

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION
Harold R. Denton, Director

In the Matter of

PHILADELPHIA ELECTRIC COMPANY
(Limerick Generating Station,
Units 1 and 2)

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Docket Nos. 50-352 OL
50-353 OL
(10 C.F.R. 2.206)

DIRECTOR'S DECISION UNDER 10 C.F.R. 2.206

Introduction

By letter dated July 2, 1982, Robert J. Sugarman, on behalf of Del-Aware Unlimited (Petitioner), filed with the Office of Nuclear Reactor Regulation a "Request for Suspension or Revocation of Construction Permits Pursuant to 10 C.F.R. § 2.202 and § 2.206(a)" (Petition). Del-Aware requested actions be taken to compel submission of an alternative to the Supplemental Cooling Water Supply System (SCWS system) planned at Point Pleasant, Pennsylvania, and to prevent construction of the planned SCWS system. The Petition also sought immediate suspension or revocation of Construction Permits Nos. CPPR-106 and CPPR-107 currently held by the Philadelphia Electric Company (PECO) for the construction of its Limerick Generating Station, Units 1 and 2 (the Facility). On August 4, 1982, I acknowledged receipt of the Petition and indicated that I would take no immediate action with respect to the Petition for the reasons presented in my letter. I further indicated that I would respond to the Petition within a reasonable time. My

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decision with respect to the Petition follows. In reaching my decision, I have considered the additional information contained in letters from Petitioner to me dated July 20, 1982, August 13, 1982, September 3, 1982, and September 23, 1982 and a Supplement to the original Petition dated November 8, 1982. I have also considered PECO's submittals of September 3, 1982 and September 30, 1982.

Issues Raised

In Petitioner's voluminous filings,^{1/} issues are raised regarding a SCWS system for the Limerick Facility. The issues are not associated with public health and safety impacts of the Facility but are issues related to the environmental impacts allegedly associated with the SCWS system.

The SCWS system for the Limerick Facility would draw water from the Delaware River. The water would then be pumped from the Delaware River at Point Pleasant, Pa. several miles through a Combined Transmission Main to the Bradshaw Reservoir. Approximately one half of the water would be pumped through the Perkiomen Transmission Main and then flow down the East Perkiomen Creek. From the creek, the water is pumped via transmission main to the Limerick Facility. The remainder of the water would be available to the Neshaminy Water Resources Authority (NWRA) for its

^{1/} The Petition is 40 pages in length and the Supplement comprises 19 pages. Attachments to these documents and Petitioner's letters and their attachments comprise an additional several hundred pages.

use in providing water to Central Bucks and Montgomery Counties, Pa. for public use.^{2/}

The SCWS system has been the subject of environmental scrutiny for a period in excess of 10 years and by an array of governmental agencies including the U.S. Atomic Energy Commission (now U.S. Nuclear Regulatory Commission), the Delaware River Basin Commission (DRBC), the U.S. Army Corps of Engineers (Corps), and the Pennsylvania Department of Environmental Resources (PA DER).^{3/}

^{2/} The pumping station at Point Pleasant, Pa., the Limerick SCWS system and the Neshaminy project will hereinafter be referred to together as the Point Pleasant Diversion Project or PPD Project. Commencement of construction of the PPD Project is scheduled for December 15, 1982. This project serves both the Limerick Facility and the NWRA.

^{3/} The U.S. Atomic Energy Commission (AEC), the U.S. Nuclear Regulatory Commission (NRC) and the Corps are Federal agencies. The DRBC is a regional agency created by an intergovernmental compact and given federal ratification by a joint resolution of Congress. The agency is comprised of representatives of the Federal Government and the States of Delaware, New Jersey, New York, and Pennsylvania and has responsibility for water supply and water quality matters related to the Delaware River and its tributaries. Water allocation to projects in the Delaware River Basin is accomplished by the DRBC through its Comprehensive Plan. The DRBC is considered a Federal agency for purposes of the National Environmental Policy Act (NEPA). PA DER is an agency of the State of Pennsylvania. Decisions and authorizations issued by these agencies concerning the PPD Project include: Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), LBP-74-44, 7 AEC 1098 (1974); Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), ALAB-262, 1 NRC 163 (1975); DRBC Decision Docket No. D-69-210 CP, March 1973; DRBC Docket No. D-65-76 CP (2), January 1967; DRBC Decision Docket No. D-65-76 CP(3), March 1971; DRBC Decision Docket No. D-69-210 (Final), November 5, 1975; DRBC Decisions Docket Nos. D-65-76 CP (5) and D-79-52 CP, February 18, 1981; Corps of Engineers Permit No. NAPOP-R-80-0534-3, October 25, 1982; PA DER Permits Nos. ENC: 09-77, ENC: 09-51, ENC: 09-81; DAM 09-181 all issued on September 2, 1982.

Each of these governmental agencies completed environmental studies prior to reaching their respective decisions. The DRBC conducted a full environmental review of the PPD Project and issued a final environmental impact statement in 1973 (DRBC FEIS). In 1973, the AEC prepared a final environmental impact statement regarding the Limerick Facility (AEC FES/CP). DRBC conducted an updated environmental appraisal of the overall PPD Project and issued a Final Environmental Assessment and Negative Declaration in August 1980. Contemporaneous with the issuance of its permit on October 25, 1982, the Corps of Engineers issued a document summarizing its assessment of the environmental aspects of the permit entitled "Neshaminy Water Resources Authority Point Pleasant Diversion Project, Point Pleasant, Bucks County, Pennsylvania Environmental Assessment". In addition, PA DER performed a comprehensive environmental assessment of the entire PPD Project, summarized in its "Environmental Assessment Report and Findings, Point Pleasant Water Supply Project" issued in August 1982 (PA DER, Environmental Assessment). All of these environmental studies culminated in favorable findings with respect to the PPD Project.

