

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
COMMONWEALTH EDISON COMPANY) Docket Nos. 50-454
(Byron Station, Unit 1 & 2)) 50-455

INTERVENORS' REPLY TO COMMONWEALTH EDISON'S
PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF
LAW ON QUALITY ASSURANCE/QUALITY CONTROL

As provided by stipulation and the Board's oral ruling on August 9, 1983, Intervenors the Rockford League of Women Voters and DAARE/SAFE hereby reply to Commonwealth Edison's proposed findings of fact and conclusions of law served on August 9, 1983.

Introduction.

The overall thrust of Edison's proposed findings, as it was during the evidentiary session in March and April, is to broadly describe, in self-serving terms, its purported commitment to quality, while attempting to rebutt, on the very narrowest of grounds, evidence presented by Intervenors. As Intervenors show below, this same myopic and overly rigid view has permeated its quality assurance program as well.

Findings 450-455.

Finding 451 is irrelevant since even as a general policy "strong commitment to the safe operation of its plants" relates to some future performance not yet demonstrated and as the record shows (Tr. 2605, 2608) this policy does not relate to QA/QC.

Contrary to Edison's assertion, it did not present "in great detail" (F. 450, p.2) the QA program at Byron. Indeed, significant portions of the program, for example the 82-05-19 reinspection program, were summarily dealt with, or omitted entirely. A further illustration is provided by the prefiled testimony of Louis DelGeorge (ff. Tr. 2344) which was carefully planned to avoid mention of the fact that \$220,000 in fines was imposed on Edison by the NRC since the beginning of 1983. (DelGeorge, Tr. 2346.) Such an arbitrary cut-off date of December 1982 was not explained by the Applicant, and the clear inference is Edison's desire to keep this damaging information from the Board's attention, particularly since the February fines alone exceeded all fines for 1974-1978. (Id.)

Therefore, any inference of Edison's "strong commitment to the safe operation of its nuclear plants" (F. 451, p.3) is unjustified and conclusory testimony to that effect must be disregarded. Such a result is confirmed, if not mandated, by Mr. Shewski's unequivocal statement that Commonwealth Edison

emphasizes production over quality (Shewski, Tr. 2402.) Further, even if Edison's assertion were true, that "strong commitment" has not filtered down to its contractors in the context of QA/QC.

Findings 456-469.

This group of findings would have the Board conclude that Edison's "corporate structure is fully adequate to implement the strong corporate commitment to safety and compliance with the Commission regulations." (F. 469). The following bases, are given, and Intervenors here respond to them:

a. Edison's appointment in 1979 of a panel to advise it on the efficacy of its nuclear operations (F. 456). Edison has been operating nuclear plants for a number of years and the appointment of a panel containing "business leaders" smacks of nothing more than a public relations gimmick, particularly since neither the details nor the results of the panel's study, nor the identity of the panel members, were disclosed.

b. A corporate structure that purports to allow Edison "to effectively utilize experience at each of its facilities to improve its operations at all of its facilities" (F. 457). This belies such occurrences as the incidents discussed with Mr. Shewski on cross-examination, specifically, receipt and acceptance of nonconforming HVAC equipment at both Byron and Braidwood; receipt, acceptance and installation of hangers and

components by Systems Control Corporation at Byron and Braidwood (see Tr. beginning at p. 2382; Jt. Int. Exh. 1 and 2); and failure to take corrective action at Braidwood (after corrective action at Byron) of identical problems in steam generator bolting, which Westinghouse brought to Edison's attention with respect to both plants (Shewski/DelGeorge, Tr. 2454-2459; Jt. Int. Exh. 6; Panel, Tr. 3837).

c. A group of employees cast as "analogous to" the ACRS (F. 458-461). The Board must note, of course, that these are in fact Edison employees, as contrasted to the independent and statutorily-prescribed ACRS. The participation of Mr. Reea as chair of one industry committee that will evaluate the effectiveness of member QA/QC programs illustrates nothing more than the fact that Edison has strong attachments to nuclear power plant vendors, which can obviously raise a conflict. In F. 459, Edison seeks to emphasize the review of its nuclear operations conducted by two independent company organizations, one of which has the authority to perform an independent design review of various plant structures, systems and components. Yet not evidence was presented to show such independent review authority was ever exercised. The nuclear safety department team is no on site yet.

d. Purported independence of QA from production (F. 462-463). The only example Mr. Shewski could offer of such independence was the stop-work order imposed on Reliable Sheet Metals

which Shewski stated he would not lift even if fuel loading were delayed (Tr. 2580-2581). It was later clarified that, in fact, Edison will request a variance of this stop-work order from the NRC to permit fuel loading. (Tr. 2590-2593.) Further, Mr. Shewski admitted that enforcing a stop-work order might cause him to be fired. (Shewski, Tr. 2581.)

e. An ASME N-stamp (F. 466-467). Neither the qualifications for, nor significance of, such a designation was prof-fered.

f. The staff testimony (F. 468). That testimony was that there was "generally" sufficient independence (Panel, p. 15). The Region also testified, however, that there have in fact been instances of failure of separation among Edison's contractors. (Id.) While the panel attempted to minimize this inasmuch as the contractors will not be operating Byron (id.), the fact that these instances occurred under Edison's supervision shows that it is unfounded to assume that Edison will insure its own sufficient separation.

Further, Edison was severely criticized in 454/82-05-03 for lack of adequate staffing of its own QA department at Byron (See Panel Attachment A, p.35.)

Therefore, Edison has made no showing that would support the conclusion contained in F. 469. Even if it had made such a shwoing it says nothing about the quality of construc ion by Edison's contractors, for which Edison retains the ultimate responsibility.

Furthermore, the staff disclosed (Spraul, Tr. 3566-3567) that its review of Byron's QA program was based on the information contained in Chapter 7 of the FSAR and in the 1973 NRC standards, not the more stringent 1978 standards. . Because the size of the site QA organization will not be regulated by the NRC, there is no assurance that it will be adequate.

Findings 470-473, 685-689.

