UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

January 7, 1980

CONSENT CALENDAR ITEM
ADJUDICATORY

SECY-A-80-4

For: The Commissioners

From: Leonard Bickwit, Jr.
General Counsel

Subject: COMMISSION REVIEW OF ALAB-502 (IN THE MATTER OF ROCHESTER GAS AND ELECTRIC CORPORATION, ET AL.)

Facility: Sterling Power Project, Nuclear Unit No. 1.

Purpose: To present the parties' positions on the issue for review, to discuss the alternatives for Commission action, [and to recommend

Discussion: This proceeding is the Commission review of ALAB-502 in which the Appeal Board affirmed the Licensing Board's authorization of a construction permit for the Sterling Power Project, 1/ and made a significant interpretation of the Commission's "obviously superior" standard 2/ (Standard) for choosing among alternative sites. The Appeal Board reformulated the Standard to require rejection of an applicant's choice of site only if an alternative site was "clearly and substantially" superior. 3/ In its petition for review, intervenor Ecology Action of Oswego, New York challenged this interpretation, as well as several other aspects of ALAB-502. The NRC Staff and Applicant Rochester Gas and Electric both opposed review. On March 8, 1979, the Commission partially granted Ecology Action's petition for review. You framed the issue for review as:

1/ Construction of this facility has not been initiated. The applicant has not yet received the requisite certificate of environmental compatibility and public need from the New York State Board on Electric Generation and Siting.

2/ Public Service Company of New Hampshire, (Seabrook Station, Units 1 and 2), CLI-77-8, 5 NRC 503, 526-30 (1977).

3/ ALAB-502, 6 NRC 383, 397-98 (1978).

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whether in the factual circumstances presented by this proceeding, the Appeal Board correctly interpreted the Commission's "obviously superior" standard for rejecting the Applicant's proposed site because of the existence of a preferable alternative.

You have received initial briefs from all parties, and reply briefs from the Applicant and Intervenor. [We do not believe

we believe

EY.5

Factual Background:

This issue arose from a controversy over site selection which focused on two sites: RG&E's proposed "virgin" site at Sterling and its already "spoiled" site at Ginna which contains a 490 MWe nuclear power plant. The Licensing Board compared several terrestrial impacts at the two sites and found that: (1) a larger percentage of the land is in a non-natural condition at Ginna than at Sterling (77% versus 57%); (2) fewer acres of natural communities would be cleared at Ginna than at Sterling (33 acres versus a maximum of 15 acres); (3) the habitats which would be cleared at Sterling are relatively common in the region; and (4) a 179-acre swamp at Sterling would be minimally affected by construction because the applicant would mitigate construction impacts. 4/ On the basis of this comparison, the Licensing Board concluded that there would be less terrestrial impact at Ginna than at Sterling and found that Ginna must be accorded a small advantage on environmental considerations. 5/ The Board also noted that the possibility of unnecessarily committing the Sterling site to nuclear power was of greater importance, from an environmental point of view, than the small site differences. However, the Board found it impossible to quantify the impact of removing Sterling from other uses. The Licensing Board then went on to consider delay costs associated with changing the proposed site from Sterling to Ginna and

4/ 6 NRC at 415-416.

5/ 6 NRC at 416 and 418.

concluded that Sterling is the preferred site for economic reasons. 6/

The Appeal Board found that the Licensing Board used the wrong standard in making its alternative site comparison. Delay costs would have been relevant only if the Licensing Board had first found that Ginna is "obviously superior" to Sterling on the basis of environmental attributes. Because the Licensing Board did not address the issue of obvious superiority, the Appeal Board made an environmental comparison of the two sites and found that Ginna is not "obviously superior" to Sterling. In making this determination, the Appeal Board relied on its own observations of the sites as well as on the Licensing Board's determination that the trees which would be removed at Sterling were relatively common to the area, and agreed with the Licensing Board's finding that the swamp at Sterling would be adequately protected by the applicant's mitigative measures. 7/

Regarding the public's use of the Sterling site for recreation, the Appeal Board noted that RG&E owned that site and, thus, could at any time foreclose its public use whether or not it becomes the site of a nuclear power plant.

Parties' Positions:

Ecology Action contends that the Licensing Board implicitly found that the alternative site at Ginna was "obviously superior" to the site at Sterling. In Ecology Action's view, the Appeal Board erroneously contradicted this implicit finding because it applied its own "dogmatic definition" of the Standard to effectively require an alternative site to be greatly superior in order to reject the applicant's proposed site.

Ecology Action also contends that the Appeal Board's interpretation of the Standard as "clearly and substantially better" is more rigorous than is necessary to overcome the

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6/ 6 NRC at 418-19.

