January 9, 1985

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
Carolina Power & Light Company and North Carolina Eastern Municipal Power Agency	)	Docket No. 50-400 OL
	)	
(Shearon Harris Nuclear Power Plant)	)	

JOINT INTERVENORS' PROPOSED FINDINGS
ON JOINT CONTENTION 1 (MANAGEMENT CAPABILITY)

As part of the hearing process for an operating license for the above-captioned nuclear power plant, hearings were held in Raleigh, North Carolina, from September 5 through 7, and 10 through 14, 1984, on Joint Contention 1 which addressed the Applicants' ability to safely manage the Shearon Harris Power Plant based on the history at their other nuclear plants. Applicants submitted proposed findings of fact and conclusions of law on this contention on December 21, 1984. Joint Intervenors were then to file findings on January 4, 1985, although Joint Intervenors requested short extensions to January 9, 1985.

The purpose of the following proposed findings is to develop the thesis that because of a history of ineffective responses to safety problems, the management of CP&L has not demonstrated its ability to safely manage another nuclear power plant. We urge the Board to adopt these findings in full.

Introduction

1. [Finding 1 by the Applicants with the addition to the footnote] and that one unit is currently scheduled for startup in March, 1986, with commercial

operation in September, 1986.

2. [Finding 2 by Applicants].

3. [Finding 3 by Applicants].

4. [Finding 4 by Applicants].

5. [Finding 5 by Applicants with an additional sentence inserted between the first and second sentence] The preliminary assessment also contained the NRC Staff's strong recommendation that Applicants consolidate its nuclear operations under one corporate officer. [Add to bottom] Bemis testimony, Tr. 3669.

6. [Finding 6 by Applicants].

7. [Finding 7 by Applicants].

8. [Finding 8 by Applicants].

9. The primary issue presented by Joint Contention 1 is whether the Applicants can operate the Shearon Harris Nuclear Power Plant in light of the repeated violations of NRC regulations, poor performance of CP&L's other reactors (Brunswick Units 1 & 2, Robinson Unit 2), poor management practices, excessive Licensee Event Reports (LERs) which are reported to the NRC and Non-conformance Reports (NCRs) which are in-house Quality Assurance (QA) reports, and a general unwillingness by senior management to accept responsibility for its own deficiencies. In short, CP&L management is not "technically qualified to engate in the proposed activities in accordance with the regulations in this chapter..." 10 C.F.R. §50.40(b). There is also considerable discrepencies between the words and promises of the Applicants with the actions they have

undertaken. The pattern of failures by the Applicants' senior management demonstrates that public health and safety will not be adequately protected and as such the Board may not recommend the issuance of a license as it must find that "(t)he issuance of a license to the applicant will not, in the opinion of the Commission, be inimical...to the health and safety of the public." 10 C.F.R. 50.40(c).

Corporate Management

10. [Finding 19 by Applicants with an additional sentence] Reliance on one person for the three top positions has the potential to preclude effective change in response to problems in nuclear operation.

11. Reporting to Mr. Smith is the Executive Vice President for Power Supply, Mr. Utley, as well as the Executive Vice President Mr. Graham (legal, corporate communications, customer services), Executive Vice President Mr. Lilly (financial), and the Senior Vice President for Corporate Service Mr. Wilson (administration). Decisions by Mr. Smith are made under his three, at time conflicting, responsibilities; that is the safe, efficient, reliable operations of the company and facilities; providing a reasonable rate of return for the investors; and a responsibility to the employees for the conditions under which they work. Tr. 3915, 3909 (Smith).

12. FERC Form No. 1 at page 104 (in evidence as JI 2) reports that as of December 31, 1983, the following were executive officers of the company and earned more than $50,000 annually: Sherwood H. Smith, Jr.; E. E. Utley, Jr.; James M. Davis, Jr.; M. A. McDuffie; Thomas S. Elleman; Patrick W. Howe; and Robert A. Watson. Each of these were witnesses called by the Applicants or in Mr. Smith's case, voluntarily produced after Joint Intervenors sought a

subpoena. Other witnesses called by Applicants were not corporate officers, although Mr. Banks, Manager of Corporate Quality Assurance, makes in excess of $50,000 annually.

13. [Finding 20 by Applicants with an additional sentence] Also reporting to Mr. Utley is Senior Vice President of Fossil Generation & Power Transmission, Lynn W. Eury. Tr. 2528 (Utley).

14. In addition to the three nuclear units in operation and the one under construction, CP&L operates eight coal plants along with various internal combustion turbines. The fossil plants are the responsibility of Mr. Utley through Mr. Eury. Approximately 1000 staff operate the coal plants and additional personnel are involved in power transmission (although the record does not supply the actual number involved). Tr. 2528 (Utley).

15. The Nuclear Generation Group is headed by Senior Vice President, M. A. McDuffie. Although the operation of the Robinson plant and the construction and operation of the Harris plant are under his direct control, he does not have responsibility for the Brunswick plant's operation. Besides the Harris and the Robinson Nuclear Projects, reporting to Mr. McDuffie are Nuclear Engineering & Licensing (responsible for modifications at all the plants), Nuclear Plant Construction (not responsible for major construction, responsible for procurement and contracting), Engineering & Construction Support Services (budget accounting and construction services), and Nuclear Staff Support (special services to all of the nuclear plants, including security and contact with non-NRC agencies). Utley et al., Attachment 2.