These proposed findings generally describe Edison's paper commitment to the operational phase of Byron and say nothing about the construction phase. To the extent they rely on testimony of Mr. Querio, who is the Station Superintendent for Byron, they should be disregarded. Mr. Querio showed, on cross-examination by Intervenors, to be so certain that there are no flaws in either the past construction, or the future operation, of Byron that he would not consider a hypothetical question involving a possible serious accident (Querio, Tr. 2746-2747.) Mr. Querio's inflexible belief that an accident could never happen at Byron suggests that he would refuse to recognize an accident in progress, rendering him an inappropriate person to be placed in a position of any authority over the operations of Byron. Mr. Querio also admitted knowledge of budget constraints recently imposed by Edison in plant operations. (Tr. 2717.)

Further, because the QC group at Byron is not even one of the four groups in the station's organizational set-up (F. 472-

473), but rather one of six subgroups under the "administration and support services" group (Querio, Tr. 2719) sufficient independence and authority is clearly not shown.

Mr. Querio admitted (Tr. 2718) that of the 470 people identified in F. 470 as involved in both preparation of the plant for operation and the performance of various preoperational testing and checks, none will be QA, and only six will be QC.

Findings 474-489.

This group of findings concerns the QA/construction organization at Byron. No showing was made that having a small staff of only twenty people (F. 475) involved in the construction QA group is adequate; indeed, as shown on cross-examination and described below, the group has tendencies to ignore problems uncovered in audits and to audit on such a small scale that significant problems are not found. In fact, because the QA group is of low prestige within the Edison corporate structure, Edison has had difficulty keeping a person in this position for any length of time. (Shewski, Tr. 2396-2401.) Further, prior to 1981, there were five different QA superintendents at Byron, with only limited experience, and an average of 14 months (the first few of which were spent in training) on the job.

Edison's delegation (F. 477-478) of its QA responsibilities have resulted only in paper commitments by its contractors and although Edison purports to require contractors to "employ

trained and qualified quality control inspectors" (F. 478), the contractors have often failed to do so. This is amply illustrated by the training of Mr. Stimfay-Stitz discussed below, as well as by the findings of I & E 82-05-19.

Contrary to the assertions in F. 479, Edison and its contractors do not inspect "all in-coming equipment and materials." This is illustrated by Blount Brother's practice followed by Mr. Stomfay-Stitz, and Mr. Barnhart of falsifying documents to indicate inspections had been performed when in fact they had not.

It is further illustrated by the situation with Systems Control Corporation. Edison knew, at least as early as a May 1977 audit of SCC, that there were grave flaws in both SCC's QA program and in the equipment itself. The problems continued for at least three years, without adequate corrective action by Edison. In spite of this knowledge, Edison waived receipt inspection of SCC equipment and, in spite of this knowledge and failure to inspect, installed the equipment at Byron (Shewski, Tr. 2502-2511; Panel, Tr. 3842 and ff.) In a seismic event, the acknowledged faults in the equipment could cause the operator to lose control of the reactor. (Hayes, Tr. 3849.) Edison is at a loss to explain this receipt and installation of knowingly faulty equipment.

Edison has also been frequently criticized by Region III for failure to adequately audit (See Attachment A to Panel

testimony, e.g., I & E Report Nos. 454/78-10, 454/79-16, 454-80-05, 454/80-18, 454/81-06, 454/82-05-10, 454/82-07.)

To the extent Edison relies on documents in its auditing activities and obvious changes to those documents to detect falsification of them (Tr. 2371-2381; F. 481-482), this reliance is misplaced, for, as Intervenors' witnesses each testified, documentation at Byron often does not reflect what in fact occurred. Further, even Edison does not claim that its audits uncover all problem areas (Shewski, Tr. 2403.) It audits, on a sampling basis, less than 50% of contractors' work (Tr. 2371-2381.) Prime examples of Edison's failure to uncover problems are those brought to the NRC's attention well after the fact by Intervenor's whistle blower witnesses. (Shewski, Tr. 2403.) Thus, there is no reasonable assurance, in fact no assurance at all, that Edison's auditing functions have been effective in uncovering problems at Byron. The Board should note that every single witness presented by Intervenors mentioned falsified, misleading and inaccurate documentation, as well as missing documentation, in his testimony. Surely if each former worker had observed this fact in connection with his various and diverse responsibilities at Byron, Edison is under a burden to rebutt this on a broad level. It has failed to do so.

Findings 490-499, 509-513.

These findings concern ANSI standard N. 45.2.6 and the 82-05-19 reinspection program, the subjects of the May

and August testimonial phase of the hearings, will be discussed in Intervenors' findings from that phase of the hearings. Because of the paucity of the record on these topics, duly noted by the Board in its June 26 and July 1 Orders, no findings may reasonably be made on these subjects on the basis of the March and April record, save for the finding that Edison did not carry its burden. Proposed Finding 499, even if true, does not excuse Edison's past performance.

Findings 500-508.

These findings generally discuss the Region III inspection program at Byron. As Mr. Hayes testified, only one to two percent of the work at Byron is inspected by the Region (Tr. 3685.) Further, neither the staff nor Edison offered any credible explanation for the 10-fold increase, between 1978 and 1982, in the number of Edison's violations at Byron. The transparent attempt of applicant's counsel to get NRC staff to attribute the increase in Byron non-compliances to their increased inspection efforts involved a comparison of Byron to Zimmer, and failed dismally when Mr. Williams refuted the promise by saying increased inspections at Zimmer did not result in any more non-compliances there. (Tr. 3609-3612.) To the extent the increase is accounted for by stepped-up Regional inspection efforts, the obvious inference is that the Region saw a need to engage in a stronger enforcement effort at Byron. (See F.506.)

The fact that no civil penalties have been imposed at Byron (See F. 508) is meaningless. First, the incident with SCC has resulted in referral to the Department of Justice for potential criminal action.(Panel, Tr. 3712; Statement of Ms. Young, Tr. 2502.) Second, one element of the most recent Braidwood fine was the fact that the same problem occurred at both plants.(See discussion, supra, and Jt. Int. Exh. 6.) Finally, to the extent Edison relies on its experience at its other plants to attempt to bolster its assertions, the record of its other plants has been far from exemplary, based on its record of being fined on an increasingly frequent basis.(DelGeorge, Tr. 2346.)