7/ 8 NRC 395-97.

uncertainties of cost/benefit analysis which underlie use of the Standard. In its view, a Licensing Board could have the requisite confidence for rejecting a proposed site once it finds that an alternative is "clearly better." Ecology Action believes that interpretation of the Standard to mean "clearly better" is particularly appropriate in this proceeding because the alternative site at Ginna has been more extensively studied than the usual virgin alternative site and, thus, there are fewer uncertainties in site comparison here because any environmental disadvantages at Ginna are known. 8/

Staff and the Applicant contend that both the Licensing and Appeal Boards correctly found that Ginna is only marginally better than Sterling. In Seabrook, the Commission stated:

> "In sum, we think it appropriate that a licensing board refuse to take the proposed 'major Federal action,' i.e., deny the requested license, not when some alternative site appears marginally 'better' but only when the alternative site is obviously superior." 9/

Thus, Staff and Applicant believe the Appeal Board correctly applied the Standard. In their view, the facts do not support Ecology Action's assertion that the Appeal Board's interpretation of the Standard would require an alternative site to be greatly superior in order to reject the Applicant's choice of site.

Staff recognizes that the Appeal Board did not rely on a possible disparity of information between the sites even though such disparity is one of the two NEPA realities identified in Seabrook as supporting the Standard. However, Staff contends that the Appeal Board's interpretation is adequately supported by the Commission's concerns about the imprecision of

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8/ The Ginna site has been subjected to an earlier environmental review related to the nuclear power plant currently operating at that site. The record does not indicate the degree of comparability of that review to the review of Sterling. In addition, the Ginna site was studied to satisfy New York State's siting law.

cost-benefit analysis and the wide margin of uncertainty inherent in site evaluation. In Staff's view, these factors prevent the Commission from having the requisite substantial confidence in the apparent superiority of an alternative site unless that site is substantially better. Consequently, Staff believes that the Appeal Board's formulation is a reasonable interpretation of the Standard.

Staff and Applicant also contend that a more precise definition of the Standard is not required in this proceeding because Ginna was found to be only marginally better. In Seabrook, the Commission said that it would not be appropriate for a licensing board to deny a requested license if an alternative site appears only marginally better. 5 NRC at 530. Consequently, even if the Commission should disagree with the "clear and substantial" formulation, a reformulation of the Standard consistent with the Seabrook decision would not alter the outcome in this proceeding.

Ecology Action responds to the Staff and Applicant by contending that any formulation of the Standard based on the degree of superiority of the alternative site violates the National Environmental Policy Act (NEPA) by putting an unfair burden on the alternative. Therefore, the Appeal Board's interpretation of the Standard must be rejected as illegal. 10/

10/ [illegible]

Applicant's reply brief suggests that the Commission dismiss the petition for review as improvidently granted because this proceeding does not present difficult questions concerning application of the Standard. In addition, Applicant contends that petitioner Ecology Action has not pursued the issue for review but, instead, has challenged the Standard as contrary to NEPA, and the factual finding that Ginna is not obviously superior to Sterling.

Options

[In our view,

In our view,

Consequently, we believe

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1/ 5 NRC at 528.

EX.5

However, in my view,

Leonard Bickwit, Jr.
General Counsel

Attachments:
1. ALAB-502
2. Draft Memo & Order

14/ 582 F.2d at 95.

Commissioners' comments or consent should be provided directly to the Office of the Secretary by c.o.b. Tuesday, January 22, 1980.

Commission Staff Office comments, if any, should be submitted to the Commissioner NLT January 15, 1980, with an information copy to the Office of the Secretary. I the paper is of such a nature that it requires additional time for analytical rev and comment, the Commissioners and the Secretariat should be apprised of when comments may be expected.

This paper is tentatively scheduled for affirmation at an Open Meeting during the Week of January 28, 1980. Please refer to the appropriate Weekly Commission Sche when published, for a specific date and time.

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ATTACHMENT 1

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck
Richard S. Salzman

SERVED OCT 20 1978

In the Matter of	)	
ROCHESTER GAS AND ELECTRIC CORPORATION, et al.	)	Docket No. STN 50-485
(Sterling Power Project Nuclear Unit No. 1)	)	

Ms. Sue Reinert and Dr. Helen Daly, Oswego, New York (with whom Ms. Ruth Caplan was on the brief) for the intervenor, Ecology Action of Oswego.

Mr. Lex K. Larson, Washington, D.C. (with whom Messrs. Edward L. Cohen and Arthur M. Schwartzstein were on the brief) for the applicants, Rochester Gas and Electric Corporation, et al.

Mr. Stephen M. Sohinki (with whom Messrs. Edwin J. Reis and Auburn L. Mitchell were on the brief) for the Nuclear Regulatory Commission staff.

DECISION

October 19, 1978

(ALAB - 502)

On August 26, 1977, the Licensing Board rendered an initial decision authorizing issuance of a construction permit for the Sterling Power Project, Nuclear Unit No. 1. 1/

1/ The Sterling facility is to be owned by Rochester Gas & Electric Corporation (28%), Central Hudson Gas & Electric Corporation (17%), Orange and Rockland Utilities, Inc. (33%) and Niagara-Mohawk Power Corporation (22%) (Safety Evaluation Report, Supp. No. 1, §20.1). Rochester has full responsibility for the construction, operation and licensing of the facility (id., §1.1).

LBP-77-53, 6 NRC 350. The facility is to be located on the south shore of Lake Ontario, in the town of Sterling in Cayuga County, New York, approximately 8 miles southwest of Oswego and 30 miles northwest of Syracuse (FES, §2.1).