Notwithstanding the scrutiny which the PPD Project has received, Petitioner requests that construction of the SCWS system be stayed and that PECO be directed to submit alternative proposals for providing supplemental cooling water to the Limerick Facility. The Petitioner makes a number of allegations in support of this request. The main thrust and focus appear limited to alleged changed circumstances since issuance of the construction permits in the following areas:

1. The relationship between NWRA and PECO.

2. Continued construction of Unit 2 of the Limerick Facility.
3. Design and location of the intake for the Point Pleasant pumping station.
4. Cultural and historical resources.
5. Water quality.

The consideration of these issues follows below and, for the reasons there stated, I have declined to take any action with regard to them.

Certain other of these allegations raise issues which are not appropriate for consideration by this agency. A substantial portion of the Petition is devoted to the expression of concerns related to that portion of the PPD Project which would serve exclusively the needs of the NWRA. Pages 19 through 27 of the Petition deal almost exclusively with questions related to the need for, and the impacts associated with, that portion of the PPD Project which would in essence be the development of a water supply system by NWRA. Among the concerns raised are claimed pollution of Lake Galena, sludge disposal, and farmland preservation. The Supplement to the Petition again presents such concerns especially in its discussion of the so-called secondary impacts of the PPD Project.

Such concerns had been raised by the Petitioner before the Licensing Board in the current operating license proceeding regarding the Limerick Facility.^{4/} The Licensing Board concluded, as I have, that the portion of the PPD Project solely utilized by NWRA need not be considered in the NRC's environmental review of the Limerick Facility. However, the

^{4/} Special Prehearing Conference Order (SPCO), LBP-82-43A, 15 NRC 1423, 1470, 1975 (1982).

Petition goes to some substantial lengths to again argue that an environmental review of the complete PPD Project by the NRC is required since that segment of the PPD Project which would be utilized solely by NWRA would not be built but for the construction of the Limerick facility.

The test for determining the scope of the NRC's environmental review for a particular project is not whether one segment of the project would not be built but for the other segment. The scope of environmental review may be limited to one segment of a project so long as (1) that portion has independent utility; and (2) the approval of that segment does not foreclose alternatives to the part of the project not being considered.^{5/}

The PPD Project in fact consists of two projects each of which has independent utility. One serves to supply cooling water to Limerick; the other supplies water to an area served by the NWRA. Also, approval of the Limerick portion of the PPD Project will not foreclose alternatives to the NWRA portion because this latter portion has already been fixed by the decisions of the DRBC. Thus, the question of foreclosing alternatives is moot. In reaching its decisions, the DRBC reviewed the entire PPD Project in accordance with the requirements of NEPA. Following this review, the Project was added to the DRBC Comprehensive Plan. The PPD Project has recently again been given environmental scrutiny by DRBC, which culminated in a Final Environmental Assessment and Negative Declaration and final approvals for the Project. Thus, contrary to

^{5/} Duke Power Company (Amendment to Materials License SNM-1773-Transportation of Spent Fuel from Oconee Nuclear Station for Storage at McGuire Nuclear Station), ALAB-651, 14 NRC 307, 313 (1981).

assertions in Petitioner's Supplement that the PPD Project has not received an overall environmental review, DRBC has performed just such a review on at least two occasions.

It is entirely appropriate in these circumstances then for NRC to limit its consideration to the common elements of the Project and those elements attributable solely to the Limerick Facility, and to exclude from consideration impacts associated exclusively with that portion of the PPD Project which has as its purpose supplementing the public water supply capabilities of the NWRA. Consequently, I decline to consider in my assessment of the Petition any of the environmental impacts associated with that portion of the PPD Project utilized solely by the NWRA.^{6/}

A number of issues raised in the Petition and its supplementing documents are directly related to the allocation of Delaware River water to the PPD Project. Specifically, the Petition alleges that the use of the Delaware River water by the Limerick Facility through its SCWS system would concentrate industrial effluents and pollutants in the Delaware River and would affect the intrusion of salinity into the Delaware River from the Delaware Bay. Petition, p. 17. Petitioner's letter of September 3, 1982, points to acceptance by the DRBC of the so-called Level B Study regarding depletive uses of the Delaware River water and the

^{6/} Petitioner has had its opportunity to present this issue to the Licensing Board. As the Commission has stated, parties must be prevented from using 10 CFR 2.206 procedures as a vehicle for reconsideration of issues previously decided. Consolidated Edison Company of New York, Inc. (Indian Point Units 1-3), CLI-75-8, 2 NRC 173, 177 (1975).

effects of such usage upon dissolved oxygen levels. Petitioner's Supplement also alleges that "new" water quality problems now affect the Delaware River as evidenced by two draft reports issued by the DRBC,^{7/} which require reconsideration of depletive water uses of Delaware River water such as those associated with the PPD Project.

These matters are all aspects of allocation decisions which are entrusted to the DRBC and which the NRC is precluded from considering. Section 15.1(s)1 of the Delaware River Basin compact provides, in part:

Nothing contained in this Act or in the Compact shall impair or affect the constitutional authority of the United States or any of its powers, rights, functions, or jurisdictions under other existing or future legislation in and over the area or waters which are the subject of the Compact including projects of the Commission: provided, that whenever a comprehensive plan, or any part or revision thereof, has been adopted with the concurrence of the member appointed by the President of the United States, the exercise of any powers conferred by law on any officer, agency or instrumentality of the United States with regard to water and related land resources in the Delaware River Basin shall not substantially conflict with any such portion of such comprehensive plan Pub.L. No. 87-328, 75 Stat. 688 (1961) (emphasis added).

^{7/} The draft reports issued in July 1982 are the Background Report Concerning the Interstate Water Management Recommendations of the Parties to the U.S. Supreme Court Decree of 1954 to the Delaware River Basin Commission Pursuant to Commission Resolution 78-20 and Interstate Water Management-Recommendations of the Parties to the U.S. Supreme Court Decree of 1954 to the Delaware River Basin Commission Pursuant to Commission Resolution 78-20. Although Petitioner's Supplement stated that these documents were attached to it, they in fact were not. The Staff has the documents, however, and has examined them.

