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December 21, 1982

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Mr. Gary Groesch
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Dear Mr. Groesch:

At the request of Judge Wolfe, I am enclosing a copy of the Memorandum and Order (ALAB-138) in the matter of Vermont Yankee Nuclear Power Corporation.

Sincerely yours,

Carri M. Pizzuto
Secretary to Bruce W. Churchill

Enclosure
cc: Service List attached

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION



Before the Atomic Safety and Licensing Board

| | | |
|---|---|---|
| In the Matter of | ) | |
| | ) | |
| LOUISIANA POWER & LIGHT COMPANY | ) | Docket No. 50-382 |
| | ) | |
| (Waterford Steam Electric Station, Unit 3) | ) | |

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UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

## ATOMIC SAFETY AND LICENSING APPEAL BOARD

**Michael C. Farrar**, Chairman
**Dr. John H. Buck**, Member
**Dr. Lawrence R. Quarles**, Member

In the Matter of

VERMONT YANKEE NUCLEAR POWER CORPORATION

(Vermont Yankee Nuclear Power Station)

Docket No. 50-271

**Messrs. John A. Ritsher** and **Thomas G. Dignan, Jr.**, Boston, Massachusetts, for the applicant, Vermont Yankee Nuclear Power Corporation.

**Mr. Anthony Z. Roisman**, Washington, D.C., for the intervenor, New England Coalition on Nuclear Pollution.

**Messrs. William Massar, Bernard M. Bordenick**, and **Stephen H. Lewis** for the AEC Regulatory Staff.

## MEMORANDUM AND ORDER

## (ALAB-138)

The applicant, the staff and the intervenor New England Coalition on Nuclear Pollution (NECNP) have all filed exceptions to an order issued by the Licensing Board on June 13, 1973 (LBP-73-18, RAI-73-6, p. 448). That order reopened the hearing for consideration of five safety issues but declined to order a cessation of facility operations pending the outcome of the reopened proceeding.

For the reasons set forth below, we affirm the Board's decision to reopen the hearing on the fuel densification issue but reverse the Board's determination to reopen on the other four issues. On the question of interim relief, we affirm in part the Board's decision that the facility may continue to operate during the reopened proceedings on the fuel densification issue. Our affirmance is limited because certain relevant materials were not, but should have been, submitted to the Board. After those materials are submitted (see pp. 531-532, *infra*), a new decision on interim plant operation must be made by the Licensing Board.

### I

The prior course of this operating license proceeding is in large measure set forth in our decisions of May 23 (ALAB-124), June 8 (ALAB-126) and June 25 (ALAB-131).[1] For present purposes, the history of the case may be summarized as follows.

A. On May 23, following our review of the Licensing Board's initial decision authorizing the issuance of a full-power, full-term operating license, we remanded the proceeding to the Licensing Board for (1) a new determination on the adequacy of the applicant's quality assurance program and (2) reconsideration of the Board's denial of the intervenor's motion to reopen, which had sought to raise five new safety issues.[2] We called for a fresh determination on quality assurance in view of the existence of an October 25, 1972 letter from the staff to the applicant which had erroneously been excluded from the record[3] and which cast serious doubt upon the adequacy of the then existing quality assurance program. Reconsideration of the motion to reopen was necessary in view of our conclusion that the Board's reasons for denying the motion were either erroneous or inadequately articulated.

In remanding the proceeding,[4] we set forth some of the basic principles which should be applied by licensing boards in passing upon motions to reopen. We emphasized that a board must consider both the timeliness and the significance of the matters sought to be raised (RAI-73-5 at 364-65). Our remand order required that, within 16 days, the Board apply these principles to determine (1) whether the record should be reopened either on quality assurance or on the five safety issues and (2) if so, whether the plant could continue to operate during the pendency of the reopened proceeding. In connection with the remand we held, for reasons which we articulated, that plant operation could continue in the "short term"—by which we had in mind the 16-day period allowed the Licensing Board for its determination.[5]

B. The Licensing Board immediately set a schedule which called for the submission by the parties of written presentations by June 6 and for a conference on June 11 (see May 24 "Order Convening Conference)."[6] Before it received the written presentations, however, the Board issued an order reopening the proceeding but permitting continued plant operation (June 4 "Order Reopening Record . . ." RAI-73-6, p. 443). The Board stated it would reconsider that determination at the conference to be held on June 11.

We thereupon issued an order vacating the Licensing Board's order as premature. We explained the basis for our ruling in ALAB-126.[7] Thereafter, the Licensing Board held the scheduled conference and, on June 13, issued the order which is the subject of the exceptions now before us (RAI-73-6, p. 448).

That order reopened the proceeding on both the quality assurance issue and on four of the other five safety issues originally presented.[8] The Board set forth in some detail its reasons for reopening the

[1] Those decisions are reported at RAI-73-5, p. 358 and RAI-73-6, p. 393 and p. 427, respectively.

[2] Those issues involved fuel densification, fuel rod hydriding, thin-walled valves, routing of steam and other high-pressure lines, and alleged operational problems stemming from a fire in the auxiliary transformer.

[3] At the time we issued our decision, it was not clear to us whether the letter had been included in the record but disregarded, or whether it had been excluded. We held that, in any event, it should have been included and considered. The Licensing Board later explained that its intent had been not to include the letter.

[4] Our remand order also indicated that we were retaining jurisdiction of the proceeding and that we would complete our consideration of the case upon receipt of the Licensing Board's reports pertaining to the action taken on remand.

[5] It later developed that there was some confusion about the period intended to be covered by our "short term" determinations (see June 11 Tr., pp. 130-32, 146-47, 150A, 155-57). The only question before us when we made those determinations was the continuation of plant operation pending the completion, within 16 days, of Licensing Board action on reopening and continued plant operation. Thus, we did not anticipate that our phrase "short term" would be interpreted other than as covering the 16 days. Further guidance on the period covered by our "short term" determination was, we thought, provided by the distinction we drew between that determination and the one the Licensing Board would be called upon to make 16 days later if it did reopen the proceeding (see ALAB-126, RAI 73-6 at 395). As we pointed out in ALAB-124 (RAI-73-5 at 367) and elaborate on herein (see p. 529, *infra*), once reopening is ordered, somewhat different principles than those which we applied in the short term in ALAB-124 govern the question of continued plant operation.

[6] The Board later explained that June 11 was the first day that the Board, which included two part-time technical members, could assemble.

