

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:  
Ivan W. Smith, Chairman  
Dr. A. Dixon Callihan  
Dr. Richard F. Cole

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In the Matter of  
  
COMMONWEALTH EDISON COMPANY  
  
(Byron Nuclear Power Station,  
Units 1 and 2)

) Docket Nos. STN 50-454 OL  
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JOINT INTERVENORS' PARTIAL PROPOSED FINDINGS  
OF FACT AND CONCLUSIONS OF LAW ON CONTENTION 1A

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I INTRODUCTION

1. On April 27, 1983, Joint Intervenors filed their Motion to Allow Testimony of John Hughes. The Board, determining that, although the record in Contention 1A ( Quality Assurance/Quality Control) had not been closed, "relaxed" standards applicable to those for reopening a closed record would be applied. Accordingly, on May 26, 1983, it heard, in a Board-conducted "deposition", Mr. Hughes' testimony.

2. Determining that portions of Mr. Hughes' testimony raised significant safety issues, and that neither Commonwealth Edison nor the NRC staff had submitted sufficient evidence concerning (a) allegations received against Hatfield Electric Company and (b) a massive reinspection program, pursuant to finding 19 of I & E Report 454/82-05, during the March and April portion of the QA/QC evidentiary hearing, the Board ordered

further evidentiary submissions from the applicant and the staff. As the Board correctly ruled, no license could issue without a further showing on these two issues. (See Memorandum Order of June 21, 1983.)

3. Edison complained about the scope of the hearing as it pertained to the 82-05-19 program, and in a Memorandum and Order dated July 7, 1983, the Board, without giving reasons therefore, narrowed the parameters of the hearing to the following:

1. Evidence may be limited to Hatfield Electric Company. This would include Pittsburgh Testing Laboratory employees and similar personnel, if any, assigned to Hatfield.
2. Report the results of Applicant's reevaluation of previously trained/qualified/certified QA/QC personnel employed by or assigned to Hatfield.
3. Report the results of the reinspection program regarding Hatfield Electric installations. (CECO letter of February 23, 1983, Attachment A).
4. Report Region III's position on the adequacy of the reevaluation of Hatfield QA/QC personnel and the reinspection program regarding Hatfield.
5. The Board is particularly interested in any fraudulent training, qualification, or certification practices.
6. This limitation should not be construed as a limitation of the evidentiary showing required pertaining to the investigation and inspection referred to in Region III's testimony, ff. Tr. 3586 at 6.

3. The Board notes the Commonwealth Edison did not carry its burden with respect to these issues in the March and April segment of the evidentiary proceeding. This present segment was devised to allow Edison and the staff to present such additional evidence as is required in order for the Board to find the requisite reasonable assurance so that an operating license might issue. As explained below, for the second time insufficient

evidence (as outlined in finding 2 above) has been offered. Therefore, based on our findings below, the operating license shall not issue.

## II. TESTIMONY OF JOHN HUGHES

4. John Hughes was hired by Pittsburg Testing Laboratories (PTL) to work for Hatfield Electric Company at the Byron Plant. He had in excess of four years of nuclear experience. (Hughes, tr. 7028-29) He worked at the Byron plant from October 1, 1982 to January 7, 1983 as a QA Level II trainee and inspector. He had previously been certified in electrical, mechanical, welding, civil, and structural nuclear inspection work. (Id.) His education consists of a high school equivalency diploma from the State of Illinois, and nearly two years at a technical college. (tr. 7029-38)

5. He was sought out and hired by Marvin Tallent, of PTL, to work at the Byron plant; Mr. Tallent was familiar with Mr. Hughes' work from working with him at the Surry Nuclear Power Station in Virginia. (tr. 7037-38) Edison did not produce Mr. Tallent to testify.

6. Mr. Hughes described his training by Hatfield Electric as consisting of reading procedures, accompanying "on various occasions" a Level II inspector, and approximately two hours of class room training. (tr. 7095) Mr. Hughes did not keep track of his on-the-job training or his classroom training. (tr. 7108)

7. Mr. Hughes was given a series of six tests, one of which he failed. The test was graded by Al Koca, Mr. Hughes' supervisor at Hatfield, who reviewed the test with him, and went



over the questions he had missed. Mr. Koca told Mr. Hughes to take the corrected test back to his des. and study it. (tr. 7056-57) Mr. Hughes discussed the test with a co-inspector, Irvin Souders. (tr. 7111-12) He was given an identical test to take approximately 30 minutes later. (tr. 7056-57)

8. While taking the test the second time, he had the answers from the first, failed, test before him, although he did not need to use the supplied answers. (tr. 7169-70) When he took the second test to Mr. Koca for grading, he told Mr. Koca he did not make a perfect score; Mr. Koca told him that if individuals made perfect scores, it might seem that Hatfield's testing procedures were too lenient. He passed the test the second time. (Id.)

9. He subsequently saw the failed test in a session with NRC inspectors in January, 1983; he identified the test as the test he took and failed, and initialed it in the top right hand corner. (tr. 7058)

10. Other inspectors were tested in a manner similar to that of Mr. Hughes. Mr. Hughes was in a position to observe such testing practices because his desk was directly across from Mr. Koca's, and he also overheard discussions between Mr. Koca and individuals who had failed tests. (tr. 7059)

11. Mr. Hughes was unable to recall the exact date of his certification, but believes it was October 12, 1982. (tr. 7059-60) He was certified as an electrical hanger inspector first, then later as a cable pan inspector. (tr. 7060) The Board notes that none of these tests were produced by Commonwealth Edison or the NRC staff, nor did either party offer any evidence concerning

the existence vel non of the tests.

12. In a discussion between Mr. Hughes and Mr. Tallent, Mr. Hughes indicated his desire to obtain a GED and Mr. Tallent helped to facilitate this. (tr. 7167-68) .

13. At the completion of Mr. Hughes' testing, he was told by his immediate supervisor that he was certified in cable pan hanger inspections and in cable pan inspections (tr. 7170) Mr. Hughes was given a document stating he was so certified; he could not perform inspections until he received the document. (tr. 7172-73)

14. With respect to classroom training, Mr. Hughes attended quality control meetings, and would sign a form stating he had attended. (tr. 7191) He also spent one and a half hours with a Level II inspector going over procedures. (tr. 7192)

15. The Board finds as incredible Mr. Koca's account of 64 hours (see findings 27-29, infra), or indeed Mr. Hayes' account of 48 verified hours (see finding 144, infra), of on-the-job-training. While Mr. Hughes testified that on-the-job training could conceivably include office work (tr. 7193), he spent fewer than 120 hours in the field the entire time he was on the job site (tr. 7193). Mr. Koca and Mr. Hayes both testified that on-the-job-training was actual in-field inspections.

16. Mr. Tallent told Mr. Hughes that a high school equivalency was required at the Byron site. (tr. 7200) Commonwealth Edison's insistence that Mr. Hughes did not obtain a GED until October 29, 1982, (see, e.g., tr. 7200) is completely beside the point for, if no such degree was required, as Mr.

Koca deems to assert, (see finding 21, infra) it simply would not matter when, or even whether, such a diploma was received.