16. The Operations Support Group provides technical support services to all of the Applicants' nuclear plants, and is headed by Senior Vice President for Operations Support, James M. Davis, Jr. It is comprised of the Fuel Department (determines need for and procures both nuclear fuel and coal); Material Management (purchasing, control, distribution, etc., of all CP&L material requirements, except generation fuel, power plant construction materials, and land), Operations Training & Technical Service Department (radiation control, training of both nuclear and coal employees, among other duties), and Environmental Services (responsible for environmental regulatory compliance for nuclear and coal facilities). Utley et al., pp. 11 - 12.

17. [Finding 23 by Applicants].

18. The Corporate Nuclear Safety and Research Department (CNS&R) is headed by Dr. Elleman. Among its responsibilities are [see listing of duties in Findings 26 and 27 by Applicants] and research projects dealing with all areas of the utility, including transmission and the coal facilities. Utley et al., pp. 8 - 9, 19 - 22.

19. The Corporate QA Department is headed by Mr. Banks. [Finding 32 by Applicants with additional sentence] The QA Service Section additionally provides QA/QC functions at the coal plants. Tr. 2685.

20. A management audit of CP&L was conducted by Cresap, McCormick, and Paget, Inc. ("Cresap") under an order of the North Carolina Utilities Commission, the state's public commission which regulates electric utilities. The report was issued in December 1982 (a quarterly status report submitted by CP&L dated June 29, 1984, was received into evidence as JI-14, and Appli-

cants' Exhibit 2 was the executive summary of the June 1984 report, and Applicants' Exhibit 3 was a section of a June 1983 report from CP&L to the NC Utilities Commission). The Cresap report contained 55 findings of "opportunities for improvements," approximately half of which involved management process improvements. CP&L reviewed the draft of the Cresap report before its official release. Tr. 2779, 2790 (Utley); Tr. 3910 (Smith); Utley et al., p. 33.

21. Recommendation number 1 of the Cresap report was that the Company "should consider adding one or more outside directors to its Board who are experienced in or knowledgeable about nuclear operations." Although CP&L informed the NC Utilities Commission that this had been completed in 1983, the Company has in fact not added outside directors with nuclear experience to date. This recommendation by Cresap arose from discussion with Mr. Smith sometime before the report was issued. Tr. 3910 (Smith), Tr. 2796 (Utley).

22. None of the senior management (that is, of vice president level or higher) receive written evaluations of their performance. Evaluations are made formally on an annual basis. Tr. 3056 (McDuffie).

23. Mr. Smith evaluates Mr. Utley in part on the performance of the nuclear units as the nuclear units are Mr. Utley's dominant responsibility. The Harris plant is the largest financial commitment undertaken by CP&L and Mr. Smith stated, "(s)o you can't separate either finance or safety or some of the other aspects of nuclear operation from the other." Each of the vice presidents responsible for a nuclear plant have responsibilities for and are evaluated on the performance of that plant, which includes electrical output, safety and meeting regulations, and budget. Tr. 3916 - 21 (Smith); 3059 (McDuffie).

24. CP&L has not taken disciplinary action against any employee of the rank of Vice President or higher due to management or safety problems at a nuclear facility. CP&L has however modified its organization from time to time to accomodate growth or in response to regulatory pressure. As a result, reassignment of responsibilities of personnel at the rank of Vice President or higher have occurred but not specifically due to management or safety problems. Tr. 3956(Utley).

25. Applicants has taken only limited personnel actions (various disciplinary actions such as termination, suspension, or reassignment) because of violations of NRC regulations. JI-17 lists the dates of responses to notices of violations, summaries of incidents, and adverse employment actions taken. At Shearon Harris, there have been only three incidents of adverse employment action for NRC violations and an additional seven incidents which had the potential for safety significance (but did not constitute NRC violations) in which adverse actions were taken. At Robinson, there were thirteen incidents which were NRC violations and another ten which had possible safety significance in which adverse actions were taken. At Brunswick, there were 25 NRC violations in which adverse employment actions were taken and another 32 other incidents which lead to employment actions. Tr. 2895 ff. (Utley).

26. Mr. Utley stated that in 1979 "there was a separation of the nuclear operations from fossil operations, and the placement of nuclear operations under the direction of a corporation officer." (Tr. 2550). This statement is incorrect in light of testimony by NRC Staff witness, Bemis, who testified that when he entered his position as Section Chief in November 1982, CP&L had still not implemented the separation of nuclear from coal operations. Tr. 3665 (Bemis).

27. Section 13.1.1 of the SER states that CP&L underwent a restructuring on August 24, 1983, to take a major step in consolidation of its nuclear activities. Appendix G of Supplement No. 1 of the SER contains the ACRS REport on the Shearon Harris Nuclear Power Plant (dated January 16, 1984) also states that the 1983 restructuring "will eventually result in a consolidation of CP&L's nuclear organization under one senior manager." Bemis, p. 35 - 36.