[7] In ALAB-126, we indicated our view that the Board's order had complied in form, but not in substance, with our request that a decision be issued by June 8 (RAI-73-6 at 396). In part, we based our view on the Board's having coupled its decision with the statement that it would later reconsider its decision. The Licensing Board subsequently expressed the view that "the entertainment of a motion to reconsider does not affect the order being reconsidered" (June 13 Order, p. 6, fn. 6; RAI-73-6 at 450). In view of that statement, we should explain that we had not disregarded that principle. Rather, we acted on the belief that the Board had not made a conclusive decision on June 4 since the decision itself acknowledged that the Board fully intended to reconsider the decision. In our view, a decision which is plainly intended to be conditional is quite different from one which is intended by the Board to be final but is followed by the submission by a party of a motion for reconsideration.

[8] NECNP had by that time withdrawn from consideration the issue arising from the fire in the auxiliary transformer. It had, however, added the quality assurance issue—which we had raised *sua sponte*—to its amended motion to reopen. In accordance with our earlier comments on this approach (ALAB-126, RAI-73-6 at 396), our decision today treats the quality assurance issue as if it had arisen by way of a motion to reopen based on the October 25 letter.

proceeding on those items. In the course of its opinion, however, the Board requested further guidance concerning the principles which should be applied in future cases when a situation such as that involving the quality assurance letter arises or when a motion to reopen is filed (June 13 Order, pp. 6-10, RAI-73-6 at 450-51). Although we attempted to convey such guidance in ALAB-126, we respond further to the Board's request in Part II of this opinion.

The Licensing Board went on to rule that continued plant operation was justified pending the outcome of the reopened proceedings. Its justification for that ruling was, essentially, its adoption of the "short term" determinations we had made earlier (see fn. 5 and text accompanying, *supra*, p. 521).[9]

C. The Board's order prompted each of the three principal parties to file exceptions.[10] The applicant asserts that reopening was incorrect as to all five issues and urges us to rule that no reopened proceeding should be allowed. Acceptance of its view would, of course, moot the question of interim relief. The applicant asserts, as a fallback position, the correctness of the Licensing Board's determination refusing to order interim cessation of plant operation. The staff agrees with the applicant in part, urging that reopening was improper as to three of the five issues (*i.e.*, fuel rod hydriding, thin-walled valves, and quality assurance). The staff does not, however, take exception to reopening on the other two issues (*i.e.*, densification and pipe rupture).[11] The staff asserts with the applicant that, in any event, the plant should continue to operate pending the completion of any reopened proceedings. The intervenor, on the other hand, is fully satisfied with the ruling on reopening but takes exception to the refusal to order interim cessation of plant operation.

At the request of the parties, we had set an expedited briefing schedule for the consideration of exceptions. In doing so, we had not precluded the filing of any motions for emergency relief, and NECNP's exception was accompanied by a request for immediate suspension of plant operation. We set an expedited schedule for consideration of that motion and, after full consideration, denied it (ALAB-131, RAI-73-6, p. 427). In denying the motion, we stressed that all that was before us at that time was the question of continued plant operation pending the outcome of our orderly but expedited consideration of the exceptions.

D. Against the foregoing background, in Part II of this opinion we set forth the principles which are applicable here and which should guide Licensing Boards in future cases (see also this page, *supra*). We then proceed, in Part III, to apply the stated principles to the facts of this proceeding. Our conclusion is that the hearing was correctly reopened only with respect to the issue of fuel densification. The question of interim relief on the other issues is, therefore, moot. In Part IV we explain why we are not now requiring cessation of plant operation pending the outcome of the reopened hearing. In that connection, however, we are requiring that certain additional evidence be promptly supplied to the Licensing Board and that, based on that evidence, it make a new evaluation of the permissibility of continued plant operation pending its final resolution of the densification issue.

[9] More precisely, the Licensing Board's reasoning was as follows:

> ALAB-124 further directed the Licensing Board to determine whether the nuclear plant should be permitted to continue operations while these safety matters are resolved. This subject was considered with the parties at the June 11th conference, as announced in our June 4th Order. Based upon these discussions and considerations, the Licensing Board has concluded that the Appeal Board's determination that short term resolution of the safety matters justify continued operation of the plant, and for that reason, also, the initial decision issued February 27, 1973 need not be modified in reference to plant operation. The short term determinations by the Appeal Board are reflected at pages 28-29 of ALAB-124 and are adopted here.

June 13 Order, RAI-73-6 at 453 (footnote omitted).

[10] We have retained jurisdiction of the proceeding and clearly have the *power* to consider the exceptions. In the circumstances now presented, it is also appropriate that we consider them. In the first place, we have already stated that we would entertain exceptions to the Board's ruling on the question of interim relief in the event the record were to be reopened (ALAB-124, RAI-73-5 at 367). Thus, the intervenor's exceptions are appropriately before us. Since the outcome on interim relief is partially dependent upon the correctness of the order reopening the record, we have determined also to entertain the applicant's and the staff's exceptions. The applicant correctly perceived that this was not a necessary result (see June 11 Tr., pp. 108-11).

[11] The staff, which in its papers below had entirely opposed reopening, stated that its failure to take exception to reopening on those two issues was "not intended to indicate and should not be construed as agreement" with the Board's ruling. This statement prompted NECNP to make the following observation in its responding brief:

> Surely the Staff has read *Scenic Hudson Preservation Conference* v. *Federal Power Commission*, 354 F. 2d 608, 620 (CA 2nd, 1965). Surely it realizes that it cannot be an umpire and merely sit back. Surely therefore, it realizes that the failure to except must mean that it supports the finding since if it objected we can reasonably assume it would say so as it has as to other findings favorable to the Intervenor. We hope the Appeal Board will require the Staff to fully explain its concept of its duty which concept compels it to speak up loudly whenever it disagrees with the Intervenor but to remain silent when it disagrees with the Applicant.

Since we do not regard the intervenor's stated assumption to be valid, we do not accept the conclusion which it derives from that assumption.

## II

### A. MOTION TO REOPEN

1. During the proceeding on remand, some confusion appears to have arisen concerning the receipt of evidence in connection with consideration of a motion to reopen the record. Much of the problem may have been semantic, for it centered on possible distinctions among several terms such as the "record," the "evidentiary record," and the "hearing record."

This confusion can largely be swept away by careful analysis of precisely what a licensing board must decide when confronted with a motion to "reopen the record" which, like the one filed here, seeks a further evidentiary hearing on new issues not previously considered. First, as we have indicated earlier (see ALAB-124, RAI-73-5 at 364-65), the board must consider: (1) the timeliness of the motion, *i.e.*, whether the issues sought to be presented could have been raised at an earlier stage, such as prior to the close of the hearing;[12] and (2) the significance or gravity of those issues. A board need not grant a motion to reopen which raises matters which, even though timely presented, are not of "major significance to plant safety" (ALAB-124, RAI-73-5 at 365). By the same token, however, a matter may be of such gravity that the motion to reopen should be granted notwithstanding that it might have been presented earlier (ALAB-124, RAI-73-5 at 365, fn. 10; see also ALAB-126, RAI-73-6 at 394).