17. Mr. Hughes described a typed memo by Mr. Tallent to Hatfield Electric company verifying that Mr. Hughes had in fact passed his GED. (tr. 7201) We find Edison's failure to produce this document to be suspect.

### III. COMMONWEALTH EDISON WITNESSES

#### A. Allen W. Koca

18. Mr. Koca was responsible for John Hughes' training and certification (Koca, tr. 7423). Proper certification requires objective evidence of qualification such as a document with a signature. (tr. 7424-25) Objective evidence of Mr. Hughes' educational background was necessary for proper certification. (tr. 7425) It is the responsibility of the contractor to obtain such verification; Mr. Koca admitted, however, that he does not verify such items as another company's certification, or telephone memoranda. (tr. 7426-29)

19. Mr. Koca claimed that he verified Mr. Hughes' education and experience. (tr. 7430) The Board finds that this is not true, because the only "objective" evidence (see tr. 7424-25) in the file (Exhibits B-0 to Mr. Koca's prefiled testimony) is a single telephone memo confirming Mr. Hughes' employment with Nuclear Energy Services (NES), (prefiled testimony, Exhibit C). The memo does not purport to do anything other than confirm the fact that Mr. Hughes at one time worked for that company. It is silent as to length of employment, level and type of certification, or any other pertinent fact.

20. The Board therefore finds that Hatfield Electric verified virtually none of Mr. Hughes' background prior to certifying him as a Level II inspector.

21. Mr. Koca's testimony was unclear and contradictory concerning precisely what is required by Hatfield's Procedure 17, (Exhibit A) which establishes required education and experience levels for certification. For example, he stated that it was Hatfield policy (although not a requirement) that an applicant have a GED. (tr. 7432-34) He further contradicted himself by stating Hatfield does not deny certification because of a lack of a GED. (tr. 7440) He also stated that Hatfield had erroneously certified someone who did not have a high school equivalency diploma. (Id.)

22. Mr. Koca testified that he told Mr. Hughes to obtain a GED at the time he was close to meeting other certification requirements, because no objective evidence of a GED had been produced (tr. 7531-32). We reject this testimony for two reasons. First, Mr. Hughes stated that it was his idea to obtain a GED, and he arranged to do so through Mr. Tallent. (Hughes, tr. 7200-01) Second, it would have been Hatfield's or PTL's job, not Mr. Hughes' job, to verify the existence of a GED. Finally, and most tellingly, is Mr. Koca's repeated assertion that a GED is simply not required. (see finding 21, supra)

23. Mr. Koca could not identify under which portion of Exhibit A, Paragraph 5.5, Mr. Hughes was certified. He did unequivocally testify, however, that Mr. Hughes was not certified under Paragraph 5.5.1.1. (tr. 4734)

24. Mr. Koca further admitted on cross-examination that



Hatfield did not verify Mr. Hughes' experience level. (tr. 7441-44) On redirect, he changed this answer. (tr. 7510) In fact, the documents in Mr. Hughes' certification file indicate that Mr. Hughes had a GED and four and one half years of experience. (Koca, prefiled testimony, Exhibits B and E) Mr. Koca admitted that the four and one half years of experience were not verified, and the only thing verified was that Mr. Hughes had worked (for an unknown length of time) for NES. (tr. 7451-53, 7460) While Hatfield used Mr. Hughes' certification by NES as "verification" of prior work experience (tr. 7454), Mr. Koca admitted that Mr. Hughes could not possibly have had even one year of experience with that company. (tr. 7453)

25. The Board also finds that Mr. Koca's testimony concerning the documented training (see Joint Intervenor's Exh. 24) received by Mr. Hughes to be unreliable. Mr. Koca explained (tr. 7460-61) that Mr. Hughes' records show eight hours of classroom training, signed by Mr. Koca for Hatfield. With respect to the required indoctrination, Mr. Koca admitted that the entire record was prepared post facto with no indication as to when the training was actually given. While he professed that it was impossible to document the training as it progressed because of the number of people going through training (see tr. 7426-65), he admitted that only one other person received training at the same Mr. Hughes did. (tr. 7465)

26. The Board finds that Hatfield's records of on-the-job-training, purporting to reflect such training received by Mr. Hughes, are even less reliable, and suspect in origin. In order



to be certified for the three different procedures for which certification was contemplated, Mr. Hughes would have been required to have 120 hours of on-the-job training. Hatfield appears to require 40 hours per procedure, although on-the-job-training is not allocated on the basis of procedure. (tr. 7466-67 and Koca Exhibit E)

27. Exhibit G to Mr. Koca's prefiled testimony, which purports to reflect the number of hours per inspection, is inherently unreliable. First, the document does not reflect the identity of the inspector alleged to have accompanied Mr. Hughes.

28. Second, the inspection reports from which the information contained in Exhibit G purportedly was taken do not themselves give the number of hours per inspection. (tr. 7470)

29. Third, each entry in Exhibit G reflects precisely two hours of on-the-job training time. While Mr. Koca attempted to explain this by stating that Scott Wagner had ascertained the time per each inspection from the particular inspector accompanying Mr. Hughes on each inspection (tr. 7471), we find Mr. Koca's assertion to be incredible. Mr. Koca would have this Board believe that each and every inspection took between one hour and 55 minutes and two hours and five minutes. (tr. 7471) At the same time, Mr. Koca admitted that some hangers are very simple, while others were very complex (tr. 7472), thereby impeaching his own testimony.

30. Further evidence of Mr. Koca's unreliability is shown in the Region III panel testimony (tr. ff. 7801) in discussing allegations received against Hatfield Electric. One of the allegations was that Hatfield had a quota of one and one half

hours per inspection. (Panel, tr. 7897) Understandably, the Region was concerned that such a system could force the inspectors to rush the inspection process. (Id.) The Panel admitted that some inspections could take as much as five to six hours (Panel, tr. 7898), and reported that the average time for each inspection is three hours. (Panel, tr. 7898)

31. The Board does not deem it significant that the Region III inspectors should arrive at an estimate which is greater than that reflected in Koca Exhibit G. The exhibit purports to be an accurate reflection of time spent, and it clearly is not. Given this fact, the Board has no choice but to find Exhibit G inherently and completely unreliable, and further that such unreliability casts a shadow over Hatfield documentation in general, and of inspector certification files in particular.

32. Mr. Koca testified that on-the-job training consisted of field work, (i.e., actual physical inspection of hangers), a task which Mr. Hughes was not required to, and in fact did not, perform as a Level II inspector. (tr. 7473) Mr. Koca then attempted to change his answer and asserted that on-the-job-training includes the portion of an inspection for which Mr. Hughes was in fact responsible (i.e., comparing inspection results to allowable tolerances). (tr. 7475; compare tr. 7473) This "office" portion of each inspection was estimated by Mr. Koca to take between two and ten minutes per inspection. (tr. 7475) Mr. Koca plainly admitted that all on-the-job training recieved by Mr Hughes, save two to ten minutes per inspection,

was Level I work. (tr. 7476)

33. The Board further finds Hatfield documentation to be unreliable in another respect. Mr. Koca stated that Mr. Hughes was not authorized to perform inspections until November 1. (tr. 7478-79) However, he asserted that Mr. Hughes could fill out discrepancy reports ("DRs") before he was certified (such as that seen in Joint. Int. Exh. 26). However, not one time did Mr. Hughes' signature on these DRs indicate that he was not a certified inspector. We find this omission in Hatfield's documentation system to be an example of its incomplete and potentially misleading documentation.

