

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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In the Matter of)
)
HOUSTON LIGHTING & POWER) Docket Nos. 50-498 OL
COMPANY, ET AL.) 50-499 OL
)
(South Texas Project, Units 1)
and 2))

APPLICANTS' REPLY TO PROPOSED FINDINGS OF FACT
AND CONCLUSIONS OF LAW SUBMITTED BY THE OTHER PARTIES

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Board of the City of San Antonio,
CENTRAL POWER AND LIGHT COMPANY,
and CITY OF AUSTIN, TEXAS

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In reply to the proposed findings of fact and conclusions of law submitted by other parties, Applicants propose that, in addition to the findings proposed by Applicants on August 6, 1982, the Board also adopt the following findings to address the additional arguments and differing positions presented by CCANP and the NRC Staff.^{1/}

Board's Evaluation of Submittals by the Parties

R-I. General Matters

1. Proposed findings of facts and conclusions of law were submitted by Applicants, CCANP (CCANP FOF) and the NRC Staff (Staff FOF) on August 6, September 20 and October 4, 1982, respectively, and reply findings were submitted by Applicants on October 18. The filings of Applicants and the Staff differed in format and, to some extent, in emphasis,

^{1/} This additional filing by Applicants is in the form of a supplement to the proposed Partial Initial Decision submitted by Applicants on August 6, 1982. Accordingly, all references within this filing to other parts, sections or paragraphs of this Decision refer to the equivalent portion of the August 6 submittal, or if preceded by the letter "R" to the equivalent portion of this reply.

but both were generally in accord as to substance and both reflected the extensive record in this proceeding.^{2/} We have chosen to follow in this Partial Initial Decision the proposed findings and conclusions of the Applicants since it is our belief that their filings tended generally to be more complete and to conform more closely to the entire record.^{3/} Unlike our discussion below of the filings of CCANP, we do not find it necessary to explain our choice between the proposals of the Applicants and the Staff in any greater detail.

2. We have rejected CCANP's proposed findings of fact and conclusions of law for a number of reasons. The bulk of CCANP's filing (CCANP FOF, §§ 1, 3-8) consists of CCANP's identification of characteristics that it labels "qualities of character" (e.g., Id., ¶ 1.13) and its attempt to

^{2/} To the extent that there were some differences between the findings proposed by the Staff and Applicants, our adoption of the Applicants' proposed findings sufficiently reflects our resolution of such differences without the need for any further discussion.

^{3/} For example, although such matters are not central to our Decision, we have noted a few instances in which our reading of the record differs from findings proposed by the Staff FOF: the concrete verification program found that there were no voids in the concrete (compare Staff FOF, at 37 with App. Ex. 5 at 19); backfill procedures adequately described the end-process testing and need to continue compaction until adequate density was achieved (compare Staff FOF, at 133, ¶ 158 and at 135, ¶ 161 with Pettersson et al., ff. Tr. 5796, at 11-12; Wilson and Kirkland, ff. Tr. 2697, at 11-12); and Applicants did adequately explain how it was determined that voids might exist in lift 8 (compare Staff FOF, at 156, ¶ 201 with Tr. 5235-37 (Frazar)).

demonstrate that HL&P did not possess such "qualities." As we explain at some length in Part R-II below, CCANP's discussion utterly ignores the true determinants of corporate character which were discussed at length in the legal memorandum filed with the Board^{4/} and properly applied in the filings of both the Applicants and the Staff. Although CCANP's "qualities" did not provide the true basis upon which character is to be judged, since they are not wholly irrelevant to the broader question of whether HL&P possesses the necessary "managerial competence and character" referred to in Issues A-D, we have dealt with them at some length in Part R-II. As we there show, consideration of those "qualities" did not in any way affect the affirmative findings we have reached on the basis of our application of the appropriate factors.

3. Another portion of CCANP's filing (CCANP FOF, § 2), sought to discredit the conclusions of the Staff's witnesses that HL&P's past deficiencies did not mean that HL&P lacked the necessary competence and character. CCANP would have us use the Staff's testimony as to the facts and the Staff's criteria, but disregard the Staff's conclusions because, allegedly, the Staff could not explain or justify its conclusions, its reasoning in prefiled testimony was

^{4/} Applicants' Memorandum of Law on Issues Concerning Competence and Character (May 2, 1981); NRC Staff Memorandum on Standards For Evaluating Managerial Competence and Corporate Character (May 6, 1981); CCANP Brief on "Character" (May 5, 1981); Citizens for Equitable Utilities Prehearing Brief (May 6, 1981).

irrational, and its witnesses lacked experience in reaching such conclusions. As discussed in Part R-III below, CCANP's arguments are without merit and we find the virtually unanimous testimony of the Staff's witnesses that HL&P possesses the necessary character and competence to be both amply supported and highly persuasive.

4. Finally, CCANP's filing contained its proposed findings on Issues A-E (CCANP FOF, Part III) and on part of a single contention (Id., Part IV) and its conclusions of law (Id., Part V). As we discuss in Part R-IV, below, since CCANP's proposed findings of fact in its Parts I and II dealt only with HL&P's conduct without regard to corrective actions, CCANP attempted to provide support only for its position on Issue A. As to that Issue we have found CCANP's proposed findings and arguments unpersuasive. In essence, CCANP has chosen to proceed on the assumption that its views on Issue A would prevail and has provided no support for reaching a negative conclusion under Issues B-E. We have found nothing in its filing that would persuade us to rule against Applicants on those remaining issues. As we point out in Part R-IV, its two-paragraph proposed finding on a portion of Contention 1.7e is also unpersuasive. Finally, CCANP's proposed conclusions of law also fail in light of their mistaken view of both the facts and the law.

5. Before proceeding to our detailed explication of the foregoing matters, we wish to discuss briefly both the problems created by the limited scope of CCANP's filing and

some of the general defects we found in its proposed findings which caused us to give its filing little weight.

6. As noted above, CCANP chose to devote its entire filing to its views concerning the dispositive nature of HL&P's record of compliance, without regard to corrective actions, i.e., Issue A. It thus proposed no findings as to the appropriateness or adequacy of the actions taken by HL&P to correct identified deficiencies in its quality program, improve its QA/QC program, provide assurance of future compliance with NRC requirements, etc. It assumed that character "is irremedial (sic) absent a change in ownership of the corporation" (Id., ¶ 10.3.1), that the Board of Directors lacked character for not firing the leadership or issuing orders (Id., ¶ 1.3.2) and that there is no record upon which to judge the technical competence of Bechtel and Ebasco (Id., ¶ 10.3.3). We judge those--at best--conclusory findings on Issue B to be frivolous. CCANP takes the position that its finding on Issues A and B compel a negative finding on Issues C and D (Id., ¶¶ 11.1 and 12.1) and thus proposed no findings as to such components of those latter issues as HL&P's planned organization for operation of the STP or the current QA/QC organizations of HL&P, Bechtel and Ebasco. Finally, CCANP did not chose to file proposed findings under Issue E as to the extensive record dealing with the adequacy of the in-place concrete and soils or the extensive program concerning welds. Instead CCANP

attempted to discredit the testimony in the record because some deficiencies may not have been reported (Id., ¶ 13.3), the NRC did not seek to interview all former QC inspectors (Id., ¶¶ 13.4, 13.5), an inspector might be afraid to incriminate himself (Id., ¶ 13.6), defects found in re-examination of welds meant to CCANP only that the original inspectors were afraid to report deficiencies (Id., ¶ 13.7), and, in CCANP's view, the Board is being asked to speculate concerning a matter--in-place condition of structures--that must be considered indeterminate (Id., ¶¶ 13.8 and 13.9). We deal with these views below, but we must emphasize that CCANP's failure to file proposed findings on a substantial portion of the record dealing with key aspects of Issues B-E have left us in the dark concerning CCANP's position on those matters. Both because these issues arose out of the Commission's Order and because of their innate importance we have reviewed the record with great care and reached detailed judgments on such matters. Since CCANP did not choose to refute the proposed findings of the Applicants on such matters, it failed to provide us with a basis for choosing between the Applicants' position and CCANP's hidden disagreement, if one there be. We are confident that our judgments are amply supported by the record, even without the exercise of dealing with an explicitly stated differing viewpoint. We emphasized to CCANP that it should focus in its findings on those issues it considered most significant (Memorandum and Order, August 19, 1982), and both at the

hearing (Tr. 10,660-64) and in a subsequent conference call when CCANP requested more time to submit its findings we urged CCANP to assure itself it had sufficient time to do so. Its failure to submit findings on much of the record is a matter on which we need not dwell further, but which will be an important factor to be considered by the Appeal Board if CCANP were to seek to file exceptions on any matter encompassed in Issues A-E as to which it failed to file any proposed findings.^{5/}

7. Even more disturbing, however, is CCANP's failure to submit any proposed findings on its own contentions, except for the finding on part of Contention 1.7e discussed below. CCANP states that no findings are offered for Contentions 1, 2, 3, 4, 5, 6, 7a, 7b, 7c and 7d^{6/} because of their relative unimportance in light of the larger issues (CCANP FOF, ¶ 14.1) and that findings on Contentions 8a through 8d and Contention 2 "would also not contribute materially to the record" (Id., ¶ 14.3). In light of this position, we find it inexplicable that CCANP did not request permission to withdraw its contentions early enough to relieve the other parties of the burden of filing proposed findings on matters that CCANP was no longer urging as important to the decision. Although our detailed review of the record also leads us to conclude that the contentions

^{5/} See note 9, infra.

^{6/} CCANP's references to these Contentions are obviously references to subcontentions under its admitted Contention 1.

are not significant, we have made findings thereon in order to dispose of them clearly on their merits. However, we additionally find that CCANP has, in effect, abandoned or withdrawn the contentions,^{7/} and that CCANP is in default with respect to its obligation to file proposed findings on such contentions. Although we do not rest any part of this Decision on CCANP's abandonment of its contentions or its default,^{8/} such actions by CCANP again constitute an important factor to be taken into account by the Appeal Board if CCANP attempts to file any exception based on our disposition of its contentions.^{9/}

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- ^{7/} In addition we should note that with respect to many of its contentions we seriously question whether CCANP has met its burden of going forward. Not only did CCANP present no witnesses, but its cross-examination on testimony relating to most contentions was sparse and unfocused and, although we granted CCANP much leeway in introducing exhibits through witnesses for Applicants and the NRC Staff, it failed to relate the vast bulk thereof to any contention.
- ^{8/} Under 10 CFR § 2.754(b), we are granted discretion with respect to finding CCANP in default for failing to file appropriate proposed findings of fact and conclusions of law and with respect to imposing any sanctions for such default. See, e.g., Consumers Power Company (Midland Units 1 and 2), ALAB-123, 6 AEC 331, 332-3 (1973); Boston Edison Company (Pilgrim Nuclear Power Station, Unit 1), LBP-74-57, 8 AEC 176, 177 (1974). For reasons stated above, we find that such default exists but do not deem it necessary to impose any sanctions at the trial level.
- ^{9/} The Appeal Board has taken "failure [to file proposed findings] into consideration in ruling upon exceptions filed by that party." Midland, supra, 6 AEC at 333. A party who fails to file appropriate findings and conclusions "may thus waive its rights of appeal on some issues." Omaha Public Power District (Fort Calhoun Station), LBP-73-24, 6 AEC 591, 594 (1973).

3. As to the reasons why we have given CCANP's filing little weight, we discuss below at some length CCANP's failure to appreciate and apply the appropriate factors that can be derived from pertinent precedents in judging corporate character and the most prominent errors made by CCANP in seeking to justify its views as to the "qualities" of character it discusses. Since we cannot attempt, in this already lengthy decision, to discuss every deficiency in CCANP's filing^{10/} we should point out some that were general and pervasive. In order to present a coherent picture of HL&P's actions regarding STP--from which its character and

^{10/} We have also noted that CCANP cited a number of extra-record publications that are not directly related to the issues in this proceeding. See, e.g., CCANP FOF, ¶¶ 1.1, 1.34, 3.3, 10.3.1. While it might be proper for us to take official notice of certain generally accepted texts and scientific or technical facts, the Commissions' regulations require that such matters be brought to the attention of the parties so that they may be given an opportunity to contravene such facts. 10 CFR § 2.743(i). By raising such matters for the first time in its findings, after close of the record, CCANP failed to allow for such an opportunity. We are especially reluctant to rely on such facts in this case because CCANP's description of these publications may not be accurate. For example, it cites a magazine article for the proposition that the risks of a catastrophic nuclear plant accident and a nuclear weapon are comparable. CCANP FOF, ¶ 1.34. The article actually states that the consequences of the two events are "fundamentally different" and that the "gravest conceivable accident to a nuclear reactor is far less destructive." Fetter and Tsipis, Catastrophic Releases of Radioactivity, 244 Sci. Am. 4 (1981). In any event, CCANP's findings do not rely on such publications for any material matter. Accordingly, we do not rule on the propriety of such CCANP citations.

managerial competence could fairly be judged--both the Applicants and the Staff painstakingly discussed the specific time-frames (e.g., pre-Investigation 79-19; the period covered by 79-19; post 79-19) during which non-conformances or other events took place. CCANP instead often chose to ignore time frames and to lump together a group of unrelated events which took place over a wide period of time^{11/} (without discussion of intervening events), thus giving the misleading impression that the events were related or constituted a pattern of behavior. Perhaps even more serious are the many instances in which CCANP cites the record out of context,^{12/} discusses a portion of the record while ignoring other directly pertinent portions,^{13/} makes generalized attacks based on a very limited number of events,^{14/} and relies upon inapposite references.^{15/} Although we can appreciate a party's desire to present its reading of the record in a manner that supports its position, when we find that its filing both distorts and fails to take into account pertinent portions of the record we inevitably attribute less credibility to the entire pleading.

11/ See, e.g., R, ¶¶ 32, 37, 39, 51, infra.

12/ See, e.g., R, ¶¶ 22, 33, 34, 45, infra.

13/ See, e.g., R, ¶¶ 34, 49, 67, infra.

14/ See, e.g., R, ¶¶ 24, 25, 26, 30, infra.

15/ See, e.g., R, ¶¶ 35, 39, 72, infra.

R-II. CCANP's Assessment of
Corporate Character

A. Introduction

9. In Section 1 of its proposed findings CCANP attempts to justify as the attributes which should be used in measuring corporate character "the qualities of foresight, judgment, perception, resolve, integrity and values." CCANP FOF, ¶ 1.46. It does so through a simplistic discussion unsupported by reference to law, regulations, or precedents in either judicial or administrative decisions.^{16/} CCANP perhaps seeks to excuse its lack of discussion of the legal questions involved by alleging that this proceeding "is the first in which an applicant's character has been specifically raised." Id., ¶ 1.48. Whether or not such statement is made accurate by excluding the NRC decisions dealing with character because the subject was not "specifically raised" in an issue or contention,^{17/} it does not justify ignoring the ample teachings concerning the pertinent attributes of character that can be derived from precedents at the NRC, other Federal agencies and judicial decisions.

^{16/} Indeed, even though CCANP cites extra-record texts on managerial competence, (CCANP FOF, ¶ 3.3) neither are its six qualities purported to be derived from such sources.

^{17/} The precedents have obviously dealt with "character" under other names. E.g., in Virginia Electric Power Co. (North Anna Nuclear Power Station, Units 1 and 2) LBP-77-68, 6 NRC 1127 (1977), one issue considered by the Licensing Board was whether the applicant possessed the necessary commitment and technical qualifications to operate units safely and in compliance with applicable requirements. Id. at 1135.

These were fully discussed in the memoranda of law filed by Applicants (May 2, 1981) and the NRC Staff (May 6, 1981), and in the Staff's proposed opinion (Staff FOF, at 12-28); and the relevant NRC precedents were succinctly referred to in the portion of Applicants' proposed findings that we have adopted in ¶¶ 333-34 of this Decision. We consider the factors there listed to be those that are truly central to a determination of "managerial competence and character," which, as we have explained, we consider difficult to address separately in practice.