28. The Standard Review Plan used by the NRC Staff in preparation of the SER states at 13.1.1, "(a) corporate officer should clearly be responsible for nuclear activities, without having ancillary responsiblities that might detract from his attention to nuclear safety matters." The only CP&L corporate officer responsible for all nuclear activities is Mr. Utley, who is also responsbile for all fossil generation, transmission, and distribution for the company. This does not meet the Standard Review Plan acceptance criteria. Bemis, p. 36.

History of Inadequate Management Controls

29. The ability of senior management to safely construct, maintain, and operate a nuclear power plant can best be evidenced by that senior management's past performance.

30. Since CP&L began its nuclear operations in 1974, management has incurred eleven violations which resulted in civil penalties (see Attachment 1(30) for a summary). These violations show severe programmatic failures and breakdowns in management controls, many of which had potential for safety significance or adverse effects on public health and safety.

29. A series of Systematic Assessment of Licensee Performance (SALP) reports were issued by the NRC Staff on Applicants' nuclear operations. The first report, SALP I, was received into evidence as JI-19 and covers the period from April 1, 1979, through March 31, 1980. SALP II was received into evidence as JI-20 and covers the period July 1, 1980, through December 31, 1981. SALP III was received into evidence as JI-21 and covers the period January 1, 1982, through January 31, 1983. SALP IV was bound into the record following the testimony of NRC Staff witness, Bemis, and covers the period February 1, 1983, through April 30, 1984.

30. Each of the four SALP reports contains an evaluation of the performance of each of the nuclear facilities licensed by the Applicants. SALP I is much different in substance and organization than the other three reports, which are similar in format.

31. SALP II through IV assess CP&L's performance in selected functional areas for each of its nuclear units. For each area, a performance level is given with Category 1 (reduced NRC attention may be appropriate) the highest, then Category 2 (NRC attention should be maintained at normal levels) next, and then Category 3 (both NRC and licensee attention should be increased). Establishment of a performance level is based on management involvement in assuring quality, responsiveness to NRC initiatives, enforcement history, reporting and analysis of LERs, staffing, and training effectiveness. There is both a quantitative and qualitative analysis which occurs in establishing the evaluation. Tr. 3653 ff. (Bemis).

32. CP&L witness, Utley, stated that the company would make changes to correct any deficiency contained in the SALP reports. However, major weaknesses at Brunswick in SALP II were plant operations, maintenance, fire protection,

plant procedures, radiation protection, environmental protection, and quality assurance. In SALP III, weaknesses were noted in the areas of plant operations, maintenance, surveillance, fire protection, refueling, licensing activities, and quality assurance programs. Tr. 2969, 2974 ff. (Utley).

33. JI-39 was entered into evidence and compares selected functional areas for SALP II through SALP IV in those areas were comparisons can be made (ratings were not made for each area in each of the SALP reports). JI-39 is helpful in assisting in comparison between the different SALP reports and their evaluations. In SALP II, Robinson was evaluated for the following which do not appear on JI-39: refueling (category rating: 2), personnel, training, and plant procedures (3); fire protection (2); design changes (2); environmental protection (1); audits (2); corrective actions (2). In SALP III, Robinson was evaluated for the following which do not appear on JI-39: refueling (1) and licensing activities (3). In SALP IV, Robinson was also evaluated on refueling (1); licensing activities (2); fire protection (1). In SALP II, Brunswick was evaluated for the following which do not appear on JI-39: personnel, training, and plant procedures (3); design changes (2); environmental protection (3); emergency preparedness (2); audits (3); corrective action (2). In SALP III, Brunswick was also evaluated on: emergency preparedness (1); refueling (3); licensing activities (3). In SALP IV, Brunswick was also evaluated on emergency preparedness (1); refueling (1); licensing activities (2). In SALP II, Harris was also evaluated on site preparation (2); safety-related structures (2); fire protection (2); corective actions (2); procurement (2); design (2); training (2). In SALP III, Harris was also evaluated on: licensing activities (3). In SALP IV, Harris was also evaluated on: soils and foundations (1) and licensing activities (2).

34. JI-40 is also useful in comparing the number and severity of NRC violations at each plant during the SALP review periods. The severity level ranges from level I which is the most severe to level VI, the least. SALP II and III also used deviations and infractions (less than violations) as categories. In comparing evaluations of different functional areas, one must consider both the number and severity of violations. Bemis, pp. 12; 10 C.F.R. Part 2, Appendix C, Supplement 1.

35. A comparison between SALP III and IV shows that at Brunswick in the area of fire protection, four level 5 violations were given a category 3 in SALP III, while four level 4 violations plus a level 3 violation were given a category 2 (improving) in SALP IV. At Harris in the area of piping, one level VI violation, three level V violations and two level IV violations were given a category 2 rating in SALP III, while seven level V and two level IV violations were given a category 2 (improving) in SALP IV. Also at Harris, inconsistency can be found in the evaluation of safety-related components, electrical, and quality assurance. At Robinson, the maintenance area also shows inconsistency in the areas of maintenance and security and safeguards.

36. The evaluations in each functional area for each plant in each of the SALP reports (except SALP I) contain a discussion of the incidents which lead to each of the violations.