Findings 514-519.

The next group of proposed findings generally discuss stop-work orders, and specifically discuss stop-work orders with respect to Hatfield Electric (F. 520-522), Systems Control (F. 523-529) and Reliable Sheet Metal (F. 530-532).

With respect to Mr. Shewski's general testimony under cross examination, it should be noted that he admitted refusing to lift a stop-work order could mean his job.(Tr. 2581.) Although he attempted to retract this admission, such a retraction is unpersuasive given the spontaneous nature of his admission under redirect examination by his own counsel.

Findings 520-522.

Hatfield Electric Company was ordered to stop work, not because of any impropriety uncovered by Edison, but because Region III demanded it (Jt. Int. Exh. 5; Williams, Tr. 3653-55.) The fact that the Region had, in reports 78-07 (Jt. Int. Exh. 3) and 79-18 (Jt. Int. Exh. 4) uncovered significant problems with Hatfield shows that Edison should have audited Hatfield with greater diligence. Instead, in its typical myopic fashion, it corrected the narrow problems without consideration of Hatfield's program or attitude as a whole. That Hatfield may have undertaken "a broad range of corrective actions" (F. 522) following the 1981 stop-work order is belied by Hatfield's later performance (See generally 82-05; Applicant's Exh. 8.)

Findings 523-529.

These proposed findings concern Systems Control Corporation (SCC). Edison apparently had planned to keep the facts surrounding SCC's work outside the purview of the Board by casting Mr. Shewski's testimony only in terms of "on-site" stop-work orders (Tr. 2406), an artificial distinction of no use to Edison save to limit the evidence is presents.

A scheduled SCC audit in January 1977 was not performed. (Tr.2406), Pursuant to a May 1977 audit, Edison found problems in SCC's program, but stopped work only for a few days.(Tr. 2506.) Continuing problems were uncovered in March

1978, September 1978, August 1979, and these problems persisted without effective action by Edison until Region III performed Report 80-04 in 1980, only because of fortuitious contact by a concerned SCC worker.(Tr. 2507-08.) Mr. Shewski admitted that Edison did not take timely and effective corrective action (Tr. 2509). [Mr. Hayes' (Tr. 3850) and Mr. Williams' (Tr. 3852) comments to the contrary can only be viewed as attempts by these panel members to downplay the poor corporate attitude of Commonwealth Edison.] Even four years after uncovering serious problems with SCC, the deficiencies remain unresolved. (Hayes, Tr. 3847 3898-99.)

Findings 530-532.

Edison's own version of its knowledge of problems with Reliable Sheet Metal's QA program illustrates its practice of blissful ignorance of its contractors' shortcomings. The NRC found, in 1978, flaws in Reliable's QA program, but Edison allowed the problems to persist until September of 1982 before taking effective corrective action. Given similar problems with the Zack Company at Edison's LaSalle plant (Shewski, Tr. 2521; Panel, Tr. 3840) and the striking similarity between the Zack and SCC occurrences, the Board must find that falsification of documents and misrepresentation by contractors without action by Edison is commonplace.

proper corrective action at Braidwood. Mr. Shewski, on cross-examination admitted to numerous instances where Edison failed to learn from experience (See generally Tr. 2383 ff.)

Thus, Edison's "program utilizing experience at any particular plant to improve performance at all plants" (F. 540), if indeed extant, has been ineffective.

Findings 541, 683.

In ruling on all aspects of the evidence pertaining to Joint Intervenors' three witnesses, Mr. Smith, Mr. Gallagher, and Mr. Stomfay-Stitz, this Board must keep in mind that neither Edison or the staff were able to identify any motivation for any of these witnesses to testify other than truthfully and to the best of his recollection.

In contrast, each of Commonwealth Edison's witnesses was a present employee of either Edison or a contractor, with vested interest in continuing employment and in the issuance of an operating license. Further, Intervenors', their counsel's, and the three witnesses' access to documentary evidence from Edison and its contractors, which could have refreshed a witness' memory (either before preparation of his affidavit or while preparing his written testimony), or substantiated a fact, was completely controlled by Commonwealth Edison. Therefore, no inference can be fairly drawn against these witnesses when that inference pertains to the witness' memory of events or procedures.

Further, the Board should note that the testimony of Mr. Tallent and Mr. Johnson was an after-thought on the part of Edison. Edison was fully apprised of Intervenor's proposed testimony far enough in advance to allow it to present these two PTL employees as a part of its direct case. Their testimony should accordingly be given little weight.

In F. 683, Edison correctly notes that none of Intervenor's three witnesses presented in the March and April segment of the QA hearings contacted the NRC prior to contacting the Intervenor. While Edison suggests this is a "pertinent factor to be considered in its evaluation of their testimony", it does not give any clue as to how that factor should weigh. Indeed, the fact is utterly irrelevant, except to show the Board that most Byron workers with knowledge of shoddy construction practices do not reveal that knowledge to Region III, or chose to reveal it through means other than the one regional officials have set up.

Finally, it must be noted that the only former employee whose credibility and background Edison seriously questions is Mr. Stomfay-Stitz. This witness is the only witness proffered by Intervenor who was not fired by a site contractor.

Findings 541-590.

These findings all concern the testimony of former Byron worker Michael A. Smith.

In proposed Findings 546 and 547, Edison lists portions of Mr. Smith's original affidavit which he revised in his written direct testimony. Mr. Smith's affidavit was drafted entirely from his own memory, without benefit of documents which subsequently refreshed his recollection of events. (Smith pre-filed testimony, pp. 4-5.) Accordingly, it is to Mr. Smith's credit that he chose to correct his affidavit for the Board.