10. Regardless of CCANP's lack of legal support or rationale for the six "qualities" that it has identified^{18/} and regardless of our view that all of them are not truly relevant to character per se, we do not consider them to be wholly irrelevant to an evaluation of the combined concepts of "managerial competence and character." Moreover, CCANP utilized its evaluation of these six "qualities" in Sections 3-8 of its proposed findings as the mechanism for its discussion of selected portions of the record; and we believe it appropriate to express our assessment of those views.

^{18/} It is interesting to note that CCANP did not deem these "qualities" to be sufficiently important to bring them to our attention when it filed the "CCANP Brief on Character" on May 5, 1981. The failure of CCANP to raise this theory of the case in timely fashion would alone justify our rejection of it at this time. Troxel Manuf. Co. v. Schwinn Bicycle Co., 489 F.2d 968 (6th Cir. 1973), cert. denied 416 U.S. 939 (1974); Jacobson v. Rose, 592 F.2d 515 (9th Cir. 1978); Wealdon Corp. v. Schwey, 482 F.2d 550 (5th Cir. 1973); Rosenbloom v. Adams, Scott & Conway, Inc., 521 F. Supp. 372 (S.D.N.Y. 1981).

Accordingly in the subsequent sections of this Decision we will address those portions of CCANP's proposed findings.

B. Foresight

11. The first quality of character addressed by CCANP it has designated "foresight, which it defines in terms of "whether strategies and detailed plans are developed which are designed to achieve objectives and avoid foreseeable problems." CCANP FOF, ¶ 3.1. It is obviously difficult to assess, based on hindsight, whether there was a reasonable exercise of foresight because of the problem in determining what facts were known to the decisionmaker at a particular time or what plans and strategies were formulated then. CCANP proposed findings based on its interpretation of several factors affecting construction projects generally and STP in particular, asserting that HL&P should have made special plans to address these factors, but failed to do so. CCANP made no attempt to address in a more general sense whether HL&P made plans to achieve objectives and avoid problems it foresaw. In the findings of fact below, we address the principal examples CCANP cites as failures to avoid foreseeable problems and explain the basis for our conclusion that the record does not support CCANP's position. Thereafter, we address the issue somewhat more generally, showing that HL&P did develop strategies to achieve objectives and avoid foreseeable problems.

12. The first CCANP example of a "problem" that HL&P should have planned for is high personnel turnover.^{19/} CCANP cites Staff investigative findings and testimony to the effect that there was high turnover in personnel, asserting without record support that there were "no visible HL&P measures to compensate for the worst effects." Id., ¶ 3.9. In fact the record shows that "there is high turnover in the industry. . . . It's just the nature of construction." Tr. 9543 (Phillips). The record also shows that measures were taken to discourage turnover in craft positions. E.g., Tr. 9542 (Taylor). Moreover, although CCANP implies that training of personnel was inadequate in light of such personnel turnover (CCANP FOF, ¶ 3.5), the record shows that an extensive training program was implemented at the outset of the Project and that personnel were required to be properly trained before performing safety related work. Broom and Vurpillat, ff. Tr. 3646, at 21-22; Tr. 3193-94 (Goldberg); Tr. 4258-63 (Vurpillat). This CCANP example is not borne out by the record.

13. The other principal example^{20/} cited by CCANP is an alleged failure "to compensate for the limited experience of [Brown & Root], Tr. 1336-37, in spite of known deficiencies

^{19/} CCANP's record citations make clear its focus is turnover in lower level positions. Testimony and cross-examination devoted greater attention to turnover of management personnel; we discuss this subject at ¶ 29.

^{20/} CCANP also makes a passing reference to intimidation and harassment, which we deal with at R, ¶¶ 46-52, infra.

in past [Brown & Root] quality of work. Tr. 2121." CCANP FOF, ¶ 3.9. There is however, no record support for the proposition that there were "known deficiencies in past [Brown & Root] quality of work." At the transcript page cited by CCANP, Mr. Oprea merely stated that there had been citations of noncompliance at the two other Brown & Root nuclear construction jobs. The record is clear, as the Board itself knows, that there have been some citations of noncompliance at every nuclear construction site. See, ¶ 342. Moreover, the only measure CCANP asserts should have been taken was to compensate for Brown & Root's lack of experience by hiring experienced HL&P personnel. CCANP FOF, ¶ 3.9. However, the primary remedy for any inadequacies in Brown & Root's experience would have been adding experienced people to the Brown & Root staff. Tr. 1599-1600 (Amaral); Tr. 2522-24 (Goldberg). HL&P did obtain changes to Brown & Root personnel assignments to improve performance at STP. Oprea et al., ff. Tr. 1505, at 41 (Oprea); Broom and Vurpillat, ff. Tr. 3646, at 50-52. In addition, the record shows that HL&P did attempt to hire personnel with nuclear experience but had limited success in the early stages of the Project. See ¶¶ 25, 31. CCANP emphasizes the relative inexperience of HL&P's first and second QA managers. CCANP FOF, ¶¶ 3.9. Both did have less experience than subsequently recommended by HL&P's consultant, Mr. Amaral, but their respective appointments do not reflect adversely on HL&P's character or managerial competence. Both men are degreed,

registered professional engineers. Goldberg and Frazar, Tr. 906, at 15 (Frazar); Tr. 3220 (Frazar); Tr. 5675-77 (Barker). The first HL&P QA Manager, Mr. Barker, had 6 years prior experience in nuclear engineering and construction, including his work on modifications to the nuclear ship, U.S. Savannah, and design and fabrication of equipment for the research reactor at Texas A&M University. Tr. 567 (Barker). He also had experience as a QA supervisor for the H.B. Zachry Company, developing QA manuals for the proposed Aguirre nuclear plant. Tr. 5676-77 (Barker). Thus he was not a novice in the nuclear field nor was he new to nuclear QA. In this context it should be noted that Appendix B to 10 CFR Part 50 was adopted in June, 1970, so no QA Manager being appointed in 1973 could have been expected to have substantial experience with its implementation. 35 Fed. Reg. 10,499 (1970). The second QA Manager, Mr. Frazar, joined HL&P after 5 years of industrial experience as a chemical engineer. Mr. Frazar supplemented his education and experience with inter alia, active participation in the Edison Electric Institute QA Task Force, in which QA managers from various nuclear utilities met to share experiences and attendance at seminars on QA. Tr. 3222 (Frazar). He was appointed Manager of the QA department after 4 years in HL&P QA. Goldberg and Frazar, ff. Tr. 906, at 15 (Frazar). His appointment was thus based on a significant HL&P opportunity to observe his job performance. Although HL&P

witnesses, and indeed Mr. Frazar himself, testified that his experience upon appointment was less than HL&P now considers desirable (§ 350; Tr. 1444-45, 1467-68 (Jordan)), Mr. Frazar also testified that his level of experience was comparable to that of personnel being appointed QA managers at other nuclear utilities. Tr. 3231 (Frazar).

14. The foregoing CCANP "examples" all go to aspects of the Project that have undergone change over the past few years. In 1980-81 HL&P acquired the services of highly experienced QA professionals as QA Manager and Project QA Manager. § 125. In 1981 construction of STP was halted and thereafter a new Constructor (Ebasco) was appointed. Staff Ex. 131, at 9; Goldberg et al., ff. Tr. 10403, at 5-7. CCANP's proposed findings regarding foresight contain a number of other attacks upon HL&P's performance, some with no record support, and all without explanation of their relevance to the foresight criterion. See CCANP FOF, §§ 3.11, 3.12. For example, despite CCANP's assertion that HL&P's consultant found HL&P "not committed [sic] to quality first" (CCANP FOF, § 3.12), the consultant said no such thing. In fact that same consultant testified that from the start of his involvement on the Project he found that HL&P executive management had a positive attitude towards QA, and that view was confirmed by the NRC Staff witnesses. §§ 348-50.

15. With respect to the general question of "foresight," it is clear that HL&P did formulate plans and strategies.

It initiated its QA Department early in the planning for the Project, and decided to apply QA to its fossil program as well. ¶ 30; Jordan, ff. Tr. 1223, at Attachment 1. Its QA Program for STP was reviewed by the NRC Staff at the Construction Permit stage and found acceptable. Gilray, ff. Tr. 10689, at 3; Broom and Vurpillat, ff. Tr. 3646, at 11-12; LBP-75-71, 2 NRC 894, 909-14 (1975). When it foresaw problems it took steps to deal with them. For example, in early 1978 when it detected that the QA Program was not functioning properly, it expressed its concerns to Brown & Root executive management and then followed up to see to it that improvements were made. See ¶ 45. Also in 1978, to improve its Project management HL&P substantially reorganized, creating a large Project management team. See ¶ 25. In 1979, it hired Mr. Ferguson, a highly experienced executive, to upgrade its executive management of the Project, (Tr. 5105-06 (Oprea)) and Mr. English, who had extensive construction experience, to upgrade its site management. Tr. 5742-44 (Barker); Goldberg and Frazar, ff. Tr. 906, at 9 (Goldberg); Tr. 2571-77 (Goldberg). In early 1980, it decided to use Bechtel as an independent consultant to perform a thorough audit of the STP site QA activities, anticipating by several months the NRC requirement for advice by a consultant on the Project QA structure. See ¶ 55. Also in 1980 it acquired the services of Mr. Goldberg

after an extensive search. Goldberg and Frazar, ff. Tr. 906, at 4 (Goldberg); Tr. 1453 (Jordan). In 1977 HL&P began to assemble a plant operations staff and in 1981 it acquired the services of Mr. Dewease as Vice President, Nuclear Plant Operations. Goldberg and Dewease, ff. Tr. 10548, at 3, 19-20. Extensive planning and preparations for plant operation have been underway for some time. ¶¶ 240-56.^{21/} These are but a few of a large number of examples in the record that refute the assertion that HL&P did not formulate plans and strategies to avoid anticipate problems. The record shows neither that HL&P was prescient nor that it failed to plan for the future. Even if, in retrospect, its anticipation of future problems was not as effective as it could have preferred, certainly any such deficiencies were not of a type and scope that would influence our judgment as to HL&P's character and managerial competence.

C. Judgment

16. CCANP defines its second quality of character, "judgment," as "selecting the appropriate people and making correct decisions necessary to achieve the [desired] goal." CCANP FOF, ¶ 1.13.2. However, CCANP's examples of HL&P's "poor judgment," are all limited to instances where it believes that more experienced or more highly qualified

^{21/} Since this proceeding is on an application for operating licenses, HL&P's planning for plant operations is particularly germane.

personnel should have been selected. After discussing these alleged inadequacies in personnel, CCANP concludes that "HL&P has shown poor judgment in staffing its own organization and in assessing the staffing done by its prime contractor." Id., ¶ 4.20.

17. Even within the limited definition provided by CCANP, the concept of good judgment is somewhat amorphous. Like foresight, it is difficult to assess, given the problem of determining the facts or circumstances that were or should have been known by the decisionmakers at the time prior decisions were made. In addition, the question of HL&P's judgment seems to go primarily to its managerial competence, its ability to achieve results, rather than its character or willingness to do so, and thus reflects CCANP's confusion between the admittedly interrelated concepts of character and competence.

18. In any event, CCANP provides several examples of what it believes to be manifestations of HL&P's poor judgment. CCANP argues first that HL&P's failure to require that its CEO, Mr. Jordan, possess experience or training in QA demonstrates its poor judgment. CCANP FOF, ¶¶ 4.3-4.5. CCANP asserts correctly that prior to Mr. Jordan's attendance at a "Quality College" seminar conducted by a QA consultant in 1980, he had no other formal QA experience or training. Id., ¶ 4.4. CCANP's findings, however, completely misconceive the role of a corporate CEO. As the highest

ranking corporate officer in charge of a broad range of corporate activities, Mr. Jordan is not in a position to personally direct the STP QA program on a day-to-day basis and does not require the type of QA training that would be needed for such purposes. Consistent with his role as CEO, Mr. Jordan performed the function of reaffirming and promoting a strong corporate policy mandating compliance with the STP QA program, a policy so much embracing QA that, as CCANP recognizes (CCANP FOF, ¶¶ 5.9-5.10), although it was first developed for nuclear projects, HL&P elected to apply it to fossil plants as well. Jordan, ff. Tr. 1223, at 10; Tr. 1278-79, 1475-76 (Jordan). Mr. Jordan's lack of formal QA training prior to 1980 does not at all reflect adversely on HL&P's judgment.

19. CCANP also would have us find that Mr. Jordan's "delay" in formally assigning HL&P's Executive Vice-President to nuclear matters on a full time basis manifests poor judgment. CCANP FOF, ¶ 4.7. As demonstrated by the record (Tr. 1272 (Jordan)) and recognized by CCANP, Mr. Oprea had in reality already been spending a considerable portion of his time on the STP. Although Mr. Jordan's decision to separate formally nuclear and non-nuclear responsibilities does serve to further manifest management's recognition of the importance of its nuclear responsibilities, we do not draw any negative inference from the timing of this organizational change.

20. CCANP's next criticism is that Mr. Oprea lacked experience in management of nuclear construction and that he "relied on training to overcome an absence of experience." CCANP FOF, ¶¶ 4.6, 4.8, 4.11. Although the record demonstrates that Mr. Oprea did not have nuclear construction experience, he is HL&P's most senior engineering-oriented executive and possesses a broad range of experience in all of HL&P's engineering-related activities. Jordan, ff. Tr. 1223, at 7; Tr. 1257-58 (Jordan). The record also demonstrates that Mr. Oprea prepared himself for the position. Tr. 1381 (Jordan); Tr. 2113, 2243 (Oprea). The placement of this senior official in a position to oversee the STP was prudent and displayed good judgment.

21. CCANP next turns to alleged inadequacies in the qualifications of HL&P's first QA Manager, Mr. Barker, and its second QA Manager, Mr. Frazar. CCANP FOF, ¶¶ 4.9-4.12. Although we have already concluded in R, ¶ 13, supra,^{22/} that appointment of Mr. Frazar to the QA Manager position did not reflect a lack of foresight on the part of HL&P, there are nevertheless, several specific points raised by CCANP in its discussion of HL&P's judgment which we address here. First, inconsistent with its general thesis that HL&P demonstrated poor character, CCANP recognizes that Mr. Frazar, as well as HL&P QA personnel generally, were "strong on desire" even if some individuals lacked substantial nuclear

^{22/} There we also deal with CCANP's criticisms of Mr. Barker's experience.

experience. CCANP FOF, ¶ 4.11. Thus, CCANP in essence praises HL&P's character in this respect while faulting, if anything, its competence. In an effort to challenge Mr. Frazar's competence, CCANP cites alleged variations between his prepared testimony and cross-examination in describing the QA/QC functions. CCANP FOF, ¶ 4.12. CCANP asserts that Mr. Frazar inappropriately introduced the concept of "managing" construction work into his description of the QC function. This assertion is founded upon an error in transcription and thus has no merit. Compare Tr. 2155 (Frazar) with Applicants' unopposed Motion to Incorporate Transcript Corrections, August 6, 1982, Attachment A, at 4. Even if the transcription of Mr. Frazar's statement had not been corrected, we are unimpressed with CCANP's meager effort to demonstrate his alleged incompetence. Mr. Frazar testified before us on fifteen separate occasions and the Board was impressed with his technical knowledge of QA. Although his experience level may have been less than desirable at an earlier stage in the Project, we find that he has now demonstrated significant experience and understanding.

22. In a further effort to discredit Mr. Frazar, CCANP mischaracterizes the record. Mr. Frazar's reluctance to describe the informal mechanism HL&P established to identify those matters on which HL&P QA was to monitor and report back to him as a formal "system" (Tr. 5092 (Frazar)) is characterized by CCANP by the bare assertion that "Mr.

Frazer [sic] did not set up [such a] system. . . ." CCANP FOF, ¶ 4.13. In asserting that Mr. Frazar did not even know what his staff's monitoring activities were (Id.), CCANP fails to mention that in the time frame as to which Mr. Frazar was testifying, he was away from the Project on active military reserve duty. Tr. 5093-94 (Frazar). In both of these instances, the information withheld by CCANP was contained on the very transcript pages which it cited to this Board. Thus, it is evident that CCANP has not accurately portrayed the record regarding Mr. Frazar's qualifications.