Exceptions to the decision were filed by intervenor Ecology Action of Oswego[2] and by the applicants. Additionally, at various times during the pendency of the appellate proceedings, Ecology Action filed with us motions to reopen the record on such discrete issues as (1) the need for the power to be generated by the Sterling facility;[3] (2) the environmental costs associated with releases of radon (Rn-222) in the mining and milling of uranium;[4] (3) whether the facility should be located at some other site;[5] and (4) the availability and cost of the uranium necessary

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2/ Ecology Action participated below as a joint intervenor with Sharon Morey, an individual. Ms. Morey has not joined in the appeal. As used in this opinion with reference to the proceedings before the Licensing Board, the term "Ecology Action" embraces both that intervenor and Ms. Morey.

3/ Motions dated October 24, 1977 and April 28, 1978.

4/ Motion dated March 15, 1978. On April 28, 1978, Ecology Action filed a "Renewal and Supplement" to this motion. Subsequently it filed several other requests respecting the "radon" question.

5/ Motion dated March 22, 1978. On August 3, 1978, Ecology Action filed a supplement to this motion.

to fuel the reactor over its projected lifetime.[6] With respect to the second and third of these subjects, on April 28, 1978 Ecology Action moved to suspend the effectiveness of the construction permit[7] to await the outcome of its appeal. In an unpublished order entered on May 5, 1978, we declined to grant that relief, noting (inter alia) that the applicants had represented to us that, in any event they did not intend to commence construction prior to the fall of 1978. We directed, however, that, pending our final decision on the various exceptions, the applicants provide us with at least ten days' written notice prior to the commencement of any construction activities.[8] By letter date July 21, 1978, the applicants advised us that commencement c construction had been deferred until the fall of 1980, with the scheduled date of commercial service deferred until the spring of 1988.

In this opinion, we reach and decide all matters before us except for need-for-power and radon releases. For the following reasons, decision on those two issues is being deferred:

6/ Motion dated April 28, 1978.

7/ The permit (No. CPPR-156) issued on September 1, 1977. See 42 F.R. 45722 (September 12, 1977).

8/ Ecology Action unsuccessfully sought Commission review of our May 5 order. Thereafter, it sought judicial review of that order; that action is still pending. Ecology Action of Oswego, New York v. NRC, D.C. Cir. No. 78-1855.

1. In its motions seeking a reopening of the record on the need for Sterling-generated electricity, as well as in its exceptions addressed to that question, Ecology Action placed heavy reliance on various reports which purportedly counter the Licensing Board's findings respecting when that need will arise. More particularly, in its April 28, 1978 filing (see fn. 3, supra), Ecology Action brought to our attention the report submitted earlier that month by the New York Power Pool pursuant to the requirements of the New York Public Service Law (commonly referred to as a "Section 149-b" report). According to Ecology Action, that report reflected a reduced projected demand growth in the applicants' service areas, as well as the likelihood that, even in the absence of Sterling, excess generating capacity would be available in 1984. [9]

In granting in January 1978 the requisite state certificate of environmental compatibility and public need for the Sterling facility, the New York State Board on Electric Generation Siting and the Environment (siting board) had concluded that, without the addition of Sterling or a fossil-fuel alternative to it, a deficiency in generating capacity was likely in 1986. In the wake of the Section 149-b report rendered in April, and alluding specifically to it, the siting board

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9/ The Licensing Board found that Sterling power would be needed in that year. See 6 NRC at 379.

entered an order on May 4 which directed a "limited reopening on the issue of public need for the" Sterling facility (order p. 10). To date, insofar as we have been informed, the siting board has not rendered its determination on this reopened issue.

We are, of course, under no legal compulsion to withhold our own decision on the need-for-power question to await the siting board's ruling. But it appears to us that little useful purpose would be served were we now to undertake a duplication of the inquiry being made by the state body into the significance of the disclosures in the Section 149-b report. We have been given no cause to believe that the siting board -- which has among its members a representative of the New York Public Service Commission -- lacks either the capability or the willingness to explore the matter thoroughly and to make an informed judgment on it. Beyond that, our understanding is that Ecology Action is a party to the state proceeding; thus it is in a position to put forth in that proceeding the same considerations it has pressed upon us in support of its challenge to the applicants' claims respecting when Sterling power will be needed.

In its Vermont Yankee decision[10/] last April, the Supreme Court noted that "[t]here is little doubt that under the Atomic

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10/ Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, 435 U.S. ___, ___, 55 L. Ed 2d 460, 483 (1978).

Energy Act of 1954, state public utility commissions or similar bodies are empowered to make the initial decision regarding the need for power". 435 U.S. at ___, 55 L. Ed 2d at 483. Although, to be sure, this Commission's responsibilities in this sphere have their primary roots in the National Environmental Policy Act rather than the Atomic Energy Act,[11/] we even more recently expressed the view that NEPA does not foreclose "the placement of heavy reliance upon the judgment of local regulatory bodies which are charged with the duty of insuring that the utilities within their jurisdiction fulfill the legal obligation to meet customer demands." Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, 4), ALAB-490, 8 NRC ___, ___ (August 23, 1978) (slip opinion at 14). Granted, -- unlike state utilities commissions such as the one involved in Shearon Harris --, the siting board as such may not have that duty. But, especially in light of the New York Public Service Commission presence on it, no less than a public utilities commission the siting board can "be expected to possess considerable familiarity with the primary factors bearing upon present and future [electricity] demand * * * ". Id. at ___ (slip opinion at 13). This being

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11/ "'Need for power' is a shorthand expression for the 'benefit' side of the cost-benefit balance which NEPA mandates for a proceeding considering the licensing of a nuclear power plant". Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-422, 6 NRC 33, 90 (1977).

so, we have little hesitancy in carrying over to this case the conclusions reached in Shearon Harris with regard to the deference which appropriately may be given to need-for-power determinations by state agencies.