Mr. Smith's Audit 059-3, the follow-up audits, and the subsequent NRC March 1980 inspection are discussed in F. 549-559. As is typical of Edison's posture, it has focused not on the gravamen of Mr. Smith's testimony: that the audit results were changed by Mr. Somsag; that the adverse findings included in the final version were there only because Mr. Smith and Mr. Zeise were absolutely insistent upon it; and that the audit exposed severe deficiencies in Hunter Corporation's QA/QC program, which would have gone undetected by anyone but Mr. Somsag, (who, one may assume, knew of the deficiencies in the first place). The fact that "the audit did precisely what it was supposed to do" (F. 555-559) must be considered in light of the fact that the result would have been the opposite--the problem would have been covered up;--had Mr. Somsag had his way. Indeed, given the fact that substantial improvements were not made until the NRC found the identical problems in March, 1980, the Board must conclude that Hunter ignored the results of its own audit.

There is no indication that Hunter's practices substan-

tially improved after Mr. Smith's audit. As Mr. Yin testified, he found identical discrepancies some months after the problems uncovered in 059-3 had supposedly been closed out (Yin, Tr. 3785-3786.) Indeed, had Hunter been forthcoming about the results of the audit to Mr. Yin, much of the work Mr. Yin did in his March, 1980 inspection would have been unnecessary, for he in fact duplicated much of Mr. Smith's work. (Tr. 3786-3787.)

Even if it was common industry practice not to inspect supports in a timely fashion (see F. 557), that fact does not excuse Hunter from timely inspection. The corrective actions taken as a result of Mr. Yin's findings forced Hunter to do precisely what audit 059-3 suggested Hunter should be doing in the first instance. (Somsag, written testimony at 20-21.) Indeed, a resulting 100% reinspection was necessary because, as Mr. Smith had continually pointed out, the documentation was woefully inadequate in the first place, notwithstanding Mr. Somsag's asserted belief that the hanger inspection program in place during Mr. Smith's audit was not inadequate (id., 22-23).

This assertion on the part of Mr. Somsag shows that he refuses to admit to defects in Hunter's program, even when substantiated by his own company's audit, by a regular NRC inspection, or by Region III in its special inspection of Mr. Smith's allegations.

Therefore, contrary to the suggestion of F. 559, this

Board must find that Hunter's audit program was not functioning effectively, for its results were ignored until forced to Hunter's, and Edison's, attention by Mr. Yin. Such a finding underscores Intervenor's position that Commonwealth Edison and its contractors do not possess the willingness to conduct a satisfactory QA program.

The subject of "tabling", or failing to document audit findings, is discussed in F. 560-564. Not even Commonwealth Edison attempts to assert that "tabling" is consistent with NRC regulatory requirements. The fact that Mr. Smith could not point to any specific tabled component, nor that the Region III inspections did not substantiate this allegation, is not dispositive, for the Hunter practice of tabling is aimed at covering up, not recording, faulty practices.

Mr. Somsag's practice of rewriting audit reports is discussed in F. 565-571. Mr. Somsag does not deny altering audit reports. The dispute is the extent of Mr. Somsag's changes. Intervenor's submit that this Board must find that Mr. Smith's, and not Mr. Somsag's, recitation of the extent and nature of these rewrites is the correct version.

First, Mr. Smith's original drafts were not produced by Edison, and Mr. Somsag claims them to be inexplicably missing from Hunter's files (Tr. 2891-2895). While Intervenor's cannot know the reason why these drafts are missing, it is indeed suspect that each and every original draft claimed by Mr. Smith to have been changed by his supervisor cannot be found.

Second, Mr. Somsag originally prepared and filed written testimony which stated that there was no requirement that original drafts be retained (Somsag, Tr. 2882; pre-filed testimony summary at p. 2; pre-filed testimony, A. 85 (deleted); Tr. 2892-2894). Upon taking the stand, and after counsel for Intervenors had requested the pertinent portion of Hunter's manual, he subsequently changed this testimony. While Intervenors do not know why Mr. Somsag made this misrepresentation in his original testimony, at the very least it shows that he is less than careful, and that in writing testimony which was aimed at explaining missing documents, he did not even check to see whether his representations to the Board concerning Hunter's requirements were accurate.

Third, the fact that Mr. Smith could not point to specific deletions is not surprising, for the audits in question were written a number of years ago and the documents which would substantiate Mr. Smith's testimony are mysteriously missing from the files, in violation of Hunter's own procedures.

The failure of the NRC staff to "substantiate" this allegation is neither surprising (for the documents which would do so have disappeared) nor binding (for this would constitute an improper delegation of the Board's authority to the staff). Mr. Yin's conclusions that the deletions involved are personal concerns is irrelevant, for Mr. Yin has not seen the original drafts with the original changes. The fact that the changes viewed by Mr. Yin were deemed by him not to have

safety impact is similarly irrelevant.

Therefore, this Board must find that Mr. Somsag made substantial, substantive changes to Mr. Smith's drafts. Further, the Board must find that this is indicative of Hunter's, and therefore Commonwealth Edison's, attitude toward QA/QC, as is the inexplicable disappearance of Mr. Smith's original drafts.

Findings 572-575 concern Mr. Smith's audit of the Authorized Nuclear Inspector (ANI). Even if Edison's assertions about the appropriate scope of the audit (i.e., whether the ANI had all necessary documents in his file), neither Edison nor the staff produced any testimony whatever to contradict Mr. Smith's testimony that he was instructed "You do not tell the Authorized Nuclear Inspector he's wrong, no matter what he does." (Smith, written testimony at p. 16). Accordingly, the Board must find as fact that Hunter instructed its auditors what they were to conclude in their audit. Again, Hunter's slipshod attitude toward QA/QC (as well as Edison's, which retains the ultimate responsibility) has been proved.

Findings 572-579 concern Mr. McGhee's practice of signing off welds using the initials of other inspectors and post-dating the inspection dates. Mr. Somsag could not deny it might have occurred (Tr. 3955), and Edison does not deny that this happened, but typically attempts to cast it as some isolated, insignificant incident. Even if such a characterization were

fair (as shown below, it is not a justifiable characterization), particularly in light of Mr. Somsag's lack of denial, it is additional proof of Hatfield's acquiescence in practices absolutely contrary to NRC regulations.