The Federal participation necessary to activate the statutory preclusion has occurred.^{8/}

The salinity intrusion question was specifically raised by Del-Aware in the operating license proceeding as Contention V-16. This contention was rejected by the Licensing Board in its Memorandum and Order of July 14, 1982, on the ground of preclusion.^{9/} I see no basis to distinguish allegations raised here by Petitioner, from the substance of the contention which was rejected by the Licensing Board, i.e., salinity intrusion. All concerns are directly linked to allocation of Delaware River water and are properly left to the consideration of the DRBC.^{10/} Preclusion would extend to all of these concerns and, on this basis, I decline to consider claims raised in the Petition regarding them.^{11/}

^{8/} See Memorandum and Order of July 14, 1982, specifically p. 10, and Memorandum and Order of September 3, 1982 issued by the Atomic Safety and Licensing Board in the Limerick operating license proceeding.

^{9/} See Memorandum and Order, pp. 18-19.

^{10/} That DRBC is the proper agency for consideration of water allocation questions is evidenced by its active consideration of allocation questions as reflected in the draft documents issued in July 1982. Furthermore, the various DRBC approvals of the PPD Project are conditioned to require operation at all times in accordance with the requirements of the DRBC. It is thus to the DRBC that Petitioner should direct its concerns as it indeed has done by virtue of its "Amended Petition to Reopen and for Reconsideration and, to Set Aside Prior Orders, And to Take Other Action As Appropriate", directed to the DRBC and dated September 13, 1982.

^{11/} See footnote 6, supra.

I have also declined to consider certain other subject areas which are mentioned in the Petition and its supplementing documents only by passing reference. These subject areas do not appear to be raised as issues, or if they were intended as issues, the issues have not been sufficiently specified to permit my consideration of them.

For example, at p. 9 of the Petition, it is claimed that "Fishing, canoeing, and other recreational pursuits would be hampered by the diversion." No further specificity is provided. Also at p. 6 of the Petition, it is claimed that "... the Board did not include ... transmission lines in its decision or the construction permit." No reference or further particularity is provided. Also, the Supplement to the Petition had attached to it a large number of documents to which no specific reference was made in the Supplement.

Section 2.206(c) requires that Petitioner "... set forth the facts that constitute the basis for the request." Absent such a showing, the Director need take no action on the Petition.^{12/} Consequently, to the extent that I may not have addressed "issues" Petitioner believes have been raised by the Petition and its supplementing documents, it is

^{12/} Public Service Company of Indiana, Wabash Valley Power Association, Inc. (Marble Hill Nuclear Generating Station, Units 1 and 2), DD-79-17, 10 NRC 613, 614-615 (1979) and Duke Power Company (Oconee Nuclear Station, Units 1, 2, and 3), DD-79-6, 9 NRC 661-662 (1979); see also Public Service Company of Indiana (Marble Hill Nuclear Generating Station, Units 1 & 2), CLI-80-10, 11 NRC 438, 443 (1980).

because the requirement of Section 2.206(c) calling for a factual basis for the Petitioner's request has not been met.^{13/}

Background

In order to properly assess the Petition's claims that construction permit revocation or suspension is warranted on the basis of changed conditions since the issuance of the construction permits, an examination of the environmental assessments which the Limerick Facility and associated water supply proposals have received is necessary.

In March 1970, PECO applied to the DRBC for a water allocation permit to provide supplemental cooling water for the proposed Limerick Facility and sought its inclusion in the Comprehensive Plan. The DRBC rendered its decision on PECO's request (DRBC Docket No. D-69-210 CP) in March 1973 stating PECO could draw water from the Schuylkill River, the Perkiomen Creek, and the Delaware River, provided certain conditions were met. Supplemental cooling water could be made available to the Limerick Facility under options including the "river follower" method of operation with no storage, or construction of a storage reservoir. Each of these options involved diverting water from the Delaware River to augment the water supply in the Perkiomen Creek and made use of the already proposed Point Pleasant Diversion. The Point Pleasant Diversion was originally proposed as part of a Neshaminy Water Supply Project to provide water to

^{13/} In several instances, documents supposedly attached to the Supplement were not provided. To the extent such documents were available to my Staff, they were considered, as were all documents actually provided by Petitioner, in reaching my decision.

Central Bucks and Montgomery Counties for public use. This latter project had been added to the DRBC Comprehensive Plan in January 1967 (DRBC Docket No. D-65-76 CP(2)). Following a feasibility study of locating a pumping facility at Point Pleasant, the DRBC, in March 1971, issued a decision adding the Point Pleasant Diversion as an element of the Neshaminy project. (DRBC Docket No. D-65-76 CP(3)).

The same DRBC decision of March 1971 added the Limerick Supplemental Cooling Water Supply system to the Neshaminy project. This system would rely on a portion of the Neshaminy project to link the Delaware River with the East Branch of the Perkiomen Creek. The DRBC conducted a full environmental review and issued in 1973 a final environmental impact statement (FEIS) covering the Limerick SCWS system, the Neshaminy project and the pumping facility at Point Pleasant herein referred to collectively as the Point Pleasant Diversion Project or PPD Project. The FEIS was submitted to the Council on Environmental Quality in February 1973. This document, which included an evaluation of alternative methods of supplying water to the Limerick Facility (as well as to Bucks and Montgomery Counties), concluded that the benefits of the PPD Project exceeded any adverse effects and that the PPD Project was an acceptable alternative for meeting Limerick's supplemental cooling water needs. The DRBC Docket No. D-69-210 CP decision of March 1973 referred to above was issued shortly thereafter. This decision conditionally approved the water supply aspects of the overall Limerick project. A final decision was deferred pending completion of a final environmental impact statement (FES) for

Limerick by the Atomic Energy Commission (AEC).^{14/} Following issuance of construction permits for the Limerick Facility by the AEC, the DRBC gave final approval in Docket No. D-69-210 (Final) to construction of the Schuylkill River and Perkiomen Creek intake and diversion structures. Approval for construction of those elements of the PPD Project shared by the Limerick Facility and the Neshaminy Water Resources Authority (NWRA) as well as the remaining elements of Limerick's portion of the project was granted in 1980.