23. CCANP next challenges the competence of the QA Program Evaluation Committee, arguing that while the NRC was "detecting deterioration" in the QA program just prior to Investigation 79-19, the Committee failed to detect similar problems. CCANP FOF, ¶ 4.15. CCANP ignores the fact that during 1979, the NRC Staff's inspection reports did not indicate "deterioration" in the STP QA program and that in its Mid-Term Inspection Report the Staff reported highly positive findings regarding the effects of efforts to improve the working relationship between QC Inspectors and Construction workers. Staff Ex. 27, at 28; Tr. 9558-59 (Seidle).

24. CCANP also suggests that we find that HL&P inadequately assessed the "adequacy or the experience level" of Brown & Root's on-site employees. CCANP FOF, ¶ 4.16. In

support of this proposed finding, however, CCANP provides a string of isolated and sometimes inaccurate examples. As CCANP describes, a Staff witness did express disapproval of some of Brown & Root's earliest site management personnel and opined that top Brown & Root management may have been part of the problem. CCANP FOF, ¶ 4.16. Although the Staff witness testified that it took HL&P "longer than [he] would have liked" to remedy the problem, he recognized that HL&P could not be faulted for allowing some time for the individuals in question to improve their performance. Tr. 9524-25 (Taylor).

25. CCANP's failure to characterize the record accurately continues with its broad assertion that a high percentage of unqualified personnel were hired. CCANP FOF, ¶ 4.16. This statement is based on the results of a Staff examination of the qualification records of twenty Brown & Root and PTL Inspectors which revealed that eight Inspectors lacked sufficient QA experience. Tr. 9667 (Hayes). Although a Staff witness did testify that this represented a large percentage of the individuals reviewed (Id.), we do not believe it is fair to generalize--as CCANP does--on the basis of this one small sampling, that a large percentage of the personnel on the Project were unqualified. Furthermore, upon being notified of the results of the Staff's examination, HL&P undertook effective measures to verify the qualifications of existing Brown & Root and PTL personnel

and to ensure future hiring of qualified people. ¶ 76; Tr. 5480-82 (Frazar); Staff Ex. 47, Attachment, at 28-31.

26. CCANP next asserts generally that HL&P's management was weak and lacked a commitment to quality. CCANP FOF, ¶ 4.17. As discussed in ¶ 350 and R, ¶¶ 71-83, infra, the record does not support this assertion. CCANP, however, sets out several isolated examples of what it perceives to be symptoms of this alleged lack of commitment. In support of its assertion that people with inadequate credentials were hired, CCANP cites Mr. Amaral's recommendation that QA personnel recognized in the field be acquired. Id.; Tr. 1905 (Amaral). In arguing that people with adequate credentials were unable to perform effectively, CCANP cites testimony that the Brown & Root QA Manager was respected in the industry but had some difficulties in implementing the Brown & Root QA program. CCANP FOF, ¶ 4.17; Tr. 1595-96 (Amaral). Another citation fails to support CCANP's assertion. See, Tr. 9533-34 (Seidle, Taylor). In generalizing that people were performing tasks which were not within their capabilities, CCANP cites Mr. Goldberg's testimony that when he joined HL&P he found "a few instances" of people performing tasks which were not within the "mainstream of their capabilities." CCANP FOF, ¶ 4.17; Tr. 1164 (Goldberg). In arguing that insufficient numbers of persons were assigned to tasks, CCANP cites testimony regarding the conclusions of the Staff following Investigation 79-19. CCANP FOF, ¶ 4.17.

The Staff noted, however, that while additional personnel would have been useful in meeting the established surveillance schedules, there were no specific numerical staffing requirements. Tr. 9963-64 (Hayes, Shewmaker). Finally, in arguing that numerous people were assigned to a task which still did not get performed, CCANP cites a Staff witness' testimony that the number of QA personnel on the site prior to Investigation 79-19 "far exceeded the numbers that [he] was accustomed to seeing at other sites." Tr. 9516 (Phillips). When viewed in context and within the framework of the full record in this proceeding the incidents described by CCANP do not affect our view of HL&P's commitment to quality.

27. Finally, CCANP asserts that after the Show Cause Order, HL&P brought in 15 or 16 individuals from another company to "compensate for management inabilities" and that the same replacement method had been used at an earlier stage. CCANP FOF, ¶ 4.18. What CCANP fails to point out is that the individuals brought in after the Show Cause Order were acquired to bolster the HL&P and Brown & Root QA staffs while the previous replacements were in HL&P project management positions. Tr. 5119-20 (Oprea). Moreover, while CCANP elsewhere criticizes Applicants for acting only in response to prodding by the Staff (CCANP FOF, ¶ 5.6), it fails to acknowledge here that the previous replacements were made solely on HL&P's own initiative.

28. Although the record contains numerous instances throughout the course of the Project where HL&P took actions

which demonstrated good judgment, we do not consider it sensible to evaluate a charge of "poor judgment" by seeking to balance that charge with extensive examples of "good judgment." In our view, many of CCANP's examples are misleading and erroneous and, in any event, its limited record support is rather feeble in light of the enormity of the Project and the length of time under review. Therefore, to the limited extent that consideration of "judgment," as defined by CCANP, may be relevant to our determinations on HL&P's managerial competence and character, we conclude that the record demonstrates that HL&P can be expected to exercise proper judgment in the operation of the Project.

D. Perception

29. CCANP defines its third quality of character, "perception," in terms of "the effective receipt, processing and transmission of information" (CCANP FOF, ¶ 5.4) and the "ability to absorb and digest information, see important patterns, and identify salient facts" (CCANP FOF, ¶ 5.3). As so broadly defined it is difficult to distinguish CCANP's concept of perception from its concepts of judgment and foresight. As described below, we find CCANP's rambling arguments unpersuasive.

30. CCANP first cites testimony of Staff witnesses to the effect that during Investigation 79-19 HL&P was not adequately knowledgeable about the details of site activities (CCANP FOF, ¶¶ 5.5, 5.6) and argues that there was a generalized failure on the part of HL&P to keep itself

informed about Project activities. CCANP FOF, ¶ 5.7. CCANP's specific examples, however, relate to defects in only two of the techniques utilized by HL&P to monitor Project activities: trend analysis and audits. The Staff found the trend analysis program inadequate in Investigation 79-19 (see ¶ 99) and HL&P agreed that it was inadequate and initiated a more effective program. See ¶¶ 99-103. The Staff also found deficiencies in the audit programs of HL&P and Brown & Root, and corrective measures were adopted. See ¶¶ 110-12. These deficiencies were considered important by HL&P and the Staff; HL&P cited them as among the root causes of the noncompliances detected in Investigation 79-19, and the Staff required improvements in both programs in the Show Cause Order. See ¶¶ 99-110. Those improvements have been made by HL&P, and reviewed and accepted by the Staff. See ¶¶ 103, 112. Even prior to HL&P's corrective actions, HL&P did, however, attempt to keep itself informed of Project activities in a variety of ways (see ¶¶ 356-60) and there was no indication that either of these problems was the result of a management decision to forego such sources of information or reflected any HL&P tendency toward a lack of diligence in keeping itself informed about STP. Thus these deficiencies, while significant, do not reflect adversely on HL&P's character, nor do they indicate a basic flaw in HL&P's managerial competence.

31. The common thread in the larger portion of CCANP's proposed findings on perception appears to be arguments by

CCANP as to various ways in which HL&P allegedly manifested a misunderstanding of NRC requirements, failed to detect indications of "trouble", failed to perceive that its actions were ineffective or failed to appreciate the significance of various matters. These arguments overlap other CCANP factors, such as judgment, foresight, resolve and values, thus highlighting a defect in the CCANP analysis of the issue of character. However, to make clear our disposition of the principal CCANP arguments, the following findings address each one seriatim.

32. CCANP suggests that HL&P failed to perceive fundamental differences between building a nuclear plant and building fossil plants. CCANP FOF, ¶ 5.8. CCANP's support for this assertion rests primarily on the fact that HL&P decided to apply its QA requirements to both fossil and nuclear activities. Although CCANP sees this as a failure to perceive distinctions, the Board finds it a demonstration that HL&P places a high value on QA, adopting QA requirements even where not legally required to do so. CCANP also cites the fact that HL&P assigned Mr. Oprea responsibility for STP instead of hiring an executive with extensive nuclear experience. CCANP FOF, ¶ 5.13. However, as we discussed at R, ¶ 20, supra, in connection with CCANP's similar argument concerning "judgment," assignment of responsibility for STP to its senior technically oriented officer (Jordan, ff. Tr. 1223, at 7), hardly manifests a

failure to appreciate the significance of the Project. When it became apparent that there was a need for greater HL&P involvement in Project management, HL&P created an extensive Project management team (see ¶ 25) and thereafter hired an executive with extensive nuclear experience. Tr. 5105-06 (Oprea). CCANP continues its argument by noting the long reporting chain in HL&P STP QA, suggesting, without record support, some parallel to HL&P fossil projects. CCANP FOF, ¶ 5.14. HL&P's corrective actions in response to Investigation 79-19 included shortening that reporting chain. See ¶ 88. There is no basis for suggesting that the creation of long reporting chains is a prevalent HL&P practice nor that it reflects in any way on HL&P's perceptions of nuclear or fossil plants. CCANP's proposed findings regarding HL&P's alleged failure to appreciate the difference between fossil and nuclear plants concludes with the assertion that even after Mr. Oprea was assigned full time to HL&P's nuclear projects he did not know that Mr. Singleton was Civil QC Superintendent and could not recall a single Brown & Root report coming directly to him. CCANP FOF, ¶ 5.18. Neither assertion fairly represents the record. Mr. Oprea testified that Mr. Singleton worked for Brown & Root QC, but that he couldn't recall his precise job title. Tr. 2176 (Oprea). That can hardly be seen as a valid criticism. The statement that Mr. Oprea couldn't recall a Brown & Root report coming directly to him is simply not true. E.g., Tr. 1752 (Oprea).

Mr. Oprea testified at the point in the record cited by CCANP that he received monthly reports directly from Brown & Root, but that he did not receive the specific monthly QA reports which were the subject of Mr. Gay's questions. Tr. 3438 (Oprea). Moreover, although CCANP cites this testimony as a criticism of Mr. Oprea's performance after his full-time assignment to nuclear matters, the record clearly concerned reports sent to Mr. Oprea "prior to the latter part of '79." Tr. 3434 (Oprea).

33. CCANP next argues that HL&P failed to perceive various signs of trouble. Although CCANP calls this one the most serious failures (CCANP FOF 5.21), none of its examples support the general contention. The first sign is that the FBI conducted an investigation at STP. Id. Its difficult to see why an investigation is a sign of trouble when no negative report or prosecutions result. The second such sign is that HL&P at times had to use strong language to get Brown & Root's attention. Id. However, the testimony cited by CCANP for its position states that such "strong language" was used by HL&P on STP "as we do on any project" Tr. 5079 (Oprea). Moreover the record indicates that only two specific instances could be recalled by the witnesses at that point. Tr. 5079-80 (Oprea, Frazar). The third alleged sign of trouble is the adoption of a formal procedure for dispute resolution. However, that formal procedure was adopted in response to the NRC findings of harassment and intimidation

of QC Inspectors in Investigation 79-19; thus it was part of HL&P's corrective action, not some additional signal. Staff Ex. 47, Attachment, at 4. The last alleged sign is the turnover in the Brown & Root site manager position. The record shows that this turnover did not adversely affect the quality of construction (¶ 29) and thus cannot be seen as a trouble sign relevant to HL&P compliance with NRC requirements.

34. The CCANP proposed findings suggest that "HL&P often did not perceive the difference between effective action and merely doing something." CCANP FOF, ¶ 5.22. However, here again the examples do not support the accusation. First CCANP says that Mr. Oprea took six months to select and hire an independent consultant to review the QA program. However, there was no NRC requirement for such a review, nor any suggestion from any quarter that it was necessary; it was an innovative step showing HL&P's initiative. It is frivolous to assert that Mr. Oprea was under any illusion that considering alternative consultants was in itself an effective action, as opposed to being part of the process of planning such an action. Next, CCANP alleges that under the system for approval of field design changes adopted in response to the Show Cause Order, there would be no documentation of certain types of design changes. The allegation is without merit; the system provides for all approved field design changes to be documented on Design Change Notices. ¶ 105. The third CCANP allegation is that

Mr. Oprea "equated management involvement with physical visibility on his part." CCANP's assertion does not fairly describe the record. At the very page in the record cited by CCANP Mr. Oprea cites his personal review of various reports, including HL&P and Brown & Root audit reports, trend analysis reports and corrective action requests, meetings with QA/QC personnel, communications with Mr. Frazar, and his personal communications with HL&P personnel about questions raised by the various reports and communications. Tr. 2245 (Oprea). Mr. Oprea's mention of personal interaction with Brown & Root and HL&P on-site workers is neither the predominant aspect of his personal involvement in the Project, nor is it the insignificant factor CCANP suggests. Finally, CCANP argues that Mr. Jordan's testimony suggests that he believed that by issuing a letter directing all HL&P personnel to comply with the corporate QA program and cooperate with the HL&P QA Manager, he had done all that is necessary to create an effective QA program. Mr. Jordan's testimony provides no support for the assertion. In reply to a question from Mr. Gay about his 1974 letter endorsing the QA program, Mr. Jordan testified that it was disseminated widely within HL&P so that HL&P personnel, whether or not working on STP, would have no question in their minds about HL&P's dedication to QA. Tr. 1281 (Jordan). There is no hint of a suggestion that the letter was relied upon as the sole means of conveying that message. Several hours

later, in reply to a question from Judge Lamb about whether, in retrospect, he believed that the QA program was functioning adequately prior to Investigation 79-19, Mr. Jordan replied that the basic organization and corporate policy were not at fault but that implementation was breaking down. Tr. 1446 (Jordan). CCANP's proposed findings distort these statements and improperly imply a link between them. They are related in neither subject matter nor time of utterance, and do not support CCANP's position.

35. The next CCANP argument is that HL&P refused to recognize when people were unable to perform their tasks. CCANP FOF, ¶ 5.23. Two bases are alleged for this statement and neither can support it. One basis is that HL&P continued Mr. Frazar in his position as QA Manager. CCANP does not explain why HL&P should not have continued Mr. Frazar in his position. Mr. Jordan testified to his personal assessment that Mr. Frazar was qualified for his position if given proper technical support. Tr. 1444-45 (Jordan). In fact, Mr. Amaral also expressed the view that with the support of Mr. Zwissler, Mr. Frazar was qualified to continue as Project QA Manager. Tr. 1767 (Amaral). No witness for any party has suggested otherwise. CCANP's only basis for disagreement is a Staff report (Staff Ex. 133), admitted into evidence without sponsoring witness or cross-examination, which does not mention Mr. Frazar at all, let alone suggest any inadequacy in his performance. Moreover the deficiencies noted in the report had been corrected by the time of

the report's issuance. See Staff Ex. 134. The second alleged basis for this CCANP argument was that Mr. Jordan disagreed with an HL&P consultant as to whether coordination was taking place. CCANP FOF, ¶ 5.23. CCANP's record citation in support of this allegation does not address Mr. Jordan's opinion on the matters. However, even if there were such a disagreement, it would not suggest a defect in HL&P's character or managerial competence.