34. Mr. Hughes was tested under Mr. Koca's supervision. (Koca, tr. 7480) Mr. Koca administered all tests and his role in testing was described as supervising, giving and grading the tests; all testing was done within his sight and under his supervision. (tr. 7488)

35. At the time Mr. Hughes was tested, there was only one possible version of each individual test. (tr. 7490)

36. Mr. Koca described the following practice: upon failing a test, the trainee was given the corrected test to study and was then retested. (tr. 7492) He denied retesting trainees immediately (tr. 7493), but admitted that it was possible some trainees were retested at least on the same day (tr. 7494). It was up to the trainee, not the QA supervisor, to determine what additional subject matter review (if any) was necessary. (tr. 7494)

37. Mr. Koca admitted that it was his responsibility to see to it that the failed test was taken away. (tr. 7495) He

stated he would rip up and throw away a failed test, but not until after the trainee had passed an identical version of the test. (tr. 7494-95)

38. Mr. Koca testified that if only one person was taking the test, it would be graded immediately. (tr. 7535) Therefore, the Board infers that Mr. Hughes' test was graded immediately, and was immediately returned to him.

39. Mr. Koca stated that he habitually, upon grading a test, would write down the score, his initials and the date on the test. He denies, however, that Joint Intervenors' Exhibit 27, Mr. Hughes' failing test, was one graded by him because the score, initials, and date are absent (tr. 7496). At the same time, however, he admitted that some of the marks on Exh. 27 were made by him. (Id.)

40. Mr. Koca was asked why he would date and initial a test he knew he would rip up and throw away. The Board observed Mr. Koca's demeanor, and finds that he appeared shocked and surprised and hesitated before answering. He indicated that he would date and initial the test on the chance that the test would be discussed with Hatfield's QA/QC manager. (Id.) The Board finds this explanation as incredible and finds that Mr. Koca was grasping for an answer which he did not have. Because the QC manager's desk was only 15 feet away from Mr. Koca's desk (tr. 7508) and there would be no need for Mr. Koca's authenticating marks to appear on a failed test, for it could easily be confirmed by the manager.

41. We find Mr. Koca's testimony unreliable for still



another reason. Mr. Koca denies all knowledge of Mr. Hughes having failed a test at all. (tr. 7498) At the same time, he admits that there were fewer than two dozen failures of a total of 390 to 425 total tests he has given. (See, tr. 7423, 7494) Surely a failing test would cause Mr. Koca to be concerned that the inspector's training was inadequate, and we would expect Mr. Koca at a minimum remember whether Mr. Hughes had failed the test at all. We must compare this with Mr. Koca's seemingly impeccable memory regarding a telephone call made by Mr. Barzilaski Hughes' employment with NES. (tr. 7443-440) The Board finds that this selective failure of memory to be another example of the unreliability of Mr. Koca's testimony.

42. The Board finds that Hatfield has made recent changes to its testing procedure at the insistence of Commonwealth Edison. We further find that Commonwealth Edison either did not know of Hatfield's testing procedure but should have known, or that these procedures were used by Hatfield with Edison's knowledge and acquiescence.

43. Mr. Koca enumerated the following changes:

- (a) there is now more than one test per procedure; (tr. 7469-70, 7481);
- (b) there is a two-day mandatory waiting period between a failed test and retesting (Id.);
- (c) tests are kept in a locked place(Id.);
- (d) there is a minimum of 40 questions per test (Id.);
- (e) the tests are approved by Mr. Koca (tr. 7481); and
- (f) copies of failing tests are retained (tr. 7504).

44. While the Board finds these changes comforting as to the future, we also find that Hatfield's lax testing procedure



could, and in fact did, affect the quality of certified inspectors at the Byron plant.

45. As discussed above, the Board finds Mr. Koca's testimony to be absolutely unreliable, contradictory and self-impeaching. We further find that these aspects of Mr. Koca's testimony reflect poorly on the attitude of Hatfield Electric regarding its QA/QC program, and therefore on Commonwealth Edison.

46. In sum, we find no reasonable assurance of adequate inspector training and certification at Hatfield Electric Company and therefore determine that the operating license cannot issue.

B. Michael A. Stanish

47. Commonwealth Edison also presented the testimony of Michael A. Stanish, Quality Assurance Superintendent for Commonwealth Edison at Byron. (Stanish, prefiled test. ff. tr. 7549) The Board first notes that Mr. Stanish's prefiled testimony nowhere mentions Hatfield Electric Company, but discusses the 82-01-19 reinspection and recertification program as it applies to all of Edison's contractors generally. Thus, we find that Edison chose to submit evidence of a scope broader than that called for in our July 7 Order, quoted supra, finding 2. However, as show below, neither the prefiled testimony nor the demonstrated knowledge of Mr. Stanish concerning the program and Hatfield was sufficient to satisfy the Order.

48. Mr. Stanish discussed generally the recertification aspect of the 82-05-19 program. Mr. Stanish refused to admit that any contractor's program was not in compliance with the ANSI

standard, and asserted that each contractor had met "the intent of ANSI". (tr. 7552-53) Region III is of the contrary opinion. (see findings 98, 102, 109, infra).

49. The evidence is clear that at least one contractor, Reliable Sheet Metal, had never even committed to ANSI at all (Panel, tr. 7816), and there were others who were not in compliance with it; (Id.). If Edison did not know this, it should have known. We find this indicative of Commonwealth Edison's poor corporate attitude.

50. Mr. Stanish generally described the review and recertification aspect of the program required by 82-05-19, and stated that this was completed in the Spring of 1983. (tr. 7559) He testified that all contractor certification files were reviewed at least twice, once by the contractor and once by Commonwealth Edison (tr. 7561), and that review of these files was completed in September 1983 as to Hatfield (tr. 7562), and all other contractors. (tr. 7572)

51. Under the program, Edison is to review 100% of contractor certification files. The review began in October, 1982. (tr. 7640) It was stopped because the contractors were not properly documenting inspector certifications (id.) and Edison's new contractor requirements were being inconsistently implemented (tr. 7562). The review began again in February, 1983. (tr. 7641)

52. Given the fact that inconsistent implementation of the ANSI requirements was the cause of the 82-05-19 finding in the first place (see findings 93-99, infra), the Board finds that this is the second incident of inconsistent implementation among

Edison's contractors, and is typical of Commonwealth Edison's insufficient oversight of those contractors.

53. The Board therefore finds that Edison has been unable to implement effective oversight of its contractors, even with respect to a matter as simple as appropriate documentation.

54. The Board notes that Mr. Hughes' file was not reviewed at all by Commonwealth Edison in its review of contractor inspection certification packages. (tr. 7571)

55. We also find, as shown in the findings immediately below, that Mr. Stanish either is being less than truthful with the Board, or he lacks knowledge of Edison's contractors' QA programs.