If these questions are resolved in the movant's favor, the Board must then proceed to consider whether one or more of the issues requires the receipt of further evidence for its resolution. If not, there is obviously no need to reopen the record for an additional evidentiary hearing. As is always the case, such a hearing need not be held unless there is a triable issue of fact.

In other words, to justify the granting of a motion to reopen the moving papers must be strong enough, in the light of any opposing filings, to avoid summary disposition.[13] Thus, even though a matter is timely raised and involves significant safety considerations, no reopening of the evidentiary hearing will be required if the affidavits submitted in response to the motion demonstrate that there is no genuine unresolved issue of fact, *i.e.*, if the undisputed facts establish that the apparently significant safety issue does not exist, has been resolved, or for some other reason will have no effect upon the outcome of the licensing proceeding.

If the motion is disposed of on such grounds, the "record" (in the broad sense) will necessarily have been supplemented by the introduction of the affidavits, letters or other materials accompanying the motion and the responses thereto.[14] The "hearing record," however, has not been reopened. Typically, in this situation, the result will be designated a denial of the "motion to reopen the record," even though that description of the action taken does not precisely reflect what transpired.[15] For clarity, the order denying

[12] In seeking guidance on the impact of our handling of the quality assurance matter (June 13 Order, RAI-73-6 at 450, fn. 8), the Board raised a question related to timeliness by referring to the *Point Beach* proceeding. There, a motion to reopen on a radiological safety issue was filed before the hearing record was finally closed but after the radiological phase had been concluded. Our determination (ALAB-96, WASH-1218 (Supp. 1) p. 574) that reopening should have been permitted in that circumstance does not imply that reopening should be denied whenever a motion is filed at a later stage. Regardless of when the motion is presented, the question in each case must center on whether the matter could have been raised earlier.

[13] We adverted briefly to this test in ALAB-126, RAI-73-6 at 396, fn. 5.

[14] The applicant and staff characterized this situation correctly below by referring to the creation of a "mini-record" or a "record on the motion to reopen" (June 11 Tr., pp. 96, 128, 152, 161).

[15] This situation is not unique. For example, adjudicatory tribunals frequently "deny" petitions for reconsideration by issuing supplemental opinions which respond to the merits of the issues presented by the petition. See, *e.g.*, *Irom* v. *Schuyler*, 465 F. 2d 608, 614-15 (D.C. Cir.).

the motion should state that the record has been supplemented and that the denial of the motion is based on the absence of a triable issue of fact.

In conclusion, we should also add that, while it is useful from an analytical standpoint to keep separate the factors to be considered on a motion to reopen, it will not always be possible, in passing upon the motion, to give them separate consideration. The questions of whether the matter sought to be raised is significant and whether it presents a triable issue may often be intertwined, and can be so treated, as we do here (see p. 526, *infra*).

2. The utilization of principles akin to those involved in summary judgment requires consideration of a related subject. A party opposing summary judgment is, of course, entitled to submit countervailing affidavits and other documents. In some circumstances, however, countervailing materials may not be presently or readily available. Faced with that situation, a party opposing summary judgment may typically request appropriate relief. The Commission's regulations are similar to the Federal Rules in that regard. Specifically, 10 CFR 2.749(c) provides:

> Should it appear from the affidavits of a party opposing the motion that he cannot, for reasons stated, present by affidavit facts essential to justify his opposition, the presiding officer may refuse the application for summary decision or may order a continuance to permit affidavits to be obtained or make such other order as is appropriate and a determination to that effect shall be made a matter of record.

Similarly, Rule 56(f), *F.R.* Civ. P., states:

> ***When affidavits are unavailable.*** Should it appear from the affidavits of a party opposing the motion that he cannot for reasons stated present by affidavit facts essential to justify his opposition, the court may refuse the application for judgment or may order a continuance to permit affidavits to be obtained or depositions to be taken or discovery to be had or may make such other order as is just.

In other words, to justify the deferral of a ruling pending his utilization of discovery procedures, the party opposing summary judgment must be able to demonstrate with some particularity that discovery is indeed likely to develop the basis for avoiding summary judgment on his contentions.[16]

In this case, the intervenor based its motion to reopen solely on correspondence and other documents which passed between the staff and applicant. To the extent that the materials later submitted by the staff and applicant supplied facts (not just opinions)[17] which were fully responsive to the documents submitted by the intervenor and which would establish that the issues raised did not warrant reopening, it was then incumbent upon the intervenor—as the party who, in effect, was opposing summary disposition—either to file additional materials demonstrating the existence of a triable issue or to proceed under principles such as those set forth in Rule 56 by, for example, demonstrating with particularity that discovery would enable it to produce such materials. If it had selected the latter course and made the necessary showing, deferral of action on the motion to reopen would have been appropriate.[18]

## B. THE QUALITY ASSURANCE MATTER

We need not repeat what we have said earlier concerning what was expected of the Licensing Board when it found itself faced with the October 25 letter on quality assurance. We wish to make, however, two comments in response to the Board's request for guidance on this score.

1. Our reference to the oft-cited "umpire" analogy was not intended, as the Board seems to have read it, to require the Board to become a "player" by advocating a position in the hearing. Instead, our intention was only to note that the Board should not have let the parties have the sole voice respecting what matters were considered by the Board. Having become apprised of the existence and content of the October 25 letter, the Board's obligation was to insure that the letter—which related to a contested issue[19]—became a part of the record. The Board would not then have advocated any particular result, but would have awaited the parties' submissions with respect to the letter.

2. In its June 13 Order, the Board requested guidance with respect to whether we deem its "general determination" that "the plant could be operated without endangering the health and safety of the public" inadequate or insufficient to cover the "many items of safety, as to which a Licensing Board has concerns, but which do not require separate and precise rulings." (RAI-73-6 at 450). Stated otherwise, the Board seeks "a determination respecting those areas of insufficiency which the Appeal Board concludes are not resolved by a general conclusion on plant safety" (*ibid.*). For, in the Board's view, its "general determination that the plant could be operated without endangering health reflected the consideration that the quality assurance program was adequate." (*id.* at 449, fn. 1).

While certainly all major contested issues should be disposed of by specific rulings, it was not for failure to do so that we held that the Licensing Board's handling of the quality assurance matter was erroneous. We assumed that the Board's general determination was intended to cover the issue of quality assurance.[20] Our ruling was that such a determination, whether generally or particularly expressed, could not stand in the face of the October 25 letter which had erroneously been excluded from the record.[21]

As indicated in our earlier opinions (ALAB-124, RAI-73-5 at 366; ALAB-126, RAI-73-6 at 396), although the quality assurance matter arose in unusual fashion in this case, in all the circumstances, including the amendment of NECNP's motion to include quality assurance, it simplifies analysis to treat that issue as if it had arisen by way of a motion to reopen. We treat it in that fashion in Part III of this opinion, where we apply the principles stated in Part II to the facts of this case.

