresses this criterion it should set out with as much particularity as possible the precise issues it plans to cover, identify its prospective witnesses, and summarize their proposed testimony.

WPPSS, supra, 18 NRC at 1177. This standard is instructive in determining whether an intervenor has satisfied the third factor with respect to a late-filed contention.

Mr. Eddleman's coverage of the five factors totals the second half of the second page of his filing and is patently deficient.

First Mr. Eddleman states that the basis for his contention was not available until June 13, 1984. This is incorrect. The concrete pour packages referenced on page 1 of Mr. Stokes affidavit go back at least till December 6, 1978 (1CBXW219001) and could have been sought by Mr. Eddleman on discovery since the September 22, 1982 Board Order admitted Contention 65. This is not new information under the Commission and Appeal Board decisions, see Catawba cited supra.

No one but Mr. Eddleman has sought to raise these issues and thus factors ii and iv weigh in his favor.

Certainly, admission of these contentions will delay the proceeding. Testimony on all safety issues is to be filed August 9, 1984. Discovery, motions for summary disposition, Board rulings and preparation and filing

of testimony could not be accommodated within the present schedule if these two contentions are admitted.

In regard to factor iii, the extent to which Mr. Eddleman can contribute to a sound record, Mr. Eddleman states he has an expert working on this and he (Eddleman) can cross-examine. In regard to the first, Mr. Stokes has no demonstrated expertise in concrete work. Mr. Stokes appeared before the 288th full meeting on April 6, 1984 of the ACRS. The resume he submitted to the ACRS is attached here as Exhibit I and it shows experience only in piping and structural steel. Mr. Stokes' resume shows no expertise in concrete work. Thus, looking at factor iii and the Appeal Board's statement in WPPS, supra, 18 NRC at 1177, it is clear Mr. Stokes cannot be expected to improve the record.

Thus, in our view, factors i, iii and v weigh against Mr. Eddleman, and these are the most important of the five factors.

Contention 65A

This contention asserts that voids may exist in the Harris containment structure.

Considering this contention within the context of 10 C.F.R. § 2.714, it should be denied. The Stokes affidavit itself provides no basis. The pour packages are so disjointedly excerpted that nothing can be coherently reasoned from them. The pour documentation referenced by Mr. Stokes itself is missing. The Staff's concrete experts can make little or nothing from the selective excerpts in the Stokes affidavit. One cannot tell from Mr. Eddleman's motion what parts of the Stokes affidavit are

alleged to support which new proffered contention, and the contentions are different.

Contention 65A alleges the possible existence of voids in the containment due to improper concrete procedures. Our review of Mr. Stoke's affidavit which consists of out-of-context extracts of pour packages does not provide the specificity and basis for an admissible contention under 10 C.F.R. § 2.714. Putting that aside for the moment, the Contention 65A now proffered by Mr. Eddleman is clearly no different than Contention 65 which has been admitted. Proffered 65A should be denied as lacking basis and specificity and as duplicative of admitted Contention 65.

Contention 65B

This contention alleges possible "damage to the Harris waterstop due to cadwelding" and in support Mr. Eddleman cites generally to the Stokes affidavit. The Stokes affidavit, in this regard, states "On all the FIRWWS for all pours, there is an extensive problem to waterstop by cadwelding and other assorted problems." Stokes at 9. The Eddleman motion and the Stokes affidavit convey no meaningful information at all. The Stokes affidavit on page 10 states that the "waterstop was damaged and repaired." The pour packages themselves identify the problem and state that it was remedied. The documents (1 CBSL 216003 and 1 CBSL 216006B attached hereto as exhibits 2 and 3) referenced by Mr. Stokes clearly, on their face, state that no problem exists. A problem did exist in 1978. The Applicants found the problem in 1978. The Applicants remedied the problem in 1978 (see Exhibits 2 and 3). What is the issue

in controversy to be litigated in October 1984? The papers filed by Mr. Eddleman do not make a case for him that his proffered contentions comply with 10 C.F.R. § 2.714.