In performing its review of the environmental impacts anticipated from the construction and operation of the proposed Limerick Facility, the AEC staff evaluated the DRBC FEIS covering the entire PPD Project, including the portion associated with the Limerick Facility, and concurred in DRBC's conclusion reached in its decision concerning the PPD Project (Docket No. D-65-76 CP(3)) that:

The proposed Point Pleasant diversion would be beneficial to the Neshaminy and Perkiomen watersheds and would not be detrimental to the Delaware if conditions of operation imposed by the Commission [DRBC] are observed. Decision, I-4.

^{14/} The Petition suggests that DRBC approvals reflect something less than a full environmental review by DRBC of the particular project being considered and that conditions in the approvals support this claim. (Petition, pp. 35-38). Such is simply not the case. The DRBC FEIS constituted a full environmental review of the PPD Project. To the extent that the DRBC decisions regarding the PPD Project were conditional, they called simply for completion of environmental impact statements by the AEC/NRC regarding the Limerick Facility. Such a statement was prepared at the construction permit stage by the AEC and is being prepared for the operating license stage by the NRC.

Testimony by the AEC staff^{15/} at the construction permit proceeding provided further results of the AEC Staff's environmental review, beyond those presented in the FES. In particular, the Staff examined that portion of the overall economic and environmental cost of constructing and operating the PPD Project which would be attributable to Limerick. (The DRBC had not attempted to apportion these costs in its FEIS). The Staff concluded that the economic cost of the entire PPD Project would be insignificant compared to the total cost of the Limerick Facility. The Staff also concurred in the DRBC finding that the benefits of the PPD Project outweighed the costs. Based on the Staff's FES and testimony at hearings before the Atomic Safety and Licensing Board, the Licensing Board authorized issuance of construction permits for the Limerick Facility.^{16/}

The authorization of construction permits was challenged on the basis that the environmental assessment of the PPD Project and its alternatives failed to meet the requirements of NEPA.

The Atomic Safety and Licensing Appeal Board, in its decision of March 1975,^{17/} upheld the Licensing Board authorization of construction permits and found that the impacts of the PPD Project were adequately considered and discussed.

^{15/} Testimony of A.R. Lyle following Tr. 5847.

^{16/} Limerick, supra, 7 AEC 1098.

^{17/} Limerick, supra, 1 NRC 163.

The Appeal Board's decision was appealed to the United States Court of Appeals.^{18/} The Court's decision, rendered in November 1975, denied challenges to the NRC findings in the construction permit proceeding and upheld the Appeal Board's decision in all respects.

In summary, the environmental assessment conducted at the construction permit proceeding regarding the Limerick Facility was substantial and included major participation from DRBC in its role as the responsible entity for water supply and water quality matters related to the Delaware River and its tributaries. That assessment was the subject of adjudicatory proceedings, appeals, and eventual affirmance by the Court of Appeals.

There has been additional review activity relevant to the PPD Project by the DRBC since the Limerick Facility construction permits were issued. In July 1979, the NWRA applied to DRBC for final approval for construction of the Point Pleasant pumping station, the combined transmission main to the Bradshaw Reservoir, and components of the Neshaminy portion of the PPD Project. Subsequently, in August 1979, PECO applied to DRBC for approval for construction of the remaining elements of the SCWS system, i.e. the Bradshaw Reservoir, and the transmission and release facilities to the East Branch of the Perkiomen Creek. The DRBC reviewed updated environmental reports submitted with the PECO and NWRA applications as well as other related documents generated since the DRBC

^{18/} Environmental Coalition of Nuclear Power et al. v. U.S. Nuclear Regulatory Commission, et al., No. 75-1421 (3rd Cir. 1975).
Unpublished Opinion.

FEIS was issued in 1973. An updated environmental appraisal of the overall PPD Project was prepared in February 1980 based on this review and was circulated for comment. A Final Environmental Assessment was issued in August 1980 which responded to various areas of environmental concern expressed in comments by interested agencies and members of the public. These areas included water quality, impact on aquatic biota, conservation, impact on growth and development, aesthetics, archeological and historic sites and consideration of project alternatives. Based on the findings of the Final Environmental Assessment, the Executive Director of DRBC issued a Negative Declaration on the PPD Project in August 1980.^{19/} Public hearings on the PPD Project were then held by DRBC, following which approval was granted for the project. (DRBC Docket Nos. D-65-76 CP(5) and D-79-52 CP, February 18, 1981.) This decision was reviewed by the United States District Court and the United States Court of Appeals. The decision of DRBC was upheld by both courts.^{20/}

In December 1980, NWRA submitted an application (NAPOP-R-80-0534-3) to the Corps for a permit to construct a water intake structure in the Delaware River at Point Pleasant, pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Federal Water Pollution Control Act (86 Stat. 816, P.L. 95-500). Subsequently,

^{19/} It should be noted that the Point Pleasant intake at the time of this review was a vertical travelling screen design and was located flush with the river bank.

^{20/} Delaware Water Emergency Group v. Hansler, 536 F. Supp. 26 (E.D.Pa. 1981), aff'd mem., No. 81-2622 (3rd Cir. 1982).

the Corps began an independent environmental assessment of the construction and operational impacts of the proposed project. This assessment was coordinated with the National Marine Fisheries Service, the Advisory Council on Historic Preservation, the U.S. Fish and Wildlife Service, the Pennsylvania Department of Environmental Resources, the Environmental Protection Agency, and the DRBC. The Corps issued a Public Notice regarding this application in April 1981 and a Notice of Public Hearing in August 1981. A hearing was held on September 15, 1981. In February 1982, a supplement to the original Public Notice was issued describing certain revisions to the project.

On the basis of its review, the Corps issued to NWRA a permit on October 25, 1982 to construct the water intake at Point Pleasant. The Corps also issued a document dated October 14, 1982 summarizing its assessment of the environmental aspects of the permit entitled "Neshaminy Water Resources Authority Point Pleasant Diversion Project, Point Pleasant, Bucks County, Pennsylvania Environmental Assessment." This study includes a discussion of alternative intake sites, and concludes that the Point Pleasant area was an appropriate location for the withdrawal, and that the specific site selected for the intake is the most practicable. The study further concludes that the issuance of the permit will not significantly affect the quality of the human environment, that there are no unresolved conflicts concerning alternative uses of available resources and that no Environmental Impact Statement is required.