56. While Mr. Stanish was presented as one having knowledge of Hatfield's recertification program, the Board finds that he exhibited a striking lack of knowledge about that program. He did not know:

- (a) the total number of contractors involved in the program (tr. 7564);
- (b) the number of contractors required to review their revised programs (Id.);
- (c) whether Hatfield was included in the group of those contractors who had to revise its program a second time (tr. 7563);
- (d) the auditing history of Commonwealth Edison with respect to Hatfield's compliance with ANSI standards (tr. 7575);
- (e) most of the six changes made by Hatfield as a result of 82-05-19. He was aware only of changes regarding the minimum hours for on-the-job training and the minimum number of test questions (tr. 7565, 7567-68);
- (f) the extent to which Hatfield was following this very aspect of Hatfield's program (tr. 7578);

- (g) how many Hatfield inspectors required retesting due to the fact that Hatfield had used tests with fewer than 4 questions, although he admitted it was at least half of the 60 to 70 Hatfield employees' files reviewed (tr. 7580);
- (h) whether the 82-05-19 program applies to cable pan hangers (tr. 7708-09) in spite of the fact that it was a cable pan inspector, Mr. Hughes, whose testimony instigated this phase of the hearing.

57. The Board finds that Edison's offering of Mr. Stanish as a witness in this hearing, when Mr. Stanish failed to be even minimally familiar with the review and recertification aspect of the 82-05-19 program as it relates to Hatfield Electric Company, is an example of Edison's casual attitude toward this hearing process. The Board is distressed at this apparent attempt to keep the information set forth in the Board's July 7 Order from being heard by presenting evidence through a witness with such minimal knowledge of a specific subject about which an evidentiary showing was specifically ordered.

58. The Board finds that Commonwealth Edison's purported review of all new contractor inspector certification files is inadequate. For example, while the program purports to double-check the contractors' work (tr. 7633-34), Edison merely reviews the documents and does not verify the contents of those documents. (tr. 7635-36) Indeed, as Mr. Stanish clearly testified, Edison reviews consist only of determining whether the documents themselves are in the files. (tr. 7642) Because, as shown above (see finding \_\_\_\_), Hatfield does not verify the contents of the documents either, we find that Commonwealth Edison's review of contractor inspection certification packages to be ineffective at best, and nothing more than a formalistic



gesture completely lacking in substance.

59. The Board finds that Mr. Stanish was not forthcoming in his testimony before the Board. For example, he testified that when an inspector was found to have been unqualified but subsequently requalified, that inspector's entire prior work is reinspected. (tr. 7645-46) However, during cross-examination, Mr. Stanish later admitted that in fact not all the work is reinspected, but only a portion of it. (tr. 7647) Indeed, as to the inspectors who were not qualified even though certified, their work may not be reinspected at all (tr. 7649).

60. The Board finds Mr. Stanish gave evidence demonstrating Commonwealth Edison's poor corporate attitude. For example, Edison starts with the assumption that an inspector was qualified, irrespective of whether he was properly certified. (tr. 7648) Mr. Stanish refuses to admit that there were inspectors who were unqualified at all (tr. 7745). This is in direct conflict to Mr. Teutken's testimony which shows that thus far the sampling program has uncovered two inspectors who were unqualified, at least during their first three to six months on the job (Teutken, prefiled test. ff. tr. 7760 at pp. 9-10) Region III agrees that there were unqualified inspectors working at Hatfield. (see generally findings 93-109, infra)

61. The Board finds further evidence of Hatfield's, and Commonwealth Edison's, poor attitude toward QA generally and the reinspection program specifically, with respect to certain bolt torque inspections. Where torque checks on a bolting system were initially inspected on a 10% sampling level, and this inspection was subject to the 82-05-19 reinspection program, Hatfield, and



Edison, took the position that they could not recreate the inspection because they did not know which 10% of the bolts had been inspected in the first place. (tr. 7719-21) The Board notes that only one inspector was involved in bolting inspections. (Teutken, prefiled test. at p. 8)

62. First, the Board finds that failure to record and document which 10% of the bolts had been inspected is a failure on the part of Hatfield, and therefore Edison.

63. Second, and as Judge Cole pointed out in his questioning of Mr. Stanish, if Hatfield had reinspected 10% of the torque bolts, it could determine whether the original 10% inspection had given an accurate picture of whether the work had been properly done in the first instance. (Stanish, tr. 7723)

64. Even Mr. Teutken could not persuasively explain the failure of the reinspection program to cover this aspect. He relied on statistical relationships and asserted overinspections about which no evidence was produced. (tr. 7791-92) The Board finds this explanation completely unpersuasive.

65. Commonwealth Edison's continued reliance on overinspections and surveillances (tr. 7794) is also unpersuasive. It has been proven to be ineffective because it did not find the problems found with the two inspectors who failed the first three months of the reinspection program (Teutken, prefiled test. p. 9) and are projected to fail the second three months of the reinspection program. (Id.) Additionally, visual weld attributes had previously been overinspected by Pittsburgh Testing Laboratories. (Panel, tr. 7977) The Board

must therefore find that Edison has exhibited a lack of concern with the quality of the work, and an emphasis on how the program appears to the NRC.

66. The Board finds that Edison chose not to introduce any evidence regarding possible fraudulent practices in the contractors' certification program (Stanish tr. 7651), and in addition finds that Edison has taken no effective measures in this area. Mr. Stanish testified that Edison has done two things to see whether Hatfield has engaged in fraudulent practices, (a) attending Hatfield training sessions, (b) reviewing on-the-job-training on an ad hoc basis and unknown frequency. (tr. 7659) Edison could have, for example, reviewed tests, audited testing procedures, interviewed workers, or a myriad of other activities. They chose not to do so, therefore the Board has no choice but to find that Edison has done virtually nothing to insure that its contractors do not use fraudulent practices. Further, the Board finds that Edison has done nothing (save for increasing at some unidentified level its attendance at Hatfield's training) (tr. 7660-61) in response to the NRC's certification and qualification program concerns, with respect to fraudulent testing practices.

67. The Board finds that Commonwealth Edison's responses to I & E Report 82-05-19 is indicative of its recalcitrance toward proper QA practices. The report was issued in June, 1982. Commonwealth Edison responded in July, 1982, but its first proposed corrective action was rejected by Region III because the action did not address reinspection. (tr. 7697-99) It was not until February, 1983 that Commonwealth Edison was able to devise a program sufficient to satisfy Region III (tr. 7699). The Board

finds that Edison has been recalcitrant and has demonstrated an unwillingness to assure that inspectors accomplished their work in an adequate manner, inasmuch as a reinspection program should be the major facet of Edison's proposed corrective action, given the findings of 82-05-19 that inspectors had in fact been improperly certified.

68. The Board finds that Region III has criticized Commonwealth Edison in its auditing of the reinspection program. (tr. 7699) Edison's first (and, we assume, only) audit did not take place until July 18, 1983 (Stanish, prefiled test. at p. 5), and should have been done much earlier (Panel, prefiled test. Attachment D [I & E 454/83-26])

69. The Board finds that Edison's direct testimony was cast so as to keep from the board any but the most general evidence of this audit. (See Stanish, prefiled test. at 5-6) Indeed, were it not for the fact that intervenors' counsel saw Mr. Stanish refer to a document during cross-examination, and demanded to examine the document, neither Edison's audit report nor the details of the audi, would have been presented to the Board.