There may be a good contention on concrete in the base mat or the containment. However, Mr. Eddleman's motion to admit proffered Contentions 65A and B dated June 14, 1984 and Mr. Eddleman's response to Applicants' motion for summary disposition on Contention 65 dated June 16, 1984 (the Stokes affidavit) read in para materia do not constitute good contentions within the parameters of 10 C.F.R. § 2.714 as interpreted by the adjudications cited in the standards section of this response.

Also, the "waterstop"^{9/} allegation is far removed from "voids." Proffered Contention 65B has no discernable relation to the allegation of Contention 65 that voids may exist in the base mat or containment.

III. CONCLUSION

The information set forth in Mr. Eddleman's motion was available to him at least since September 22, 1982 and no good cause exists for proffering Contentions 65A and 65B at this time.

It does not appear from the papers filed by Mr. Eddleman that the Intervenor could make a substantial contribution to the record in this proceeding upon concrete.

^{9/} For "waterstop" see Figures 3.8.1-1 and 3.8.1-2 of the FSAR, attached hereto as Exhibit 4.

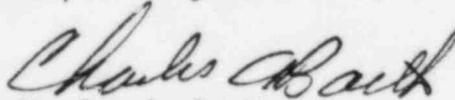
The papers filed by Intervenor are on their face disjointed extracts and summaries of other papers. The Intervenor has failed to set forth specific problems with the base mat and containment of the Harris site and to set forth a cogent basis in support thereof.

Contention 65A is only a reiteration of Contention 65 which has been admitted as an issue in controversy.

We conclude that Contentions 65A and 65B do not meet the late-filed criteria as delineated by both the Appeal Board and the Commission in Catawba cited supra. We also conclude that those contentions do not meet the basis and specificity requirements of 10 C.F.R. § 2.714.

For all of the above reasons, Contentions 65A and 65B proffered by Mr. Eddleman should be denied admission as issues in controversy in this proceeding.

Respectfully submitted,



Charles A. Barth
Counsel for NRC Staff

Dated Bethesda, Maryland
this 3rd day of July, 1984

CHARLES C. STOKES, P.E.
Route 1, Box 223
Cottonwood, AL 36320
(205) 677-5078
(805) 773-1813 Leave Message
(805) 595-7540 or 595-7646

EXPERIENCE:

- 11/82 - Present Field Engineer
Accepted assignment to Pacific Gas and Electric Company's Diablo Canyon Nuclear Project Units 1 & 2. Placed in on-site engineering group. Performed pipe stress and pipe support design calculations. Wrote paper on how to design and represent flare-bevel, flare-v, skewed welds and other partial and full penetration welds on drawings to comply with AISC and AWS prequalified welds for structural and tube steel. Was assigned to Pipe Support Design Tolerance Clarification Group to authorize changes required for installation of supports and was responsible for snubber substitution on both units.
- 2/82 - 5/82 Pipe Stress/Support Engineer
Field consultant on Mississippi Power & Light's Grand Gulf 1 for RCI Inc. Assigned to Control Rod Drive System to assist ECHO pipe stress group and RCI hanger group in resolving interference problems by suggesting alternate design. Responsible for ECN's of as-builts and alternate designs and supervising drafting. Assisted QC and Construction personnel in interpretation of drawings. BWR Plant and Class 1 pipe.
- 6/81 - 2/82 Mechanical Engineer
Assigned to the Mechanical Engineering Department of the Lawrence Livermore National Laboratory as a stress analyst on the injector of the Advanced Test Accelerator (ATA). Performed calculations on the injector housing, epoxy insulators, accelerator cells, cathode, anode, support structure and handling fixtures for fabrication and installation. System involved vacuum-oil interfaces and extremely strong magnetic and radiation fields. Injector constructed of aluminum and stainless steel with insulators of a special fill-epoxy compound. Also made design changes to epoxy insulators on Experimental Test Accelerator (ETA).
- 10/80 - 5/81 Pipe Stress/Support Engineer
Contracted to Nuclear Services Corporation, a division of Quadrex Corp. in San Jose, CA. Performed pipe stress calculations and design of safety related small bore piping supports. SACS program was used in analysis of complex supports. Was assigned to Zimmer Nuclear Plant as a member of special pipe stress and hanger analysis group. Class I, II, III pipe.
- 6/80 - 10/80 Pipe Support Engineer
Assigned to Bechtel Power Corporation's Civil Structural group in Gaithersburg, MD working on the Davis-Besse Project. Checked and made base plate and anchor bolt stress calculations and modifications for anchors and pipe hangers. ANSYS finite element program utilized to account for plate flexibility and bolt elongation. Strudl was used for analysis of complex frames. Other in-house programs were also used.