## III

For the reasons set forth below, we affirm that portion of the order reopening the record which dealt with the fuel densification issue but reverse the reopening order in all other respects. In view of the result we reach, we need not give separate consideration to each of the numerous exceptions or arguments of the applicant and staff which assert that the Licensing Board failed to follow our instructions on remand.

### A. Timeliness

The Licensing Board interpreted our prior orders as "removing the timeliness objections to late motions to reopen . . ." (RAI-73-6 at 451). As we have seen (see p. 523, *supra*), that was not what our orders said or meant.[22] Given the failure of the Board to consider the timeliness of the matters raised by the motion to reopen, we would normally call upon it to consider the question anew. But in the interest of expedition, we are resolving (as we can) the timeliness issue ourselves.

In its filings with us, the applicant asserts that the motion to reopen was untimely only with respect to densification and hydriding (Brief in Support of Exceptions, pp. 30-33). As far as we can determine, the applicant did not include even those timeliness defenses in its written filings with the Licensing Board on remand. An examination of the transcript of the oral argument below reveals that the applicant did argue untimeliness, but only with respect to densification (June 11 Tr., p. 104-07). On the densification issue, the applicant's untimeliness argument is not persuasive. For reasons which shall appear, we consider and accept the untimeliness argument presented here on the hydriding issue even though it was not fully presented below by the applicant.

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[16] In its most recent order, the Licensing Board stated that we had made provision for discovery by the intervenor (RAI-73-6 at 451). We did not intend to make, and have been unable to find, such a statement in our opinions. Discovery prior to acting upon a motion to reopen should be permitted only in accordance with the principles we have set forth herein. Of course, once reopening has been granted, discovery may proceed as it does in the ordinary hearing.

[17] See June 11 Tr., pp. 98-99, 115-16, 173.

[18] Had the Board been faced with such a situation here, where we had allowed it only 16 days to rule upon that motion, it could have utilized that situation to seek expansion of the allotted period (compare ALAB-126, RAI-73-6 at 396).

[19] Moreover, the rules applicable to this proceeding required this result even if the issue had not been contested by the parties. See ALAB-124, RAI-73-5 at 362, fn. 4.

[20] In many cases, of course, quality assurance is one of the most significant issues and thus would warrant individualized analysis by a Licensing Board.

[21] It was against that background—*i.e.*, considering the October 25 letter as part of the record—that we held that "here there is no record evidence [*i.e.*, no record evidence contradicting the October 25 letter] that a satisfactory [quality assurance] program even exists." (ALAB-124, RAI-73-5 at 362).

[22] See also ALAB-126, RAI-73-6 at 395, reiterating that the Board must "consider the timeliness of the raising of the different aspects of the motion."

1. The applicant's argument that the densification issue might, through due diligence, have been raised earlier is not altogether without merit. On balance, however, we are persuaded that the complexity of the matter involved—which is attested to by the staff's failure thus far to have completed its own deliberations thereon (see p. 530, *infra*)—justifies the failure of NECNP to raise it prior to its receipt in mid-December, 1972, of the staff's November 14, 1972 report. In any event, the densification matter is of such paramount importance that, considering the staff's incomplete analysis, reopening would be permitted even if NECNP's motion were as untimely as the applicant claims.

2. We reach the opposite result on the hydriding issue. Even though untimeliness as to that issue was not raised on remand, the applicant had raised it at an earlier stage (see January 9, 1973 Answer to Motion of NECNP to Reopen the Record, p. 2) and the facts involved are quite clear from the record. The applicant had, on the last day of the hearing, elicited testimony for the specific purpose of bringing the hydriding issue to the attention of the Board and the parties (November 9 Tr., pp. 6129-30, 6134-37). While we would not require that the intervenor utilize that testimony to present a contention that same day, we believe that the delay of over one month which ensued before the intervenor evidenced an intention to challenge the license on this ground justifies our refusal to permit further consideration of that issue.[33]

Our reliance on untimeliness to deny the motion to reopen on the hydriding issue will not compromise public health and safety. The Vermont Yankee reactor is currently operating with a relatively large number of leaking fuel rods. Regardless of the condition of the rods, emissions from the facility are required to be within the existing numerical standards adopted to protect the public against exposure to radiation. 10 CFR Part 20. In addition, emissions must conform to the "as low as practicable" requirement of the Commission. 10 CFR 20.1(c). If operation at full power will, due to leaking fuel, result in excessive emissions, the power level of the reactor must be reduced to the point where the emission limits are met. The evidence submitted does not indicate that those limits have been or can reasonably be expected to be exceeded. In other words, while the existence of the leaking fuel rods is not a desirable condition, it does not violate applicable regulations or present a hazard to the public health and safety. Thus, the factual issues which remain are not significant or material to the extent needed to warrant reopening. Any disadvantages stemming from operation with such rods until this problem is cured, whether by the replacement of the rods with properly constructed fuel elements, the installation of increased off-gas control systems, or some other measure, will be in the form of economic harm to the applicant rather than exposure of the public to radiation.

**B. Existence of Significant Triable Issues**

As we indicated earlier we would do (see p. 524, *supra*), we consider together the questions of whether the issues other than hydriding (which is treated on this page, *supra*) sought to be raised are of major significance to plant safety and present triable issues of fact.

1. *Fuel Densification.* The Licensing Board correctly evaluated the significance of this item. For the reasons it stated, and for the additional reasons which appear from our discussion in Part IV, *infra*, there is no question that reopening of the hearing was required on this issue.

2. *Thin-walled Valves.* The documents submitted by the staff and applicant show that the applicant acted promptly on receipt of the Commission's request to determine whether any thin-walled valves—which had been discovered at another facility—had been installed at the Vermont Yankee facility. The applicant initiated a program of record review and component examination which demonstrated, to the regulatory staff's satisfaction, that all valves in the reactor coolant pressure boundary at the station had walls of acceptable thickness. The staff and applicant have submitted documents, including an inspection report (No. 50-271/73-07), which explain the basis for the conclusion that all the valves are acceptable[33] and which furnish full assurance that the thin-walled valve inquiry has been satisfactorily resolved.

Consequently, there is no basis in the record for NECNP's claim that there is a possibility of the existence of unsafe thin-walled valves in the Vermont Yankee reactor. Indeed, the Licensing Board itself recognized that this item did not "appear to equate in importance" with the others presented (RAI-73-6 at 453).