36. The next CCANP criticism is the alleged failure of Mr. Jordan and Mr. Oprea to recognize their personal responsibilities for the Project. CCANP FOF, ¶ 5.24. The first three examples offered are vague generalized attacks which are either unsupported by record citations or irrelevant to NRC requirements. CCANP FOF, ¶¶ 5.24.2 (first), 5.24.2 (second), and 5.24.3. The next example involves alleged defects in Mr. Jordan's understanding of the NRC findings in Investigation 79-19, HL&P's responses thereto and I&E reports in general. CCANP FOF, ¶¶ 5.24.4, 5.24.5. However, the very record citations relied upon by CCANP show that Mr. Jordan had as great or greater knowledge of those documents as one could expect of the chief executive officer of a large utility, with multiple responsibilities. Tr. 1387, 1405-07 (Jordan); see R, ¶ 18, supra. Similarly, given Mr. Jordan's position as CEO, CCANP's isolated references to Project details of which Mr. Jordan was not entirely familiar (CCANP FOF, ¶ 5.24.6), do not persuade us that his knowledge of the Project was not adequate. The fifth

example is Mr. Oprea's failure to perceive that the QA staff was focusing on correcting detailed nonconformances at the expense of providing a QA overview of its performance. CCANP FOF, ¶ 5.24.7. In response to Investigation 79-19, HL&P recognized this as a deficiency in the QA program and took steps to correct it. Tr. 3217 (Frazar). There is no indication in the record that Mr. Oprea denied or failed to appreciate his ultimate responsibility for this deficiency. As a final example CCANP again alleges that Mr. Oprea was deficient in failing to perceive that Mr. Frazar "could not handle his job," a subject we have already covered in R, ¶¶ 14, 24 and 25, supra. None of these examples supports the assertion that either Mr. Jordan or Mr. Oprea failed to recognize his responsibility for Project performance. In fact the record demonstrates, and we can recall from our own perception of their demeanor and knowledge, that they did recognize where improvements could be made. See, e.g., Tr. 1444-45, 1467-68 (Jordan); Tr. 2241-44 (Oprea).

37. CCANP's proposed findings list a number of alleged Project deficiencies that CCANP contends to have resulted from shortcomings in HL&P's perceptiveness. CCANP FOF, ¶¶ 5.25-5.25.8. Some of these alleged shortcomings are not directly related to safety-related issues (e.g., CCANP FOF, ¶ 5.25.2, 5.25.6); others are reiterations of defects in trend analysis and audits discussed in R, ¶ 30, supra (e.g., CCANP FOF, ¶¶ 5.25.3, 5.25.4 (various references to Staff Ex. 46), 5.25.8). In some cases the CCANP record citation

does not contain any support for the proposed finding (e.g., CCANP FOF, ¶ 5.25.4 states that Staff Ex. 83 reveals an auditing breakdown, but it does not); in others the "deficiency" cited by CCANP was considered by the NRC Staff and found not to be a violation of NRC requirements (e.g., CCANP FOF, ¶ 5.25.4 addresses the use of punch lists as mentioned in Staff Ex. 52, but no notice of violation was issued; it also cites a sentence from the unsworn summary of an anonymous interview regarding handling of CARs that was not even deemed worthy of follow-up by the NRC Staff in Investigation 79-19). The alleged incidents range over a period of more than two years (CCANP FOF, ¶ 5.25.4 cites Staff Ex. 11 which is dated November 15, 1978, Staff Ex. 64 dated September 19, 1980, and Staff Ex. 83 dated March 20, 1981). While the incidents cited by CCANP include some nonconformances with NRC requirements, the record shows that in each instance the deficiencies were corrected to the satisfaction of the NRC Staff. See ¶¶ 52, 78, 141.

38. The example CCANP identifies as most important is an alleged failure by HL&P to identify the root causes of problems. CCANP FOF, ¶ 5.26. This CCANP position focuses on HL&P's responses to the enforcement actions resulting from Investigation 79-19. HL&P's response to the Notice of Violation identified six root causes of the twenty-two items of noncompliance. Staff Ex. 47, at 2-3. Essentially identical descriptions of these root causes were contained in the testimony of Mr. Oprea (Oprea et al., ff. Tr. 1505 at

27 (Oprea)) and in Applicants' response to the Show Cause Order (Staff Ex. 48, Attachment 1, Ex. 1., at 4-7).^{23/} CCANP criticizes this identification of root causes on essentially two grounds. The first ground is that four of the areas in which HL&I and Bechtel found a need for improvement are specifically addressed by 10 CFR Part 50, Appendix B, suggesting that addressing deficiencies in such terms is dealing with symptoms rather than causes. CCANP FOF, ¶ 5.28. This CCANP criticism is not persuasive. The requirements of Appendix B are broadly stated criteria for a QA program. The six root causes did not, in fact, merely parrot the Appendix B requirements, but were short summaries of the more specific recommendations of Bechtel for improvement in those six areas. Staff Ex. 48, Attachment 1, Ex. 1, at 4-6.

39. The second CCANP criticism of the HL&P-Bechtel identification of root causes is that the NRC Staff identified different root causes. CCANP FOF, ¶ 5.29. This criticism fails for several reasons. Some of CCANP's examples of Staff identification of root causes cannot be fairly characterized as such. For example CCANP relies in part on Tr. 9491-94 as showing that the Staff found failure to train and to perform adequate surveillance as root causes. In fact at those pages the Staff did not mention any failures to train or to conduct adequate surveillance, did not mention root causes, and did not even mention anything about the

^{23/} CCANP's attempt to distinguish between HL&P's reference to "job requirements" and Bechtel's reference to QA Program requirements is frivolous. CCANP FOF, ¶ 5.27.

findings of Investigation 79-19. Similarly the testimony of Mr. Taylor relied upon by CCANP (Tr. 9523) concerned not the causes of the noncompliances identified in Investigation 79-19, but rather addressed circumstances prior to February 1978. Tr. 9557 (Taylor). Other alleged Staff identifications of "root causes" cited by CCANP may have contributed to an understanding of the problems but did not point to any solution. Thus, difficulties in logistics and communications caused by the separation of headquarters and the Project site (Tr. 9936 (Hayes), 9938 (Shewmaker)) is too general a comment to assist in planning corrective action. The other Staff identified root causes cited by CCANP generally fall within the area to be addressed by improved audits and training (e.g., too much attention to detail). The root causes identified by the Staff witnesses who testified about Investigation 79-19 were in fact areas directly and thoroughly addressed by Applicants in their corrective measures. For example, inexperience of HL&P and Brown & Root personnel was addressed by careful reviews of staff qualifications and by adding a large number of highly experienced, well qualified individuals. App. Exs. 33, 34, 35 and 36; See ¶¶ 125-26. Although CCANP attempted to contrast Applicants' root cause identification with the Staff's, the Staff expressed no criticism of HL&P's analysis.^{24/} Moreover, it should be

^{24/} At Staff FOF, at 73, ¶ 43, the Staff indicates its agreement with Applicants' root causes and would have added only inexperience and an attenuated chain of command. See also Staff FOF, at 34. Both of these causes although not separately identified as root causes, were corrected by Applicants. See ¶¶ 119, 125, 126.

recognized that Applicants identified root causes based on a thorough technical review of the program for the purpose of determining the necessary corrective measures. App. Ex. 47, at 2. The NRC Staff testimony was an attempt to provide a non-technical explanation in summary fashion in response to Board examination. Tr. 9935-40 (Hayes, Shewmaker, Phillips). Our review convinces us that Applicants' identification of the root causes is not, as suggested by CCANP, an indication of unacceptable character, but rather is indicative of technical and managerial competence.

40. CCANP proposed a finding to the effect that Applicants' corrective actions in response to the Show Cause Order were similar to their corrective actions in response to prior indications of low QC Inspector morale. CCANP FOF, ¶ 5.30. The record citations relied upon by CCANP, however, show that prior efforts were of much more limited scope. Compare Staff Ex. 11, at 5 with Staff Ex. 47, Attachment, at 1-9. In addition, the Board notes that since improvements in this area were noted by the NRC Staff after the earlier corrective measures (Staff Ex. 27, at 28), it was not unreasonable to reinforce actions which had worked to some extent in the past. Cf. Tr. 3736, 4068-70 (Broom).

41. Finally CCANP proposed findings to the effect that HL&P, particularly Mr. Jordan and Mr. Oprea, perceived the findings of Investigation 79-19 as less serious than they really were. CCANP FOF, ¶¶ 5.31-5.35. This argument high-

lights an overlap between the two CCANP criteria designated as "perception" and "values." However, since CCANP dealt with it under the perception section we address it here. To support its position CCANP cites instances in which HL&P described certain noncompliances "as 'procedural'", thus connoting to CCANP a lack of seriousness. CCANP FOF, ¶ 5.31. In none of the examples cited by CCANP, however, was a noncompliance described as "merely" or "only" procedural, although CCANP uses such modifiers. Neither does the context suggest that violations of procedures were not considered important. In one instance, Mr. Frazar testified that most of the Investigation 79-19 violations were due to a failure to implement procedures. Goldberg and Frazar, ff. Tr. 906 at 33. In Applicants' proposed findings certain violations were described as violations of QA procedures to distinguish them from others involving improper craft work. See ¶ 62. A third example is extracted from an I&E Report, in which the comment is ambiguous at most. Staff Ex. 64, at 5. CCANP's suggestions that Mr. Jordan and Mr. Oprea did not take seriously the problems found in Investigation 79-19 is contradicted by both the testimony and the actions of those corporate officers. In response to the NRC findings HL&P restructured its corporate organization, assigned its Executive Vice President virtually full-time to STP, hired a new corporate officer, stopped complex concrete placements and made the numerous other significant changes to its management of STP detailed in ¶¶ 59-134. These changes were

directed by Mr. Jordan and Mr. Oprea and dramatically demonstrate the seriousness with which they viewed the NRC findings. Their testimony did not create a contrary impression. See e.g., Tr. 1291 (Jordan); Jordan ff. Tr. 1223, at 5-8; Tr. 5323-27 (Oprea); Oprea et al., ff. Tr. 1506, at 19-29 (Oprea).

42. We should note that "perception", as defined by CCANP, appears to cover the general area addressed in our discussion of alleged abdication of knowledge and management commitment at ¶¶ 348-62, which we need not repeat. As there demonstrated, the record shows that HL&P made efforts to keep itself knowledgeable about Project activities, but that there were aspects of HL&P's system which kept upper management from receiving complete information about Project activities. However, this cannot be attributed to a defect in HL&P's character nor does it demonstrate any fundamental flaw in HL&P's managerial competence. See ¶ 360. Indeed HL&P has corrected the situation. ¶¶ 363-72. HL&P management is committed to compliance with NRC requirements (see ¶¶ 348-50), and the record does not support CCANP's contention that HL&P management failed to perceive the significance of information it received regarding Project activities. Accordingly, the Board rejects CCANP's proposed findings regarding HL&P's ability to perceive and finds that consideration of this factor would support a conclusion that HL&P possesses the necessary character and managerial competence to be granted operating licenses.

E. Resolve

43. The fourth quality cited by CCANP is labeled "resolve," which CCANP defines as "seeing to it that plans are implemented, commitments are fulfilled and directives are carried out." CCANP FOF, ¶ 6.1. CCANP has proposed that we address this subject by ignoring HL&P's efforts to assure that the QA program functioned properly and by focusing instead solely on problems that occurred despite HL&P's efforts, without considering HL&P's responses to those problems. We reject such an approach because it would not be consistent with our obligation to reach a judgment concerning whether there is now reasonable assurance that HL&P will comply with NRC requirements in the operation of STP. As discussed below, we have reviewed the record in light of CCANP's proposed findings regarding HL&P's "resolve" and find that consideration of this factor supports our conclusion that HL&P has the necessary character and managerial competence to be granted operating licenses.

44. The CCANP proposed findings on resolve may generally be divided into five parts. The first part briefly addresses Staff testimony about the effectiveness of HL&P's QA program in the period prior to Investigation 79-19 and certain conclusory findings of the 79-19 investigation team regarding HL&P's involvement in the site QA program. CCANP FOF, ¶¶ 6.3-6.6. That testimony is generally discussed at ¶¶ 36-127, and its consideration does not affect our determination regarding HL&P resolve. The second part argues that

HL&P intended "to leave the task of implementation to others," indicating a lack of resolve. CCANP FOF, ¶¶ 6.7-6.8. The third and longest part, argues that HL&P's lack of resolve is demonstrated by recurring incidents of harassment and intimidation. CCANP FOF, ¶¶ 6.9-6.29. The fourth part briefly argues that HL&P showed a tendency to procrastinate. CCANP FOF, ¶ 6.30. The final part argues that HL&P manifested a lack of resolve by "indulging" Brown & Root. CCANP FOF, ¶ 6.31. Below we address, in the order of CCANP's presentation, each of these arguments (with the exception of the first).

45. I&E Report 79-19 stated that there was a lack of detailed HL&P involvement in the QA program. CCANP proposed that we find that this indicates that HL&P left implementation up to Brown & Root (CCANP FOF, ¶¶ 6.4-6.5), in other words that HL&P abdicated its responsibility for proper implementation of the QA program. This is precisely the issue we address in ¶¶ 351-55, where we find that HL&P did not abdicate its responsibilities to Brown & Root. In support of its argument CCANP quotes incompletely and out of context from the testimony of Staff witness Crossman to the effect that there was a lack of management ability and strength to make the organization work. CCANP FOF, ¶ 6.6. Although on the overall issue CCANP's findings purported to address HL&P's character, CCANP excised from the quote, ^{25/}

^{25/} The reference cited in CCANP FOF, ¶ 6.6 contains an apparent typographical error. The quote is from Tr. 9529, lines 14-17, not Tr. 9527.

and replaced with an ellipsis, Mr. Crossman's words to the effect that there was not a lack of character. Moreover, taken in context it is apparent that it is Brown & Root management, not HL&P management, that was the subject of Mr. Crossman's testimony. Tr. 9528-29 (Crossman). CCANP also alleges that HL&P witnesses addressed certain noncompliances in terms that indicated that they were not considered serious. CCANP FOF, ¶ 6.8. This same argument is addressed at R, ¶ 41, supra in our discussion of CCANP's proposed findings regarding perception. As we explain there, viewed in context, the use by witnesses of the word "shortcoming" does not suggest a lack of appreciation of the seriousness of the matter. CCANP also suggests that it is just "an excuse" when HL&P witnesses stated that it was inadequate implementation rather than inadequate procedures that resulted in certain noncompliances. CCANP FOF, ¶ 6.8. We disagree. In each case cited by CCANP it is clear that the statement was intended as an explanation that suggested an appropriate corrective action.^{26/} Tr. 1446 (Jordan); Tr. 3421 (Turner). Moreover, this same distinction was made by the NRC Staff. Shewmaker et al., ff. Tr. 9576, at 8; Staff FOF, at 69 ¶ 36.

^{26/} At another point CCANP argues that Mr. Oprea testified that HL&P "develops policies and procedures while leaving implementation to others" revealing "a profound misconception." CCANP FOF, ¶ 2.32. The argument misconstrues the record. Mr. Oprea testified that HL&P has "full responsibility" while Brown & Root's responsibility was limited to "implementation of the program." Tr. 2291 (Oprea). HL&P clearly recognized that assuring proper implementation is an important part of its responsibilities. Cf. ¶¶ 45, 351-55; Tr. 3215-16 (Frazar).

46. The next CCANP argument, concerning recurring problems, primarily focused on the various allegations of harassment and intimidation, most of which are discussed in ¶¶ 47-50, 64-66. CCANP FOF, ¶¶ 6.9-6.29. CCANP initiates its criticism by alleging that NRC called to the attention of HL&P on at least five occasions low morale of QA/QC inspectors, but then cites only four places in the record which collectively address only two such occasions. Those occasions, the 1977 investigation regarding an altercation between a QC Inspector and a construction worker, and the 1978 investigation that did not substantiate accusations of harassment and intimidation, but did conclude that morale of Inspectors was low, are addressed in ¶ 47 and ¶ 49, respectively. The latter investigation was the subject of a meeting in August 1978, which CCANP may have had in mind as a third occasion. See Staff Ex. 9. In any event, our findings at ¶¶ 47-50 show that HL&P and Brown & Root management responded vigorously to such incidents, although the root causes were apparently not recognized and the problems did eventually recur.

47. CCANP contrasts with the findings of Investigation Report 79-19, HL&P's testimony that prior to that investigation the available information "did not suggest any pattern of problems in the QA/QC program." CCANP FOF, ¶¶ 6.19, 6.20. (A similar argument is made with respect to judgment at CCANP FOF, ¶ 4.15). CCANP argues that if HL&P was unaware of such problems, it failed to keep itself informed. CCANP

FOF, ¶ 6.21. This is simply a reiteration of the abdication of knowledge issue we address at ¶¶ 356-60 and in response to CCANP's proposed findings on perception at R, ¶ 30, supra. Accordingly, we do not address it further here.

