

August 23, 1982

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

DOCKETED  
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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IN THE MATTER OF	)	
	)	
CONSUMERS POWER COMPANY	)	Docket No. 50-155-OLA
	)	(Spent Fuel Pool
Big Rock Point Nuclear	)	Modification)
Power Plant	)	

OFFICE OF SECRETARY  
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CONSUMERS POWER COMPANY'S PROPOSED FINDINGS OF FACT  
AND CONCLUSIONS OF LAW ON REMAINING NEPA ISSUES

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I. OPINION

A. STATEMENT OF FACTS

In Consumers Power Company (Big Rock Point Nuclear Plant), ALAB-636, 13 NRC 312 (1981), the Atomic Safety and Licensing Appeal Board held that Section 102(2)(C) of the National Environmental Policy Act ("NEPA"), 42 U.S.C.A. § 4332(2)(C), did not require preparation of an environmental impact statement ("EIS") covering the effects of the additional term of reactor operation that the proposed expansion of the Big Rock Point spent fuel pool would permit. 13 NRC at 333. This decision reversed a previous determination by this Board in its Memorandum And Order On NEPA Review, LBP-80-25, 12 NRC 355 (1980). The Appeal Board did not preclude a finding on remand that the direct effects of pool expansion required preparation of an EIS, but directed this Board to await the issuance of the NRC Staff's environmental document before determining this issue. 13 NRC at 333. The Appeal Board likewise left open the question

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whether, if an EIS were not required, a discussion of alternatives might nonetheless be mandated by Section 102(2)(E) of NEPA, reasoning that a determination would be premature in the absence of a record. 13 NRC at 332.

On May 15, 1981, the NRC Staff issued an Environmental Impact Appraisal ("EIA"). On May 10, 1982, the Staff issued a revised form of this document.<sup>1/</sup> The Staff concluded that Section 102(2)(C) of NEPA did not require preparation for an EIS:

The NRC staff has reviewed this proposed facility modification relative to the requirements set forth in 10 C.F.R. Part 51 of the Commission's regulations. The staff has determined, based on this assessment, that the proposed license amendment will not significantly affect the quality of the human environment. Therefore, the Commission has determined that an environmental impact statement need not be prepared, and that, pursuant to 10 C.F.R. 51.5(c), the issuance of a negative declaration to this effect is appropriate.

EIA at 14.

Moreover, the EIA contains the basis for the Staff's conclusion that Section 102(2)(E) of NEPA does not require a consideration of alternatives in this case. The Staff concluded that expansion of the Big Rock spent fuel pool "will not result in any significant change in the commitment of water, land and air resources (EIA at 13).

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<sup>1/</sup> Environmental Impact Appraisal By The Office of Nuclear Reactor Regulation Relating To The Modification Of The Spent Fuel Storage Pool Facility Operating License No. DPR-6 Consumers Power Big Rock Plant Docket No. 50-55, May 15, 1981, Revised Date May 10, 1982.

The most significant use of resources will be that of the stainless steel used to fabricate the racks; but the Staff concluded that in comparison to the amount of stainless steel used annually in the United States, the amount to be used in the racks is "insignificant" and there are no unresolved conflicts with respect to it (EIA at 13-14). Although the EIA as originally issued contained a voluntary discussion of alternatives, the revised document omitted this discussion in accordance with the Staff's conclusion that NEPA does not require consideration of alternatives to the proposed action.

On March 1, 1982, during a telephone conference among the members of this Board, Licensee, the Commission Staff, Intervenors Christa-Maria, et al., and Intervenor John O'Neill, the Board Chairman requested that the parties brief "the outstanding NEPA issues left after the Appeal Board's decision" (Tr. 267). Specifically, the Chairman requested that the parties brief the questions (a) whether, in light of the Staff's EIA, an EIS is required in this proceeding, and (b) whether the Board is required to consider alternatives (Id.). On April 27, 1982, Licensee filed a brief on the status of the remaining NEPA issues. On May 17, 1982, the NRC Staff filed a brief expressing agreement with the Licensee's two main arguments, characterized by the Staff as follows:

- (1) the decision to require an EIS should be made only after an evidentiary determination on the adequacy of the Staff's EIA, (2) a discussion

of alternatives is not proper prior to litigating the adequacy of the EIA's finding that there are no unresolved conflicts about alternative uses of available resources...