3. *Quality Assurance.* We raised the quality assurance issue because the October 25 letter reflected the staff's view that, at that time, there existed extensive deficiencies in the applicant's quality assurance program. The affidavits and documents submitted by the applicant and the staff demonstrate conclusively that these deficiencies were corrected in February, 1973.[34] There is nothing in the intervenor's submissions to indicate that the plan as it now exists is defective, and our examination of it has revealed no obvious defects. In fact, our understanding of its position is that the intervenor does not challenge the adequacy of the program as presently written. For these reasons, we can find no basis for concluding that the issue which we raised is still a triable one.

While the quality assurance plan as written is adequate, NECNP questions its implementation. Specifically, it calls attention to the defective fuel rods and thin-walled valves and asserts that a properly implemented quality assurance program would have prevented installation of those components.

NECNP's argument is not persuasive. Proper quality assurance does not require that the applicant test each component installed in the facility. Instead, in certain instances, the applicant is entitled to rely on the certifications of the vendor that the product furnished complies with applicable standards. The discovery of defects in the products may call for examination by the staff of the vendors' quality assurance procedures and for termination of the vendors' right to certify to the adequacy of its products. It does not, however, reflect adversely upon the applicant or, in view of the reports here presented, upon the entitlement of the facility to operate.

4. *Pipe Rupture.* NECNP claims that further proceedings are necessary on the "pipe rupture" question. It grounds this claim (Br. pp. 3-4) on its view that (1) the applicant and staff have conceded that in "two instances . . . further protection of safety systems is required but has not yet been implemented," and (2) the staff had indicated, in a May 4, 1973 letter, that further analyses "are needed to demonstrate that all safety systems are adequately protected from postulated pipe ruptures."

a. This issue first arose as a result of a staff letter requiring an analysis of the routing of "high-energy pipe lines" to assure that there would be no safety hazard from the consequences of postulated pipe ruptures. The threat from pipe whip was the principal matter under consideration. The applicant performed the required analysis, located five instances where modifications were desirable, and made three of the modifications.

In two instances, appropriate modifications have not yet been made. The applicant explains, however, that it is making the modifications out of an abundance of caution rather than to correct an immediate safety problem. Specifically, the relevant affidavit states that with respect to one item, "although redundant remotely operated valves were available to isolate a rupture, it seemed conservative to reroute these cables . . . " Similarly, with respect to the other item, it explains that "although doubly redundant systems are available, it seemed wise to prevent this potential problem." We can find no basis for a challenge to the staff's conclusion (Butler affidavit, p. 2) that "there is reasonable assurance that the station can be shutdown and maintained in a safe shutdown condition should any of the postulated pipe ruptures actually occur." In other words, the facility appears to comply with applicable regulations.[35]

b. The May 4, 1973 letter presents somewhat different considerations. Although neither the staff nor the applicant's affidavits discussed that letter, it seems to us to be unrelated to the prior correspondence and reports cited by NECNP. Instead, it appears to initiate a new line of inquiry into "flooding of critical equipment" from ruptures of low-pressure lines. More specifically, the staff letter requests that the applicant "investigate . . . to assure that equipment important to safety will not be damaged by flooding due to rupture of a *non-class I* system component or pipe such that engineered safety features could not perform their design function. No single incident of a *non-class I* system component or pipe failure shall prevent safe shutdown of the facility" (emphasis added).

In our judgment, this concern over the flooding from possible but unlikely rupture of low-pressure lines falls clearly into the area where the facility compliance with applicable criteria is established but where, out

[33] We note that, while the applicant submitted its report to the staff on January 9, 1973, it was not until May 30-31, 1973—*i.e.*, just after we issued our first remand order—that the staff inspection and review of the applicant's data and documentation took place.

[34] Although the issue of the impact of the October 25 letter on the validity of the temporary operating license was never squarely presented to us, we feel compelled to call attention again to our comments on that subject (see ALAB-124, RAI-73-5 at 362).

[35] The applicant's final report on this subject was due for filing around July 1, 1973. Its absence does not affect the conclusions drawn from the record before the Licensing Board.

of an abundance of precaution, additional steps to make the facility "more safe" may be taken. In short, this matter simply does not meet our "major significance to plant safety" test and thus does not justify reopening the hearing record.

### C. Conclusion

Our conclusion, then, is that the motion to reopen should have been granted only with respect to the fuel densification issue. We should explain that our conclusion that reopening is not required on the other issues is in no way inconsistent with the Commission's decision in *Point Beach 2*. There we had held, based on presentations made to us by counsel for the parties, that there was no triable issue concerning the acceptability of reactor operation at 75% of full power for three months (ALAB-90, RAI-73-1, p. 11). The Commission reversed, holding that the intervenors were entitled to "an opportunity to participate in the resolution of properly contested issues" before the Licensing Board (CLI-73-4, January 30, 1973, RAI-73-1 at 7). Here, the intervenors have had full opportunity to present to the Licensing Board materials in support of a claim that material, triable issues exist.[26] Unlike the situation in *Point Beach 2*, the countervailing submissions of the other parties consisted of much more than just the expression of the views of counsel. Before us, in addition, are affidavits which have been subjected to Licensing Board scrutiny. Our decision—that NECNP has not demonstrated to the Licensing Board that there is a triable issue on quality assurance, pipe routing, or thin-walled valves—is, therefore, not in conflict with *Point Beach 2*.

## IV

By virtue of our holding that the reopened proceeding should embrace only the fuel densification issue, our consideration of the correctness of the Board's order allowing continued plant operation pending the outcome of the reopened proceedings is restricted to that issue. We affirm the result reached by the Board, but are requiring that additional information be promptly furnished to that Board and that a fresh determination on that score be made.

A. 1. As a general rule, the Commission's regulations preclude a challenge to applicable regulations in an individual licensing proceeding. 10 CFR 2.758.[28] This rule has frequently been applied in such proceedings to preclude challenges by intervenors to Commission regulations. Generally, then, an intervenor cannot validly argue on safety grounds that a reactor which meets applicable standards should not be licensed. By the same token, neither the applicant nor the staff should be permitted to challenge applicable regulations, either directly or indirectly. Thus, those parties should not generally be permitted to seek or justify the licensing of a reactor which does not comply with applicable standards.[29] Nor can they avoid compliance by arguing that, although an applicable regulation is not met, the public health and safety will still be protected. For, once a regulation is adopted, the standards it embodies represent the Commission's definition of what is required to protect the public health and safety.

In short, in order for a facility to be licensed to operate, the applicant must establish that the facility complies with all applicable regulations. If the facility does not comply, or if there has been no showing that it does comply, it may not be licensed.

2. One of the applicable standards requires the existence of an emergency core cooling system which meets certain interim acceptance criteria. 36 *F.R.* 12247 (June 29, 1971); 36 *F.R.* 24082 (December 18, 1971). There is a great deal of controversy in other forums concerning these criteria—some say that the criteria are unduly conservative, others that they are not conservative enough. That controversy need not concern us, for the decision has been made that, pending its resolution, an individual licensing tribunal need ascertain only whether the reactor ECCS in fact complies with the interim acceptance criteria. The compliance question is not necessarily an all-or-nothing proposition, for it may be possible to attach restrictions on power levels or operating conditions which will result in compliance.