Mr. Smith recalled at least 10 incidents of this falsification of records, in addition to numerous incidents of inspector's post-dating of their own signatures. While Mr. Zeise could recall only three and believes he would have been informed if the welds had subsequently failed, that leaves a number unaccounted for and uncontradicted by any other testimony. The Board must therefore find that this occurred on at least seven occasions without any evidence of subsequent testing or inspection.

Findings 580-583 pertain to the uncontroverted testimony of Mr. Smith concerning Hunter's admittedly inadequate practice of updating or revising its site implementation procedures manual, a practice found by Region III to be contrary to document control requirements. Edison's proposed ultimate conclusions on this issue (See F. 582) are (1) that this did not impair the effectiveness of Hunter's QA program and (2) the practice had no effect in "the implementation of Audit 059-3".

As to the first, the very fact that Region III forced a change in Hunter's procedures belies a lack of QA significance, for NRC inspections concern themselves only with safety-related issues. As to the second, the mandated change to Hunter practices had nothing to do with the implementation of Audit 059-3;

the audit concerned use of the manual by workers, and the workers were not, as 059-3 found, even familiar with the document (M1916, concerning allowable tolerances) referenced in the Unter manual.

Finally, Edison discusses (F. 584-588) Mr. Smith's testimony that he was inhibited from taking problems to the NRC. Two facts are relied on in support of Edison's proposed finding that Mr. Smith's testimony is untrue. The first is Mr. Somsag's denial.(F. 586.) Of course, Mr. Somsag has a vested interest in not admitting to a violation of NRC regulations and federal statutes. Such an instruction need not be direct, as shown by Mr. Smith's description of Mr. Somsag's direction to him (Smith, written testimony at 39; see F. 584). The second is the NRC's failure to "substantiate" this allegation. Of course, even from Edison's own description of Mr. Hayes's testimony, it is clear that Mr. Hayes investigated the wrong thing: denial of access to a worker by an NRC inspector is utterly different from instructing a worker not to contact the NRC. Further, Mr. Hayes could not identify anything he did which was aimed at uncovering whether such a practice was followed at Hunter. Therefore, the NRC's conclusions should be disregarded.

In Finding 589, Edison makes a futile attempt to "undermine the credibility of [Mr. Smith's] testimony". Each instance deals not with credibility but with memory, as refreshed by documents produced to Mr. Smith.

In sum, none of Mr. Smith's allegations was sufficiently rebutted. Because Edison failed to carry its burden, all facts must be found in Intervenors' favor.

Findings 590-630.

These findings concern the testimony of Daniel A. Gallagher, a former concrete batch plant operator at Byron employee by Blount Brothers.

Proposed Findings 595-630 deal with Mr. Gallagher's testimony that there was a continual problem with excessive fines in the aggregate used to mix concrete at Byron. While admitting that at times the aggregate did in fact contain excessive fines (See F. 597) Edison appears to rely on unidentified break tests, none of which were produced, to show that the non-conforming aggregate had no effect in the strength of the concrete. Mr. Pope, Edison's chief rebuttal witness, based his assertion that all aggregate was conforming, on the fact that in the event any break test had failed, he would have known about it; since he was not aware of any failing break tests, there must not have been any problem with the aggregate. Mr. Pope's logic, aside from being tenuous, shows his testimony is unreliable because in fact there were failing break tests. (Tallent and Johnson, Tr. 3967-3968.) Further, Mr. Pope proffered no expertise on any facet of construction save the operation of concrete batch plants, and was thus far removed from the engineering determinations involved in strength tests. Finally,

no credence should be given to his testimony concerning the Ross plant, for he never ran it. (Pope, Tr. 2879.)

With respect to the description of PTL's aggregate testing (F. 599, p. 62), the testimony is clear that PTL's testing of the aggregate pile was haphazard at best. The pile was constantly shifting in shape and form. Samples were taken just from one face of the pile, and cylinder samples taken every 10th truck for containment, every 15th truck for the other safety-related areas (Tr. 3975, 3985.) No attempt was made to mark the location of a sample, and there was no assurance that condemned aggregate was in fact adequately segregated (Pre-filed testimony of Mr. Peter Stimfay-Stitz at pp. 24-28; Tallent and Johson, Tr. 3974-3975.)

The fact that the visiting Israeli engineer did not look at test results (See F. 600) is irrelevant, inasmuch as if Mr. Pope could tell by visual observation that the aggregate was non-conforming (Pope, Tr. 2837), so too could the engineer (Gallagher, pre-filed testimony at p. 13). Edison cannot have it both ways. Mr. Pope's failure to remember this incident may be accounted for by poor memory (as with his failure to remember any failing break tests) or by his self-interest in continuing his employment at Blount.

Edison's assertion in Finding 603 that "Mr. Gallagher was unaware of any instance in which non-conforming aggregate was used in the batching of safety-related concrete" is a blatant misstatement of his testimony. A review of Tr. 3483-3484 shows

that he was asked to pinpoint specific pours using aggregate that was "bad". Of course, Mr. Gallagher was batching concrete, not placing it, and has no way of knowing the precise present location of each batch. Rather, his testimony is based on the fact that the aggregate was non-conforming over a period of several years, during which 100,000 yards of Category I concrete was poured. Indeed, even PTL employees Tallent and Johnson admitted that, in fact, there was non-conforming aggregate at Byron in 1979 (F. 603, p. 640) and no evidence was offered to with respect to any aggregate tests, or of Sargent & Lundy analyses. Therefore, the Board must find that Edison has not carried its burden to rebut Mr. Gallagher's testimony.

Edison's witnesses' recurrent theme of "if it happened, I would have known about it; since I don't know about it, it didn't happen" is the sole basis for any evidence to contradict Mr. Gallagher's testimony that water was added to concrete at the placement center, but not recorded, reflected in F. 604-609.