In this connection, in the particular circumstances confronting us, it is of no moment that in Shearon Harris, unlike here, the ultimate state determination had already been made by the time that the NRC licensing proceeding had reached the adjudicatory stage. Apart from all other considerations, as previously noted the applicants do not propose to start building for another two years. By that time, both the siting board ruling and our own need-for-power decision in the wake of it should be in place. Stated otherwise, although in many situations a deferral of one licensing body's decision to await that of another might cause prejudicial delay, we perceive no significant risk of that happening in this instance.

Once the siting board has ruled, we will expect the applicants promptly to bring its decision to our attention. Should the decision be adverse to the applicants (and not overturned on any subsequent judicial review which might be available), that most likely would be the end of the matter.

For, according to our understanding of New York law, the grant by the siting board of a certificate of environmental compatibility and public need is a condition precedent to plant construction no matter what this Commission might conclude regarding the need for the plant.[12/] On the other hand, if the applicants prevail before the siting board, the Shearon Harris principles will come into play. That is to say, the need-for-power findings and conclusions of that board will be given great weight by us unless shown to "rest upon a fatally flawed foundation." ALAB-490, supra, 8 NRC at ___ (slip opinion at 13-14). Cf. Seabrook, ALAB-422, supra fn. 11, 6 NRC at 69-71, affirmed on this point, CLI-78-1, 7 NRC 1, 23-28 (1978), affirmed sub nom. New England Coalition on Nuclear Pollution v. NRC, ___ F.2d ___ (Nos. 77-1219 etc., 1st Cir., decided August 22, 1978) (slip opinion at 16-19).[13/]

2. For its part, the issue relating to the environmental effects of radon releases in the mining and milling of uranium is "generic" in character in the sense that it applies equally to all reactors. Nonetheless, it is under current consideration in a large number of individual licensing proceedings as a

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12/ There has, of course, been no federal preemption insofar as determinations respecting need for the nuclear facility are concerned.

13/ We assume that the siting board's decision will develop in some detail the basis for whatever conclusions the board may reach. Such development is a condition precedent to our giving deference to those conclusions.

result of the Commission's amendment of Table S-3 of 10 CFR Part 51 to delete the value assigned in the table to radon releases. 43 F.R. 15613 (April 14, 1978). This action was taken because that value had been found to be incorrect. In ordering the deletion, the Commission further directed that the radon issue be examined or re-examined in all pending proceedings without reference to the discredited value.

In implementation of the Commission's instructions, we established procedures for dealing with the radon issue in cases such as this one. See Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), et al., ALAB-480, 7 NRC 796 (May 30, 1978). Those procedures are being followed but as yet have not reached the culmination point; hence we put the radon issue to one side in this case until that time.

We now turn to the issues which are ripe for decision at this time.

I.

The evaluation of alternatives to a proposed nuclear facility mandated by Section 102(2)(C)(iii) of the National Environmental Policy Act, 42 U.S.C. 4332(2)(C)(iii), has been characterized as "the 'linchpin' of environmental

analysis".[14] One important ingredient of this evaluation is the "obligation to consider possible alternative sites" for the proposed reactor. Seabrook, CLI-77-8, supra fn. 14, 5 NRC at 522. The alternate site issue was sharply contested in this case, and aspects of the Licensing Board's decision are challenged on appeal by both Ecology Action and the applicants.

A. Information concerning alternate sites was provided by the applicants, both in their environmental report[15] and at the hearing.[16] The staff analyzed this information as well as site data of its own.[17] Although several claims relating to the alternate site inquiry were presented to the Licensing Board, what the appeals call upon us to consider is that Board's treatment of the applicants' choice of Sterling over one specific site -- identified as "Ginna" -- of the several possibilities examined.

14/ Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-77-8, 5 NRC 503, 522 (1977), citing Monroe County Conservation Society, Inc. v. Volpe, 472 F. 2d 693, 697-98 (2d Cir. 1972). See also Boston Edison Co. (Pilgrim Nuclear Generating Station, Unit 2), ALAB-479, 7 NRC 774, 778-79 (May 30, 1978); Kansas Gas and Electric Co. (Wolf Creek Generating Station, Unit No. 1), ALAB-462, 7 NRC 320, 338 (March 9, 1978).

15/ ER, §9.2.2.

16/ Testimony of Robert J. DeSeyn on contentions 11, 12B, fol. Tr. 868; testimony of Michael J. Hess on contention 12D, fol. Tr. 935.