37. The nuclear plants licensed by CP&L had the following number of violations during each of the SALP periods:

Name of plant	Number of violations		
	SALP II	SALP III	SALP IV
Robinson	33	46	37
Brunswick (I & II)	50	40	25
Harris	11	20	36

38. JI-40 contains information which was compiled from NRC documents; the parties stipulated and it was received into evidence. In comparing the SALP ratings for all operating nuclear plants during the period covered by SALP II, the Brunswick plant had the lowest average rating (a 2.57 with 3 being the absolute lowest) in the nation.

39. During the 1979 remand hearings, one of the issues raised was the high number of LERs at the Brunswick units. At that time, CP&L's position was that it was not content with the high number and promised to correct the problem. JI-15 which was received into evidence shows the total number of LERS at each of the nuclear units. In fact, instead of decreasing after 1979, the number of LERs significantly increased through 1982 to a high of 152 at Brunswick 1 and 145 at unit 2. Although the number of LERs are slightly inconsistent with those in JI-15, JI-40 shows that of all the operating nuclear plants in the country, the Brunswick units were fourth and fifth in the number of LERs in 1982.

40. The reporting criteria for LERs was changed effective January 1, 1984, and will have the effect of significantly diminishing the number of LERs. Up to early July, 1984, there were 9 LERs at Robinson, 11 at Brunswick 1, and 8 at Brunswick 2. Tr. 2893 (McDuffie), 3371 (Howe).

41. Several of the witnesses agreed that more LERs are likely when a plant is going on-line or off-line rather than one that is in full operation or completely down.

42. As it is not in operation, there are no LERs at the Harris plant although the equivalent for a plant under construction are Construction Deficiency Reports (CDRs), also known as 50.55(e) reports. JI-39 summarizes the CDRs listed in the SALP reports as follows: for SALP II, there were 19 CDRs at Harris; during SALP III, there were 24; and during SALP IV, there were 23. These also would fluctuate depending on the amount of construction activity taking place.

43. JI-40 shows that in 1982, Brunswick 2 was tied for the most incidents with an NRC rating of 2 (a rating given by the NRC Office for the Analysis and Evaluation of Operational Data for mishaps which appear to be safety significant) with ten incidents while Brunswick 1 was tied for ninth in the country with six such incidents.

44. One of the measures by which the performance of a nuclear plant is evaluated is its capacity factor, both annual and lifetime. JI-27 gives capacity factors of the Brunswick and Robinson plants for 1982, 1983, and for its lifetime. Using figures supplied by Applicants' counsel based on maximum dependable capability, capacity factors are as follows:

Unit	Capacity Factors 1982(%)	1983(%)	Lifetime
Brunswick 1	42.2	20.1	46.0
Brunswick 2	27.5	56.9	44.3
Robinson	38.7	57.5	65.8

Tr. 3209 (Roach).

45. JI-40 shows that in 1982, Brunswick 2 had the sixth worst capacity factor of operating reactors in the nation with 26.2 (based on "design electrical ratings" for each reactor). JI-40 also shows that presumably at the end of 1982, Brunswick 2 had the seventh lowest lifetime capacity in the

nation, while Brunswick 1 had the eleventh lowest (again, using "design electrical ratings" for each reactor). The approximate average lifetime capacity of U.S. reactors in 60 - 65%.

46. Applicants' QA staff issue Nonconformance Reports (NCRs) for any condition that is not in conformance with procedures, requirements, or tech specs. The QA supervisor has the responsibility for determining if it is a nonconformance or not; if it is, it goes to the organization which created the nonconformance for appropriate corrective action. Corrective action is then reported back to QA. During November or December, 1983, QA shifted from a dual reporting system of deficiency disposition reports (DDRs) and deficiency reports (DRs) to that of NCRs. This was done upon the recommendation of a consultant, Management Analysis Company (MAC), which made the recommendation in August 1982. Tr. 2739 ff. (Banks); Utley et al., pp. 27 - 30.

47. One of the major issues in the 1979 remand hearings was the necessity for adequate staffing at the Brunswick units. CP&L's position was in effect that staffing levels were not where it wanted them to be but gave assurances that this problem would be taken care of. However, as late as the Cresap report in late 1982 (see Finding 20), this problem had not been rectified. Recommendation 50 by Cresap was that eliminating the shortages of operating personnel at the Brunswick plant should continue to be a senior management priority. Tr. 2815, 2867 (Utley); 2551 (Utley).

Brunswick

48. [Finding 61 by Applicants].

49. [Finding 63 by Applicants with the insertion of "August" before 1982].

50. [Finding 64 by Applicants with the insertion of "January" before 1981 and an additional sentence] In his employment with General Electric, Mr. Dietz was the manager for the start-up of the Brunswick plant.

51. [Finding 67 by Applicants].

52. [Finding 79 by Applicants with an additional sentence] The concerns raised during the 1979 remand hearing were raised by NRC Inspector, Floyd Cantrell.

53. As a result of the issues raised at the remand hearing, CP&L management beginning in 1979 inistituted many improvement programs that entailed significant management changes at Brunswick to resolve those problems. Tr. 2554 - 2558 (Utley).

54. [Finding 82 by Applicants with the deletion of the last sentence].