Exhibit 1

EXPERIENCE: (Cont.)

7/75 - 5/80

Project/Design Engineer

Southern Company Services Inc., Birmingham, AL. Wrote two specifications concerning modifications to Georgia Power's Hatch Nuclear Plant. The main item modified was the Reactor Heat Discharge System in the Torus.

Designed the structural steel truss for Georgia Power's Schereer Plant coal conveyor system Unit No. 2 including details and bents.

Redesigned the precipitator structural steel on Alabama Power's Miller Steam Plant to add precipitator roof enclosure. Elastic analysis performed to allow for thermal growth and to resist wind forces. Strudl analysis, code check and design was used.

Acted as a nuclear pipe support stress analysis, designer and checker on Alabama Power's Farley Nuclear Plant. Performed stiffness calculations and checks by hand and computer. Strudl was used for analysis of complex structures. Also worked in the field supplying support information to office personnel. Work performed in accordance with NRC 79-02 and 79-14. PWR class I, II, III pipe.

Served as civil material coordinator on Georgia Power's Vogtle Nuclear Plant. Was responsible for civil quantity take-offs for project construction scheduling, financing and material purchases. Computer storage and retrieval of information was used.

Did ANSYS finite element analysis of powerhouse substructure on Alabama Power's Harris Dam. Supervised drafting. Checked drawings and checked calculations on superstructure concrete.

Designed outdoor structures on Alabama Power's Miller Steam Plant. These included railroad, truck and ash pipe bridges, ash trench system and off-site make-up water system. Responsible for checking calculations. Supervising drafting and coordinating field and inter-office disciplines.

PROFESSIONAL
LICENSES AND
AFFILIATIONS:

Registered Professional Engineer, State of Alabama (12786)
Registered Professional Engineer, State of Florida (29985)
Registered Professional Engineer, State of Georgia (12340)

EDUCATION:

- Birmingham School of Law, Birmingham, AL, Juris Doctorate Degree, May 1980.
- Auburn University, Auburn, AL, BCE Degree, May 1975.
- Massey Institute of Technology, Jacksonville, FL, correspondence accounting.

The facts stated above are true and accurate.

CHARLES C. STOKES, P.E.

Exhibit 1

CAROLINA POWER & LIGHT
SHEARON HARRIS NUCLEAR POWER PLANT
FIELD INSPECTION REPORT FOR WATERSTOP AND WATERPROOFING

Placement No. 1 CBSL 216003

Sheet 1 of 1A

Location Unit No. 1 Containment Building

NO.	INSPECTION LOCATION	SPlicing VIOLATIONS OR HOLIDAYS	INSTALLATION VIOLATIONS	QUALITY	QC INSPECTOR
1	<p><u>Repair of Waterstop</u> (A) Azimuth 270 ± (B) Azimuth 320 ± Elevation 204 Waterstop burned during cadweld operation.</p>	<p>Areas are to be chipped out and waterstop replaced by patching. Work <u>Not</u> completed 7/19/78</p>		-	<p>Randy G. Godwin Individual Notified: Jim Lathan Date 7/19/78</p>
2	<p><u>Waterstop</u> Butt Splices 325 ± 200 ± 340 ± 275 ±</p>	<p><u>None</u> All splices made in accordance with WP-12.</p>	<u>None</u>	<u>Satisfactory</u>	<p>Randy G. Godwin Individual Notified: J. C. Hyatt Date 7/21/78</p>
3	<p><u>Waterstop</u> Alignment Inspection 270° - 320°</p>	<p>one area burned by cadwelding. Reported to Superintendent and corrected.</p>	<u>None</u>	<u>Satisfactory</u>	<p>Randy G. Godwin Individual Notified: J. C. Hyatt Date 8/2/78</p>
4	<p><u>Waterstop</u> 2.4 EW Accidental burning by cadweld operations. 280 ±</p>	<p>Area corrected on 8/8/78.</p>	on	<u>Satisfactory</u>	<p>Randy G. Godwin Individual Notified: Jim Lathan Date 8/8/78</p>
5	<p><u>Waterstop</u> Entire Placement 270° - 303°</p>	<p><u>None</u> All work performed in accordance with WP-02.</p>	<p>Final check completed 8/15/78</p>	<u>Satisfactory</u>	<p>Randy G. Godwin Individual Notified: Jim Lathan Date 8/15/78</p>