70. When Edison finally audited its contractors' implementation of the reinspection program, it found that Hunter Corporation and Hatfield Electric were not issuing DRs for non-conforming conditions found during the reinspection program. (tr. 7702) Indeed, Edison's audit found that Hatfield was not following their own program in this respect. (tr. 7703-04)

71. The Board finds that Hatfield's failure to use DRs for the nonconformances uncovered during the reinspection program

serves the purpose of keeping these nonconformances out of the trend analysis. (tr. 7752) Further, given Mr. Hayes' testimony (Panel, tr. 7806-10) that over 800 welding defects have been found so far in the reinspection program, the Board finds that any trend analysis of Hatfield Electric has been skewed to such an extent that it is completely unreliable.

72. Most importantly, the audit found that Hatfield was not properly documenting what it was doing, a finding identical to that highlighted in 82-05-19. (tr. 7708) In fact, Hatfield was not even performing the evaluation it had committed to. (Id.)

73. The Board also finds that in at least two respects, Mr. Stanish contradicted Mr. Koca's testimony. First, Edison's audit found that Hatfield had certified two people without verifying their education (tr. 7725-27) Commonwealth Edison forced Hatfield to revoke the certification of these two people. (Id.) Secondly, according to Mr. Stanish, Edison will not allow Hatfield to certify those who do not have a GED (Id.). (Compare Mr. Koca's testimony, finding 21, supra.)

74. The audit also found that Hatfield's interpretation of the 82-05-19 reinspection program allowed a much smaller sample size than did the program set forth by Edison. (tr. 7727-28) This fact, coupled with the interpretation of the bolt torque sampling technique (see findings 61-64, supra) forces the Board to conclude that Hatfield was looking for ways to nominally comply with the reinspection program, while ignoring the substance of the problem. Further, there were no instances where Hatfield had interpreted the 82-05-19 reinspection program in a more demanding way than did Edison. (tr. 7733) The Board



therefore finds that Hatfield Electric's posture reflects poorly on it, as well as on Commonwealth Edison.

75. The Board notes that Mr. Stanish indicated that he saw a statement by John Hughes in January, 1983. On cross-examination by the NRC staff, the staff attorneys were not interested in establishing whether Mr. Stanish saw Mr. Hughes' statement to NRC Office of Investigation, to which he clearly should not have had access to, or whether he saw Mr. Hughes' hand-written statement, which was a public document written and submitted to this Board in April. (tr. 7733-34)

76. Based on the magnitude and longevity of the 82-05-19 findings, the Board finds that Commonwealth Edison's and Hatfield's auditing programs are inadequate. Although Commonwealth Edison was required to audit Hatfield, and although Hatfield obtained the lowest possible ratings in the SALP report, ("Systematic Assessment of License Performance") (tr. 7679-80), Mr. Stanish was unable to think of any particular problem with Hatfield Electric. (tr. 7737-38) The Board finds that this refusal by Commonwealth Edison's to so much as consider that a contractor is involved in substandard QA performance is indicative of Edison's poor quality assurance attitude.

77. In sum, the Board finds that Mr. Stanish lacked specific knowledge regarding the reinspection program as it applies to Hatfield Electric Company, was evasive and not forthcoming in his testimony, and demonstrated well Edison's cavalier attitude towards Quality Assurance at Byron.

C. Richard Teutken



78. Commonwealth Edison also submitted the testimony of Mr. Teutken, Edison's project engineer at Byron. (Teutken, tr. ff. 7760) The project construction group was responsible for designing the reinspection program. (Stanish, tr. 7744)

79. Mr. Teutken, as an Edison employee responsible for implementation of the program, has both the QC and production responsibilities. (tr. 7767) Because the reinspection program is a QA/QC function, this raises a conflict and is another example of insufficient separation of QA and production by Commonwealth Edison, as set forth in Intervenor's Contention 1-A.

80. Mr. Teutken described a meeting of August 4, 1983 between Edison and the NRC staff, in which Region III expressed concern that Hatfield may not be taking the time and effort to perform an adequate reinspection, due to the state of Hatfield's records. (Teutken tr. 7756-58; see also Panel tr. 7855-56)

81. Mr. Teutken described the details of the reinspection aspect of the 82-05-19 program (tr. beginning at 7769). Specifically, a 20% random sample of inspectors was selected, and Region III selected four additional inspectors. A total of 22 inspectors were thus selected, all of whom had been certified prior to September, 1982. (tr. 7771) As to these 22 inspectors, all of their "accessible" work during the first 90 days of their certification will be reinspected. (Id.)

82. Eighty percent of Hatfield's inspectors will not be covered by the first phase of the reinspection program. (tr. 7771-72)

83. In the event an inspector's work fails to meet certain standards, a second 3-month period is reinspected. (Teutken,

prefiled test. at 6) Should an inspector's average for six months fall below a certain percentage, the program is expanded into a second phase in which the sample size is increased. (Id) Only under the circumstances when an inspector fails the second three months of the reinspection program will all of that inspector's work be reinspected. (tr. 7787)

84. The program is designed to expand only in the area in which the sampled inspector was inspecting, for example, in the visual weld area. (tr. 7773) Even if the program is expanded to its second phase, only 30% of Hatfield's inspectors will have the first three months of their work inspected. (tr. 7774)

85. The Board finds that such a procedure is inadequate, for it fails to take into account that the 82-05-19 reinspection program was aimed at all areas inspected by Hatfield. Therefore, the identification of the fact that unqualified inspectors existed in one area should raise a question of whether additional unqualified inspectors exist in the 80% of the unchecked inspectors in all other areas.

86. In addition, not all of the work done by Hatfield inspectors, even those who have been found to be unqualified, will be reinspected. Mr. Teutken estimated that only 5% to 10% of the total of Hatfield's work will be reinspected. (tr. 7777)

87. At the same time, the program does not encompass some work from each inspector. (tr. 7778-79)

88. Additionally, the reinspector is aware of the identity of the inspector whose work is beng reinspected. (tr. 7784) Because the reinspection includes subjective judgments (see

generally, Panel, tr. 7997-8006) the program leaves room for an inspector to take into account the identity of the original inspector. The Board finds this is an inadequate practice.

89. Contrary to standard practice, and over the objection of the Intervenor, the Board allowed Mr. Teutken to modify his written testimony after it had been sworn to, admitted, and cross-examined upon, and even though Mr. Teutken had modified other portions of his testimony orally before submitting it into the record and adopting it as his own. (Tr. 7787-90) These modifications concerned the projected passing rate of the second three month reinspection of two Hatfield workers who had failed the first three months inspection work (see Teutken, prefiled test. at p. 9), and were made without affording an opportunity for review or cross-examination by the parties. (see tr. 7789-90)

90. The Board finds that it must accept Mr. Teutken's testimony as originally filed, and not as modified. The Board additionally finds that the form of modification is relevant to the forthrightness of Mr. Teutken's, and Commonwealth Edison's, presentation, as well as containing information contrary to Mr. Teutken's cross-examination testimony (see tr. 7763).