No witness asserted that either Blount or PTL had QA/QC inspectors constantly at the placement site. Mr. Gallagher's testimony proves conclusively that water was added without being recorded. Edison and the staff's reliance on batch tickets which showed no, or acceptable amounts, of water added is clearly misplaced. The testimony is that the documents don't reflect the facts, because the water would not always be recorded. (Gallagher, Tr. 3487, 3490-3491.) Examination of documents to rebut that testimony is absurd. The the extent Edison

attempts to raise a hearsay objection to Mr. Gallagher's testimony at this late date (see F. 609, p. 69) or assert that Mr. Gallagher's testimony is less reliable than a "presumption" by a present Byron employee, these suggestions should be disregarded.

Finally, the testimony showed that not only was every batch not tested (Gallagher, Tr. 3468-3469; Pope, pre-filed testimony at p. 12), but it was possible to add water after samples had been taken for the break test cylinders (*id.*, 3536-3537). Similarly, not every batch was sampled for the test cylinders. (Pope, pre-filed testimony at p. 12.) Indeed, aggregate would be used before test results were available to see whether it was acceptable (Tallent and Johnson, Tr. 3971-3973.) Therefore, there can be no reasonable assurance that the tests produced reliable information for all placed concrete.

Findings 610-614 concern Mr. Gallagher's testimony that Blount employees lied to NRC inspectors. Edison and Region III inspectors sidestep the issue by arguing that the lies were irrelevant because they were about a matter with which Region III is unconcerned. Because Edison does not deny the fact of the lie--indeed, it did not even call as a witness the person charged with lying--the Board must find this fact in Intervenor's favor. The very idea that Region III inspectors were interested enough to query Blount employees about plant maintenance shows its safety significance. Even if Region III

ascribes no safety significance to the substance of the lie, Mr. Gallagher's testimony is yet another example of Edison's-- and its contractors'--cavalier attitude toward QA/QC.

Edison, in Findings 615-618, has completely mischaracterized the thrust of Mr. Gallagher's testimony that pressure was put on Blount by Edison to increase production. Just because Mr. Gallagher, a most conscientious worker, refused to let that pressure affect the quality of his work does not mean that the pressure did not exist, nor that others were similarly unaffected. Not only did Edison fail to produce Mr. Sorensen, the producer of the pressure, but it apparently does not deny the fact that there was such excessive pressure (see F. 617-618). Further, reliance on documents shown by Mr. Gallagher's and Mr. Stomfay-Stitz' testimony to be absolutely unreliable, cannot give credence to the staff's conclusion that there was no adverse effect in the concrete QA program.

As with the aggregate testimony (F. 595-603) and the testimony concerning the addition of water to concrete (F. 604-609), Edison relies on unidentified and unspecified cylinder break tests, and Mr. Pope's failure to be informed of a failing break test, for its conclusion that no, or insignificant amounts of oil leaked into the cement. Because not every batch was tested, the test cylinders would not necessarily be taken from a batch into which oil had leaked. (See discussion supra.) Mr. Pope's memory, demonstrated to be poor on other matters, should not be relied on here for the assertion that the problem was promptly remedied (see F. 623). Finally, the fact that the concrete work was not immediately

stopped upon notice of the leaking blower provides yet another illustration of Blount's--and therefore Edison's--lax attitude.

Edison finally discusses the circumstances of Mr. Gallagher's termination (F. 624-630). First, there was no evidence that the trucks which were in use on the day Mr. Gallagher was fired were the trucks which the Region inspectors found as having been appropriately tested. Indeed, the rented trucks had explicitly not been tested (Tr. 3886.)

As Judge Smith correctly commented, Mr. Pope's testimony, aimed at suggesting Mr. Gallagher quit because the Ross plant was a less desirable workplace, is unpersuasive (Tr. 3465, see F. 627.) While Mr. Pope may believe the Ross plant, which he did not run, to be capable of mixing Category I concrete, his testimony is noticeably lacking as to the capability of the mixing trucks, which is the reason given by Mr. Gallagher for the incompetency of the resulting mix.

The fact that incompetent mix from the Ross plant would have to be discarded is irrelevant, for the import of Mr. Gallagher's testimony is that because he refused to mix faulty concrete, Blount terminated him rather than assure him that the concrete would not be used in safety-related construction or change the designation on the batch ticket.

The fact that Mr. Gallagher did not file a union grievance is irrelevant. Even if it were relevant, he did not, as Edison suggests opt[...]to forget about filing a grievance". Rather,

he was told by a union official not to (Gallagher, written testimony at p. 24-25.) Mr. Pope's testimony that Mr. Gallagher could have filed a grievance is not entitled to any weight, for he did not show himself to have any working knowledge of union procedures. It is Mr. Gallagher's belief, not Mr. Pope's, which would be relevant to the issue of why no grievance was filed.

In sum, Mr. Gallagher's testimony amply illustrates Blount's utter disregard for quality work practices.

Findings 631-632.

The group of findings relates to the testimony of Peter Stimfay-Stitz, former QA/AC Materials Controller for Blount Brothers. Finding 631 purports to summarize his testimony; however, because Edison has miscast the majority of these allegations, they are corrected below:

(1) His training as materials controller was inadequate and not properly documented.

(3) He was instructed to, and did under threat of termination, falsify reports by certifying materials which he had never seen.

(5) There is no reasonable assurance that non-conforming masonry blocks were not used in safety-related construction.

(7) His training for, and inspections of, structural steel bolting in were inadequate.

(8) There is no reasonable assurance that structural steel beams were not improperly deleted during construction.

To cast these allegations as Edison does in its proposed findings unfairly and unlawfully puts the burden in Intervenors, rather than on the applicant where it properly belongs.

A similar error is contained in Finding 633, where the fact that Mr. Barnhart was responsible for Mr. Stomfay-Stitz' bolting-in training is obscured. To phrase it as "instruct[ing] Mr. Stomfay-Stitz in 'bolting-in'" gives the impression that this function was fundamentally different from a QA/QC function such as materials controller, which is patently false.