Exhibit 2

SRK

CAROLINA POWER & LIGHT
SHEARON HARRIS NUCLEAR POWER PLANT
FIELD INSPECTION REPORT FOR WATERSTOP AND WATERPROOFING

YP-21
Exhibit 1

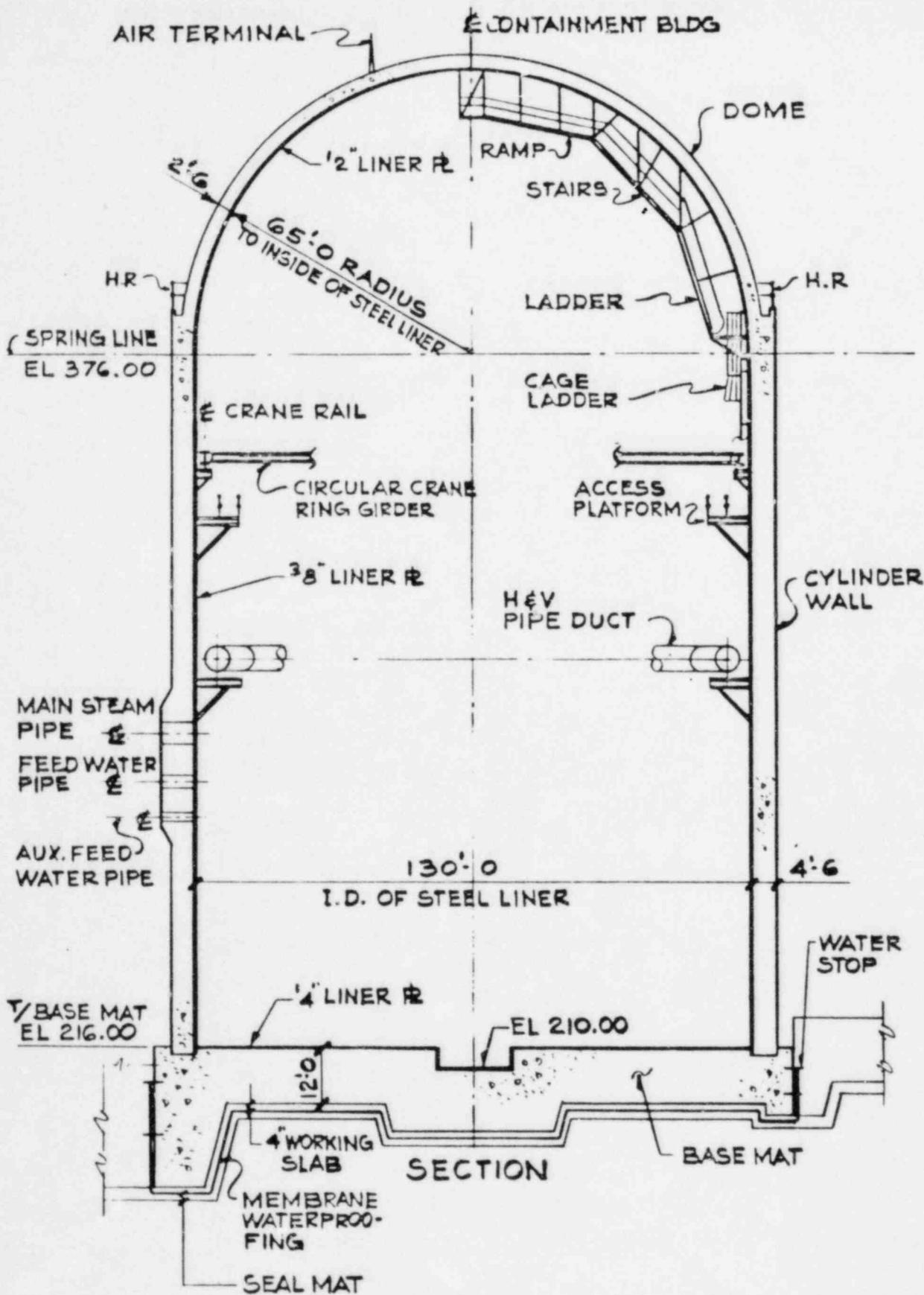
Placement No. 1 CBSL 216 006

Sheet 2 of 2

Location Unit No 1 Containment Building

NO.	INSPECTION LOCATION	SPLICING VIOLATIONS OR HOLIDAYS	INSTALLATION VIOLATIONS	QUALITY	QC INSPECTOR
1	<u>Waterstop</u> Butt Splices 215° ± 270° ±	<u>None</u> All splices made in accordance with WP-12.	<u>None</u>	<u>Satisfactory</u>	Randy G. Godwin Individual Notified: J.C. Hyatt Date: 7/21/78
2	<u>Waterstop</u> Alignment Inspection 270° - 320° 208-10' - 270'	One area rejected because of minimum 1 1/2" splice not being performed. Reported to General Foreman and Superintendent and corrected.		<u>Satisfactory</u>	Randy G. Godwin Individual Notified: Jim Lathan Date: 8/2/78
3	<u>Waterstop</u> Elev. 2.4 Accidental burning by Cadweld operations 250 ±	Area corrected on 8/8/78		<u>Satisfactory</u>	Randy G. Godwin Individual Notified: Jim Lathan Date: 8/8/78
4	<u>Waterstop</u> Entire Placement 208-10' - 270'	<u>None</u> All worked performed in accordance with WP-02.	Final check completed 8/15/78	<u>Satisfactory</u>	Randy G. Godwin Individual Notified: Jim Lathan Date: 8/15/78
5					Individual Notified: Date:

— Exhibit 2 —



SHEARON HARRIS
 NUCLEAR POWER PLANT
 Carolina
 Power & Light Company
 FINAL SAFETY ANALYSIS REPORT