55. [Finding 83 by Applicants with an additional phrase added to the last sentence] although the failure unless correct/ed could/have lead to more serious events (see Attachment 1(30) for brief summary of incidents).

56. The NRC determined that the cause of the violations appeared to be a breakdown in corporate and facility management controls in the areas of corporate oversight, facility management and operations, and problem identification and correction (see Attachment 1(30) and JI-18). Applicants were fined $600,000 as a result of failure to comply with tech specs by not conducting surveillance procedures and verification, in some cases since the issuance of the operating licenses for the units in 1974 and 1976. Applicants also had discovered the problem in April 1979 through a QA audit and failed to take corrective actions. Utley et al., p. 29; Tr. 3232 ff. (Howe).

57. The failure to conduct the surveillance procedures was discovered on Brunswick unit 2 during the latter part of June 1982 (NRC Region II was notified on June 30) after a loss of voltage to emergency buses resulted in a reactor SCRAM. Unit 1 was not shut down until July 16 when Applicants recognized that the same lack of testing applied to that unit also (see JI-18 for additional information). If the Applicants had not shut down Unit 1, the NRC would have required them to. Tr. 3234 (Howe).

58. In investigating the incidents which lead to the $600,000 civil penalty, Applicants discovered 94 deficiencies at the plant. These included a total of 38 additonal regulatory non-compliances (procedural, programmatic, and administrative), 27 non-reportable items which required resolution before resumption of power operation, and an additional 29 procedural, programmatic, and administrative enhancements. These were discovered in a self-assessment review from July to October 1982. Tr. 3239 (Dietz).

59. Mr. Smith summarized the "root causes" of the problems at Brunswick as follows: (1) Brunswick had shifted from individual to standard tech specs which were more voluminous and precise; (2) staff had a lower level of experience than present; (3) management may have made incorrect decisions; (4) there were considerable changes as a result of the accident at TMI; (5) the technology of nuclear power was relatively new. Tr. 3933 (Smith).

60. NRC Staff witness, Bemis, testified that by the middle of 1982, the NRC Region II office felt that CP&L's performance was poor and that improvement was not clearly forthcoming. The initiation of a comprehensive, long-range improvement program known as the Brunswick Improvement Program (BIP) was imposed on CP&L by NRC Confirmatory Order EA-82-106 on December 22, 1982.

This was done because the regional office had concluded that no substantial improvements had been observed since the Cantrell concerns were aired in the remand hearings. Tr. 3656 - 7, 3713 (Bemis).

61. Mr. Bemis also testified that, based on his knowledge and experience in the field, the TMI changes required at Brunswick were not substantially greater than those at other similar BWR plants. Tr. 3876 - 7 (Bemis).

62. The BIP required in part the rewriting of approximately 3,000 operational procedures for the Brunswick plant. These ranged in size from a few pages to voluminous documents. Tr. 3224 (Howe).

63. [Finding 89 by Applicants].

64. [Finding 86 by Applicants with the phrase "recommendations for improvements" in quotes and deleting "did not make any adverse findings regarding CP&L's program but"].

65. SALP IV on p. 37 states, "(m)aintenance instructions in many area remain poorly understood, leading to decision making at a level which seldom ensures managment review." This had been previously identified in 1982 as one of the items which management wanted to pursue at the Brunswick plant. Tr. 3339 (Howe).

66. A notice in the Federal Register (Volume 47, NO. 95, May 19, 1982, at pp. 21653 - 6, admitted into evidence as JI-12) discussed abnormal occurences at Brunswick as well as other nuclear power plants caused by the blocking of coolant flow to safety systems and components by the buildup of biological organisms. The notice states that the "incident discovered at Brunswick Unit 1 was the most significant from the safety standpoint due to the total loss of both redundant trains of the residual heat removal system." The Residual Heat

Removal (RHR) systems, which provide decay heat removal capability following normal shut downs and during post-accident recirculation cooling, at both units were affected. Some shells were also found in other safety and non-safety related component coolers; the three RHR heat exchangers were inoperable.

67. In the 1979 remand hearings, one of the issue raised was the necessity for changes in the health physics program as too many workers were being exposed to radiation. Again, CP&L's posture was that this area was one in which improvements would be made. Howe/Dietz at 17 - 19.

68. JI-40 shows that in 1982 the Brunswick plant had the most workers in the nation exposed to measurable doses of radiation with 4957 workers. In 1983 there were 7020 personnel who were monitored with 5602 of them receiving a measurable exposure (that is, within the sensitivity of the TLDs). Of the 5602 exposed, 2872 received a significant exposure (that is, greater than 100 mrem/year). Tr. 3375 - 77 (Howe).

69. The total man-rem at Brunswick in 1983 was 3475. It was estimated that the average man-rem at a two-unit BWR plant was approximately 2000. Tr. 3377, 3332 (Howe).

70. The number of workers being monitored for radiation exposure has increased over the last several years at the Brunswick plant. One of the major reasons is that the population of the plant has grown and trailers were placed inside the protected area because of lack of space outside the protected area. Tr. 3298 (Howe).

Robinson

71. [Finding 117 by Applicants].

72. [Findings 119 and 120 by Applicants].