NRC Staff Brief on NEPA Issues at 12.

On June 7 through June 12, 1982, hearings were held in Boyne Falls, Michigan for the presentation of evidence on the license amendment. The record was closed on several issues at the conclusion of the hearings, including the issue regarding the adequacy of the Staff's EIA. At the hearing the EIA, marked as Staff Exhibit 3, was admitted into evidence pursuant to 10 C.F.R. 2.743(g) (Tr. 2286). The document was sponsored by Staff witnesses Emch and Donohew.

B. APPLICABLE LAW

Section 102(2)(C) of NEPA, 42 U.S.C.A. §4332(2)(C), requires preparation of an EIS with respect to every recommendation by a federal agency of a major federal action significantly affecting the quality of the human environment.

Section 102(2)(E) of NEPA, 42 U.S.C.A. §4332(2)(E), provides that "all agencies of the Federal Government shall -- develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."

The Staff has the responsibility of ferreting out the baseline facts regarding environmental impacts and producing a final environmental statement which is necessarily a prime ingredient in the ultimate fashioning of the agency's NEPA determinations by the adjudicatory tribunals. Texas Utilities Generating Company (Comanche Peak Steam

Electric Station, Units 1 and 2), ALAB-260, 1 NRC 51, 55 (1975). The Staff's environmental documents must be introduced into evidence at the hearing before the Licensing Board. 10 C.F.R. §51.51(b)(1). The Staff's environmental documents are subject to review and amendment by the Licensing Board in an adjudicatory setting, in which all parties with a demonstrated interest may participate in evidentiary hearings. New England Power Company (NEP, Units 1 and 2), LBP-78-9, 7 NRC 271, 279 (1978).

In Consumers Power Company (Big Rock Point Nuclear Plant), ALAB-636, 13 NRC 312 (1981), the Appeal Board held that a reasonable application of NEPA does not require consideration of the continued operation of the Big Rock Point plant that will be permitted by the proposed spent fuel pool expansion. 13 NRC at 333.

## C. DISCUSSION

### 1. Status of NEPA Issues

We agree with the positions on the status of the remaining NEPA issues taken by the Licensee and the Staff in their pretrial briefs on this issue. We believe that in light of the Appeal Board's decision in Big Rock Point, ALAB-636, supra, two environmental issues remain for our determination. The first issue is whether in light of the Staff's EIA, an EIS is required regarding the direct environmental impacts of the proposed spent fuel pool expansion. We believe that this issue must be resolved by considering

the adequacy of the Staff's analysis supporting its conclusion that the proposed action does not constitute a major federal action significantly affecting the human environment. If the Staff's conclusion is supported by the evidence, there is no need for preparation of an EIS under the statute. In particular, we must consider whether any evidence of record, either presented directly by another party or elicited on cross-examination of a Staff witness, casts doubt on the soundness or completeness of the Staff's analysis.

The second issue is whether, if preparation of an EIS is not necessary, a discussion of alternatives is required by Section 102(2)(E) of NEPA. Again, we believe this issue must be resolved by considering the adequacy of the Staff's EIA. The Staff concludes that there will be no significant change in the use of land, water or air resources. Mineral resources in the form of 63,000 pounds of stainless steel will be used in the fabrication of the new fuel racks, but the Staff concludes that there are no unresolved conflicts about alternative uses of this resource. We believe that if these Staff conclusions are supported by the evidence, there is no need for a discussion of alternatives under Section 102(2)(E) of NEPA.