CONCRETE CONTAINMENT STRUCTURE -
 GENERAL ARRANGEMENT

FIGURE
 3.8.1-1

Exhibit 4

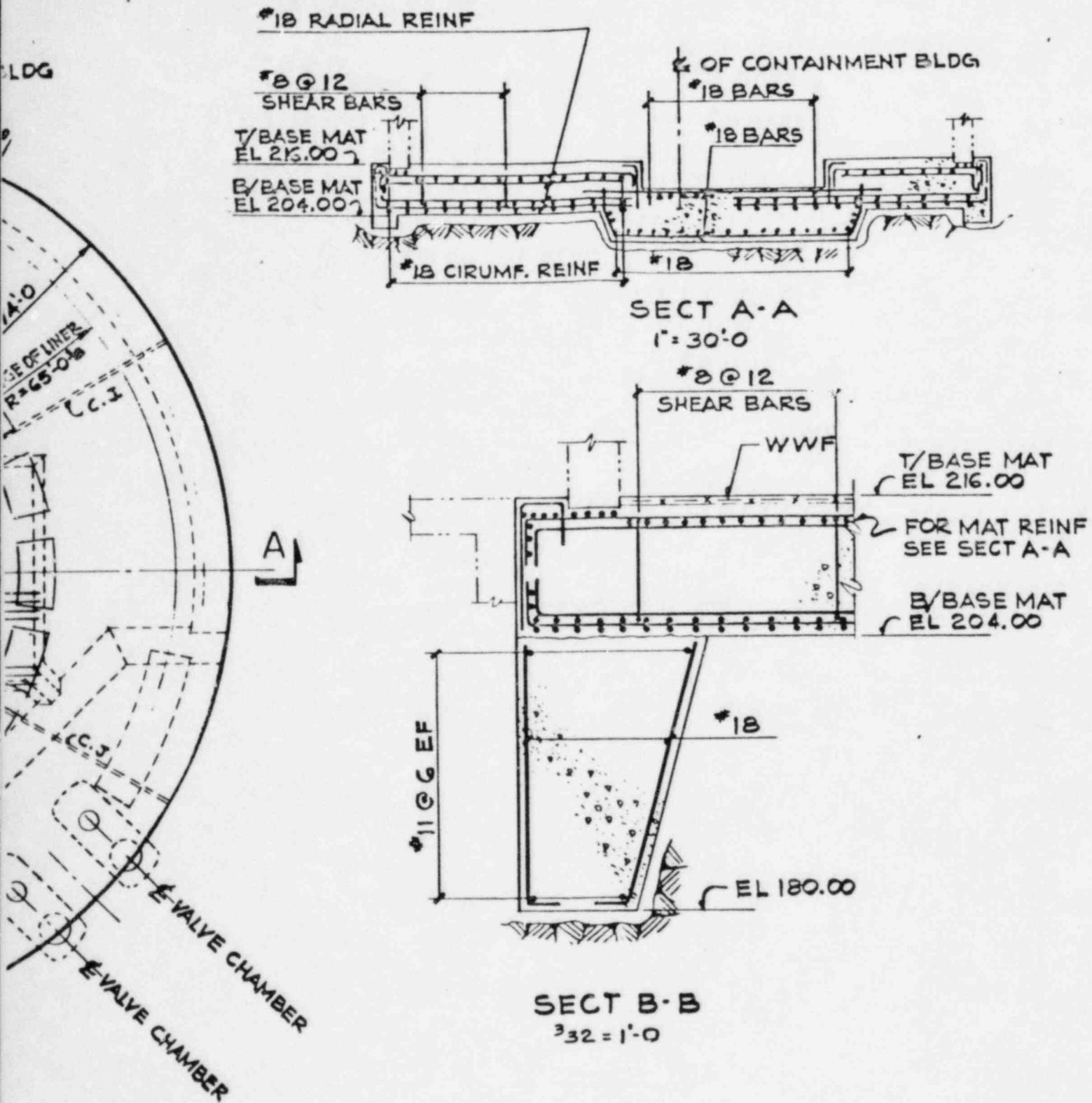


Exhibit 4

SHEARON HARRIS NUCLEAR POWER PLANT Carolina Power & Light Company FINAL SAFETY ANALYSIS REPORT
CONCRETE CONTAINMENT STRUCTURE - MAT, MASONRY & REINFORCING FIGURE 3.8.1-2

CIRCUMF. BARS
#18 @ 12" LAYER TOP
& 2 LAYERS BOT
(STAGG. SPLICES)

MECH SPLICE
SLEEVE (TYP)

RADIAL BARS #18 @ 11"
T & B (2 LAYERS)

☉ OF CONTAINMENT B

EL 216.00

4'-5 3/8
(3DP KEY)

R=7
OUTSIDE ED

A

REACTOR VESSEL
RECESS

C.C.J.

#18 @ 8" ±
T & B EW

C.C.J.

KEY

VALVE CHAMBER

VALVE CHAMBER

B1

B2

PLAN OF FOUNDATION MAT
1" = 20'-0"

Exhibit 4

John Runkle, Executive Coordinator
Conservation Counsel of North
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307 Granville Rd.
Chapel Hill, NC 27514

Atomic Safety and Licensing Appeal
Board Panel*
U.S. Nuclear Regulatory Commission
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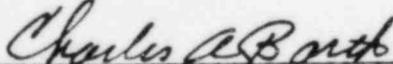
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