During 1981 and early 1982, NWRA and PECO filed a series of applications with the Pennsylvania Department of Environmental Resources

(PA DER) for permits authorizing the construction and operation of facilities associated with the PPD Project, pursuant to Section 401 of the Federal Water Pollution Control Act, the Pennsylvania Dam Safety and Encroachments Act, and other statutes. As part of its regulatory responsibilities relevant to these applications, PA DER performed a comprehensive environmental assessment of the entire PPD Project. The document summarizing this review, "Environmental Assessment Report and Findings, Point Pleasant Water Supply Project," (PA DER Environmental Assessment) was issued in August 1982. The assessment gave consideration to the following issues:

1. Need for the Project
2. Impacts on the Delaware River
3. Impacts on North Branch Neshaminy Creek
4. Impacts on East Branch Perkiomen Creek
5. Impacts on the Delaware Canal
6. Water Quality Concerns
7. Blasting Impacts
8. Archaeological/Historical Impacts
9. Land Use Impacts
10. Wetlands Impacts
11. Alternatives to the Proposed Project

On the basis of its assessment, PA DER concluded that "the public benefits of the Point Pleasant Diversion Project, including provision of public utility services, protection of public health and safety, development of energy generating resources, and improved management of ground

and surface water resources in the region, substantially exceed and outweigh any adverse impacts on the environment and public natural resources engendered by the project." All permits applied for by PECO and NWRA were subsequently issued on September 2, 1982. It should be noted that the assessments performed both by PA DER and the Corps of Engineers reflect the current and final configuration of the PPD Project.

The NRC Staff is also currently conducting its operating license environmental assessment for the Limerick facility with a draft environmental statement scheduled for issuance in May of 1983. Consequently, the Limerick Facility and associated cooling water supply proposals have received careful and continued environmental scrutiny from a number of agencies.

Consideration of Issues Raised In the Petition

Suspension or revocation of construction permits may be appropriate based upon substantially changed circumstances. The matter of the appropriateness of suspending construction permits for nuclear facilities based upon alleged changed circumstances has been previously addressed.^{21/} NEPA does not require that decisions based upon environmental impact statements be reconsidered whenever information developed subsequent to the action becomes available; it is unnecessary for an agency to reopen a NEPA record unless the new information would clearly mandate a change in result.^{22/} The showing required for reopening a record was articulated in a Director's Decision on the Marble Hill matter.

^{21/} Georgia Power Company (Alvin W. Vogtle Nuclear Plant, Units 1 and 2), DD-79-4, 9 NRC 582 (1979); Marble Hill, supra, 10 NRC at 129.

^{22/} Vogtle, supra, 9 NRC at 584-585.

"In order to have a hearing reopened on the basis of new information, as STV seeks to do, the Appeal Board has held that new information must identify a significant unresolved safety issue or a major change in facts material to the resolution of major environmental issues. (Footnote omitted.) Although the Director, in considering a request for action under 10 CFR 2.206, is not bound by the Appeal Board's standard for reopening a licensing proceeding on the basis of new information, this standard is persuasive in considering requests under 10 CFR 2.206 because, as the Commission has indicated on another occasion, '[P]arties must be prevented from using 10 CFR 2.206 procedures as a vehicle for reconsideration of issues previously decided....'. Consolidated Edison Company, (Indian Point, Units 1-3), CLI-75-8, 2 NRC 173, 177 (1975)." 23/

Settled NRC policy requires that the claims in the Petition urging a revocation or suspension of the construction permits for the Limerick Facility must identify "a major change in facts material to resolution of major environmental issues."

Also relevant to a number of aspects raised in the Petition is the current status of the operating license proceeding under way regarding the Limerick Facility. Del-Aware is a party to this proceeding and has raised a number of issues regarding the SCWS system proposed for the Limerick Facility before the Licensing Board sitting in the operating license proceeding. A number of these issues have been admitted as contentions. To the extent that Del-Aware has raised similar issues in its Petition, I have examined those issues with the understanding that a proper forum for their resolution lies in the operating license proceeding. 24/ Nevertheless, I have examined those issues for the sole purpose of determining whether activities presently authorized under the construction permits should be modified since the Licensing Board for the operating

23/ Marble Hill, supra, 10 NRC at 130-131.

24/ See Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-81-6, 13 NRC 443 (1981).

license proceeding is without jurisdiction to modify the construction permits.^{25/}

Other issues raised by Del-Aware in the operating license proceeding have been rejected by the Licensing Board as either beyond the scope of the environmental assessment which NEPA requires the NRC to conduct in furtherance of its regulatory responsibilities or as beyond the jurisdiction of a Licensing Board sitting only to examine impacts associated with the issuance of an operating license. In rejecting such issues, the Licensing Board suggested that certain of:

"...Del-Aware's allegations that changes in construction impacts due to either changes in proposed construction or the changes in recognition of the historical value of areas which may be impacted by construction should be directed as a request for action to the Director of Nuclear Reactor Regulation pursuant to 10 C.F.R. § 2.206(a)".^{26/}

Consequently, in evaluating the concerns identified in the Petition, I have given careful consideration to the rulings made by the Licensing Board in the operating license proceeding in determining which issues are appropriate for my consideration at this time.

With these general principles in mind, I have considered the five substantive issues raised in the Petition.

1. The Relationship Between The Neshaminy Water Resources Authority and PECO.

Much of the Petition is devoted to an exposition of supposed changed circumstances in the relationship between the NWRA and PECO.

^{25/} Consumers Power Company (Midland Plant, Units 1 & 2), ALAB-674, 15 NRC 1101, 1102-1103 (1982).

^{26/} Limerick, supra, 15 NRC at 1478.