17/ FES, §9.1.2.2; Supplemental Testimony of Martha S. Salk on contention 12D, of Dino C. Scaletti on contention 12C, of Arvin S. Quist on contention 12A and 12B, of Mr. Scaletti on contention 11B.2, and of Messrs. Quist and Scaletti on contention 11A, all fol. Tr. 1296. The applicants and staff also presented testimony comparing the Sterling and Ginna sites assuming closed-cycle cooling were used at each. Appl. Exh. 8, as revised May 16, 1977; NRC Staff Supplemental Testimony - Alternate Sites, by Dino C. Scaletti, fol. Tr. 4048. See fn. 27, infra.

As earlier noted, the Sterling site is on the south shore of Lake Ontario, approximately 8 miles southwest of Oswego (FES, §2.1). Although also on Lake Ontario (FES, §9.1.2.2), the Ginna site is 35 miles to the west of Sterling, near Rochester (ER, Fig. 2.9-2). It now houses a 490-MWe nuclear reactor which is operated by Rochester Gas & Electric Company, one of the Sterling applicants (FES, p. 9-10). Primarily for this reason, Ecology Action asserted below that the Ginna site should have been selected for this reactor rather than Sterling.

The Licensing Board carefully analyzed the various attributes of the two sites, with particular reference to those factors stressed by Ecology Action -- namely, transmission lines, aesthetics and land clearing requirements. 6 NRC at 414-16.[18/] Although the applicants and staff regarded the Sterling site's proximity to a proposed 765 kv transmission line as favoring use of that site, the Board agreed with Ecology Action that it should be given no weight in view of the then lack of local approval of the proposed line. Id. at 414.[19/]

18/ The Board also examined Ecology Action's claim that the applicants had rejected "some sites" (not further identified) because they could not accommodate two coal-fired plants which the applicants had once planned for the Sterling site (in addition to the nuclear unit) but had since postponed indefinitely. 6 NRC at 413. The Board found other reasons why each site had been rejected. Id. at 414-15. Ecology Action has not reasserted this claim before us.

19/ We have not been apprised by the parties of any further developments with regard to the approval of the line; presumably, it is still under review.

On the score of aesthetic effects, the Board found the differences between the two sites to be "slight". Although taking account of the intervenor's thesis that a "second unit at Ginna would blend with the first and thus provide less visual impact," the Board balanced against it the consideration "that the Ginna site is smaller and flatter, with less natural cover and that the rolling hills and vegetation around Sterling would reduce the visual impact of the plant from a landward direction".20/ Id. at 415. As for the impact upon the terrestrial environment, the Board determined that there was some advantage to the Ginna site. Id. at 416. This stemmed from the fact that fewer acres would have to be cleared (150 as opposed to 201 in the case of Sterling). The Board noted, however, that the trees which would be removed at Sterling "are not unique to the region since mature hardwoods are relatively common in the area along the southern shore of Lake Ontario". Ibid. It also found that the wooded swamp on that site would be only "minimally affected" by the project. Ibid.

Going beyond these environmental comparisons, the Board undertook an economic analysis which produced the conclusion that it would cost roughly the same amount to

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20/ Our own visit to the two sites bore out the accuracy of the Board's summary of the terrain of each.

build, operate and decommission the reactor whether located at Ginna or Sterling -- assuming that no weight were given the substantial transmission line cost differential in Sterling's favor should the proposed line in the vicinity of that site be approved. 6 NRC at 417-18. This equivalence -- taken in conjunction with the slight environmental advantage which it thought that Ginna possessed -- led the Board to join in Ecology Action's concern respecting the commitment of a "virgin" site such as Sterling to power generation when another site already so committed was available. Id. at 418. But the Board then went on to find that a change in site from Sterling to Ginna would result in a two and one-half year delay in the completion of the plant, that the power provided by Sterling would be needed in 1984, and that beginning in that year an additional amount in excess of $100 million annually would have to be expended to obtain replacement power from some other source. Ibid. Because of these factors, the Board concluded that "Sterling is the preferred site for economic reasons". Id. at 419. It added:

> If, however, a delay of two or more years were to occur in the beginning of construction of Sterling, then a reevaluation of site selection must be given serious consideration.

Ibid.

B. Ecology Action and the applicants each take issue with the Board's resolution of the Ginna-Sterling alternate site question -- although, not surprisingly, on different grounds.

The intervenor claims that the Licensing Board's finding of environmental preferability of the Ginna site must perforce control the resolution of the site issue and that it was impermissible for the Board to have founded its ultimate conclusion on the "cost of delay". We are told that this is at least so where, as assertedly is true here, there is available "sufficient power to absorb the delay without jeopardizing the public interest in having sufficient electricity". On the other hand, the applicants maintain that the record demonstrates the environmental preferability (or at least equivalence) of the Sterling site and that the choice of that site should have been ratified for that reason. Further, they urge that the Licensing Board relied on an incorrect legal standard in conducting its site evaluation. For these reasons, they would have us countermand that Board's suggestion that there be undertaken a reevaluation of the sites should there be a delay of two or more years in the commencement of construction -- an eventuality which, we have seen, has indeed materialized.[21/]