#### IV. NRC REGION III PANEL

##### A. 82-05-19

91. The NRC staff presented a panel composed of Region III inspectors William A. Forney, Kevin Connaughton, and D.W. Hayes. (tr. ff. 7801)

92. Mr. Hayes supplemented the panel's testimony by stating

that certain welding allegations had been substantiated and that the welding could be worse the Region III is now aware. (tr. 7806 and ff.) Further, Region III was unequivocal that no operating license will issue until resolution of the welding problems and all allegations. (tr. 7809-10)

93. Region III is not in agreement with Commonwealth Edison's interpretation of the applicable ANSI standard. (Panel, tr. 7802-05) The Board finds that the ANSI requirements have been committed to by Commonwealth Edison (with the exception of the high-school diploma requirement) in spite of Mr. Stanish's and Mr. Koca's assertions that the ANSI standards are merely guidelines. (See Koca, tr. 7436; Stanish, prefiled test. p. 13) The Board finds that the ANSI standards have not been compiled with the Commonwealth Edison and this is an additional reason why the operating license shall not issue. (Panel, tr. 7803-05)

94. In inspection report 82-05-19, Mr. Forney found that there was no formalized Commonwealth Edison policy as to how contractors were to apply to ANSI standards. (tr. 7813) Although Edison had in place an auditing program to look at its contractors' qualification and certification programs, it had no formal program against which to review what each contractor was doing. (tr. 7966) It is this flaw in Commonwealth Edison's program that allowed the contractor variation in the first instance, which variation resulted in the reinspection program required by the findings of 82-05-19. (Id.)

95. The program which Commonwealth Edison had in place prior to the findings of 82-05-19 was inadequate and resulted in no assurance that its contractors' programs meant the intent of



ANSI, let alone the standard itself. (tr. 7966) The examples given by Mr. Forney of instances where "equivalent related experience" was in fact not "equivalent" is further evidence that Commonwealth Edison did not meet the intent of ANSI. (tr. 7967-68)

96. Further, the Board agrees with the Staff's conclusions that Commonwealth Edison's program was ineffective. (tr. 7968) This is not, as Edison would cast it, a question of interpretation, but rather of application of the ANSI commitments. (tr. 7968-69)

97. Commonwealth Edison knew, as early as 1975, that the NRC required compliance to ANSI, and it was understood by Edison and the NRC that the ANSI requirements governed the Byron program. (tr. 7820, 7821, 7970) On March 16, 1981, Commonwealth Edison formally committed to the ANSI requirements. (tr. 7821) It was Edison's responsibility to see to it that its contractors also complied with ANSI, and Region III's responsibility to see to it that Commonwealth Edison was doing its job in this respect. (tr. 7822)

98. NRC inspectors found that Hatfield has a history of non-compliance with the ANSI standard dating back to the latter part of 1978. (tr. 7822) Indeed, Edison itself had a history of non-compliance to ANSI. (tr. 7823) All these non-compliances had been closed out with purported corrective action by Edison and Hatfield. (Id.) However, by March 1982, at the time Mr. Forney performed his inspection resulting in finding 82-05-19, Hatfield was again not in compliance with ANSI, as were the

other contractors. (tr. 7823-24)

99. Commonwealth Edison's audits of Hatfield had found non-compliances with respect to the ANSI standards; however, Edison required correction only of the specific non-conformances identified and did not look at Hatfield's whole program. (tr. 7825)

100. Therefore, the Board finds that Commonwealth Edison knew that Hatfield was not in compliance with ANSI, and further finds that its corrective action with respect to Hatfield was aimed only at the specific non-compliances which the NRC inspections and Commonwealth Edison audits happened to uncover. Again, Edison's myopic view -- its correction of specific problems and ignorance of the signs of potential shortcomings in the entire program -- is amply illustrated.

101. Mr. Forney categorized his finding as substantive and non-substantive. A substantive finding is that which goes to the propriety of qualification or certification itself, while a non-substantive finding would be that which is a problem concerning only appropriate documentation. (tr. 7825-30, 7836) Mr. Forney could not recall the number of findings in each category (id.) and testified that some of the findings are still not able to be categorized as either substantive or non-substantive (Id.).

102. The fact that over 800 weld attributes were found, as of June 4, 1983, to have passed initially inspection when in fact they should not have passed inspection (Panel, tr. 7807), proves unequivocally that there were unqualified inspectors working for Hatfield at Byron. The fact that even in the face of this evidence the reinspection program remains a sampling program and

not a program aimed at demonstration of qualification of all inspectors, forces the Board to conclude that both Commonwealth Edison and Region III have abdicated their Quality Assurance responsibilities.

103. Commonwealth Edison's reliance on the 82-05-19 reinspection program to demonstrate that all inspectors were qualified, even if not properly certified, is misplaced, for it is a sampling program only and therefore it cannot demonstrate anything as to those inspectors whose work is not included.

104. Mr. Forney did not appear to know precisely what files were reviewed by him, Commonwealth Edison, and Hatfield for the recertification aspect of the 82-05-19 program. Mr. Forney testified that the review of files was limited to those files since the formal ANSI commitment date of March 16, 1981. (tr.7837-38) It was not until the second day of the panel testimony that Mr. Forney changed his testimony, or at least attempted to do so, to give the impression that files prior to the formal ANSI commitment date had been reviewed. (see tr. 7964-65)

105. Inspectors who were certified prior to Edison's ANSI commitment will not necessarily have their work reinspected. (tr. 7838)

106. The Board finds that Commonwealth Edison and the NRC ignored any problem in files where the certification date was before March 1981 and instituted a simplistic and inadequate solution to the problem. In the alternative, if files before March 16, 1981 were in fact reviewed, we find Region III

exhibited inadequate knowledge of the 82-05-19 program.

107. No attempt is being made to identify all unqualified (or, indeed, all erroneously certified) inspectors, much less all substandard work. The Board finds that there is an admitted problem with Hatfield's certification program, an admitted problem with the quality of Hatfield's work, and an inadequate solution to each. Therefore, the Board has no choice but to conclude that reasonable assurance has been shown.

108. Further, the Board finds there were substantial defects in Mr. Forney's 82-05-19 inspection. For example, he relied on the documents in the file, and made no attempt to verify if the information contained in the documents was accurate, or even whether Commonwealth Edison or Hatfield had verified it. (tr. 7838-39) At the same time, Mr. Forney asserts that mere reliance on a document is "meaningless". (tr. 7839)

109. The Board adopts Region III's view (Panel, tr. 7841) in spite of Mr. Stanish's assertion to the contrary that Hatfield employed inspectors not only improperly certified, but unqualified. (tr. 7841) Although Mr. Forney testified that he cannot unequivocally state that the actual work done may have been substandard, the indications of the 82-05-19 reinspection program points to the fact that unqualified inspectors were indeed used. (tr. 7842) This fact obviously has significant safety implications. (tr. 7841)

110. Widespread findings of non-compliance with ANSI can be a symptom of a poor Quality Assurance attitude. (tr. 7846) Irrespective of the "substantive/non-substantive" categorization, failure to comply with ANSI is a non-compliance with NRC



regulations. (tr. 7842) The Board finds that, given the magnitude of the 82-05-19 inspection, and the magnitude of the findings, (that is, every contractor involved in the program had inspectors who did not meet the ANSI standards), this is more than a symptom, but direct evidence of a poor quality Assurance attitude on Edison's part.