It bears repetition that, under the principles we have set out above, it cannot be argued that, even though the reactor does not comply with the criteria, it should receive an unrestricted full-power, full-term license on the ground that there is reasonable assurance that it can operate without adversely affecting the public health and safety. Such an argument might be factually supportable, but would constitute an indirect attack on the applicable Commission regulations. Again, the point to be made is a simple one: reactors may not be licensed unless they comply with all applicable standards.

In this case, the hearing has been reopened for the purpose of further consideration of the fuel densification phenomena which, as will be seen (p. 530, *infra*), raises at least some doubt concerning whether the reactor complies with the interim ECCS criteria. At the time we made our "short-term" determination in ALAB-124 permitting continued facility operation, however, there had been no ruling that the hearing had to be reopened; rather, we had found simply that the reasons denying reopening were defective. Now that the Licensing Board has correctly required reopening, the standards which the facility must meet to justify continued operation are more stringent than those which we applied when reopening was an open question. Consequently, it was not sufficient for the Licensing Board simply to adopt as its own our short-term findings. The situation presented to the Board was different from that which we faced.[30]

Turning to that situation, we reject at the outset two of the staff's arguments in support of continued facility operations. The first is the factual one, presented by affidavit (discussed *infra*, p. 530), that there is a low probability of a loss-of-coolant accident in the time required for the reopened proceeding. That argument may be factually sound, but it constitutes an indirect challenge to the applicable criteria, in that it would permit licensing of a non-complying reactor. Consequently, we need not consider the factual question concerning the degree of probability of a LOCA in the next few months.

The second argument which we reject was presented by the staff in its brief which accompanied the affidavits. There, the staff asserted that the Commission had not yet revised the interim ECCS criteria to require that fuel densification be taken into account. Consequently, the staff argues, densification does not have to be taken into account.

That argument ignores a crucial factor. The evaluation model employed must utilize all of the relevant parameters concerning the design of the particular reactor and the characteristics of its fuel. The criteria and the model are silent as to the impact of fuel densification because that phenomenon was unknown at the time the criteria were adopted. But whatever the characteristics of the fuel, the proper parameters must be employed in the evaluation model. Otherwise, the calculations derived from the use of the model would reflect a non-existent state of facts. In short, the known facts must be utilized in all events. The Commission need not make an express statement to that effect every time additional facts are discovered.

B. Having set forth the general legal principles which apply here, we turn our attention to the precise ECCS criterion involved and its relationship to the facts presented on the record.

That criterion requires that the calculated peak cladding temperature in the event of a loss-of-coolant accident not exceed 2300°F. The evidence at the original hearing established that the Vermont Yankee reactor is calculated to have a peak cladding temperature, at 100% power, of 2280°F (July 19, 1971 Supplement to Safety Evaluation, pp. 13-14).

A number of documents were filed with the Licensing Board in connection with the motion to reopen on this issue. NECNP relied upon a November 20, 1972 letter from the staff to the applicant which referred

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[26] Although the Licensing Board's orders did not expressly provide for the filing of rebuttal documents by NECNP, the Board stated unequivocally that it would grant such an opportunity to NECNP if it so desired (June 11 Tr., p. 39A). And, at least twice during the oral argument, staff counsel stressed that NECNP must be given that opportunity (*id.*, pp. 154, 183-84). NECNP declined that opportunity, resting instead on the record as it then stood. Thus, the procedure utilized fully complied with the principles we set forth at p. 524, *supra*.

[27] [There is no footnote 27.]

[28] Parties are, however, permitted to show that "special circumstances" present in a particular case demonstrate that application of a regulation "would not serve the purposes" for which it was adopted.

[29] The Atomic Energy Act quite plainly makes compliance with Commission regulations a condition of entitlement to licensing. See, *e.g.*, Sections 183.d, 186.a, and 187, 42 U.S.C. 2233(d), 2236(a), and 2237.

[30] Nor is the situation the same as that presented by an intervenor's motion for a stay of an initial decision pending the resolution of its exceptions. There, the test is, as NECNP recognized, similar to that employed on preliminary injunction. *Boston Edison Co.* (Pilgrim Nuclear Power Station), ALAB-81, WASH-1218 (Supp. 1), p. 546. In that situation, a licensing board will have found that the reactor complies with applicable criteria, so it is appropriate to require, *inter alia*, a showing of the intervenor's probable success on the merits of the issues he raises to justify a stay. In contrast, in the situation presented here, implicit in the order of reopening is the notion that compliance with the applicable criteria has *not* been established. Consequently, the burden on the intervenor is considerably lighter; indeed, the burden may be on the applicant to justify continued operation.

to the discovery that reactor fuel in light water reactors tended to densify during operation. According to the staff's technical report on the subject, this phenomenon could lead to at least two possible results—cladding collapse and an increase in stored energy. The staff requested that applicants and license holders calculate the effect of densification on the ECCS performance for each reactor.

In response to NECNP's motion, the applicant submitted an affidavit which explained that Vermont Yankee had adopted, as its response to the staff request, a generic report which General Electric had prepared. The affiant, John W. Beck, attached the GE report to his affidavit, but made no claim that he had made any independent evaluation of the report.

The GE report states (Section 3, p. 2) that the concerns about densification are that it could cause (1) an increase in stored energy resulting from an increased linear heat generation rate or decreased pellet-clad thermal conductance or (2) local power spikes or cladding collapse if axial gaps were formed. The GE report concluded, essentially, that (1) while a local increase in linear heat generation rate might occur, this will be negated by other factors so that there will be, essentially, no net increase in stored energy and (2) cladding collapse will not occur in its fuel (Section 5(d), p. 22; Section 6(b), (c) p. 38; Section 6(d), p. 39).

The staff filed the affidavit of Victor Stello, the Assistant Director for Reactor Safety. Mr. Stello stated that the staff's review of densification with respect to its impact upon the Vermont Yankee facility will be completed within the next few months. However, Mr. Stello stated, the staff's review had been sufficient to draw certain conclusions. The critical ones he mentioned were that, while cladding collapse would not occur, "potential increases in stored energy are, indeed, possible" and that "increased stored energy could affect the calculated peak cladding temperature . . . ." In connection with his conclusions, the affiant noted that two supplements to the GE report referred to by the applicant had been received but that they were not being submitted to the Licensing Board "because they consist of proprietary information."[31]

The staff attached to the brief filed with us two additional affidavits which it had not presented to the Licensing Board. One is of no significance, for it simply attempts to buttress the claim—which is legally irrelevant (see fn. 31, *supra*)—that the probability of a LOCA is less during the next few months than over the lifetime of the reactor.