21/ Although the applicants have filed exceptions with respect to the Licensing Board's alternate-site conclusions, we have serious doubt regarding their right to do so. Exceptions may not be filed unless a party is aggrieved by the result reached below. Toledo Edison Co. (Davis-Besse Nuclear Power Station), ALAB-157, 6 AEC 858 (1973); Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-282, 2 NRC 9 (1975). Here, the applicants do not challenge the site choice endorsed by the Licensing Board but, rather, the route chosen by the Board to reach its result. Although they do seek to abrogate the site-reevaluation suggestions of that Board, those suggestions appear to be hortatory rather than mandatory and, indeed, gave rise to no construction permit condition. For that reason,
(FOOTNOTE CONTINUED ON NEXT PAGE)

Our consideration of these competing claims persuades us that the Board below used the wrong standard in making its site comparison but that, under the correct one, the approval of the Sterling site was called for and there is no warrant for a further comparison of the Sterling and Ginna (or any other) sites.

1. The standard to be used by a licensing board in evaluating alternate sites derives from the Commission's Seabrook decision, CLI-77-8, supra, 5 NRC at 522-536. There, the Commission described the lengthy and thorough review given proposed sites for nuclear power plants, commencing long prior to the adjudicatory consideration of site-related issues and involving not only the NRC staff but, as well, other interested governmental agencies and the general public. It contrasted this extensive review with the necessarily more limited analysis which reasonably can be accorded to possible alternative locations for the reactor -- noting that "[c]ommon sense teaches that the more closely a site is analyzed, the more adverse environmental impacts are likely to be discovered". 5 NRC at 529 (fn. omitted). It also pointed to the inherent imprecision of cost/benefit analysis and the "wide margin of uncertainty" attendant upon any evaluation of a particular site.

21/ (FOOTNOTE CONTINUED FROM PREVIOUS PAGE)

we dismiss the applicants' exceptions. Their brief in support of those exceptions has, however, been considered by us in connection with our assessment of Ecology Action's site-comparison exceptions. See Midland, ALAB-282, supra, 2 NRC at 10, fn. 1.

Id. at 528. Because of these two "realities of the NEPA process" (ibid.), a proposed site may be rejected in favor of an alternative not when the alternative is marginally "better" but, rather, only when it is "obviously superior", Id. at 530. Moreover, in determining whether a particular alternate site is obviously superior, actual costs of completing a facility at that site may be considered. Id. at 530-36.

The Commission's "obviously superior" standard for evaluating alternate sites has now been expressly upheld by the Court of Appeals for the First Circuit. New England Coalition on Nuclear Pollution v. NRC, supra, ___F.2d at ___, (slip opinion at 13). In doing so, the court of appeals stressed that " * * * NEPA does not require that a plant be built on the single best site for environmental purposes. All that NEPA requires is that alternative sites be considered and that the effects on the environment of building the plant at the alternative sites be carefully studied and factored into the ultimate decision". Id., ___ F.2d at ___ (slip opinion at 13-14). The court also approved the Commission's determination to take actual facility completion costs into account in evaluating alternatives, terming it a "realistic way of dealing with

existing circumstances."[22] Id., ___ F.2d at ___ (slip opinion at 14).

2. Application of this standard mandates rejection of Ecology Action's assertion that the Licensing Board was required to disapprove use of the Sterling site given its findings that the Ginna site is marginally preferable. Equally unavailing is the claim that a licensing board may not properly take into account the costs of any replacement power which might be required by reason of the substitution at a late date of an alternate site for the proposed site. Such costs appear to be as much a "cost of completion" as those associated with pouring concrete or purchasing land.[23] The only

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22/ The court did express some concern that this practice might weight the Commission's determination in favor of an applicant's chosen site, particularly where construction commences prior to the agency's final decision on the alternate site question. Because the start of Sterling construction is deferred for at least another two years, that eventuality is not likely to materialize in this proceeding.

23/ We do not now consider whether, in point of fact, replacement power would be required were the Ginna site now to be substituted for Sterling. As seen, the Licensing Board's findings respecting such power were founded on its conclusion that the nuclear facility would be needed in 1984 to meet power demands existing at that time. It is now clear that the facility will not be on-line by 1984 even if built at the Sterling site. Beyond that, we have deferred decision on the correctness of the need-for-power findings below. All that we hold here is that, assuming that there is a sufficient factual basis for concluding that the delay attendant upon a switch in sites will necessitate the acquisition of replacement power, the cost differential between that power and the power which would have been generated by the proposed facility may be factored into the alternate site comparison. Whether in the particular case there will be occasion to do so, however, will depend upon the outcome of the environmental analysis. See p. 24, infra.

substantial question now before us is one which the Licensing Board did not answer -- i.e., whether, on the basis of the record, Ginna is sufficiently better than Sterling to be adjudged "obviously superior". We conclude not.