Findings 635-638 concern Mr. Stomfay-Stitz' training as QA/QC Materials Controller. Again, Edison misses the thrust of the witness' testimony: that, while he may have learned to do the job properly, his training was contrary to procedures, and the documentation which purports to reflect his training was falsified. No witness asserted that the training memos were accurate and Mr. Barnhart did not claim to have accompanied Mr. Stomfay-Stitz on inspection activities, even though he "co-signed each of Mr. Stomfay-Stitz' R & I reports to indicate that these inspections had been properly performed under his supervision" (F. 637, p. 79). Plainly, accompanying Mr. Stomfay-Stitz on 5% of his inspections (Stomfay-Stitz, pre-filed testimony at pp. 5-6), cannot under any set of facts be construed to be appropriate supervision, particularly where all inspection reports were co-signed as if Mr. Barnhart had accompanied Mr. Stomfay-Stitz, when in fact, the trainee was functioning as if he were certified (id., p. 5). Indeed, the fact that Blount's overriding concern

was paperwork is shown by Mr. Barnhart's description of his supervision of Mr. Stomfay-Stitz as trainee: he just checked the paperwork, but did not supervise the inspection itself. (Barnhart, Tr. 2804.) Given Blount's admitted failure to follow its own procedures and to train and supervise Mr. Stomfay-Stitz in accordance with those procedures, and its falsification of training records, the Board must find that Blount's QA/QC program--and therefore Edison's--was inadequate under NRC regulations.

Findings 639-642 concern the lack of adequate QA/production separation. As admitted by the staff, its own inspections of this allegation is far from adequate, for the questions posed by Mr. Hayes were not designed to elicit any helpful information (e.g., Tr. 3757.)

Edison's attempt to explain away Mr. Stomfay-Stitz' uncontroverted testimony by asserting that "the interaction between Blount Brothers quality assurance program and its production program did not undermine the integrity of effectiveness of the QA/QC program" is particularly telling. First, Edison does not deny the lack of separation. Second, it can point to no evidence in the record of failure to "undermine." Lack of separation is prima facie unlawful under NRC regulatory scheme. The Board must find this as fact as to Blount, no contrary evidence having been produced. (Edison's aside that no documentary evidence was submitted by Intervenors on this issue (F. 642) ignores the fact that all documentary

evidence is in Edison's, not Intervenor's control.)

Finding 643-650 concern Blount's admitted failure to follow its own procedures. More properly stated, the witness was instructed to, and did under threat of termination, falsify reports.

Edison admits, as it must, that Blount did not follow its procedures; rather, Blount followed a practice designed to make sure the documentation was in order, but with absolute disregard for whether inspections were done properly, or were in fact done at all. Particularly relevant is the fact that Mr. Barnhart could not identify a single reason why he did not perform and document receiving and inspections activities himself. (Barnhart, Tr. 2806-2807.) Thus, the most obvious inference is that he did not, in fact, perform them at all. Additionally, he did not deny threatening Mr. Stomfay-Stitz' job if he did not falsify documents.

The fact that the witness could not, and did not, go out to the site and find the materials allegedly received by Mr. Barnhart is not surprising, for Blount received fungible goods such as block and steel which cannot be identified as belonging to a particular shipment once unloaded.

Finally, Edison would have the Board conclude that "no non-conforming materials were improperly accepted for use at the site" (F. 650, p. 85). Of course, that conclusion is entirely unfounded given the fact that there were shipments

received for which no valid inspection reports exist.

Tendon receipt and storage is the subject of Findings 651-659. Again, Edison mischaracterizes the thrust of the witness' testimony: no matter what his storage inspections showed, he was told not to document, and in fact did not document, non-conforming conditions. Again, the matter of falsified documents alone, irrespective of whether subsequent damage occurred to the tendons, shows Blount's--and Edison's-- utter disregard for anything but paperwork. Finally, the fact that neither the NRC (in its sporadic, infrequent spot-checking) nor Edison (in relying on falsified documents) did not happen to discern any inappropriate storage conditions says nothing about Blount's slipshod approach to QA/QC.

Indeed, Edison's chief witness, John Mihovilovich, admitted he relied in his testimony on documents whose authenticity he knew were called into question. This proves without a doubt that Edison's corporate attitude toward QA/QC is woefully inadequate.

Masonry block and aggregate are discussed in Findings 660-662 and Findings 663-669, respectively. With respect to both, Edison provides no assurance that adequate segregation of non-conforming materials was in fact accomplished.

In Finding 667, Edison states that Mr. Stomfay-Stitz acknowledged that he has no way of knowing whether condemned aggregate was used in the mixing of Category I concrete.

Unfortunately, neither does Edison, Region III, this Board, or the public.

Mr. Stomfay-Stitz' bolting-in inspection responsibilities are the subject of Findings 670-677. Again, Edison ignores the essential elements of Intervenors' position:

(1) Mr. Stomfay-Stitz' training was not adequate for him to know what he was doing, let alone to be certified;

(2) Mr. Barnhart, who purportedly trained Mr. Stomfay-Stitz, was not himself certified;

(3) Even if each bolting-in inspection performed by these two uncertified inspectors was reinspected, the fact that Blount conducted itself in this matter, with Edison's actual or imputed knowledge, proves unequivocally that Edison's QA program is a complete failure.

Mr. Stomfay-Stitz' testimony with respect to deleting of steel beams is discussed in Findings 678-681. A review of the evidence shows that no witness contradicts Mr. Stomfay-Stitz' testimony. The problem is that neither Edison nor Region III was willing, or able, to produce documentation concerning this fact. It is not the witness' responsibility to do so. The evidence being completely unrebutted, the Board must find as fact that missing beams were improperly deleted, by way of a telephone call from a Level I QA/QC Materials Controller, and without any documentation. Edison, by allowing this conduct, has shown itself unqualified to receive an operating license for Byron.