48. One of the incidents cited by the NRC Staff as a basis for its proposed findings on allegations of harassment and intimidation is a statement made by the Brown & Root Site QA Manager to a group of QC Inspectors. Staff Ex. 46, App. A, at 4. CCANP proposed that the Board make a finding to the effect that the intent of the Site QA Manager was to intimidate the Inspectors. CCANP FOF, ¶ 6.24. However, the former Brown & Root Site QA Manager who made the statement testified denying that he intended to intimidate anyone (Tr. 8274-76 (Warnick); see also Tr. 5494-95 (Frazar); Tr. 8642-43 (Singleton)), and his explanation of the remarks was credible and convincing.

49. Another incident cited in I&E Report 79-19 involved an allegation that a QC Supervisor indicated that after NRC completed its investigation some QC Inspectors would be fired. Staff Ex. 46, App. A, at 4. CCANP proposed a finding to the effect that the QC Supervisor indicated "that any QC inspector who talked to NRC investigators would be fired." CCANP FOF, ¶ 6.25. CCANP failed to mention the extensive testimony by that QC supervisor, in which he explained that he was considering firing people for failing to perform their job functions and that he was not threatening to fire anyone for cooperating with the NRC investigation.

Tr. 8718-20 (Singleton). This uncontroverted testimony was also credible and convincing. CCANP's proposed finding is not supported by the record.

50. Another CCANP proposed finding concerns an incident that occurred during Investigation 79-19, but which was investigated by the NRC Staff some months later. CCANP FOF, ¶¶ 6.25, 6.25.1. This was Investigation 80-14 (referred to in ¶ 142), which found that a Brown & Root QC Inspector falsified two safety related Project records concerning a missed inspection hold point. Staff Ex. 60. CCANP proposes that we find that the Brown & Root Site QA Manager attempted to intimidate two QC Inspectors (CCANP FOF, ¶ 6.25), but such an allegation was not investigated by the NRC Staff nor was it proven on the record. In addition, although CCANP alleges that individual D had been "on probation for improper inspection practices at the time of the falsification" (CCANP FOF, ¶ 6.25.1), it appears that the probation was based on a question as to the QC Inspector's "being physically able to perform his work." Staff Ex. 60, at 6. The record shows that initially Brown & Root decided that no document falsification was involved and therefore HL&P was not informed of the incident until the NRC investigation. Staff Ex. 60, at 10. Moreover, it is clear that there was full cooperation by Brown & Root and HL&P in the NRC investigation, and that there was prompt corrective action once the allegations were confirmed. ¶ 142. Based on this record,

we find that HL&P's handling of this incident reflects positively on HL&P management.

51. As discussed at ¶¶ 59-128, in response to the Investigation 79-19 finding, HL&P instituted extensive corrective measures. CCANP does not criticize HL&P's corrective actions, nor does it address the NRC testimony that "previously identified conditions which resulted in Item of Noncompliance No. 1 [related to alleged harassment and intimidation of QC Inspectors], had been corrected and no recurring trends were evident" (Crossman, et al., ff. Tr. 10010, at 8). Instead, CCANP proposed findings (discussed below) regarding several NRC investigation and inspection reports from the post-show cause period (CCANP FOF, ¶¶ 6.27-6.27.5) and then proposed that the Board find that "the NRC Staff testified that harassment and intimidation were never really under control despite any efforts HL&P may have made." CCANP FOF, ¶ 6.28. However, it cites as support testimony of NRC witnesses (Tr. 9414-15 (Crossman, Hubacek), 9508 (Crossman)) who were testifying about the pre-show cause period (Seidle et al., ff. Tr. 9205, at 3) and testimony of Mr. Frazar (Tr. 5421-22) that was explicitly addressing the pre-show cause period. We find CCANP's use of such portions of the record as alleged support for a finding concerning post-show cause experience to be--to put it charitably--misleading and disingenuous.^{27/}

^{27/} Of course, even as to the pre-show cause period, NRC Staff found only that there were isolated instances of intimidation and harassment and no pattern of such conduct. See, e.g., Staff FOF, at 29-30, 46.

52. Several NRC investigation and inspection reports were cited by CCANP in support of its position that corrective actions in response to Investigation 79-19 "failed to bring an end to intimidation, efforts to obstruct the proper QA/QC process, or other practices detrimental to quality." CCANP FOF, ¶ 6.27. The first report cited by CCANP concerned a Brown & Root auditor who heard a rumor that someone had called him "a nut" and felt intimidated by that remark (CCANP FOF, ¶ 6.27.1), but the Staff investigation found no intimidation. Staff Ex. 70, at 6. The second report concerned a remark by an unspecified person heard by "at least five inspectors" at a meeting between QC Inspectors and craftspersons. CCANP FOF, ¶ 6.27.2. No violation of NRC requirements was found (Staff Ex. 71), and the matter was settled to the satisfaction of the NRC Inspector and the QC Inspectors (Staff Ex. 86, at 6-7). Similarly, the third report disclosed no intimidation and no violation of NRC requirements. CCANP FOF, ¶ 6.27.3; Staff Ex. 130, at 1, 5-6. The other reports cited by CCANP concern the investigations addressed in ¶¶ 143-45. There we explain the bases for our findings that those matters do not reflect in any fashion on the QA program at STP. None of these incidents reflect adversely on HL&P's character or managerial competence, nor do they in any way support CCANP's proposed findings.

53. As final support for its argument regarding recurrence of problems, CCANP cites several I&E Reports from the

post-show cause period which involved notices of violation related to various construction and QA activities at STP. CCANP FOF, ¶ 6.29. These are addressed in ¶ 141 and CCANP failed to explain why that discussion does not adequately consider them.

54. In its final argument regarding resolve, CCANP proposed that we find that HL&P had a "tendency to indulge B&R." CCANP FOF, ¶¶ 6.31-6.33. The alleged bases for such a finding involve matters unrelated to safety concerns (CCANP FOF, ¶¶ 6.31.3, 6.31.5, 6.31.6), distortions of the record (CCANP FOF, ¶ 6.31), irrelevant arguments (CCANP FOF, ¶¶ 6.31.2-6.31.6) and unhelpful rhetoric (CCANP FOF, ¶¶ 6.31.5-6.33). Accordingly, we reject those proposed findings.

55. The quality of resolve is much akin to the quality of commitment addressed in ¶¶ 348-50. It can be seen from our findings there that HL&P did manifest the commitment to compliance with NRC requirements which is necessary to be granted operating licenses. CCANP's proposed findings on resolve do not identify any matters which would lead us to modify that conclusion.

F. Integrity

56. The fifth quality identified by CCANP as a component of character is "integrity." In challenging HL&P's integrity, CCANP accuses HL&P, its CEO and Executive Vice-President of "deliberate attempt[s] to deceive the Commission." CCANP FOF, ¶ 7.3.19. We have carefully examined CCANP's findings on this point and find them to be a

distortion of the record before us. The record reveals that HL&P has conducted itself in an honest and forthright manner both with the NRC Staff and before this Board. See ¶¶ 337-40. Allegations of material false statements have been demonstrated to be without basis (¶¶ 337-38), and the allegations of deceit raised for the first time in CCANP's proposed findings are equally without any support. Thus, as discussed in more detail below, we find CCANP's allegations in this regard without merit.

57. CCANP's proposed findings on integrity focus upon an alleged "hidden agenda" in Bechtel's analysis of alternative organizational structures undertaken in response to Item 1 of the Show Cause Order. CCANP FOF, ¶¶ 7.3.13, 7.3.1-7.3.16. The essence of CCANP's allegation is that HL&P unreasonably restricted the scope of Bechtel's review, that the Bechtel study was a deliberate ruse, that no study of alternative organizational structures actually took place, and that Mr. Oprea and Mr. Amaral deliberately misrepresented the nature of the study to this Board.

58. CCANP first alleges that although Mr. Oprea testified that no other alternative offered significant advantages over the five addressed in the Show Cause Order, the record shows that a sixth alternative offered such advantages, that Bechtel was familiar with at least one additional alternative offering significant advantages and that Bechtel was aware of three other "options worth

considering" CCANP FOF, ¶ 7.3.2. Our review of the record demonstrates that CCANP is in error. The "sixth alternative" described by Bechtel was temporary supplementation of HL&P and/or Brown & Root's QA organizations with third party consultant personnel (Staff Ex. 48, Ex. 1, Attachment A at A-14). This was not, however, a separate alternative because it would continue to retain Brown & Root authority over its QA organization with HL&P overview, the first alternative included among the original five. Staff Ex. 48, Ex. 1, Attachment A, at A-14 - 16. Furthermore, because utilization of this option in conjunction with the first alternative did provide certain advantages (Id.), as CCANP recognizes (CCANP FOF, ¶ 7.3.2) it was essentially adopted by HL&P. Tr. 1786 (Amaral). While CCANP argues that HL&P and Bechtel failed to address four other alternatives (CCANP FOF, ¶ 7.3.2), none of them constitutes a separate alternative. The first--third party inspection of selected activities--is a variation on alternative d (independent QA/QC organization).^{28/} The second CCANP "alternative"--"client doing QA while the contractor does QC"--is simply a variation on alternative c (HL&P assuming all of the Brown & Root QA/QC functions). Thus, both CCANP's first and second alternatives were implicitly considered by HL&P.

^{28/} Moreover, inspection agencies were utilized at STP both before and after the Show Cause Order. Tr. 1682, 1775 (Amaral); Tr. 7751 (Wilson; Pettersson et al., ff. Tr. 5796, at 12-17.

There are obviously a multitude of such variations on the five basic alternatives. See Tr. 1680 (Amaral). Neither the Show Cause Order nor common sense required an explicit separate analysis of each such variation, and CCANP does not suggest any advantages for the two that it mentions. The other two CCANP "alternatives" are identical to alternatives identified in the Show Cause Order and explicitly considered by HL&P. "[C]lient supervising contractor QA personnel" is alternative b, and "independent QA organization" is alternative d. Certainly nothing in this record suggests a lack of integrity on the part of HL&P, Mr. Oprea or Mr. Amaral.

59. CCANP next alleges that HL&P restricted the scope of Bechtel's analysis in contravention of the Show Cause Order by limiting its task to a consideration of alternatives which would not alter Brown & Root's responsibilities on the Project and by eliminating consideration of several of the alternatives raised in the Show Cause Order. CCANP FOF, ¶¶ 7.3.3-7.3.13. The only basis for CCANP's assertion that HL&P did not ask Bechtel to consider alternatives that would change Brown & Root's responsibilities on the Project is Mr. Oprea's testimony that Bechtel was chartered to give consideration to "alternative organizational responsibilities for control of the Project QA activities within the scope of the contract with [Brown & Root]." CCANP FOF, ¶ 7.3.3; Oprea et al., ff. Tr. 1505, at 31 (Oprea). Having questioned Mr. Oprea and Mr. Amaral at length during the hearing regarding the conduct and conclusions of Bechtel's study, it

is apparent to us that CCANP has misinterpreted Mr. Oprea's testimony. It is clear that Bechtel was requested to consider, and did in fact consider, alternative methods of controlling those Project QA activities which were then within the scope of the Brown & Root contract, and was not told to limit that study to alternative structures that would not alter contractual responsibilities for QA activities. This conclusion is buttressed by CCANP's own statement that four of the five alternatives set forth in the Show Cause Order "clearly require a change . . . in the scope of [Brown & Root's] contract" (CCANP FOF, ¶ 7.3.3), and by the fact that the record clearly shows that Bechtel and HL&P considered these alternatives. Staff Ex. 48, Attachment 1, Ex. 1; Oprea et al., ff. Tr. 1505, at 33-36 (Oprea), 121-25 (Amaral); Tr. 2144-45 (Jordan). Mr. Amaral discoursed at length about the relative advantages and disadvantages of the various options. See e.g., Tr. 1619-59, 1661-73, 1907-14, 1930-31, 1957-61 (Amaral).

60. Thus it cannot seriously be questioned that Bechtel undertook a good faith study of the alternatives described in the Show Cause Order and that HL&P made a rational decision to adopt one of those alternatives after careful deliberation. By juxtaposing subtle differences between some of the witnesses' characterizations of the alternatives with the precise language of the Show Cause Order, CCANP attempts to demonstrate that all alternatives except the one adopted were eliminated without consideration.

See, CCANP FOF, ¶ 7.3.6. For example, one alternative in the Show Cause Order called for consideration of an independent organization to conduct "the current [Brown & Root] QA/QC functions." Staff Ex. 46, Show Cause Order at 13. In an effort to show that HL&P failed to consider this alternative, CCANP cites testimony suggesting that Bechtel considered introduction of an independent organization to perform both the HL&P and Brown & Root QA/QC functions. CCANP FOF, ¶ 7.3.6. Obviously, even if this characterization were a precise description of Bechtel's efforts, it would not serve to demonstrate that Bechtel failed to consider the alternative in question. In any event, our review of Bechtel's report convinces us that Bechtel did indeed consider the alternative of replacing only the Brown & Root QA/QC functions with an independent organization. Staff Ex. 48, Ex. 1, Attachment A, at A-9 - A-12.

61. CCANP's next basis for impugning HL&P's integrity has nothing at all to do with honesty or forthrightness and is merely a challenge to the "doer" philosophy articulated by Mr. Amaral, i.e., that the "doer" of a task ought to be responsible for assuring the quality of its work. CCANP FOF, ¶¶ 7.3.8-7.3.9. This philosophy was embodied in the second criterion identified by HL&P and Bechtel for analyzing the various alternative organizations. Oprea et al., ff. Tr. 1505, at 34 (Oprea). Although as CCANP suggests,

the "doer" concept was not based on any sociological studies, it is a recognized principle of QA and is a concept "which has been implemented successfully in numerous utility/ AE Constructor combinations over the years in nuclear power construction." Oprea et al., ff. Tr. 1505, at 122 (Amaral); Tr. 2115 (Oprea). CCANP's unsupported assertion that this concept was "lacking in reason" is of no merit. CCANP FOF, ¶ 7.3.8.

62. Another aspect of CCANP's effort to discredit the Bechtel study is its assertion that through the "doer" concept, Bechtel eliminated options that would have provided more independence for QA personnel from cost and scheduling pressures. CCANP FOF, ¶ 7.3.10. Oddly, in this same context, CCANP admits that Bechtel ranked QA independence as at least as important as maintaining constructor responsibility for quality. Id.; Tr. 2287 (Amaral). In any event, CCANP's specific criticisms in this connection are that Bechtel failed to investigate alleged harassment and intimidation on the Project and failed to do more "to systematically assess QA/QC independence than [look] at the organizational structure." CCANP FOF, ¶ 7.3.10. As the record clearly demonstrates, no such broad-ranging investigation was contemplated by the Show Cause Order. The purpose of the independent evaluation was simply to consider alternative organizational structures for the performance of QA activities on the STP. Staff Ex. 46, Show Cause Order, at 12-13; Tr. 1744 (Amaral). Bechtel's failure to undertake analyses

which are not even a remote requirement of the Show Cause Order does not impugn its study.

63. CCANP next alleges without record support that maximum QA independence could be attained by eliminating Brown & Root's QA function and that HL&P "recognized" this to be true. CCANP FOF, ¶ 7.3.12. In fact, Mr. Oprea testified that HL&P would still retain ultimate responsibility for quality as well as cost and schedule. Tr. 2135-38 (Oprea). CCANP suggests that the only negative impact of this type of structure which could be identified by Mr. Amaral was based upon cost considerations not quality considerations. CCANP FOF, ¶ 7.3.12. However, in response to our inquiries, Mr. Amaral and Mr. Frazar both identified negative aspects of this arrangement related to quality which were viewed as more important reasons for rejecting this structure than cost considerations. Tr. 1654-59 (Amaral, Frazar); Staff Ex. 48, Ex. 1, Attachment A at A-9 - A-12.

64. CCANP alleged that the "hidden agenda" in the Bechtel study produced numerous contradictions in the testimony. CCANP FOF, ¶ 7.3.13. The single alleged contradiction pointed to by CCANP occurred in Mr. Amaral's discussion of the relevance of cost to QA. CCANP's allegation stems from its confusion of two separate subjects addressed by Mr. Amaral. Mr. Amaral clearly communicated the inappropriateness of considering the impact on cost and schedule of

construction in conducting a QA program, while also clearly testifying that in weighing the alternative QA organizational structures Bechtel considered, as one relatively insignificant factor, the cost of implementing those QA alternatives. Tr. 1733-39 (Amaral); 2141-42 (Oprea).