The principal advantage of Ginna obviously is the presence there of an existing reactor. That factor is significant but not dispositive. Boston Edison Co. (Pilgrim Nuclear Generating Station, Unit 2), ALAB-479, 7 NRC 774 (1978); Florida Power and Light Co. (St. Lucie Nuclear Power Plant,Unit No. 2), ALAB-355, 3 NRC 830 (1976). "[B]uilding a second nuclear plant nex to an existing one is not always the most favorable solution". Pilgrim, supra, 7 NRC at 789. And the possibility that it will not be is enhanced where, as here, the existing plant was built in the 1960s and is vastly different from the proposed unit, with the consequence that there is little potential for the two units to share common facilities or equipment.[24/]

The various environmental attributes of the two sites control whether Ginna is "obviously superior" to Sterling.[25/]

24/ See, e.g., "Applicant's Response to Board Inquiry on Cost Review of the Proposed Nuclear Unit at Sterling and as a Second Nuclear Unit at Ginna", fol. Tr. 2445.

25/ Unless environmental preferability of an alternative is demonstrated, the cost comparison becomes irrelevant. Consumers Power Company (Midland Plant, Units 1 and 2), ALAB-458, 7 NRC 155, 161-62 (1978).

As earlier noted, the Licensing Board thought the two sites to be essentially equivalent except that use of Ginna would involve the clearing of only 150 additional acres (in contrast to the 201 acres which would have to be cleared at Sterling).

In assessing the environmental harm associated with land clearance, one must look at what is being removed from the site and not just at how many acres are involved. "It does not follow as night the day that every inch of ground spared from a power plant or transmission facilities is so much parkland preserved." Pilgrim, ALAB-479, supra, 7 NRC at 787. In this regard, the Licensing Board found:[26/]

> Thirty-three acres of mature beech maple forests will be cleared at Sterling, which amounts to a loss of 64% of the remaining mature beech maple forests on the site. At Ginna, 8 to 15 acres of intermediate-to-mature hardwoods would be cleared. Ibid.; Tr. 937-38. Therefore, in terms of the number of acres of natural communities to be cleared, the impact would be less at Ginna than at Sterling. However, the habitats which will be cleared at Sterling are not unique to the region since mature hardwoods are relatively common in the area along the southern shore of Lake Ontario. Salk Contention 12D Testimony at p. 1; Tr. 1352-1353.

We were told at oral argument by Ecology Action that one of the prime disadvantages of the Sterling location is that its use would mean the destruction of a large hardwood forest along Lake Ontario (App. Bd. Tr. 28-32). That is somewhat of an

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26/ 6 NRC at 416.

overstatement. As earlier noted, the Licensing Board found the trees to be removed not to be "unique" and mature hardwoods to be "relatively common" in the area. The witnesses cited by the Licensing Board as advancing this proposition clearly did so, and Ecology Action has presented no contrary claim to us (App. Bd. Tr. 29). Moreover, our own inspection of the site left us with the firm impression that it is populated essentially with second or third growth trees -- not unattractive but scarcely differentiable from the substantial number of other trees in the general area.

It is undoubtedly true that, as was stressed by Ecology Action during the oral argument (App. Bd. Tr. 29-30), once construction were to be commenced on the Sterling site members of the public no longer would have access to it -- as they apparently do now -- for such recreational purposes as strolling along the edge of the lake among the trees. But that consideration hardly serves to defeat the applicants' proposal to use the site for a nuclear plant. Ecology Action attaches insufficient significance to the fact that the site is owned by the lead applicant, Rochester Gas and Electric, which acquired it for the purpose of building some type of power plant on it. The public now enjoys its use not as of right but, rather, because that company has chosen to allow such use. At any time, the company presumably could foreclose further

public use -- irrespective of whether either a nuclear plant were built on the site or (as seems likely should the Sterling proposal fail) the site were dedicated to some other project. In these circumstances, the public use factor cannot be weighed heavily against the Sterling site on the NEPA scales. Indeed, if a landowner's voluntary choice to permit public access to its property were deemed to provide a possible obstacle to its own future use of that property for some other purpose, the almost certain consequence would be that such permission would never be forthcoming. This assuredly would further no one's interests.

Ecology Action also has renewed before us its argument below that aesthetic considerations dictate the selection of Ginna over Sterling. We see no reason, however, to disturb the Licensing Board's finding to the contrary. More specifically, our own inspection of the two sites confirmed what the Board found the record to establish (see p. 12, supra): that each site has certain advantages and disadvantages from the standpoint of minimizing aesthetic effects and that, on balance, the difference between them is slight.

Finally, Ecology Action asserts the possibility that an existing swamp on the Sterling site might be seriously disturbed by construction and operation of the plant.

It does not take issue with the finding below that only one acre of the 179-acre wooded swamp would unavoidably be altered due to construction (6 NRC at 416); instead, its challenge goes to the further finding that the applicants will take steps to protect the remainder of the swamp area and thus that area will be but minimally affected by plant construction and operation (ibid.). Specifically, Ecology Action points to the potential effect of oil, salt and dust on the swamp and expresses doubt that the proposed mitigative measures will be successful.

When closely questioned at oral argument, however, Ecology Action was unable to point to any evidence establishing that permanent damage to the swamp likely would eventuate or that the applicants' mitigative measures would not succeed (App. Bd. Tr. 27-28). And our independent review of the record has turned up no evidence which would undercut the Licensing Board's conclusions on the matter. In that connection, it is worthy of note that the undertaking of mitigative measures, as spelled out in §4.5 of the Final Environmental Statement, is expressly made a construction-permit condition and that the Licensing Board also imposed the following further condition:

> If unexpected harmful effects or evidence of serious damage are detected during plant construction, the Applicants shall provide to the Staff an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.