The Staff argued in its pretrial brief that the meaning of "available resources" in Section 102(2)(E) was intended to be limited to natural resources. Staff Brief at 5-8. The Staff pointed out, inter alia, that this was the view taken in at least two prior spent fuel pool expansion

proceedings, Portland General Electric Co. (Trojan Nuclear Plant), ALAB-531, 9 NRC 263, 265 (1979), and Virginia Electric and Power Company (North Anna Nuclear Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 458 (1980). Moreover, since the Appeal Board in Big Rock Point, ALAB-636, supra at 332, cited North Anna with approval, the Staff argues there is an implication that it agreed with this characterization of "resources." We do not believe it is necessary for us to determine the exact meaning of the term "resources" in the statute. We are at a loss to find any evidence of record which suggests that there might be an unresolved conflict about alternative uses of available resources in respect of the proposed action no matter how broadly the term "resources" is defined.

We are aware that in Dairyland Power Cooperative (La Crosse Boiling Water Reactor), LBP-80-2, 11 NRC 44, 73-77 (1980), the Licensing Board held that the nuclear plant itself was a resource within the meaning of the statute and that since expansion of the spent fuel pool would permit continued plant operation, an unresolved conflict existed as to the use or non-use of the plant. We believe, however, that this decision has no force as precedent in light of the Appeal Board's decision in Big Rock Point, ALAB-636, supra. The Appeal Board's holding that a reasonable interpretation of NEPA did not require consideration of the environmental impacts of the continued plant operation made possible by pool expansion was made in the context of Section 102(2)(C)

of NEPA. Nonetheless, we believe that the Appeal Board's reasoning is equally applicable to Section 102(2)(E). Because continued plant operation is beyond the scope of the environmental inquiry in this proceeding, there can be no unresolved conflicts about the use or non-use of the plant, even assuming that the plant is a "resource" within the meaning of the statute.

With respect to both of the remaining NEPA issues, therefore, the relevant inquiry is the same: does the evidentiary record, including the evidence marshalled in the EIA itself and any developed during the hearing on this issue, support the relevant conclusions reached by the Staff in the EIA? If it does, there is no need for preparation of an EIS or a consideration of alternatives.

## 2. The Evidentiary Record

Our review of the EIA convinces us that the proposed spent fuel pool modification would not cause any significant environmental impacts or involve any unresolved conflicts about alternative uses of resources. The offsite radiological impacts in the form of increased releases to the atmosphere are conservatively estimated to be so small that they can only be characterized as insignificant (Section 5.3.2). No increased releases to receiving waters are expected (Section 5.3.4). Likewise, no increase in solid radwaste from the SFP purification system is expected, but a conservatively estimated increase in the amount of such radwaste to be shipped from the plant annually would have no



significant environmental impact (Section 5.3.3). The occupational radiation exposure that will be incurred in the reracking process is quite small compared to the total annual occupational exposure burden and the incremental burden accruing from the presence of additional, relatively old, spent fuel in the pool is negligible (Section 5.3.5).

The only nonradiological impact of the proposed action will be a slight increase in the plant thermal discharge to Lake Michigan. This increase would amount to less than 0.04% of the thermal discharge from the plant's main condenser (Section 5.4). At the hearing, Mr. Axtell testified that the change in temperature across the main condenser averages about 15 degrees (Tr. 2303). Thus the temperature increase resulting from the modification, 0.04% of 15 degrees, will be insignificant.

Because the proposed modification will not change the dimensions of the pool, it is obvious that no additional commitment of land is involved (Section 5.1). As regards water use, there will be a slight incremental heat load on the SFP cooling system, but this heat load -- and, therefore, make up water needed to replace water lost through evaporation -- will not exceed the design basis (Section 5.2). The Appeal Board in Consumers Power Company, ALAB-636, supra at 332, reasoned that NEPA had application only when there were environmental changes to evaluate. Although the Appeal Board was considering Section 102(2)(C) of NEPA, we believe this reasoning is equally applicable to Section 102(2)(E).