73. Robinson Unit 2 is a Westinghouse "turnkey" reactor; that is, one which Westinghouse designed, constructed, and developed all procedures for, and then turned over to CP&L. It is a PWR although is dissimilar to the Harris plant in size and complexity, operating under custom tech specs. Tr. 3177 (Beatty).

74. Robinson Unit 1 is a coal plant located at the same site. It is the responsibility of Mr. Morgan, the General Manager of the Robinson plant, with approximately 55 employees reporting to him. Tr. 3128 (Morgan).

75. Currently Robinson 2 is out of service for an extended period to replace the steam generator tubes which has been subject to degradation. Tech specs require that a patch is applied if the tube cracks are 47% through wall and that the limit is 70% through wall penetration, below which the tube is likely not to rupture. The greatest degradation before repairs was 100%, with a leak rate at the time the unit was shut down at close to 0.3 gallons/minute. Tr. 3174 - 77 (Beatty).

76. [Finding 137 by Applicants with the additional sentence] These management controls appeared to be lacking from the plant prior to March 1983.

77. The management of Robinson was significantly reorganized in September 1983 with the establishment of a project manager (responsible for administration, cost control, planning, and scheduling) as well as a general manager (responsible for plant performance). Changes in August 1984 separated the responsibilities for operations and maintenance. The position of Manager of Design Engineering

(responsible for the design of modifications to ensure compliance with applicable engineering codes and regulatory requirements) is currently unfilled. Beatty/Morgan, pp. 4 - 6, Tr. 3127.

Harris

78. [Finding 149 by Applicants].

79. [Finding 178 by Applicants].

80. Applicants' witnesses stated that the Harris plant was 88% completed but that it is substantially behind its completion schedule. There are now identified to 1064 different systems and subsytems which need to be completed, of these approximately 500 have been released for testing, although not all of these have been tested. Tr. 3474 (Watson).

81. SALP IV on pp. 60 - 62 describes inspections of the Harris electrical power supply and distribution systems. One violation, in May 1983, resulted in the initiation of a 100% reinspection of all previously inspected cable tray support and hanger welds. At the time of the issuance of SALP IV, 600 out of 3500 supports had been reinspected; less than 10% had weld defects with 1% of those requiring repair. The conclusion of SALP IV for this area is that the inspection program may have been poorly defined or ineffectively applied by a portion of the QC inspection staff. A total of twelve violations were identified in this area during the assessment period. Tr. 3510 (Watson).

82. SALP III on p. 55 had previously identified a weakness in the area of welding and welding inspection of electrical items and supports.

83. George Maxwell, senior resident NRC inspector for operations

at the Harris plant, has held that position since November 1982. Prior to that, he was senior resident inspector for construction at the same plant, beginning in July of 1980. Mr. Maxwell was employed by CP&L for a year in the early 1970's as a QA technician at the Brunswick project. Tr. 3816 - 7 (Maxwell).

84. In his four years at the Harris site, Mr. Maxwell has discovered somewhat less than 100 violations. Of these, he could recall only about five incidents where CP&L management was not as responsive as they should have been, or did not respond as vigorously as Mr. Maxwell felt they should have to the situations he brought to their attention. Tr. 3832 (Maxwell).

85. One of the violations which Mr. Maxwell felt CP&L management was not fully responsive involved the control of non-conformance reports to comply with Appendix B Criterion 15. Another violation involved defective welds from a vendor's shop, Peden Steel. CP&L did not research other welds/from other vendors sufficiently when they discovered the initial problem although after it was brought to their attention by Mr. Maxwell, CP&L required a full reinspection. Tr. 3832 - 6 (Maxwell).

86. Mr. Maxwell also testified to an incident where he felt that a large volume of QA records were misplaced. These included the marked-up drawings and the status tracking of the installed conditions of electrical raceway supports (see Finding 81 for details). Mr. Maxwell testified that he could not determine if those documents were mislaid or had not been created in the first instance. Tr. 3850 - 1 (Maxwell).

87. CP&L initiated a program in June, 1984, at the Harris site which is called the Quality Check program. It is part of the QA organization and

has as its purpose to bring safety concerns to management's attention when they can be dealt with effictively. This program was initiated as it appeared that concerns about safety were not raised by workers through normal channels. There are three parts of the quality check program: the first are forms which are located throughout the site and are numbered to allow a worker to remain anonymous, although they are at times handed directly to the worker. The second is a team which randomly interviews workers around the plant and the third is a team which interviews workers after they have left the employment of CP&L (and implied in the record, those of contract employees). Tr. 2701 ff. (Banks); 3927 (Smith).

88. Most of the 157 concerns which have arisen through the Quality Check program were characterized by Mr. Banks of QA as being ones where the worker did not have all the facts and when those were supplied, the concern was resolved. Only five of the 157 required corrective action, either an NCR or correcting a field change request (minor changes in procedures). Tr. 2704 - 5 (Banks).

89. Although Mr. Maxwell has not investigated the effectiveness of the Quality Check program or reviewed any of the concerns which have risen through that program, it has had the effect of decreasing considerably the number of complaints which workers regularly bring to him and the other NRC inspectors. Tr. 3844 -5 (Maxwell).