111. Commonwealth Edison's initial response to the 82-05-19 findings posited a program less substantial than the program which is presently being implemented; in fact, Commonwealth Edison refused to admit that there were unqualified inspectors (tr. 7859-60), in spite of the fact that there were unqualified inspectors working at Hatfield. (tr. 7847-48) Commonwealth Edison made no provision in its proposal for reinspection of any work. (tr. 7859-60)

112. In fact, because Region III did not review every file, Edison concerned itself only with the non-compliances uncovered by Region III and with other non-compliances which may have existed. (tr. 7861) The Board finds this again is clear evidence of Edison's poor quality assurance attitude due to the fact that Edison submitted a proposal that did not include any reinspection of work done by unqualified inspectors. Again, this is another example of Commonwealth Edison taking too narrow a view.

113. Commonwealth Edison has in the past been criticized for taking such a myopic view (tr. 7862) and specifically with respect to the 82-05-19 reinspection program.

"Additional inspection of open items from the team

inspection and findings from other functional areas, however, continued to identify generic quality problems and concerns throughout the remainder of the assessment period. These observations and findings indicated that the licensee at times did not address corrective actions beyond the specifics in the noncompliances, his corrective measures were not effective in all cases, in at least two instances failed to promptly address potentially reportable items, and exhibited a lack of thorough understanding of quality requirements. These observations are evidenced by the following examples:

"-- Followup on the noncompliance concerning QA/QC personnel qualifications (Item 2 above) indicated that the qualification/certification practices for QA/QC personnel were deficient in almost all contractor organizations performing safety related work. Subsequent to the end of the assessment period, an acceptable proposal for corrective action was obtained, is currently in progress and is scheduled for NRC review and evaluation in July, 1983."

(tr. 7865, quoting pp. 16-17 of SALP report)(emphasis supplied.)

114. The reinspection program would not have been necessary had Commonwealth Edison, at the start of construction, established a formal program for contractor training, qualification and certification, and seen to it that contractors adhered to the program. (tr. 7869) Therefore, the entire responsibility for the fact that the recertification and reinspection program was necessary must rest solely on Edison's shoulders.

#### B. ALLEGATIONS AGAINST HATFIELD

115. In August and November 1982, and January and March 1982, NRC Region III inspectors received allegations from Hatfield Electric workers. Of a total of 64 unique allegations received by Region III with respect to Hatfield Electric, nearly half, or 31, remain open. (tr. 7954) The Panel admitted that its investigation of allegations against Hatfield has not been

expeditious. (tr. 7870)

116. The Region III panel testified that allegations indicating violations of a continuing nature are investigated sooner than others. (tr. 7870) The Board finds that, if this is in fact the standard used by Region III, such a standard has not been applied to the allegations received at Byron. For example, Mr. Hayes' oral testimony substantiated, for the first time, allegations of welding deficiencies received a year prior to this hearing. (tr. 7806-7808) The allegation that Hatfield's training and retraining programs are inadequate is still uninspected. (tr. 7888-90)

117. The Board finds that Panel members were unable to articulate when or under what circumstances an allegation is deemed to have been substantiated. (tr. 7875-7877) In any event, it is a subjective standard. (tr. 7876)

118. The fact that more than one worker made the same allegations gives more credence to the allegations. (tr. 7877)

119. Of the 31 unique allegations received in August 1982, four of those allegations remain uninspected; indeed, Region III appears not to have even looked at these allegations as yet. (tr. 7877).

120. The Board is disturbed by Region III testimony that it is "not unusual" to wait a year before investigation of an allegation (see tr. 7878), due to the obvious staleness of the facts. Given the fact that the average inspector stays at Byron only six to nine months, (Teutken, tr. 7776), the Board finds that Region III's foot-dragging with respect to these allegations have undermined the effectiveness of the inspection and

investigation process.

121. Region III testified that the Region intends to review all allegations before issuance of the operating license, and that the operating license cannot issue until all investigations and inspections have been completed. (tr. 7882)

122. Region III members testified that they are not necessarily relying on the 82-05-19 reinspection program to resolve this allegation; however, panel testimony on this point under cross-examination was unpersuasive. (tr. 7892) The Board finds such reliance would be inappropriate given the fact that the reinspection program will result in a reinspection of only 5 to 10% of Hatfield's work. (Teutken, tr. 7777)

123. The Board finds that the allegation regarding Hatfield's training and certification program (tr. 7888-90) must be substantiated. First, Region III must have found inadequate inspectors to have been a serious problem, as demonstrated by the fact that finding 82-05-19 resulted in a reinspection program. Unfortunately, it appears that when the allegation comes from a worker, Region III takes the position that inspection can wait, even if as here it is within the category of being of a continuing nature. The Board has no choice but to find that there is no reasonable assurance that inspectors doing the reinspection program at Byron are properly qualified. (see findings immediately following)

124. This allegation of improperly qualified and certified inspectors has thus far resulted in two items of non-compliance, one regarding a Level II welding inspector and one regarding



Hatfield's Quality Assurance Manager. (tr. 7885)

125. The welding inspector was certified as a Level II inspector on October 14, 1982, which is after Hatfield supposedly revised its reinspection program. (tr. 7886) He had had no prior experience. (tr. 7915-17) This certification of an obviously unqualified individual came after changes to Hatfield's certification program, and yet was not found in Commonwealth Edison's purported 100% review of Hatfield's files. (Id.) Therefore, and as the panel admitted (tr. 7917) Hatfield continues to certify unqualified inspectors.

126. The Board views certification and qualification programs at Hatfield as of a continuing nature, as proven by the fact that this inspector was certified after Hatfield had revised its certification program.

127. The allegation regarding Hatfield's Quality Assurance Manager concerned incompetency. The certification package was reviewed, and it was found that in fact the Quality Assurance Manager did not have the requisite background. (tr. 7877-88) In essence, he had been certified on the basis of an unverified letter in his file, and neither Commonwealth Edison nor Hatfield had checked his background. (tr. 7917-2')

128. Thus, the Board finds yet another example of Hatfield's singular reliance on documents to certify an unqualified person. Indeed, the NRC's inspection found that this person did not possess the requisite experience, even given credit for time at Hatfield in that position. (tr. 7921-22)

129. This non-compliance resulted in the issuance of a non-compliance and the removal of this person from his position.

(tr. 7921)

130. While removal of the Quality Assurance Manager from this position was an appropriate response, the Board finds that insufficient corrective action was taken. The QA Manager had been at Byron for a number of years, and, when describing corrective action taken, Mr. Forney relied on Edison's review of Hatfield certification packages. (tr. 7921) While the Quality Assurance Manager's responsibilities extended well beyond certification of inspectors, there was no other corrective action taken. (Id.)

131. The person who actually inspected this allegations was not produced by the staff (tr. 7888) and details of the inspection were impossible to develop at the hearing. Therefore, the Board finds that the staff did not comply with the Board's July 7 order as set forth above.

132. The allegations regarding destruction of discrepancy reports have been substantiated, at least in part (tr. 7894) yet, inexplicably, no notice of violation was issued by the Region. The panel's testimony was clear that the discrepancy report had been altered or tampered with in some fashion. If Hatfield had been using something other than the loose-leaf, non-tamperproof log it used since the beginning of construction (tr. 7896), this would not have happened. The Board finds no excuse was offered by Hatfield or Edison for this long-standing violation.