Approximately 63,000 pounds of stainless steel will be required to fabricate the new fuel racks. We can find no evidence that calls into question Staff's conclusion that there are no unresolved conflicts about the use of this material (Section 7.2.2).

Nothing put into evidence at the hearing in any way modifies our view that the Staff's conclusions in the EIA have adequate evidentiary support. The Intervenors presented no direct testimony regarding the adequacy of the EIA. The Board raised no issues sua sponte regarding the adequacy of the Staff's conclusions. The Intervenors did not elicit on cross-examination any testimony which might conceivably cast doubt on the adequacy of any of the Staff's analyses or conclusions.

Intervenors' questions on Section 5.2, "Water Use", were abandoned (Tr. 2297). Intervenors' questions, supplemented by the Board, concerning Section 5.4, "Non-radiological Effluents", elicited testimony showing how negligible the increase in the temperature of the plant discharge caused by pool modification would be (Tr. 2300-04). Intervenors' questions about the environmental impacts of thermal discharge in the lake were held improper because they formed the specific subject of a contention that Intervenors had previously withdrawn (Tr. 2309). Intervenors' questions on Section 5.3.2, "Radioactive Material Released to the Atmosphere", were abandoned without eliciting any testimony (Tr. 2314).

A document marked as Intervenors' Exhibit 11 for identification, but not introduced into evidence, was shown to witnesses Emch and Donohew. It purported to be a study showing that a trend to lower birth weight was found in Charlevoix County and adjacent counties but was more pronounced in Charlevoix County (Tr. 2320). The Board Chairman asked Mr. Emch whether in preparing the EIA the Staff had considered the possibility that releases from the Big Rock Point plant might cause a reduction in birth weight in the vicinity (Tr. 2320). Mr. Emch testified that generic consideration had been given to this question in that the NRC considers possible genetic and actual biological effects of radiation on unborn children and the mother, but not when the releases are as small as those the proposed modifications could cause (Tr. 2321). The Board Chairman asked Mr. Emch as a hypothetical question, what significance it would have if there were a valid study showing reduced birth weight in the area of the plant (Tr. 2321). Mr. Emch testified that such a study would have no particular significance unless it included a finding that such a trend was caused by radiation (Tr. 2322). Mr. Emch testified further that nothing in the article suggested that operation of the Big Rock Point plant may be causing a reduction in birth weights in Charlevoix County.

Thus, no doubt whatever has been cast on the Staff's conclusion that the proposed spent fuel pool expansion will have no significant environmental impacts. The

Staff's omission of a discussion of alternatives in the EIA was based on Staff's conclusion in Section 7.2 that there are no unresolved conflicts about alternative uses of resources raised by the proposed action. Intervenors did not even cross-examine the Staff witnesses with regard to this issue. Thus, the hearing process cast no doubt whatever on this conclusion.

## II. FINDINGS OF FACT

1. The additional spent fuel whose storage will be permitted by the proposed action should have decayed by more than three years (EIA at 4). There is little radionuclide leakage from spent fuel stored in pools for more than several months (EIA at 5). Moreover, most gaseous fission products decay to insignificant levels within a few months (EIA at 6).

2. The incremental gaseous release of radioactive materials that would result from the proposed spent fuel pool modification would result in an additional total body dose of less than 0.0001 mrem/year to an individual at the site boundary (EIA at 6). The additional total body dose to the population within 50 miles of the plant is less than 0.0001 manrem/year (EIA at 7). These incremental offsite exposures are insignificant.

3. The proposed modification may result in an increase of solid radioactive waste of about six cubic feet per year, primarily from replacement of the pool sock filter

(EIA at 8). This will be disposed of as low level wastes at a licensed burial site and will not have any significant environmental impact (EIA at 9).

4. The proposed modification will not cause any change in the waste treatment systems evaluated with respect to the requirements to Appendix I 10 C.F.R. Part 50 in the NRC Staff's Evaluation dated May, 1981 (EIA at 10).