The other—the further affidavit of Mr. Stello—had possible significance. It is true that, in large part, it merely expanded on his earlier statements concerning the incomplete nature of staff review and the staff's inability to say now

> with confidence whether the calculated maximum fuel element cladding temperature in the unlikely event of a loss-of-coolant accident at the station will or will not exceed 2300°F if the effects of fuel densification are accounted for.[32]

But he went on to say that, if it were assumed that a LOCA would occur, restriction of plant operation to 75% of full power "would conservatively account for the anticipated effects of fuel densification" under the postulated LOCA situation.[33]

C. The situation can thus be capsulized as follows. The Licensing Board had before it three essential factors for consideration: (1) The reactor has a predicted peak cladding temperature in the event of a LOCA of 2280°F, calculated without reference to the effects of densification. (2) GE has made a claim, which is unsworn, untested, and unendorsed by the staff, that densification has no effect on peak cladding temperature. (3) The staff asserts that it has no analysis of its own to show that densification will or will not have an effect substantial enough to raise the peak cladding temperature above 2300°F.[34]

[31] As previously noted (see p. 529, *supra*) the staff affidavit also contained an asserted justification for continued plant operation, namely, that concern for the public health and safety required no action "in light of the extremely small probability of a LOCA during the time required for the completion of staff review." For the reasons already stated, that justification lacks legal significance here.

[32] According to the affidavit, an answer on that question is expected to be forthcoming in early September, 1973.

[33] The affidavit also reflected that Mr. Stello held "without reservation" the opinion that the plant could continue to operate until completion of the staff review without "any undue risk to the health and safety of the public . . . ." For two reasons, that opinion by itself cannot justify continued plant operation. In the first place, the plant cannot be licensed unless it has been shown to comply with the ECCS criteria. Second, Mr. Stello's opinion again was based in part on an improper factor, *i.e.*, "the extremely low probability of a loss-of-coolant accident . . ." prior to the completion of staff review.

[34] The staff appears to have accepted GE's claim that cladding collapse will not occur, and we do not understand NECNP to be contesting that claim.

Based on those factors, the Board reached the correct result in permitting continued plant operation pending the outcome of the reopened proceeding. The GE report, which was the most probative evidence on the record before the board, would demonstrate the facility's compliance with the ECCS criteria. Since neither the staff nor NECNP made any showing of unlikelihood that the GE report would be accepted, that report furnished the basis for an interim finding of compliance with the criteria and thus justified continued plant operation.

We cannot upset that result on the basis of the second Stello affidavit, which indicates that operation at 75% would assure compliance with the criteria. In the first place, that affidavit was not submitted to the Licensing Board. Our reading of the Commission's decision in *Point Beach 2* (see p. 528, *supra*) is that it precludes us from relying upon such a presentation—other than, perhaps, for purposes of an emergency ruling pending receipt of responses from the other parties—when neither the applicant (which would be harmed by a derating to 75%) nor NECNP (which could assert that a lower level is proper)[35] had the opportunity to respond to it before the Licensing Board. Second, the affidavit does not reflect the factual basis for the opinion that 75% is an appropriate power level. For these two reasons, we have placed no reliance upon the second Stello affidavit.

D. While we are able, on the basis of the GE report and the entire record before the Licensing Board, to permit continued plant operation at this stage, the matter does not end there. For we are not prepared to say that plant operation can continue through the entire pendency of the reopened proceeding. This is so because the staff has not completed its analysis and has failed to submit to the Licensing Board information which may well have a crucial bearing on the validity of the interim plant operation. That information consists of the two supplemental GE reports and of the second Stello affidavit.[36]

As a consequence, further interim proceedings are necessary. While the reopened proceeding may otherwise follow whatever course the Licensing Board finds to be appropriate, including the utilization of discovery procedures, the following steps should be taken at an early date. First, the staff is to submit the supplemental GE reports promptly to the Licensing Board.[37] Contemporaneously, one copy of each report shall be delivered to counsel for NECNP and, if the supplements have not previously been provided to the applicant, to counsel for the applicant.[38]

The staff also shall promptly submit the second Stello affidavit to the Licensing Board. As soon as possible thereafter, it shall submit an additional affidavit from Mr. Stello or from another qualified staff official explaining the second Stello affidavit by answering the following questions: (1) is the staff recommending a derating to 75%; (2) if not, why not;[39] and (3) if so, what is the basis for the conclusion that 75% is both necessary and adequate to meet the criteria.

The Licensing Board should set an expedited schedule governing the submission of this additional information and any responses of the parties. Upon receipt of these additional filings, the Licensing Board is to make another interim determination, based on the entire, supplemented record then before it, as to whether and at what level plant operation can continue. The standard to be applied at that stage is a simple one: at what level of operation can it be fairly stated, based on the entire record, that there will be compliance with the ECCS interim criteria. Of course, if at any later stage of the reopened proceeding,

[35] In this connection, see NECNP's June 29 "Response to Exceptions," p. 10, fn. ** and text accompanying.

[36] In our view, the supplemental GE reports clearly should not have been withheld from the Licensing Board.

[37] In view of the claim that the reports are proprietary in nature, the Licensing Board may wish to specify the number of copies it desires to receive. One copy of the reports should also be delivered to this Board.

[38] The delivery of the reports to both those counsel shall be conditioned upon the signing by them of an appropriate protective agreement. We should add that our ruling does not intimate any view as to whether the reports are properly claimed to be proprietary. No such determination should be made without providing all persons concerned an opportunity to be heard.

[39] If the staff does not recommend derating, it should reconcile its position with that taken in other BWR licensing cases, where it has indicated that if its densification review "is not completed prior to fuel loading, consideration will be given to licensing at partial power . . . ." See July 16, 1973 "Supplement No. 1 to the Safety Evaluation of the Cooper Nuclear Station, Docket No. 50-298," p. 8.

significant new information is submitted to the Licensing Board, it should reconsider its ruling on interim plant operation.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

Margaret E. DuFlo
Secretary to the Appeal Board

Dated: July 25, 1973

The additional views of Mr. Farrar appear *infra*.

**Additional views of Mr. Farrar:**

I join fully in Parts I and II of this opinion and in most of what is said in Parts III and IV. I have, however, reservations respecting some of the conclusions reached by my colleagues in the latter two parts. Because of these reservations, I suscribe with reluctance to the Board's determination (1) to permit continued plant operation at full power based upon the GE report (Part IV-C); and (2) to exclude the pipe rupture issue from consideration in the reopened hearing (Part III-B-4).