133. The Board finds additional evidence of Region III's reluctance to substantiate allegations in testimony concerning improprieties in a weld traveller package. In fact, such

improprieties were found, but no non-compliance was issued. (tr. 7903-04)

134. The Board notes that, although the order directing this evidentiary proceeding ordered a full presentation of allegations, the Board would not allow inquiry as to some of those allegations. (see tr. 7905)

135. A further example of an allegation substantiated, but for which no action was taken, is found regarding the allegation that inspectors were told not to remove fireproofing for weld inspections, but rather to rely on documentation from another inspector. (tr. 7906-07) As the Region's testimony on this issue shows, what the allegor said was in fact true (tr. 7906) but the 82-05-19 program is being relied upon to resolve the issue. (tr. 7907)

136. With respect to Mr. Hughes' testimony of on-the-job-training time, Mr. Hayes relied on the Exhibit G from Mr. Hughes' certification files to conclude that the average time for inspection was two hours. (tr. 7899) Hatfield, of course, was using as a quota or, or at least an estimate of one and one-half hours per inspection. (See finding tr. 7900-01, supra) Mr. Hayes attempted to justify this half-hour difference per inspection as the time required to get to an inspection point. If true, this shows that Mr. Hughes did not receive two hours on-the-job-training time per inspection, for surely he should not have been credited with time walking through the plant and climbing a scaffold. Indeed, Mr. Hayes did not even know what was encompassed within this "average time per inspection". (tr. 7900)

137. Mr. Forney characterized the discharge of two Hatfield employees for lack of productivity as due to "goofing off". (tr. 7901) However, the Board finds that no evidence, indeed nothing other than the mere insinuation of counsel, has been introduced to that effect. Therefore, we find Mr. Forney's characterization as unreliable and unjustified.

138. At tr. 7910-13, the Region witnesses explained an allegation which was claimed to have been too generalized to pursue, but which in fact, the Region simply ignored.

139. The allegation that a Level I welding inspector was qualified was discussed. (tr. 7923-24) The Board finds that Region III submitted absolutely no evidence that the Region's inspector did anything other than a paper review of the certification file, which, as has been amply demonstrated, is meaningless. Further, none of the Region III panel members appearing before the Board had been involved in this inspection. (Id.)

140. None of the allegations received in January 1983 had been inspected as of the date of the hearing, some eight months later. (tr. 7933-34) One of these allegations included Mr. Hughes' failed test, and immediate testing with supplied answers, and that others were similarly tested. (tr. 7935) The Board finds that this situation falls within the circumstances indicating that an inspection should not be delayed, i.e., it is of a continuing nature and can have significant safety ramifications.

141. Region III purported to investigate Mr. Hughes'



allegations that his training was perfunctory and that the documents regarding his training were suspect. (see tr. 7937-38) Region III had interviewed Mr. Hughes four or five times prior to the May hearing, but only became aware of the allegation during Mr. Hughes' May testimony before the Board. Given that Mr. Hughes was willing to come forward to Intervenors with this fact and to make extensive public statements, the Board finds no reason why this fact could not have been uncovered by Region III. We therefore find this as additional evidence of the inadequacy of Region III inspection program.

142. In attempting to ascertain how much on-the-job training Mr. Hughes had received, Mr. Hayes went back to original inspection reports. The Board finds two obvious errors in Mr. Hayes' technique. First, the original inspection reports did not include the number of hours per inspection. (tr. 7947) Although the panel agreed that Mr. Koca's testimony of two hours (plus or minus five minutes) per inspection is wrong (tr. 7948), Mr. Hayes assumed that each inspection in fact took two hours.

143. Second, although Mr. Hughes' records show 64 hours of accompanied inspections (or 32 inspections), Mr. Hayes could locate only 24 of the reports. (tr. 7944-48) Therefore, 8 of the inspection reports have inexplicably vanished from Hatfield's files.

144. On the basis of Mr. Hayes' testimony, the Board finds, as Mr. Hayes should have, that Mr. Hughes did not receive the required 40 hours of on-the-job training required for certification to a single procedure. Twenty-four verified inspections at Hatfield's suggested time of one and one-half

hours per inspection results in fewer than the required amount: 36 hours. Therefore, given the wide range of possible inspections of differing lengths, compared with Hatfield's purported documentation, we must find that under no reasonable interpretation of the facts could Mr. Hughes have been properly certified.

145. Two of the examinations taken by Mr. Hughes which were produced by Edison lacked the required 40 questions. (tr. 7948) The Panel members attempted to assert that these particular exams were not required to have the required 40 questions because they were not exams regarding a particular procedure. (Id.) Such a view is nonsensical, for a review of the examinations (Koca, Exhs. H-M) shows the following:

Exh. H	20 questions	(no specific procedure)
Exh. I	50 questions	(no specific procedure)
Exh. J	40 questions	(10 questions for each of four procedures)
Exh. K	40 questions	(10 questions for each of four procedures)
Exh. L	20 questions	(10 questions for each of two procedures)
Exh. M	40 questions	(3 procedures, not differentiated)

Rather, it appears that Hatfield was using approximately ten questions for each procedure tested, instead of the required 40.

146. In any event, this is a Commonwealth Edison, and not an NRC requirement (tr. 7949), and therefore the panel is not competent to render such an analysis. Further, Mr. Stanish did not limit his testimony regarding the required number of questions to any particular type of test (Stanish, tr. 7580).

147. On the basis of the findings above, the Board must conclude that Hatfield was not following the testing requirements

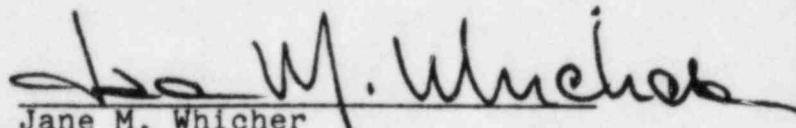
imposed on it by Commonwealth Edison, nor the ANSI certification requirements, and that, in addition, the staff has failed to provide adequate evidence ordered in the July 7 order.

V. CONCLUSION

148. Because no reasonable assurance has been shown during this evidentiary proceeding that Hatfield's QA program has been effective, and because the testimony as to resolution of all outstanding allegations is predictive only, and because neither Edison nor the staff with the July 7 order, the Board finds that the operating license for Byron may not issue.

Respectfully submitted,

September 30, 1983



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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
COMMONWEALTH EDISON COMPANY	)	Docket No. 50-454
	)	50-455
(Byron Station, Units 1 and 2)	)	

CERTIFICATE OF SERVICE

I hereby certify this 30th day of September, 1983, that copies of "JOINT INTERVENORS' PARTIAL PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW ON CONTENTION 1A" in the above-captioned proceeding were served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, by Federal Express, or by double asterisks, hand delivered.

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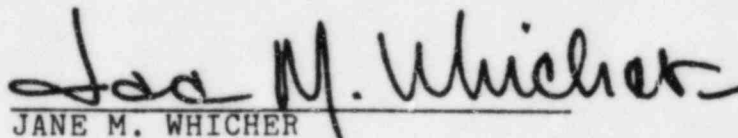
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