Finally, in Finding 683, Edison attacks Mr. Stomfay-Stitz' credibility. First, this Board must find that counsel for Edison purposefully attempted to confuse and intimidate the witness. Second, to the extent the Board finds Mr. Stomfay-Stitz was confused, evasive, intimidated, or even untruthful, the Board must also find that this fact reflects, not on Intervenors' case, but on Blount Brothers and Edison for their employment of, and placing responsibility in, this witness.

Finding 684.

This is the proposed ultimate finding on construction QA. The Board must note that Edison introduced no evidence beyond the narrowest reading of the testimony of Intervenors' witnesses. Even if Edison had successfully rebutted each fact testified to by each Intervenor witness, the paucity of evidence of "reasonable assurance that the Byron station will be [sic] built in accordance with Commission regulations" (F. 684) suggests that Edison wishes the Board to assume such reasonable assurance. The burden is on Edison to do so. It has not. The operating license must therefore be denied.

Findings 685-689.

These findings would have the Board accept Edison's proposed operational QA program and find it adequate. There are four reasons why this is inappropriate:

- a. The history at Byron of shoddy construction practices

shows that Edison is not qualified to operate Byron.

b. The extensive history of NRC-imposed fines at Edison's operating plants shows not only that Edison is unqualified to operate Byron, but that its operational performance has worsened, not improved, as its operating experience increases.

c. Edison's vesting of operational responsibility in Mr. Querio is misplaced (See discussions, supra, and, infra, of Mr. Querio's knowledge and attitude).

d. Sound operation of Byron has yet to be proved.

Findings 690-712.

These concern Edison's history of fines at other plant sites and have been replied to, supra, with respect to Mr. DelGeorge's testimony.

Finding 713.

This proposed finding, asserting again that Edison transfers knowledge from one plant to another, is simply belied by the facts aduced on cross-examination, particularly of Mr. Shewski, as well as by Edison's unjustifiably narrow approach to the testimony of Intervenors' witnesses.

Findings 714-735.

These proposed findings concern the Board-ordered pre-

sentation of the reactor trip breaker systems. Trip breaker failures, identical to the Salem failure, occurred six times at Edison's Zion plant. (Tr. 4043-4044) As with the Salem accident, the Zion accidents were due to improper maintenance (Sues, Tr. 4044.) Mr. Querio, while professing to be knowledgeable about both the Salem trip breaker accident and the Byron trip breakers, had absolutely no knowledge about Zion. (Id.) This is a most striking illustration of Edison's failure to transfer knowledge from one plant to another.

Edison has approached the problem with the Westinghouse DS-416 breakers at Byron as one of tolerances of certain equipment. (Tr. 4015-4016.) However, Edison's July 12, 1983 Board notification shows that it was mistaken in its analysis of the problems: it is not one of the tolerances, for the parts simply do not fit together at all. As is clearly stated in the June 3, 1983 letter from Edison to James Keppler (attached to the Board notification):

The width of the retaining ring on the two pivot shafts of the UV trip (refer to attachment) is not compatible with the width of the groove on the pivot shafts that receives the retaining ring. The groove in the shaft receiving the retaining ring was not increased in width to be consistent with an earlier (1972) retaining ring design change. The new retaining ring is wider than the original design and does not seat properly in the existing grooves.

Finally, the frequency of Edison's inspection of the breakers is far from clear. For example, there is no schedules for surveillances (Tr. 4024, 4050.)

In addition, the Salem presentation resulted in Edison's revelation of two important facts relevant to its overall cavalier attitude toward nuclear plant operations. First, Mr. Querio favors allowing a reactor to be restarted after a breaker trip without knowing what the cause of the trip was in the first place. (Tr. 4053.) Second, he will not follow the NRC recommendation that a simultaneous manual trip be made upon annunciation (Tr. 4047), because he apparently is more concerned with the operator's state of mind than the safety of the public (Tr. 4046).

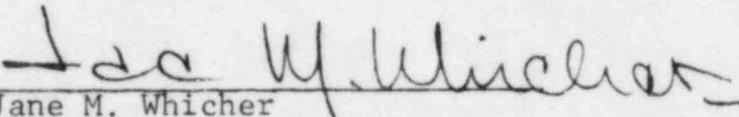
In sum, the Salem presentation should give the Board even more cause to be concerned about the safe operation of the Byron plant, rather than to give the Board confidence in it (see F. 733).

Conclusion.

Edison has not borne its burden of proof on Contention 1A. Accordingly, the operating license for Byron must be denied.

Respectfully submitted,

September 16, 1983


Jane M. Whicher
Attorney for Intervenors
The League and DAARE/SAFE
on all issues and matters
pertaining to quality
assurance/quality control

Jame M. Whicher
109 N. Dearborn
Chicago, IL 60602
(312) 64105570

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
(Byron Station, Units 1 & 2) 50-455

CERTIFICATE OF SERVICE

I hereby certify this 16th day of September, 1983, that copies of "INTERVENORS' REPLY TO COMMONWEALTH EDISON'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW ON QUALITY ASSURANCE/QUALITY CONTROL" 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.

*Ivan W. Smith, Chairman
Administrative Judge
Atomic Safety and Licensing
Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Steven C. Goldberg, Esq.
Office of Executive Legal
Director
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

*Dr. A. Dixon Callihan
Administrative Judge
Union Carbide Corporation
P.O. Box Y
Oak Ridge, Tennessee 37830

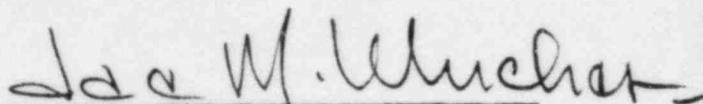
Office of the Secretary of
the Commission
Attn: Docketing & Service
Section
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

*Dr. Richard F. Cole
Administrative Judge
Atomic Safety and Licensing
Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

David Thomas, Esq.
77 South Wacker Drive
Chicago, IL 60621

Alan P. Bielawski, Esq.
Bruce Becker, Esq.
Three First National Plaza
Chicago, IL 60603

Joseph Gallo, Esq.
Isham Lincoln & Beale
1120 Connecticut Ave., N.W.
Room 325
Washington, D.C. 20036


JANE M. WICHER