1. Were I sitting alone in deciding this case, I would have required at least a partial cessation of plant operations *pendente lite*.* I start with the narrow margin by which, in the absence of any densification effect, the Vermont Yankee facility complies with the peak cladding temperature criterion. That fact, coupled with the staff's inability after seven months to state that densification will not lead to an increase in peak cladding temperature, would have led me to conclude that it cannot fairly be said at this stage that the facility complies with the interim acceptance criteria. In short, I would not have relied upon the unsworn, untested GE report which, after all, was prepared on behalf of an organization not entirely disinterested in the conclusions reached.

To be sure, in the case of a conflict between evidence supporting the applicant's position (*e.g.*, evidence elicited from GE) and evidence submitted by the staff, the trier of fact need not defer to the staff evidence simply because it came from the staff. In this connection, staff evidence should be evaluated in light of the same principles that apply to evidence adduced by an applicant or an intervenor.† Thus, the GE report might ultimately prevail over contradictory staff testimony. Nonetheless, I would not, if sitting alone, be prepared now to place entire reliance for continued plant operation upon a report prepared by those with a heavy economic stake in the matter, when the staff, which has a duty to represent the public interest, is yet unable to verify the report's conclusions. Pending the development of full information on a safety question which gives rise to legitimate doubts as to whether applicable criteria are being satisfied, I would be inclined to impose conservative limitations on reactor operation which assure that the criteria are being satisfied.

I nevertheless join the result reached here on the basis of the appraisal of the GE report by my colleagues. They bring unusual technical competence and knowledge to bear on the question, and assure me that, on its face, the GE report is plausible and contains no obviously suspect conclusions. For that reason alone, I join this aspect of the decision.

2. With respect to the pipe rupture issue, it is not immediately apparent to me from the submissions of the parties that the May 4, 1973 "flooding" letter involves insignificant matters. But, here too, I have decided to concur in the result based solely on my colleagues' appreciation and explanation of what is involved.

*If the parties had had the opportunity to respond to the second Stello affidavit, and had it reflected the factual basis for the opinion expressed, I would have relied upon it to require a derating to 75% of full power. In any event, I would have required at least partial derating.

†Needless to say, however, one of the considerations applicable in the evaluation of evidence is the nature and extent of the interest, if any, which the proponent of that evidence may have in the outcome of the proceeding.

## SUPPLEMENTAL MEMORANDUM

Our opinion of July 25, 1973 indicated that, in the absence of the fuel densification phenomenon, the peak cladding temperature calculated to be attained by the Vermont Yankee reactor in the event of a loss-of-coolant accident is 2280°F (*supra*, p. 529). Upon his receipt of our opinion, counsel for the applicant, Thomas G. Dignan, Jr., promptly telephoned the Chairman of this Board. The purpose of that *ex parte* call was to direct our attention to a portion of the record which revealed that the peak cladding temperature had been calculated, again without regard to densification, to be 2298°F under certain circumstances. This information might have been material, for a narrowing of the margin between the calculated figure and the applicable 2300°F standard would tend to make any effect occasioned by fuel densification more significant.

Before discussing the 2298° figure, we should mention that Mr. Dignan displayed highly commendable candor in calling the Board's attention to the existence of a fact which could detract from the validity of the position he was advocating. While we would expect no less from any member of the bar appearing before us, Mr. Dignan's conduct nevertheless is worthy of acknowledgement, for it reflected his full adherence to the principles which should govern those who by their advocacy participate in the adjudicatory process.

1. By the time the original hearing closed, the intervenor NECNP had conceded that the facility complied with the interim acceptance criteria (Tr. 6314). Consequently, there was no occasion for the parties in their proposed findings or the Licensing Board in its initial decision to refer to the precise calculated peak cladding temperature. Moreover, the parties did not address this question in the papers filed on the remand before the Licensing Board or in their exceptions from the Licensing Board's June 13, 1973 order. Our own review of the record disclosed only the 2280° figure in a supplement to the safety evaluation report (see *supra*, p. 529). That figure accurately reflected the reactor's design characteristics.

Mr. Dignan's call, however, directed our attention to another, less obvious, part of the record. At one stage of the hearing, testimony was elicited concerning a calculation of peak cladding temperature which reflected the effect of certain anomalies in the enrichment characteristics of the fuel then actually installed in the reactor (Tr. 4327-29, March 17, 1972).[1] According to the evidence adduced at that time, the calculated "as-built" peak cladding temperature still met the 2300° criterion, although no precise figure was given (Tr. 4329; p. 3 of letter following Tr. 4332). Cross-examination seeking to ascertain the precise figure led to the applicant's undertaking to furnish that information by letter (Tr. 4333).

The promised letter—disclosing that the precise figure was "less than 2298°F"—was sent on April 14, 1972 but was not then incorporated in the record. The letter became a part of the record only indirectly, in connection with the applicant's July 11, 1972 motion for a temporary operating license. Specifically, the letter was attached as an exhibit to one of the sixteen affidavits submitted in support of that motion (Exh. F-1 to Hinkle affidavit).

2. The decision we reached in ALAB-138 (*supra*) is not affected by our present awareness of the increase in the calculated peak cladding temperature. To be sure, "as-built," the margin of compliance with the interim acceptance criterion is narrower than we previously had thought. But we held in ALAB-138 (*supra*) that, on the record existing at this stage, reliance could be placed upon the conclusions in the GE report that the fuel densification phenomenon would occasion essentially no net effect on stored energy and, consequently, no effect on calculated peak cladding temperature. The information now brought to our attention does not alter the basis for that holding. Applying that holding to the facts as we now understand them, we can still state that, as far as the record now fairly shows, densification will not result in noncompliance with the interim acceptance criteria.

Accordingly, each of the members of this Board adheres to the views which he expressed in ALAB-138.

3. Although we place no reliance upon this possibility, it may be that the 2298° "as-built" figure is no longer operative and that the 2280° design figure can again be utilized. The record reveals that, owing to

[1] In other words, the staff and the applicant recognized that all known facts concerning the fuel must be taken into account in employing the evaluation models to determine whether there was compliance with the interim acceptance criteria. The course followed at that time—*i.e.*, taking enrichment anomalies into account—was fully consistent with, and lends further support to, our conclusion (*supra*, p. 529) that the effects of fuel densification must be considered in employing the evaluation model.

the hydriding problem discussed in our opinion, a number of fuel rods in the reactor were replaced after the issuance of the April 14, 1972 "2298" letter (see June 1, 1973 Grube affidavit attached to "Applicant's Response to [Licensing Board's] Order of May 24, 1973"). It may be, then, that by this time some or all of the improperly enriched rods have been removed. Accomplishing that result would, we presume, reinstate the 2280° figure as the starting point for considering the impact, if any, of densification.

FOR THE ATOMIC SAFETY AND LICENSING
APPEAL BOARD

Margaret E. DuFlo
Secretary to the Appeal Panel

Dated: July 31, 1973