5. No significant increase in the liquid release of radionuclides from the plant will result from the proposed modification (EIA at 9). Any increased radioactivity will be retained in the SFP filter, which is periodically removed and shipped offsite (see finding 3, supra), or in the resins of the radwaste system demineralizer (Id.). Total liquid releases of radioactivity from the plant are restricted by plant radiological effluent Technical Specifications which will not be changed by this action (Id.).

6. Occupational radiation exposures resulting from the reracking process will amount to 23 man-rem, a small fraction of the total annual occupational exposure burden (EIA at 10). Incremental occupational radiation exposure resulting from the presence of additional spent fuel will be negligible (Id.).

7. The radiological impacts discussed in Findings 1-6 take into account the mixed oxide fuel at the Big Rock Point plant (EIA at 11).

8. No additional chemical discharge will result from the proposed modification (EIA at 11). Plant thermal discharge to Lake Michigan will increase by less than 0.04% of the thermal discharge from the plant's main condenser (EIA at 11). Such an incremental thermal discharge will be environmentally insignificant (Id.).

9. No environmental impact on the community is expected to result from the modification of the SFP or from its subsequent operation with increased storage of spent fuel (EIA at 14).

10. Installation and use of the new fuel racks will not change the radiological consequences of the worst fuel handling accident in the SFP area as discussed in the Staff's Safety Evaluation (EIA at 12).

11. The proposed license amendment will not significantly effect the quality of the human environment.

12. No additional commitment of land will be required by the proposed action and the basic land use of the SFP will not change because of modification (EIA at 4).

13. The proposed modification will not significantly change plant water consumption or use. SFP water is expected to remain below design basis levels. Thus evaporation, and, therefore, need for makeup water, will not be increased above the design basis (EIA at 4).

14. The commitment of 63,000 pounds of stainless steel for the fabrication of the racks is insignificant

compared to the amount of stainless steel consumed annually in the United States (EIA at 13-14).

15. There are no unresolved conflicts in alternative uses of available resources associated with the fabrication of the new stainless steel racks (EIA at 13-14).

### III. CONCLUSIONS OF LAW

1. The grant of Licensee's application for an operating license amendment to allow modification of the spent fuel pool at the Big Rock Point Plant will not constitute a major federal action significantly affecting the quality of the human environment.

2. Section 102(2)(C) of the National Environmental Policy Act does not require the Nuclear Regulatory Commission to prepare an Environmental Impact Statement with respect to the proposed action.

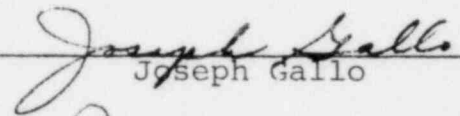
3. The proposed spent fuel pool modification does not involve any unresolved conflicts concerning alternative uses of available resources.

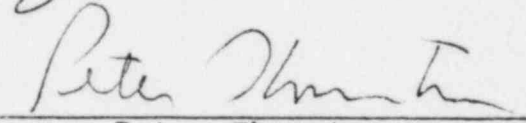
4. Section 102(2)(E) of the National Environmental Policy Act does not require the Nuclear Regulatory Commission to develop and describe alternatives to Licensee's proposed action.

CONCLUSION

Consumers Power Company's findings of fact and conclusions of law on remaining NEPA issues should be adopted by the Licensing Board for the reasons contained therein.

Respectfully submitted,

  
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CERTIFICATE OF SERVICE

I hereby certify that copies of CONSUMERS POWER COMPANY'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW ON REMAINING NEPA ISSUES were served on all persons listed below by deposit in the United States mail, first-class postage prepaid, this 29th day of July, 1982.

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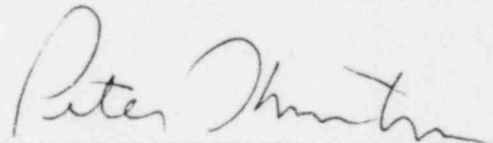
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