The Petition claims that the sole reason for the proposed construction of the PPD Project is operation of the Limerick Facility. Attached to the Petition is the "Agreement Between the Neshaminy Water Resources Authority and Philadelphia Electric Company for the Construction and Operation of Water Supply Facilities," dated February 12, 1980, which it is claimed supports the view that the PPD Project will have as its sole purpose the provision of supplemental cooling water to the Limerick facility.^{27/}

^{27/} Relative to this matter, the Petition alleges that information relevant to the relationship between PECU and the NWRA regarding the PPD Project was not disclosed by PECO to the AEC at the time of the construction permit review. The allegations, even if true, were simply not material to the issues before the DRBC and the AEC at that time. The central issue was assurance that all aspects of the PPD Project be assessed for environmental acceptability. This was accomplished through the efforts of the DRBC. To the extent environmental impacts associated with the PPD Project were attributable to the Limerick Facility, those were considered by the AEC. The existence or non-existence of any relationship between PECO and NWRA was not material to these considerations. Consequently, the allegations provide no indication of improper or unlawful withholding of information from the AEC or the NRC.

In addition, the Petition suggests that the SCWS system for the Limerick Facility should be an item explicitly referenced in and subject to the construction permits issued for this facility. Petition, pp. 2, 30, 34(b). The construction permits in this matter were issued pursuant to the authority of § 103 of the Atomic Energy Act of 1954, as amended. (42 U.S.C. 2133.) The permit governs a "utilization facility" which term is defined by the Act. See § 11(cc). This term includes, exclusively, any equipment or device capable of the production of special nuclear material, or, any important component part especially designed for such equipment or device as determined by the Commission. The SCWS system for the Limerick facility clearly does not come within the ambit of "equipment or device[s] capable of production of special nuclear material." Any remaining determination as to what constitutes a utilization facility is, by the terms of the statute, exclusively that of the Commission, and the practice has been to exclude from utilization facilities supplemental cooling water supply systems.

The claims in this regard appear to be grounded mainly upon interpretation of PECO's contract with the NWRA for construction of the PPD Project. Mr. Robert A. Flowers, Executive Director of the Neshaminy Water Resources Authority, has prepared an affidavit dated June 10, 1982, wherein he states that:

"NWRA is committed to constructing Neshaminy Water Supply System authorized by docket number D-65-76, CP(8) with or without the Philadelphia Electric Company.^{28/}

Based upon this representation from the Executive Director of the NWRA, I conclude that the Petitioner's allegation that the sole reason for the proposed construction of the PPD Project is to support operation of the Limerick Facility is without merit. In light of Mr. Flowers' Affidavit, it is clear that the commitment of both PECO and NWRA to the PPD Project has not changed materially since issuance of the construction permits.^{29/}

The Petition suggests that only the " ... incremental size of the Point Pleasant portion of the SCWS was considered in the application for the construction permit ..."^{30/} Consequently, given the alleged change in relationship that makes the PPD Project supposedly attributable solely

^{28/} This affidavit was provided to me as an attachment to the September 3, 1982, submittal from PECO titled "Comments of Philadelphia Electric Company on Delaware Unlimited's Request for Suspension or Revocation of Construction Permits Pursuant to 10 C.F.R. § 2.202 and § 2.206(a)."

^{29/} The September 17, 1979 letter to Mr. Flowers from PECO attached to Petitioner's September 23, 1982 letter to me does not affect my conclusion. The letter predates Mr. Flowers' Affidavit by nearly three years and, at best, expresses only a hesitancy with respect to the immediate expenditure of funds.

^{30/} Petition, p. 2.

to FEEO, it is argued the earlier environmental review would be incomplete. Such is not the case. As stated above, the entire PPD Project was environmentally assessed by DRBC and found beneficial. The Staff recognized and accepted this finding by the DRBC, which would weigh in favor of the Limerick Facility for the allocation would be of net benefits.^{31/} And, of course, as was decided by the Appeal Board at the construction permit stage of this proceeding, the Staff may use the environmental impact statement prepared by DRBC as a basis for its own assessment of the environmental impacts of a proposed action.^{32/}

2. Possible Suspension or Cancellation of Unit 2

The Petition questions the continued need for the SCWS System proposed for the Limerick Facility in light of the finding by the Pennsylvania Public Utilities Commission (PUC) in its Opinion and Order of August 27, 1982 that "... either the cancellation or suspension of construction at Limerick Unit 2 is in the public interest."^{33/} The Petition at p. 3 and Petitioner's letters of September 3, 1982, and September 23, 1982 allege that, with only one unit in operation, Limerick's supplemental water needs are halved, calling into question the continued need for the proposed SCWS.

^{31/} Lyle Testimony, supra, p. 4.

^{32/} Limerick, supra, 1 NRC at 184-189, wherein the Appeal Board confirmed the Staff's approach in using DRBC FEIS findings. Nor is Petitioner's reliance on the Phipps Bend decision [Tennessee Valley Authority (Phipps Bend Nuclear Plant, Units 1 and 2), ALAB-506, 8 NRC 533 (1978)] appropriate. In this instance, DRBC, a federal agency, is performing a governmental function unlike TVA, the federal agency in Phipps Bend, which was performing a proprietary function.

^{33/} Pennsylvania Public Utility Commission, Limerick Nuclear Generating Station Investigation, I-80100341, Opinion and Order, p. 24.

It should be noted that the August 27, 1982 Opinion and Order does not preclude the completion of construction and the subsequent operation of Limerick Unit 2. Rather, it requires PECO to inform the PUC of its decision whether to cancel or suspend the construction of Limerick Unit 2 within 120 days and to undertake other activities, none of which foreclose the eventual completion of Unit 2. The ultimate effectiveness of the PUC decision itself will not be determined until pending appeals are exhausted.

The terms and conditions of the existing DRBC approval for water use at the Limerick Facility are stated in DRBC Docket D-69-210 CP dated March 29, 1973 and DRBC Docket D-69-210 CP (Final) dated November 5, 1975. Restrictions on the withdrawal of Schuylkill River water for consumptive uses at Limerick and on the withdrawal of Perkiomen Creek water were established for both one and two unit operation and are defined in terms of the ambient Schuylkill River water temperature and river flowrate, and on Perkiomen Creek flowrate. Information provided by PECO and reviewed by the DRBC under Docket D-69-210 CP indicates that a supplemental water supply is needed to assure operation of either one or two units at Limerick because river and creek temperatures and flowrates would not permit water withdrawal all year around.