90. Mr. McDuffie characterized the qualifications of the personnel which have been hired for the Harris plant operations as primarily engineering. Their qualifications are also listed in Applicants' Exhibit 1 (portions of the Final Safety Analysis Report), and most of the management supervision would have engineering or scientific backgrounds. Very few of the management have

a background in personnel management, recruiting, or administration. Tr. 3025 - 6 (McDuffie).

Training

91. There is not enough evidence in the record to make the determination whether GET levels I and II satisfy the regulatory requirements for training employees working in radiation levels. All workers do not receive GET level III training, only supervisors. [see Finding 207 by Applicants].

92. JI-29 which was admitted into evidence is an IE Information Notice (No. 84-59, August 6, 1984) describing the deliberate circumventing of station health physics procedures at Brunswick and two other nuclear plants. The incidents at Brunswick which lead to the Notice involved a contractor found to be falsifying records concerning his use to TLDs and respirator. The discussion in the Notice centered around the fact that "some contractor personnel do not seem to realize that the health physics program is provided, in part, for their protection." The GET level I or II training received by contractor personnel is not adequate that the purpose for health physics procedures is for their own health. Tr. 3316 - 25 (Howe).

NRC Staff Involvement

93. Mr. Bemis testified to the NRC's staff position in the 1979 remand hearing, that CP&L met the requirements for technical capability to operate the Harris plant. Mr. Bemis also characterized most of Mr. Cantrell's concerns as management problems but added that he did not believe they had a firm regulatory basis and were enhancements to the organization at that time. Tr. 3722, 3726 (Bemis).

94. The Staff issued a Preliminary Assessment of CP&L's management (see Finding 5 above) some time after the middle of 1981 and concluded, "(h)owever, the Review Board noted that CP&L is generally responsive to NRC regulations and to findings of non-conformance; that site and corporate reorganizations have occurred and that these changes have improved management attention to the CP&L nuclear sites; and that additional management positions at the nuclear sites and related personnel changes have improved management controls at the sites." JI-38, p. 14; Tr. 3672 (Bemis).

95. The Preliminary Assessment also stated on p. 5 that, "(t)he experience level of this group of senior corporate officers provides convincing evidence that adequate attention will be paid to nuclear safety at the corporate level." JI-38, p. 5; Tr. 3674 (Bemis).

96. A year later, in November 1982, Mr. Bemis testified that the NRC believed CP&L to have a "fossil mentality," that is, that the management at all levels of CP&L were not being kept informed as to what was occurring, that they were only interested in meeting minimum requirements, and that they did not understand the differences in operating a nuclear facility with its stringent regulations from that of a fossil plant. Bemis, p. 19; Tr. 3676 ff. (Bemis).

97. Based on such incidents as the violations leading to the $600,000 civil penalty and in numerous documents, NRC Region II stated that it felt that the Brunswick facility was a poor performer in the time period around 1982. Mr. Bemis also testified that the problems that existed at Brunswick had been due to poor managment and that he conisidered the Brunswick facility in need of management changes to bring them out of that condition. Tr. 3777 - 3779 (Bemis).

98. Mr. Bemis testified that after 1982, the NRC (and Mr. Bemis) felt that "(o)ur aggressive inspection and enforcement program gives us confidence that CP&L will continue to improve its management and operation of its entire nuclear program." Mr. Bemis also testified that in his view, it was the NRC regional office in Atlanta and its personnel (including Mr. Bemis) who have been primarily responsible for prompting many of the improvements made by CP&L. Tr. 3691, 3657 (Bemis).

99. In response to repeated problems with management at CP&L's nuclear plants, the NRC regional office decided there was a need for radical management on their part over the CP&L facilities. Mr. Bemis was chosen to directly supervise CP&L and report directly to the regional administrator, James O'Reilly. Mr. Bemis was charged with overseeing improvements which CP&L's management need/ed to undertake to correct the inadequate performance at their operating facilities. Tr. 3687 -88 (Bemis); Bemis, p. 6 - 7.

100. Mr. Bemis was the primary author of much of SALP IV, including the overall utility evaluation, and overall evaluations for each facility, and coordinated the write-ups from the resident and specialist inspectors. The improvements which the SALP IV report states were made by the Applicants also have a bearing on whether Mr. Bemis was adequately fulfilling his duties in his role as overseer of CP&L activities. Mr. Bemis's testimony is replete with self-serving statements and it is not unreasonable to infer that better SALP ratings for CP&L would make Mr. Bemis look better. Tr. 3781 - 3782 (Bemis).

101. Prior to preparing testimony for the hearing on this contention Mr. Bemis had not reviewed the transcript to the 1979 remand hearing or read the initial decision at 10 NRC 37. Tr. 3629 (Bemis).

102. Mr. Bemis testified to several instance where Applicants did not react "with vigor" to concerns raised by the NRC. It took from November 1982 until August 1983 for CP&L to restructure its management at the nuclear plants and have one corporate officer at each of the plants. Mr. Bemis also felt that Mr. Utley specifically was slow in making management changes at Brunswick after the incidents leading to the $600,000 civil penalty and in hiring additional staff. Tr. 3699 - 3703 (Bemis).