Obviously, the cost and schedule considerations from which a QA organization much be independent are the cost and schedule of construction. The Commission did not preclude QA managers from considering the budgeting and scheduling of QA/QC activities. Tr. 1737 (Amaral).

65. CCANP challenged the findings of the Bechtel study by asserting that every alternative except the one chosen gave greater visibility and control to HL&P. CCANP FOF, ¶ 7.3.14. CCANP seems to imply that because this one factor may have favored several of the other alternatives, HL&P's decision was unreasonable. No effort is made by CCANP, however, to address the importance and weight of the other four criteria considered by HL&P and Bechtel. As is abundantly clear from the record, HL&P considered each of the identified criteria and reached its conclusion based upon a reasoned application of the relevant factors. Staff Ex. 48, Ex. 1, at Attachment A; Oprea et al., ff. Tr. 1505 at 33-36 (Oprea), 121-25 (Amaral); Tr. 2144-45 (Oprea).

66. CCANP's final assault upon the Bechtel study is that the written report itself was prepared after the decision to select an alternative had already been made. CCANP FOF, ¶ 7.3.15. Thus, CCANP implies that the decision to

select an alternative was predetermined on the basis of inappropriate factors and that the substantive content of the report was developed later to justify that choice. As is clear from our discussion in R, ¶¶ 59, 65, supra, such outrageous innuendo is unsupported by the record. Although Bechtel's July 24, 1980, report was indeed prepared after HL&P decided to adopt Alternative a, CCANP fails to mention that Bechtel first provided its advice to HL&P in a letter dated May 9, 1980. Oprea et al., ff. Tr. 1505, at 121 (Amaral). Furthermore, Mr. Jordan testified that prior to completion of the Bechtel study, both he and Mr. Oprea were leaning towards adoption of a third-party QA function, an option which was rejected after consideration of Bechtel's recommendations. Tr. 1469 (Jordan). Thus the timing of the final Bechtel report is immaterial.

67. Thus we conclude that CCANP's effort to discredit the Bechtel study and the principal witnesses on this point is fraught with omission, misstatement and mischaracterization. We find no attempt on the part of HL&P or Bechtel to mislead the Staff or this Board regarding the nature and scope of the Bechtel study. CCANP fails to mention that the NRC Staff found that the Bechtel study adequately analyzed the various organizational alternatives and closed out its review of HL&P's Show Cause Item 1 response. ¶ 93; Crossman et al., ff. Tr. 10010, at 35-36. We therefore find nothing in the record on this point which would adversely affect our view of HL&P's integrity and honesty.

68. CCANP also alleges, for the first time in this proceeding, that HL&P deceived the Staff and this Board by not meeting a commitment made in its response to the Notice of Violation, to increase auditor staffing levels by July 23, [sic] 1980, and by representing falsely in its Show Cause Order response that the number of auditor personnel had in fact been increased. CCANP FOF, ¶ 7.3.17. Although the Resident Reactor Inspector determined that the commitment to increase staffing by July, 1980 had not been met and did "not concur" with HL&P's response to the Show Cause Order in this regard, we find no effort to deceive on the part of HL&P. Staff Ex. 64, at 4. No such intent was detected by the Resident Reactor Inspector as evidenced by his failure to issue an additional notice of violation and his recognition that "progress has been made" in achieving HL&P's commitments. Id. at 5. The fact that HL&P failed to satisfy the July, 1980 deadline does not indicate to us an effort to mislead or deceive. Furthermore, a review of HL&P's Show Cause Order response reveals that HL&P represented that consultant personnel were being added until permanent auditors could be found, and that the auditing staff was currently under expansion. Staff Ex. 48, Attachment 1, at 9-3, 9-5. Although our consideration of this allegation is hampered by CCANP's failure to raise it at the hearings and the parties' consequent inability to compile a full record on this point, we find no evidence which would

suggest that HL&P intended to deceive either the NRC Staff or this Board.

69. A final CCANP claim of misrepresentation by HL&P involved alleged inconsistencies in Mr. Jordan's testimony regarding the motivation for placing Mr. Oprea solely in charge of HL&P nuclear matters. CCANP argues that Mr. Jordan first stated, then rejected the notion that Mr. Oprea had been reassigned as a result of the Show Cause Order. CCANP FOF, ¶ 7.3.18. Mr. Jordan's prepared testimony indicates that he reassigned Mr. Oprea as part of HL&P's response to the Show Cause Order, and at the hearing Mr. Jordan elaborated upon his decision. Tr. 1341-42, 1384 (Jordan). Rather than undertaking a "knee-jerk" response to that Order, Mr. Jordan indicated that his decision was based upon his "overall evaluation" of nuclear construction and his belief that management improvements would be necessary to resolve the underlying problems addressed in the Show Cause Order. No effort to mislead this Board is evident.

70. As indicated above, we have reviewed the record and, in particular, CCANP's allegations that HL&P has engaged in a "deliberate attempt to deceive the Commission." CCANP FOF, ¶ 7.3.19. We have found no evidence that HL&P has attempted to mislead the Staff or this Board. We find that HL&P has conducted itself in an honest and forthright manner and has demonstrated substantial integrity.

G. Values

71. CCANP's final quality is a licensee's "values," which it defines in terms of an applicant's commitment to quality. CCANP FOF, ¶¶ 8.1-8.4. Our findings regarding HL&P's commitment to quality are presented in ¶ 350. In this section we address only the arguments CCANP makes in support of its position that HL&P lacks this attribute.

72. CCANP's argument is based first, upon the belief that HL&P has established and implemented a QA program simply because the NRC requires it to do so and that it has failed to appreciate the inherent need for an effective QA program, aside from NRC requirements. CCANP FOF, ¶ 8.5. The only basis for CCANP's view is a single sentence extracted from Applicants' proposed findings of fact which addresses one aspect of the extent to which a licensee may delegate the authority for implementation of the requirements of Appendix B. This citation is not only inapposite but, in light of the extensive record in this proceeding, thoroughly unpersuasive. That HL&P does not seek solely to comply with governmental QA requirements is vividly demonstrated by its unilateral decision to establish a QA program not only for its nuclear plants but also for its fossil units. Jordan, ff. Tr. 1223, at 10; Tr. 1278-79, 1475-77 (Jordan). Moreover, the Staff noted that in some instances the STP QA/QC program exceeded the minimum requirements imposed by the NRC. Tr. 9855 (Phillips); Staff FOF, at 71, ¶ 40. Through the testimony of Mr. Jordan, Mr. Oprea and

Mr. Frazar, among others, HL&P has clearly exhibited its commitment and dedication to a strong and effective QA program. ¶ 350.

73. CCANP also implies that a firm commitment to meeting NRC requirements is not an adequate criterion for assessing a licensee's character and that "a licensee must at all times be willing to challenge even the NRC's most fundamental assumptions." CCANP FOF, ¶ 8.5. For purposes of this Decision, we need not consider the validity of CCANP's broad assertion. The issues before this Board are to be determined within the context of "[w]hether there is reasonable assurance: . . .(ii) that [the activities to be authorized by the operating licenses] will be conducted in compliance with the regulations in this chapter" 10 CFR § 2.104(c)(3). For regulatory purposes, the question is whether the applicant has demonstrated a willingness and desire to comply with applicable NRC requirements.

74. CCANP next asserts that HL&P's past performance reveals an absence of requisite values for an NRC licensee. CCANP FOF, ¶ 8.6. CCANP first cites HL&P's alleged reaction to the Three Mile Island accident, arguing that the only lesson which HL&P learned from the incident was that heightened NRC scrutiny would be forthcoming. CCANP FOF, ¶ 8.6.1. CCANP alleges that it was this fear of increased NRC oversight that prompted HL&P to consider hiring a consultant to evaluate the STP QA program and that the actual decision to

hire Bechtel was not even made until the NRC began revealing problems it was detecting in Investigation 79-19. Id. In fact, the record shows that the bases for Mr. Oprea's decision to hire a QA consultant included the increased level of construction activity and his recognition that, during the early part of 1979, the NRC had identified an increased number of noncompliances in its inspections at STP. Oprea et al., ff. Tr. 1505, at 18-19 (Oprea); Tr. 2221-22, 2251 (Oprea). Mr. Oprea indicated that he had initially believed that heightened NRC scrutiny in the wake of Three Mile Island was part of the cause for the increased number of noncompliances on object. Mr. Oprea testified that subsequently preliminary contacts with the NRC regarding the results of Investigation 79-19 caused him to suspect that the increased number of noncompliances might instead be traceable to some fundamental problems in the STP QA program. Id. However, he did not testify generally about HL&P's reaction to that accident, and there is no basis in the record for a finding, such as CCANP proposed, regarding the adequacy of HL&P's reaction to the accident at Three Mile Island.

75. In another effort to derogate HL&P's past performance, CCANP refers us to the conclusions of the NRC Staff in the Show Cause Order that HL&P had failed to comply with Appendix B requirements. CCANP FOF, ¶ 8.6.2. CCANP does not point to any evidence attributing the deficiencies found in Investigation 79-19 to a lack of commitment on the part of HL&P and our review of the record has uncovered no

such evidence. As we point out at ¶ 349, the NRC Staff witnesses who participated in Investigation 79-19 testified that they found HL&P had the necessary commitment to compliance with NRC requirements.

76. CCANP also cites the NRC Staff's Systematic Assessment of Licensee Performance (SALP) report for the period July 1, 1980 through June 30, 1981 (CCANP FOF, ¶ 8.6.3), a period of time in which extensive efforts to respond to the Show Cause Order resulted in "extreme demands [being] placed on all licensee and contractor organizations [at STP]." Staff Ex. 133, at 6. Although the SALP report concludes that HL&P's performance during this period was "minimally satisfactory," the only deficiencies noted in the report related to Brown & Root's corrective action performance and the Staff concluded that other aspects of HL&P's performance which it reviewed were satisfactory or superior. Id., at 3. In addition, CCANP fails to acknowledge the measures undertaken by HL&P to improve Brown & Root's corrective action performance and the efficacy of those efforts. Staff Ex. 134. Again, CCANP fails to identify any direct link between the Staff report and HL&P's commitment to compliance with NRC requirements. Moreover, Staff witnesses who testified concerning HL&P's performance during this period and thereafter, uniformly attested to its commitment to an effective quality program and its character and competence to operate the STP. Tr. 10067-83 (Crossman, Phillips, Hall, Tapia, Tomlinson, Herr, Hubacek).

77. CCANP also alleges that HL&P viewed quality as a relatively unimportant objective and therefore sought only to appease the NRC during construction of the Project. CCANP FOF, ¶ 8.7. CCANP quotes one of the root causes identified in Bechtel's audit of the QA program which affirms the importance of management involvement in adopting and stressing a "quality first" policy. CCANP FOF, ¶ 8.7.1. Although Mr. Amaral reiterated the importance of such a management commitment, he did not believe that HL&P management lacked a positive attitude toward quality. Tr. 1587-97 (Amaral). While Mr. Amaral did express some concern regarding Brown & Root's QA Manager and the difficulty he was having in implementing its QA program, he did not trace this problem to a lack of quality commitment. Tr. 1595-96 (Amaral). This evidence directly contradicts CCANP's assertion that the "absence of quality motivation was so widespread" that it lead Mr. Amaral to recommend utilization of an "evangelical" QA consultant to "convert" HL&P's officers and QA management. CCANP FOF, ¶ 8.7.1. Although Mr. Amaral recommended a particular QA consultant for HL&P and Brown & Root management, he also testified that he had made the same recommendation to the NRC, through the NRC to Consumers Power Company and to others. Tr. 1706 (Amaral). CCANP's implication that HL&P management so grossly lacked a commitment to quality that Mr. Amaral recommended only the most drastic form of reindoctrination is not supported by

the record. The recommendation did not indicate that HL&P management had a severe or serious lack of quality motivation. Tr. 1708-12 (Amaral).

78. CCANP challenges Mr. Jordan's commitment to quality by arguing that the only QA training he has received was the one day Quality College session, and that the training was ineffective. CCANP FOF, ¶ 8.7.2. As we discussed in R, ¶¶ 18, supra, CCANP's implication that Mr. Jordan received inadequate QA training misconceives his role as CEO. Furthermore, although Mr. Jordan only participated in a one-day executive session and did not participate in the additional training offered, the evidence shows that the course was structured to provide an initial session with top executives and then more detailed sessions for other employees. Tr. 1706-08 (Amaral). Since Mr. Jordan earlier demonstrated his commitment to quality (¶ 350), we see no inconsistency in his testimony, cited by CCANP, that neither his perception nor his philosophy of quality changed dramatically as a result of the QA training.

79. In an effort to demonstrate that HL&P emphasized cost and scheduling considerations over quality, CCANP compares the decision to hire Mr. Goldberg as Vice-President, Nuclear Engineering and Construction with the decision to retain Mr. Frazar as QA Manager. CCANP FOF, ¶ 8.7.3. While a substantial recruiting effort was undertaken to hire Mr. Goldberg, CCANP finds fault with HL&P's failure to replace

Mr. Frazar in 1980. There is, however, no basis for this criticism. Mr. Frazar was retained in his position as a result of HL&P's confidence in his ability. Tr. 1273-74, 1443-45 (Jordan). Furthermore, as CCANP fails to mention, Mr. Frazar was replaced as Project QA Manager by Mr. Geiger in 1981. Geiger et al., ff. Tr. 10580, at 3. After Bechtel recommended that, because of his limited experience, Mr. Frazar be backed up by experienced consultant personnel, Mr. Zwissler was assigned to assist him. Tr. 1767 (Oprea).^{29/} Moreover, CCANP ignored the fact that the construction forces which are Mr. Goldberg's responsibility have a highly significant role in the quality program. HL&P acquired Mr. Goldberg's services to ensure that the construction work is properly performed in accordance with Project procedures. Tr. 1060-61 (Goldberg, Frazar). Thus, neither the hiring of Mr. Goldberg, the retention of Mr. Frazar as QA Manager, nor the utilization of Mr. Zwissler supports CCANP's thesis that HL&P emphasized cost and scheduling considerations but expended few resources on its QA program. In fact the record shows just the opposite. Tr. 9941-43 (Hayes, Phillips);

^{29/} Although CCANP also attacks Mr. Zwissler's credentials arguing that he had no QA experience in construction of nuclear power plants, Mr. Zwissler was in fact a highly qualified individual. He had 18 years of professional QA experience, including 8 years involved in nuclear activities as QA manager for Argonne National Laboratory and he is a highly regarded member of his profession, a registered professional engineer and past chairman of the Energy Division of the American Society for Quality Control. Staff Ex. 48, Attachment 1, at Ex. 5; Tr. 1835 (Frazar).

Tr. 9949-50 (Phillips, Shewmaker); Tr. 9962-64 (Phillips, Hayes, Shewmaker).

80. In another effort to demonstrate HL&P's alleged differential treatment of cost and QA considerations, CCANP cites the fact that Mr. Jordan met with Mr. Goldberg more often than with Mr. Frazar. CCANP FOF, ¶ 8.7.4. Mr. Goldberg, however, is an officer of the corporation with a broad range of responsibilities. Tr. 2489-99 (Goldberg, Frazar); Tr. 5455-57 (Oprea). Mr. Frazar, as Manager of the QA program did not attend as many executive-level meetings. These facts are thus not probative of the relative importance HL&P attached to QA as opposed to cost and schedule. See ¶ 119.

81. CCANP also cited Mr. Jordan's testimony that while he recollected HL&P asking Brown & Root to remove some Construction personnel after the Show Cause Order he could not recall whether a similar request had been made regarding QA personnel. CCANP FOF, ¶ 8.7.5. We do not believe that Mr. Jordan's inability to recollect this information reflects adversely on his commitment to quality. Moreover, the change in Construction personnel was for quality reasons, not to foster cost and schedule objectives. Staff Ex. 47, Attachment, at 5.