6 NRC at 434. Given the absence of anything to suggest that this condition might not be capable of fulfillment, we think it to provide a sufficient measure of additional protection for the swamp area.

3. We earlier referred to the Commission's recognition of the "imprecision of cost/benefit analysis" and the "wide margin of uncertainty" inherent in any site evaluation (see p. 15, supra). As the Commission has explained:

> * * * in the nuclear licensing context the factors to be compared range from broad concerns of system planning, safety, engineering, economic and institutional factors to environmental concerns, including ecological, biological, aesthetic, sociological, recreational, and so forth. Much of the underlying cost-benefit data is difficult of articulation, much less quantification.

Seabrook, CLI-77-8, supra, 5 NRC at 528.

These observations ring true as applied to the evaluation of the two sites in issue here. Indeed, were we called upon to determine on the record brought to us which site was on balance the best choice from an environmental standpoint, our task would be a most difficult one. Fortunately, however, we need not make that determination. All that we must decide is whether Ginna is "obviously" -- in other words, clearly and substantially -- superior to Sterling. In our judgment, in light of the record evidence discussed above (taken in

conjunction with the fruits of our own examination of the sites), that question requires a negative answer.[27/]

This being so there will be no need for the staff to pursue the Licensing Board's suggestion -- and it was no more than that (see fn. 21 supra) -- that the selection of the Sterling site be reevaluated if the commencement of construction were delayed for two years or more. As we have seen (see p. 13, supra), that suggestion flowed from the Licensing Board's approval of the Sterling selection solely on the basis of the costs of delay entailed in transferring the plant to the Ginna site. Our holding that the Sterling site should have been approved on the quite different basis that Ginna is not "obviously superior" from an environmental standpoint eliminates, however, any occasion to consider further, now or in the future, the delay cost factor. See Seabrook, CLI-77-8, supra, 5 NRC at 533-36.

27/ The preceding discussion presupposed that, whether located at Sterling or Ginna, the facility would employ a once-through cooling system (as proposed by the applicants). As its decision reflects, however, the Licensing Board also compared the two sites on the assumption that a close-cycle cooling system ultimately will be required by the Environmental Protection Agency at both locations. 6 NRC at 352, 428-29. The Board found that that assumption did not call for an alteration of the conclusions it had reached on the basis of the once-through cooling system premise. Id. at 429. Ecology Action does not challenge this finding and our independent examination of the record convinces us as well that the choice of cooling systems is an essentially neutral factor insofar as the comparison of these sites is concerned. Accordingly, our conclusion on the alternate site issue should be taken to apply without regard to which type of cooling system were to be employed as a result of EPA action.

II.

Ecology Action has advanced several other claims on its appeal. Upon careful examination, we have found them sufficiently insubstantial to be unworthy of discussion.[28] Suffice it to say that most of the claims go to factual matters and the record manifestly provides adequate support for the Licensing Board's findings on the particular point in issue.[29]

What that leaves is the staff's unopposed request that the second paragraph 209 of the initial decision, 6 NRC at 423, be amended. In that paragraph, the Board set forth the calculations made by the staff with regard to the potential radiation consequences should truck shipments of spent reactor fuel be subjected to acts of sabotage. It concluded the paragraph with the following findings:

> These calculations do not take into account any protection likely to be afforded by buildings or evacuation of the endangered area. It is believed, however, that these factors would have a mitigating effect, reducing expected consequences substantially.

28/ The same is true of the motion to reopen the record on the cost and availability of uranium, which we hereby deny.

29/ Review on our own initiative of the portions of the Licensing Board's decision not brought to us by way of appeal has likewise disclosed no error below requiring corrective action.

These findings were an accurate reflection of the prepared testimony of staff witnesses Kasun and Hodge (following Tr. 3646 at p. 7). The staff now tells us, however, that the testimony was partially in error. In point of fact, the calculations took into account the shielding effects of buildings (albeit not the evacuation factor).

Although the staff acted responsibly in calling to our attention the error, we find no need to go beyond noting it for the record. The calculated releases as set forth in the second paragraph 209 are indeed small. And the record establishes that evacuation procedures (not factored into the calculations) would reduce those releases by an order of magnitude. Kasun-Hodge Testimony, supra, at p. 7. In these circumstances, there is continuing validity to the ultimate finding of the Licensing Board that, if an act of sabotage should occur, the radiation releases would be small and would not constitute a major threat to the public health and safety.[30/]

30/ Para. 211, 6 NRC at 423.

On the basis of the foregoing:

The Licensing Board's August 26, 1977 decision is affirmed on all issues except need-for-power and the environmental impact of radon releases arising from the mining and milling of uranium;[31/] jurisdiction is retained over those issues.

It is so ORDERED.

FOR THE APPEAL BOARD

Margaret E. Du Flo
Secretary to the
Appeal Board

31/ As seen, however, the affirmance of the result reached on the alternate site issue is on grounds other than those assigned by the Board below.

ATTACHMENT 2