Nor are the environmental impacts associated with construction of the SCWS system affected by the fact that the system may potentially serve only one unit of the Limerick Facility. Consideration was given to construction impacts associated with the PPD Project in the Final Environmental Impact Statement of the DRBC dated February 1973, in the AEC FES of November 1973 (the portion of the PPD Project involving the

intake structure on the Perkiomen Creek and the pipeline to Limerick), in the DRBC Environmental Assessment for the Project dated August 1980, in the PA DER Environmental Assessment dated August 1982, and in the Army Corps of Engineers Environmental Assessment dated October 1982. The effects of construction and operation and their impacts were found to be acceptable, subject to limitations imposed either by DRBC, PA DER in its water quality certification and dams and encroachment permits, or the Army Corps in the conditions accompanying its permit. While these studies did not address the environmental impacts of facilities sized for serving only one unit at Limerick, the construction/installation impacts associated with the PPD Project are virtually the same whether the structures are sized for two unit operation or for one-unit operation. Because about half of the allocated water withdrawal from the Delaware River is for the Neshaminy Water Resources Authority, the change in environmental impacts associated with the difference in physical size between water supply facilities for one unit or two units at Limerick could not be significant.

The U.S. Fish and Wildlife Service (USFWS) has suggested in its letter of September 14, 1982 to the Corps of Engineers that a reduction in the size of the Limerick Facility to one unit would "reduce demands and provide several other less environmentally damaging alternatives to the proposed Point Pleasant Diversion project, such as water storage in the Schuylkill River Basin."^{34/} Alternatives to the SCWS system were

^{34/} The Corps in its reply to USFWS of September 24, 1982 acknowledged the concerns of USFWS regarding the Point Pleasant Diversion Project but concluded that they were not valid deterrents in this case.

considered in the original DRBC FEIS. Therein the DRBC concluded that the SCWS system was an acceptable alternative for meeting Limerick's supplemental cooling water needs.

Alternatives were also considered by PA DER in its August 1982 assessment and by the DRBC in its Environmental Assessment of August 1980 and the May 1981 Level B Study and Environmental Impact Statement for the Delaware River Basin. PA DER found that the State Water Plan and the DRBC Level B Study both recognize technical, environmental, economic or social conditions that preclude development of significant new surface water storage facilities in the Schuylkill Basin in the foreseeable future. PA DER also found that election of a Schuylkill River alternative for cooling water for Limerick would ignore the need for drinking water supplies for Montgomery County and Bucks County, Pa. The environmental assessments of the DRBC, in preferring the PPD Project to Schuylkill River-based alternatives, stated as reasons the limited opportunities for the development of additional storage to increase the flow of the Schuylkill River, the deterioration of river water quality resulting from increased use and from flood skimming to offstream storage, and the elimination of all benefits to be achieved from the increased flow in Perkiomen Creek as a result of the PPD Project.

The range of alternatives considered in the environmental assessments of the PPD Project included: (1) additional development of groundwater resources; (2) use of existing surface supplies such as City of Philadelphia water supply, Tohickon Creek, Perkiomen Creek, Wissahicon Creek, Susquehanna River, Schuylkill River and Delaware River; (3) creation of

new surface water impoundments in both the Delaware and Schuylkill basins; (4) development of independent water supply-for PECO, Bucks County and Montgomery County; and (5) no action.

The Corps, in its Environmental Assessment dated October 14, 1982, considered the above-referenced documents and others. It therefore had the benefit of these reviews regarding alternatives to the proposed PPD Project when it issued the permit for the PPD Project intake structure.

In summary, the environmental impacts associated with the construction of the PPD Project have been reviewed and found acceptable subject to certain conditions which have been imposed. There is no indication in the reviews conducted to date that environmental impacts would differ greatly were Limerick a one-unit station. Moreover, even if one unit at Limerick were cancelled, a supplemental water source, such as the SCWS system, would be required for the remaining unit.

Alternatives to the PPD Project have also been reviewed. There is no indication in the reviews conducted to date that the environmental impacts associated with alternatives would significantly decrease were Limerick a one-unit station. Alternatives to the PPD Project were considered at the construction permit review of the Limerick Facility and the PPD Project was found acceptable. More recent environmental assessments have confirmed this finding. Even if consideration of alternatives were now appropriate, suggested alternatives such as water storage in the Schuylkill River Basin are not feasible at this time. Thus, I conclude that the possible suspension or cancellation of one of the Limerick units does not require any action to be taken with respect to the current construction permits.

3. Alteration of the Intake for the Point Pleasant Pumping Station

The Petition alleges that the intake for the PPD Project has been substantially altered since the construction permit proceeding and that these changes have not been evaluated. Petition pp. 3, 14-15, and 31. Effects on aquatic biota are alleged and concerns raised regarding the effects of construction, such as additional blasting, on residents. The Supplement to the Petition at pp. 3-4 claims that the DRBC Environmental Assessment of August 1980 did not examine the final Project intake configuration and that a report prepared for the Corps in January 1981 by Betz-Converse-Murdock, Inc. identified the wetlands near the Project intake as an area requiring further study.

The design of the intake structure in the Delaware River has been changed since the time of the AEC construction permit proceedings. The DRBC Environmental Assessment of August 1980 did not evaluate the intake as presently located and designed. At that time the intake structure was located flush with the river bank and employed vertical travelling screens for fish and debris removal as well as a dredged channel from the shoreline to the main river channel for water supply. This structure was reviewed by the DRBC in its February 1973 Environmental Impact Statement and August 1980 Environmental Assessment.

In 1981, the intake structure was changed to an in-river structure employing submerged passive wedge-wire screens located about 200 feet offshore, eliminating the need for the dredged channel. The new design was proposed by NWRA and was believed to represent a more advanced technology with less potential for adverse environmental impact. The details of the design were presented in a Public Notice issued by the Corps of

Engineers dated April 6, 1981. Revisions to the proposed placement of the structure itself and its associated piping were presented in another Public Notice issued by the Corps on February 9, 1982. The most significant of the changes proposed was the movement of the intake structure an additional 45 feet further into the river to place the structure in the main channel.