82. Finally, CCANP addresses, once again, the January 1980 Brown & Root QA presentation, which the Staff found to have overly emphasized cost and schedule considerations and which formed the basis for Show Cause Item 4. CCANP FOF, ¶ 8.7.6. We have discussed this matter in several other

contexts and in particular in our findings on HL&P's Show Cause Order response. ¶ 97. As we found there, although QA personnel on the STP have never had cost or scheduling responsibilities, HL&P took prompt and effective measures to rescind the original presentation and to reemphasize the legitimate role of QA personnel.

83. We have considered CCANP's argument that HL&P lacks a commitment and appreciation of quality and reviewed the record in that light. We find CCANP's allegations in this regard wholly unsubstantiated. HL&P, through the actions and testimony of its top executives and QA management, has demonstrated to us the requisite commitment to an effective QA program for the STP.

R-III. CCANP's Assessment
Of Staff's Testimony

84. A considerable portion of the CCANP proposed findings are devoted to a refutation of the testimony of the Staff witnesses regarding Investigation 79-19, particularly concerning their view that HL&P's record of compliance does not support a conclusion that HL&P does not have the necessary managerial competence or character to be granted operating licenses for the Project. CCANP FOF, § 2. Our review of the record, however, discloses that CCANP has misconstrued the law and ignored significant portions of the record in these proposed findings. Accordingly, as more fully explained below, we reject the CCANP proposed findings regarding the Staff's opinion testimony.

85. CCANP addressed three reasons cited by Shewmaker et al. in support of their conclusion that HL&P does not lack the necessary character: (1) differences between the managerial effort required for plant operations as opposed to plant construction, (2) the willingness of HL&P to comply with NRC requirements, and (3) whether the nature of the noncompliances was of such a character as to indicate irresponsibility or deliberateness. CCANP FOF, § 2. CCANP's thesis is that the first reason is not valid because the management of nuclear plant operation has greater safety significance than construction. With respect to the second reason, CCANP argues that the Staff's position is founded on HL&P's trying to comply, while it is actual compliance that is required. To some extent CCANP also disputes the Staff's

conclusion that HL&P tried to comply. Finally, CCANP argues that under the Staff witnesses' own definition of irresponsible behavior, HL&P's record did manifest such irresponsibility. CCANP concludes that we should rely upon the Staff's factual findings but reject the Staff's conclusion. We address these arguments one at a time.

86. The testimony of Shewmaker et al. was that "the scope of managerial effort required during the construction phase of a project . . . is far greater than that required once the plant is in operation. Thus, although shortcomings in the management of HL&P relative to plant construction is relevant to, and probative of, how it will perform under an operating license, such prior behavior should not be determinative." Shewmaker et al., ff. Tr. 9576 at 49. We address this notion in ¶ 374 of this Decision. CCANP argues that errors in plant operation are less easily detected and have more serious consequences than errors in construction, making management character more important during plant operation, and therefore to be judged by a stricter standard. In support of this position CCANP cites a statement of the licensing board in Carolina Power and Lighting Co. (Shearon Harris Nuclear Power Plant, Units 1, 2, 3 and 4), LBP-79-19, 10 NRC 37, 42 (1979) to the effect that plant operation requires a greater showing of technical qualification and management capability compared to plant construction. Although CCANP implies that the statement of the Shearon

Harris board is inconsistent with the Staff testimony, in fact there is no inconsistency. In connection with its construction permit decision, the Shearon Harris licensing board was emphasizing the importance of management during eventual plant operation, while the Staff witnesses were simply addressing the differing nature of the manager's task in the two situations, construction and operation.^{30/}

Another relevant precedent, cited in Applicants' Memorandum of Law on Issues Concerning Competence and Character, May 2, 1981, but not addressed by CCANP is Duquesne Light Company, et al. (Beaver Valley Power Station, Unit No. 1), LBP-76-3, 3 NRC 44 (1976). There, unlike Shearon Harris, an operating license application was under consideration and the character and competence of the applicants' management were being weighed in light of deficiencies uncovered during construction. The Board found a "vital key" to these considerations in the fact that "better control is possible when the personnel involved all report directly to the responsible Licensee organization." Beaver Valley, supra, 3 NRC at 60-61. This distinction, one of fundamental importance, is part of what the Staff intended by its testimony. Tr. 9906 (Phillips); Tr. 9863-64 (Hayes). This distinction is highlighted by the CCANP FOF, ¶ 2.31, which emphasizes that most of the QA

^{30/} The Shearon Harris licensing board also recognized that management of plant operation involves challenges to a utility that differ from those during construction. It stated that in considering management capability to safely operate a nuclear plant operating experience (as opposed to construction experience) "is very important to our consideration." Id., at 42.

deficiencies involved failures of contractor employees to implement an adequate written program and adequate procedures.

87. Clearly HL&P's performance during construction is relevant, and the Staff did not suggest otherwise. However, the fact that different challenges will be faced and different skills required during plant operation emphasizes the need to scrutinize the record during construction in order to determine the causes of deficiencies so that we may judge whether those causes are likely to have a continuing effect on performance during plant operation. The Staff testified that HL&P management manifested positive attitudes towards nuclear safety and compliance with NRC requirements. These positive attitudes are in part addressed in the subject of "willingness to implement corrective action," which the second part of the CCANP argument seeks to dismiss as irrelevant. CCANP FOF, ¶¶ 2.16-2.33.

88. At the outset of its attack on the second Staff reason, HL&P's willingness to implement corrective action, CCANP belittles the Staff's use of the word "tried."^{31/} CCANP maintains "performance is measured in terms of effectiveness not energy level" (CCANP FOF, ¶ 2.19), and, of

^{31/} In the course of its findings, CCANP quotes out of context to suggest that the Staff relied in part on HL&P's trying "to secure construction permits." CCANP FOF, ¶ 2.17. Obviously HL&P did secure such permits. The actual testimony was that HL&P "attempted to secure construction permits and establish the QA program in accordance with all NRC regulations." Tr. 9854-55 (Phillips). Clearly the Staff was citing the intent to comply, not the mere act of securing construction permits. CCANP's argument to the contrary is frivolous.

course, CCANP would be correct if we were involved in an enforcement action and our task was to assess the complete acceptability of the pre-Investigation 79-19 construction QA program. However, we are involved in a licensing action and our task is a predictive one. As the Appeal Board emphasized in ALAB-106, we must assess HL&P's managerial attitude, its willingness and desire to comply with NRC requirements. Consumers Power Co. (Midland Plant, Units 1 and 2) ALAB-106, 6 AEC 182, 184 (1973). That willingness and desire to comply in large measure comprises the "character" we are to assess, and sincere efforts to comply are among the prime indicators of such character.

89. Part of CCANP's argument against our considering HL&P's intent is founded on the proposition that one ought not be given credit for proper behavior if it occurs under either implied or expressed threat of regulatory enforcement action.^{32/} CCANP FOF, ¶¶ 2.18-2.22. In addition to the

^{32/} As an alleged example of HL&P taking action under a threat of enforcement action, CCANP cites HL&P's stop work order related to Cadweld inspection in 1978. CCANP FOF, ¶ 2.23. CCANP incorrectly asserts that the Cadwelds made on the second shift were uninspected. In reality each Cadweld made on the second shift had been subjected to final inspection; no Cadwelds were incorporated into the plant without inspection (Murphy *et al.* (Contentions), ff. Tr. 6522, at 28-29), and the issue was whether in-process inspections, which were required only on a spot check or surveillance basis, had to be conducted on all shifts. *Id.*; Staff Ex. 13, at 11-12. HL&P's corrective action (including stopping work, reinspecting all accessible Cadwelds and increasing HL&P surveillance (Murphy *et al.* (Contentions), ff. Tr. 6522, at 88-91 (Long)) does reflect positively on HL&P's character.

fact that many actions taken by HL&P were not under such threat, we are unpersuaded by CCANP's argument, since we do see a favorable character trait when a licensee promptly and voluntarily takes action prior to a requirement being imposed or takes action of greater scope than may be required, whether or not a regulatory threat is lurking. In addition, we note that licensees have been given credit for such actions in other cases, even when such a threat existed. See, e.g., North Anna, supra, 6 NRC at 1143-44. Moreover, consideration of intent is particularly important since the Commission has explicitly rejected the notion that a license should be denied where the licensee's violation of requirements was neither intentional nor reckless, even though it imposed civil penalties for the very same violation. Virginia Electric Power Co., (North Anna Nuclear Power Station Units 1 and 2), CLI-76-22, 4 NRC 480, 492 fn. 12 (1976); affirmed as modified sub nom., Virginia Electric Power Co. v. NRC, 571 F.2d 1289 (4th Cir. 1978). See also North Anna, supra, 6 NRC at 1143-44.

90. After devoting considerable argument to the erroneous proposition that HL&P's efforts to comply are irrelevant, CCANP cites an instance that it claims to be inconsistent with the Staff's opinion that HL&P tried to comply. CCANP FOF, ¶¶ 2.26-2.29. The example involves an inspection report prepared by the very inspector whose testimony emphasized HL&P's efforts to comply. Tr. 9851-60 (Phillips); Staff Ex. 83, at 1. The portion of Staff Exhibit 83 cited

by CCANP was not addressed in the testimony of any witness and the Board is not inclined to rely on such evidence to discount the Staff testimony. In any event, we note that there was apparently a technical disagreement about applicable requirements (App. Ex. 15), HL&P's technical position was founded in part on the advice of its NSSS supplier, Westinghouse, (Staff Ex. 83, at 9) and the matter was resolved to the Staff's satisfaction (Staff Ex. 128, at 3-4). Moreover, the Staff testified that there were few incidents where HL&P's initial responses to NRC findings were not acceptable and that it did not consider the occurrence of a few such instances to be unusual or to reflect adversely on HL&P's character. Tr. 9499-502 (Seidle, Phillips, Taylor, Crossman).

91. In connection with its attack on the Staff testimony that HL&P tried to comply with NRC requirements (testimony of exactly the nature CCANP FOF, ¶ 2.41 argues should be accepted by the Board), CCANP cites testimony of HL&P's CEO, Mr. Jordan regarding a letter he sent to HL&P officers and managers in 1974 directing full cooperation with the HL&P QA Manager in matters related to the HL&P QA program. CCANP FOF, ¶ 2.27. CCANP, by improperly citing a sentence out of context, argues that the letter was the totality of HL&P's QA effort. See R, ¶ 34, supra, for a more complete explanation of CCANP's error. In a similar vein, CCANP attempts to dismiss other parts of Mr. Jordan's testimony as if they too existed in isolation. Mr. Jordan's visits to

the site did not represent the totality of either HL&P's efforts or his personal efforts (compare CCANP FOF, ¶ 2.28 with Tr. 1387 (Jordan)), and he took the QA seminar not in response to I&E Report 79-19, but in response to a Bechtel recommendation. Compare CCANP FOF, ¶ 2.28 with Tr. 1707 (Amaral).

92. Within ¶¶ 2.27-2.33, CCANP proposed a number of findings regarding matters addressed at greater length in connection with CCANP's subsequent attempts to address its six qualities of character. Since we have generally addressed those findings in connection with the six qualities we do not repeat our discussion here.

93. The third part of CCANP's attack on the Staff testimony concerns their opinion that inadequacies in HL&P's involvement in the Project were due to "inexperience 'rather than irresponsible corporate management'". CCANP FOF, ¶ 2.34 citing Shewmaker et al., ff. Tr. 9576 at 49. CCANP's principal arguments are (1) CCANP's view that inadequate involvement constitutes abdication of knowledge or responsibility and is per se disqualifying, (2) the Staff witnesses' definition of "irresponsible" included gross negligence and in CCANP's opinion there was evidence of gross negligence, (3) the Staff cited as a basis for its opinion the fact that no irreparable defects in construction resulted and CCANP believes that to be an invalid reason, and (4) these Staff witnesses had never been called upon to offer an opinion on whether a licensee had the character to obtain an NRC license

and were thus not qualified as experts on this ultimate issue.

94. The CCANP argument that inadequate involvement is per se disqualifying is founded on its misreading of the Commission's Memorandum and Order, CLI-80-32. There the Commission stated that "[e]ither abdication of responsibility or abdication of knowledge, whether at the construction or operating phase, could form an independent and sufficient basis for revoking a license or denying a license application. . . ." 12 NRC 281, 291. CCANP argues that insufficient involvement in Project activities is tantamount to abdication of responsibility and knowledge, which CCANP maintains is "per se irresponsible." CCANP FOF, ¶ 2.34. The fallacies in this argument are apparent. The Commission did not say that a license must be denied if any such abdication were discovered, it said it could be denied. The Commission noted the predictive nature of licensing; we must judge whether HL&P's future performance will be acceptable. This is not a question of penalizing past misconduct, but rather of considering past conduct as one indicator of future conduct. Although CCANP seeks to buttress its argument with references to the Staff's identification of HL&P's failures to satisfy NRC requirements (CCANP FOF, ¶¶ 2.36-2.36.10), in each case the Staff's statement is general in nature and the degree of failure is not specified. Id. None of these failures were absolute and their significance varied. As the Staff noted: "from the inception of this

project the Staff has never issued HL&P an item of non-compliance at the severity level of a violation--indicating the Staff does not believe the functional integrity of any system has ever been lost." Staff FOF, at 71, ¶ 40. Accordingly, we reject CCANP's argument that the Staff testimony demonstrates that HL&P was "per se irresponsible." CCANP FOF, ¶ 2.34.

95. CCANP states that the Staff defined gross negligence to include failures to carry out a responsibility if the matters involved are important and material; and that in CCANP's view by that definition HL&P was grossly negligent. CCANP FOF, ¶¶ 2.37-2.40. To reach this conclusion CCANP first attacks the Staff's application of its own test, asserting that a Staff witness was in error in testifying that trying to do something and not being able to do it might be responsible rather than irresponsible conduct. CCANP FOF, ¶ 2.38 citing Tr. 9801 (Phillips). CCANP asserts that "trying" is a concept inconsistent with the gross negligence definition. Id. In fact the witness offered his explanation as part of his definition. Tr. 9800-04 (Hayes, Shewmaker, Phillips). We find it unnecessary to get deeply involved in CCANP's tortured semantics. Suffice it to say that we agree with the Staff that, in determining whether an applicant is acting irresponsibly or negligently, his degree of effort to achieve the desired result is pertinent.

96. NRC witnesses, Shewmaker, Hayes and Phillips, testified that none of them had previously been called upon

to offer an opinion on the character qualifications of an applicant for an NRC license. Tr. 9718-23. CCANP maintains that this fact disqualifies them from presenting expert testimony on this ultimate issue. CCANP FOF, ¶ 2.39. We disagree. Although these witnesses had not previously testified or formally offered an opinion on this ultimate question, they obviously must form judgments on the behavior of licensees as part of their routine activities in inspection and enforcement. Cf. Seidle et al., ff. Tr. 9205 at 5-9. Each of these witnesses had substantial QA and enforcement experience (Shewmaker et al., ff. Tr. 9576, at Professional Qualifications) and they applied that experience in offering their opinion on the character of HL&P. Tr. 9852 (Phillips). At the time of this testimony one of these witnesses had been the Resident Reactor Inspector at STP for over two years, interacting with HL&P personnel on virtually a daily basis, including meetings with HL&P's Executive Vice President. Tr. 9851-52, 9860 (Phillips). Obviously the ultimate questions regarding HL&P's character and managerial competence must be answered on the basis of the entire record. We cannot and do not base our decision solely on the opinions of the witnesses, no matter how expert. The weight we place on the opinion of an expert depends on the bases for that opinion. In this case the witnesses were well qualified as experts and while their exposure to the facts varied, as to all three individuals it was substantial. We have taken these factors into account in determining the

weight to be accorded this testimony. However, since the opinions expressed by these experts did not differ in any way from the opinions we formed independently based on the balance of the record, we must note that acceptance of this expert testimony has not altered the decision we would otherwise have reached.