103. Mr. Bemis testified that in the past CP&L management "may have to have been coerced a little to (start developing programs on their own to improve) when it was an enhancement rather than something that was a requirement to meet the regulations." Tr. 3859 - 60 (Bemis).

Conclusion

104. Reliable, probative and documented evidence of record in this proceedings and the above findings of fact demonstrate that the Applicants are not competant to operate the Shearon Harris nuclear plant. All quantitative measurements of performance--violations, civil penalties, LERs, capacity factors, and the like--demonstrate that CP&L retains a "fossil mentality" as Mr. Bemis describes it. Without constant pressure by the NRC staff and other regulatory bodies in the forms of civil penalties and low ratings, CP&L management would not have made any changes of their management. The best, and one of the most important, examples of this has been the continuous effort to restructure the CP&L management to separate nuclear plant management from fossil plant management. Despite many documented promises, Mr. Utley as Executive Vice President still has considerable responsibilities for fossil plants and transmission. Most of the senior management who report to him also have responsibilities for fossil plants.

105. Applicants' management throughout the hearing and in various filings by counsel have repeatedly stressed that the operations at its nuclear plants have never posed a threat to the public health and safety. A review of the violations leading to civil penalties shows that these statements are patently untrue--releases of radiation, overexposure to workers, precursors to loss of coolant accidents, and lack of surveillance for years have been repeatedly documented. This attitude, which we can characterize as an "ostrich mentality," is not conducive to safe operation of a nuclear reactor.

106. An example of CP&L's managerial actions is described in JI-18 although it did not lead to the $600,000 civil penalty. On January 1, 1983, a fuel assembly was placed into a cell in the reactor core when there was no control rod present. Although this could potentially cause a criticality accident, there was no direct procedural step or caution which made the operator aware that he should not do this. The NRC investigation also determined that a few days prior to the incident there had been a discussion at Brunswick about this at an outage meeting. This an other incidents demonstrate programmatic failures of CP&L management. Tr. 3754 - 3757 (Bemis).

Respectfully submitted,

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Attachment

January 9, 1985

SUMMARY OF VIOLATIONS RESULTING IN CIVIL PENALTIES

Brunswick

Penalty #	Date*	Exhibit #	Summary of incident(s)/NRC conclusion
n/a	9/23/75	JI-30	safeguards violation. $7,000 fine.
EA-80-26	6/11/80	JI-32	unmonitored, uncontrolled release of airborne radioactive material into the environment. Transmittal letter: "...however your failure to recognize the potential safety significance of the situation and the inadequacy of your response to the event are matters of serious concern." "...programattic weakness..." $24,000 fine.
EA-80-41	8/1/80	JI-31	improper disposal of licensed radioactive material into sanitary landfill. Transmittal letter: "...indicate a breakdown on the implementation and management of your radiation protection program." $89,000 fine.
EA-81-77	10/8/80	JI-33	overexposure of worker who did not have minimum qualifications. Transmittal letter: "...lack of adequate attention to changing conditions." $40,000 fine.
EA-82-75	7/16/82	JI-34	Failure to recognize failure of safety-related water level instrument over six days; violation of tech specs. Transmittal letter: "...impose this civil penalty to emphasize the need for better control of licensed activities..." $120,000 fine.
EA-82-106	2/18/83	JI-18	failure to conduct surveillance procedures and verification, in some cases since issuance of operating licenses (12/74 and 9/76); failure to correct problem when discovered by QA audit (4/79); failure to recognize that the requirement also applied to Unit 1 after being discovered on Unit 2. Transmittal letter: "The cause of these violations appears to be a breakdown in corporate and facility management controls in the areas of corporate oversight, facility management and operations,

* Date of transmittal letter from NRC to Applicants.

Summary, cont.

			and problem identification and correction." "...suggest a programmatic failure that unless corrected could lead to more serious events." $600,000 fine.
EA 83-88	1/10/84	JI-42	failure to post required firewatch; material false statement; other fire protection violations. Transmittal letter: "...also indicates systematic weaknesses in the training of nonlicensed personnel in the conduct of safety-related activities." "...programmatic breakdown of fire protection administrative and managerial controls." $40,000 fine.

Robinson

EA-81-46	5/12/81	JI-35	three individuals receiving whole body doses greater than 3 rem. Transmittal letter: "...failure to perform an adequate evaluation of radiation hazards...reveals a weakness in your radiation exposure control program..." $40,000 fine.
EA-82-07	12/1/81	JI-36	failure to follow plant procedures and take effective preventative measures after 5/81 penalty. $50,000 fine.
EA-83-94	11/15/83	JI-41	safeguards violation; failure to control personnel access into protected area. $20,000 fine.
EA-84-14	3/13/84	JI-37	unauthorized entry into locked high radiation area. Transmittal letter: "...cause was the failure of CPL to establish appropriate controls..." $30,000 fine.

CERTIFICATE OF SERVICE

I hereby certify that copies of the Joint Intervenors' Proposed Findings on Joint Contention I (Management Capability) and Joint Intervenors' Proposed Findings on Joint Contention IV (Thermoluminescent Dosimeters) were served on the following persons by deposit in the U. S. Mail, postage prepaid, on January 9, 1985, or by hand-delivery on January 10, 1985.

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This is the 9 th day of January, 1985.