97. It is CCANP's thesis that the Staff's testimony showed that HL&P had failed to carry out its responsibilities in a number of "important" respects and that such a failure constitutes gross negligence such as, by the Staff's definition, should be termed irresponsible behavior. CCANP FOF, ¶¶ 2.42-2.44. This argument is founded on the same CCANP error we addressed in R, ¶ 94, supra. In none of the cases was the inadequacy absolute. See ¶¶ 341-62. The Staff witnesses expressed their opinion that deficiencies found in I&E Report 79-19 were due to HL&P's inexperience rather than irresponsibility. Shewmaker et al., ff. Tr. 9576, at 49. CCANP argues that inexperience is in itself irresponsibility. CCANP FOF, ¶ 2.44. We cannot agree. Every licensee must start at some point. Tr. 9835 (Shewmaker). HL&P's qualifications to manage STP were considered when HL&P was granted construction permits and the evidence shows that HL&P acted to increase its level of experience thereafter, both at the officer level, e.g. by hiring Mr. Ferguson (Tr. 5105-06 (Turner)), and at lower levels (¶¶ 25, 31; Tr. 5742-45 (Barker)). The Staff correctly points out that HL&P recognized its lack of experience by hiring a major

architect-engineer-construction firm with extensive experience in heavy construction. Tr. 9863-64 (Hayes). Although Brown & Root had not previously designed and engineered a nuclear plant, it had prior nuclear construction experience and it had an association with a prominent nuclear engineering and consulting firm, NUS. ¶ 27. CCANP argues that lack of experience is not an excuse for inadequate performance. CCANP FOF, ¶ 2.47. If the issue before us was whether HL&P should be penalized for violation of an NRC requirements, inexperience would not be an excuse. However, to make the predictive judgment regarding operating licenses, the cause of prior deficiencies is very relevant. The record shows that HL&P has learned from this history; and our Decision is replete with the actions it has taken to remedy such causes.

98. Finally CCANP attacks the Staff's reliance on the fact that no irreparable construction defects resulted from QA deficiencies. CCANP FOF, ¶¶ 2.48-2.50. CCANP argues that this factor is not relevant to character (CCANP FOF, ¶ 2.49) and that no defects are literally irreparable, and it speculates that there may be hidden defects which are less reparable (CCANP FOF, ¶ 2.50). These points are off the mark. The entire purpose of a construction QA program is to assure that the facility is properly constructed. The relative significance of defects in construction is clearly relevant to an assessment of the significance of the QA deficiencies. Tr. 9957 (Shewmaker); See Commonwealth Edison Co. (Zion Station, Units 1 and 2), LBP-73-35, 6 AEC 861,

896-99 (1973); Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-106, 6 AEC 182, 186 (1973). Here the Staff additionally testified that thorough review of the quality of construction found that "there are no major safety related problems with the completed structures or physical systems." Crossman et al., ff. Tr. 10010, at 52. Thus, in assessing the weight to give to previous deficiencies in HL&P's QA performance, it is certainly relevant to consider that such deficiencies were not so pervasive as to result in "major" or "irreparable" defects. Finally, we reject CCANP's baseless speculation about undiscovered defects. Based on the thorough reevaluation of the quality of construction we find that there is reasonable assurance that there are no such defects. See ¶¶ 174-239; R, ¶¶ 106-108, infra.

R-IV. CCANP's Proposed Findings and Conclusions

A. Issue A

99. In Section 9, CCANP provides no new findings of fact but merely reaches the conclusion that HL&P has fallen far below the (unspecified) standards^{33/} set by the NRC and therefore the answer to Issue A should be "yes." As compared to CCANP's conclusory proposal, in Section IX.A of this Decision we dealt at length with all of the matters referred to in Issue A, i.e., whether HL&P made false statements to the NRC, the number and severity of noncompliances that occurred, and whether HL&P abdicated its responsibilities to Brown & Root or failed to keep itself knowledgeable concerning Project construction. Taking into account our detailed previous findings regarding HL&P's past conduct and actions and the guidance derived from precedents in ¶¶ 333-35,^{34/} we assessed the significance to HL&P's managerial competence and character of such deficiencies standing

^{33/} CCANP inexplicably cites 47 Fed. Reg. 9984, col. 3 as the source of its "standards." That citation is part of the publication in the Federal Register of a wholly irrelevant change in the NRC's regulations pertaining to antitrust review.

^{34/} CCANP argues that decisions "based on various different events do not provide good precedent when all those events are combined and multiplied in one proceeding." CCANP FOF, ¶ 9.2. CCANP is wrong on at least two counts. First, it would be rare indeed that in cases hinging on assessment of factual situations a precedent could be found that deals with precisely similar combinations of circumstances. Precedents are helpful because they are instructive as to the type of factors that should be employed in reaching a decision, and (Footnote continued on next page)

alone. We reached the conclusion that, even if considered without regard to subsequent remedial measures, the relevant history demonstrates that HL&P has the necessary managerial competence and character to be granted operating licenses. In Part R-II of this Decision we have additionally considered the marginally relevant "qualities" which CCANP suggested, and we find that they do not affect our affirmative conclusions.

B. Issue B

100. CCANP's principal conclusions in Section 10 are first that the facts found under Issue A are dispositive on the issue of Applicants' character and competence and there is no need to reach Issue B; second, if Issue B is reached, the remedial measures concerning character are inadequate and those regarding technical competence "must remain unanswered." We find that CCANP is mistaken in all respects.

102. If CCANP means to argue once more, as it has several times in the past, that we can ignore the remedial measures taken by an applicant in assessing its current managerial competence and character, CCANP is simply wrong. As we have ruled twice before and in ¶ 332 of this

(Footnote continued from previous page)
that is solely how we have used them. Second, contrary to CCANP's inference, a number of events of the type discussed in STP were also present in combined fashion in other cases. Moreover they are not present in STP in more extensive form than in some of those precedents. Cf. Virginia Electric Power Corp. (North Anna Nuclear Power Station, Units 1 and 2) LBP-77-68, 6 NRC 1127 (1977).

Decision,^{35/} the predictive judgment as to whether an applicant has the managerial competence and character to operate a facility must be based on the totality of circumstances, including remedial actions taken with respect to past problems. When the Commission stated that certain deficiencies might constitute an "independent and sufficient basis" for denial of a license, it meant only that such matters might be so serious that, without the need for finding other misconduct, they might provide a basis for denial; it neither stated nor implied that such matters should be weighed in a vacuum without consideration of other relevant information, such as related remedial actions. If, on the other hand, CCANP meant that the findings under Issue A are so adverse to HL&P that no remedial action considered under Issue B could conceivably change the result, it is simply wrong on the facts. Quite to the contrary, we have found under Issue A that HL&P has the necessary managerial competence and character even without regard to the ample remedial measures and improvements taken.

102. CCANP claims that the character of HL&P remains inadequate because there has been no change in ownership or in the Board of Directors, and that the Board of Directors

^{35/} See also, e.g., Applicants' Memorandum of Law on Issues Concerning Competence and Character, at 22 n.* (May 2, 1981); NRC Staff Memorandum on Standards for Evaluating Managerial Competence and Corporate Character, at 17-18 (May 6, 1981); Staff FOF, at 26-27, 30-33.

has shown a lack of character by failing to change HL&P's leadership and failing to order changes in response to the Order to Show Cause. CCANP FOF, ¶ 10.3.1. Such claims are frivolous in that no failure by stockholders or the Board of Directors^{36/} to take any action required under pertinent statutes, regulations, licenses or orders has been alleged or demonstrated. CCANP simply chose to grasp at this straw rather than refuting in any fashion Applicants' demonstration that it has taken extensive and thorough remedial steps. These are summarized in Applicants' proposed findings which we have adopted at ¶¶ 363-72 of this Decision. We there concluded that these steps, inter alia, demonstrated that HL&P has the necessary managerial competence and character, and nothing in CCANP's filing affects our conclusion.

103. In Section 10.3.2 CCANP makes a somewhat incoherent argument that the hiring of Bechtel and Ebasco was too recent to provide a record from which to judge the adequacy of technical competence and that remedial measures relating thereto must remain unanswered. In Part IV of this Decision we discuss the changes resulting from the hiring of Bechtel and Ebasco, including the testimony of Bechtel's Project Manager and Ebasco's Construction Manager and the

^{36/} To the extent that CCANP implies that the Board of Directors has not taken an active role concerning STP, it ignores testimony indicating that STP is discussed at practically every meeting of the Board. Oprea et al., ff. Tr. 1505, at 25 (Oprea); Tr. 1255 (Jordan).

exhibits summarizing Bechtel's and Ebasco's nuclear experience and describing the transition program. There is absolutely no question concerning Bechtel's and Ebasco's technical competence, and, in fact, CCANP even chose not to cross-examine the Staff witnesses who prefiled testimony in which they found the contractors to be eminently qualified; rather CCANP stipulated such testimony into the record. Tr. 10721. Moreover, the question under Issue B is not the technical competence of the contractors, but the managerial competence of HL&P. As we have mentioned above, the remedial measures taken by HL&P amply support a finding that it now possesses both the necessary managerial competence and character.

C. Issue C

104. In Section 11 CCANP concludes that there is no reasonable assurance that HL&P would safely operate STP because Issue A should be answered "Yes" and Issue B "No " Having reached the opposite conclusion on those two Issues, we need not belabor the matter. We note only that CCANP has wholly ignored the pertinence under Issue C of HL&P's plans for management of operation of STP, which are discussed at length in our favorable findings in ¶¶ 373-78.

D. Issue D

105. Similarly, in Section 12 CCANP concludes that there is not reasonable assurance that the requirements of 10 CFR Part 50, Appendix B will be implemented during the

remainder of construction because Issue A should be answered "Yes" and Issue B "No." Although CCANP does not even bother to explain why it believes those two Issues to be determinative of the specific questions raised in Issue D, since we have reached the opposite conclusion thereon anyway we again need not belabor the matter. We note only that CCANP has wholly ignored the extensive testimony of HL&P's STP Project QA Manager, Bechtel's Houston area QA Manager and Ebasco's STP Quality Program Site Manager. As discussed ¶¶ 166-85 of this Decision, such testimony demonstrated not only that the current QA organizations and practices meet the requirements of Appendix B, but that the QA program will be implemented so that construction of STP will be completed in conformance with applicable requirements.

E. Issue E

106. Issue E questions whether in-place backfill, concrete and welding at STP conform to the construction permits and Commission regulations, and, if not, whether HL&P has taken steps to assure necessary repairs or replacement. In response, Applicants presented extensive testimony, based upon comprehensive field inspections and analyses, by five panels of witnesses, which included numerous HL&P, Brown & Root and contractor personnel with expertise in design engineering, field engineering, construction and QA, as well as highly qualified expert consultants. NRC Staff witnesses also testified concerning their inspections and

reviews. As discussed in detail in ¶¶ 187-239 of this Decision, this uncontroverted testimony demonstrated to us that there is reasonable assurance that the Category I structural backfill and the concrete conform to applicable NRC requirements and that the AWS and ASME welds either conform or will be repaired or replaced as necessary.

107. CCANP dismisses this overwhelming record with a condescending acknowledgment that "the Applicant did hire consultants and engage in reexamination of the existing structures" and that this provided "some assurance that the items reexamined are in conformance." (CCANP FOF, ¶ 13.7). Without any attempt to review the mammoth reinspection programs undertaken by Applicants as to the status of in-place structures or even to allege any specific inadequacies in such programs, CCANP simply concludes that the Board is being asked "to speculate" whether any deficiencies in the structures could have escaped undetected and that, in light of STP's history and the difficulty in answering all doubts, the in-place condition "must be considered indeterminate." (CCANP FOF, ¶ 13.9). This amounts to a nonsensical position that, if problems arose during construction, it is impossible, regardless of the thoroughness and depth of a subsequent inspection program, ever to determine whether such construction is acceptable. We reject such a position out-of-hand. The testimony on behalf of Applicants and the Staff was very impressive concerning the planning of the reinspection programs, the scope and detail of such programs,

and the thoroughness of their implementation, and provided the reasonable assurance needed to satisfy Issue E.

108. We will touch only briefly on the allegations of CCANP contained in Section 13. CCANP claims that pressures upon and harassment and intimidation of QC Inspectors, high turnover among Inspectors, and an alleged tendency to sign off rather than engage in confrontation leave doubts as to the adequacy of in-plant structures. (CCANP FOF, ¶ 13.2). Not only does the record not establish the "systematic obstruction of the QA/QC program" which CCANP alleges, but there is no evidence that the foregoing problems resulted in any significant defects in the work product. To the contrary, for example, based on its review of I&E Report 79-19, HL&P's various responses to the enforcement actions resulting from that report and the NRC inspections both before and subsequent to 79-19 the NRC Staff concluded that there are no major safety related problems with the completed structures or physical systems. Crossman et al., ff. Tr. 10010, at 52. In any event, reviews undertaken in connection with such allegations (e.g., review of Cadweld records) together with the comprehensive reinspection programs which would have detected deficiencies regardless of cause, provide ample assurance as to the adequacy of in-place structures. Similarly, CCANP's "presumption" that some deficiencies were overlooked because of the "widespread noncompliance" in the QA/QC program (CCANP FOF, ¶ 13.3), ignores, among other

things, the fact that each non-compliance was reviewed, suitable remedial and corrective measures taken, and uncontroverted testimony, including that of the Staff, establishes that all measures were implemented fully and properly. See ¶¶ 62-78. The Staff noted that "it was not shown that in any instance such harassment stopped the QA/QC personnel from performing their duties." Staff FOF, at 30. That the Staff did not interview all QC Inspectors who had left the site or were working for the company on other tasks (CCANP FOF, ¶¶ 13.4, 13.5) is, of course, irrelevant.^{37/}

The Staff's reports and testimony reveal that a thorough inspection job was done. Finally, CCANP argues that the identification of rejectable indications in 15% of the radiographs of ASME welds "could be another indicator of inspectors accepting unsatisfactory work in order to avoid the consequences of reporting the deficiency." (CCANP FOF, ¶ 13.7). We reject CCANP's speculation since there is no evidence in the record (including any cross-examination by CCANP) indicating that welding inspectors were subject to intimidation or harassment, and, instead, the record contains a thorough discussion of the revisions in procedures, training of welders and improved certification of QC Inspectors that were implemented to resolve welding problems.

^{37/} It is also irrelevant that an inspector would be incriminating himself if he admitted that he falsely certified a document. (CCANP FOF, ¶ 13.6). The adequacy of the NRC's inspection program is based on much more than reliance on admissions by interviewees. Seidle et al., ff. Tr. 9205, at 5-9.

See ¶¶ 220-39. Thus, none of CCANP's complaints casts any doubt on the adequacy of the in-place structures or of the repair and replacement steps taken.

F. Contention 7e

109. CCANP alleges that the first sentence of Contention 7e^{38/} (sic) "has been proven beyond any doubt." (CCANP FOF, ¶ 14.2). CCANP is wrong on two counts. First, the thrust of CCANP's Contention (as is clear from the second sentence of the Contention, which CCANP conveniently omits) was that QC Inspectors participated in alleged card games, rather than conduct inspections, because of alleged assaults, threats and harassment. We found not only a total absence of evidence in support of such allegations but considerable undisputed evidence to the contrary. See ¶¶ 304-11. Even if CCANP is belatedly claiming that its Contention was intended to cover more generally assaults, threats and harassment that allegedly took place prior to the admission of its Contention in 1979, the record is devoid of any evidence of "a pattern of behavior designed to intimidate the inspectors" and instead shows only excessive friction and a number of isolated incidents whose significance we have already discussed at ¶¶ 47-51. See also Staff FOF, at 46.

^{38/} This is obviously the contention that we have referred to as 1.7(e).

G. Conclusions of Law

110. Since CCANP's proposed conclusions of law are based upon its proposed findings of fact that we have unanimously rejected, we reject such conclusions as well and adhere to those expressed in Part X of this Decision.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD 82-00119 A11:34

In the Matter of)
)
HOUSTON LIGHTING & POWER) Docket Nos. 50-498 OL
COMPANY, ET AL.) 50-499 OL
)
(South Texas Project, Units 1)
and 2))

OFFICE OF SECRETARY
LICENSING & SERVICE
BRANCH

CERTIFICATE OF SERVICE

I hereby certify that copies of "Applicants' Reply To Proposed Findings Of Fact And Conclusions Of Law Submitted By The Other Parties" dated October 18, 1982, have been served on the following individuals and entities by deposit in the U.S. Mail, first class, postage prepaid on this 18th day of October, 1982.

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