However, the present design and location of the Project intake structure have not gone unreviewed. PA DER in its Environmental Assessment of August 1982 included consideration of the necessary blasting for placement of the structures in the river and for the pipeline to the Bradshaw Reservoir. The PA DER assessment noted that the proposed NWRA blasting specifications for the construction of the PPD Project were well within the criteria set by the DRBC's consultant. These criteria were used to judge adequacy for safety and protection of nearby structures and environmental features in the DRBC Environmental Assessment of August 1980. The PA DER assessment concluded that the blasting limits and procedures proposed by the NWRA would be adequate to avoid damage to the locks and channel of the Delaware Canal and other nearby structures. Accordingly, the September 2, 1982 PA DER Water Obstruction and Encroachment Permit granted to NWRA for the construction and maintenance of the PPD Project intake structure in the Delaware River, intake conduit crossing under the Delaware Canal and other related structures has been conditioned to require construction in accordance with "Appendix B - Point Pleasant Project Blasting Requirements from the Delaware River to Pumping Station," of the August 1982 PA DER Environmental Assessment. Construction blasting impacts associated with the PPD Project intake structure

have thus received explicit consideration by both DRBC and PA DER. PA DER also assessed the wetlands issue. Its approval to construct and maintain the Project intake is conditioned, in part, to control impact to wetlands by minimizing wetlands lost to the smallest area practicable and by restoring affected wetlands to pre-construction conditions as provided in plans submitted to the PA DER.

In addition, the current design and location of the intake have been reviewed and the potential for adverse environmental impacts has been assessed by the Corps of Engineers in its Environmental Assessment of Application No. NAPAP-R-80-0534-3 dated October 14, 1982, prepared pursuant to the Corps' responsibilities under Section 404 of the Federal Water Pollution Control Act and under NEPA. This Environmental Assessment considered the need for the proposed project; potential construction impacts due to noise, air pollution, canal dewatering between Locks 13 and 14, wetlands appropriation and disturbance, in-water blasting and construction activity, injury or loss of historic and cultural properties, and traffic disruption; and potential operational impacts due to entrainment or impingement losses of shortnose sturgeon and other aquatic organisms, withdrawal of river water under low flow conditions, and adverse effects on down stream Delaware River water quality regarding chloride ion levels and dissolved oxygen levels. A major conclusion of the Corps' assessment is that wetlands in the area of the Project intake are not unique with respect to the floodplain forests of southeastern Pennsylvania and that some loss, with controlled disturbance and restoration of grade, is environmentally acceptable.

The Corps found in this assessment that the construction and operation of the PPD Project intake structure as presently designed and located will not significantly affect the quality of the human environment, and that no Environmental Impact Statement need be prepared in regard to the issuance of the Department of the Army permit for the intake. The DRBC participated with the Corps in the preparation of this assessment.^{35/} The Corps issued permit NAPOP-R-80-534-3 on October 25, 1982 to NWRA for "Construction of a Water Intake Structure in the Delaware River/Delaware Canal at Point Pleasant, Bucks County, Pa."

Concerns raised in the Petition and its Supplement regarding the effect of the intake structure on the shortnose sturgeon and American shad have also been the subject of the NRC Staff review. With respect to both the shortnose sturgeon and the American shad, the Staff reviewed their known distribution in the Delaware River, the species' life history and behavior, the location of the proposed Point Pleasant pumping station, and the design and operating characteristics of the proposed intake. The Staff concluded that operation of the intake will not jeopardize the continued existence of these species in the Delaware River. Specifically considered by the Staff were entrainment of larvae, impingement of juveniles, denial of use of critical habitat and alteration of turbidity immediately downstream of the intake. In

^{35/} The DRBC continuing overview of the PPD Project is reflected in a letter to the USNRC dated September 14, 1982: "...In the event that review by other State and Federal agencies results in a modification to the operation or the design of this project, DRBC has so conditioned this docket to allow a reopening, reconsideration, and revision of this project approval as necessary."

addition, the effect of pool drawdown on the American shad was considered.

In light of the careful consideration given to the modified intake structure by both PA DER, the Corps of Engineers, and the NRC Staff, including specific consideration of the concerns raised in the Petition and its supplementing documents, assertions that these matters have not been evaluated are without merit.

4. Effect of the PPD Project Upon Cultural Resources

The Petition and its supplementing documentation claim that construction and operation of the Point Pleasant Division Project would adversely affect the cultural resources of the proposed Point Pleasant Historic District, the Delaware Division of the Pennsylvania Canal, which is a National Historic Landmark, and an Indian archaeological site. See Petition, pp. 5, 15; Petitioner's letter of September 3, 1982.

These cultural resources may be briefly described as follows. The Point Pleasant Historic District was declared eligible for inclusion in the National Register of Historic Places by the Keeper of the Register on December 29, 1981. The District is described as representing "a significant resource relating to community development history of 18th century English settlements in Pennsylvania", and as providing a "strong sense of time and place."^{36/}

^{36/} Statement of Significance: Point Pleasant Historic District Attachment to letter from Larry E. Tise, Pennsylvania State Historic Preservation Officer to Lt. Col. Roger L. Baldwin, District Engineer of the Corps, Philadelphia District, dated September 21, 1981.

The Delaware Division of the Pennsylvania Canal was constructed in the first third of the nineteenth century and was used as a connecting link with the Lehigh Canal for transporting coal to Philadelphia and New York. Many of the lock houses and other related structures remain intact.

With regard to the archaeological site, archaeological remains were identified in the Point Pleasant area at the end of the last century and surveys have been conducted in the general area since then.^{37/}

These three cultural resources could be adversely affected by the construction of the intake structure, pumping station and piping associated with this portion of the PPD Project.^{38/} The District could be affected aesthetically by the Project's design and by areas being disturbed during Project construction. The Canal could be affected by the blasting and trenching activities required for construction. The potential also exists that unidentified archaeological sites may be damaged by normal construction activities associated with these elements of the PPD Project. The possible adverse impacts to cultural resources in these areas have been identified by the Corps of Engineers, which is the appropriate permit-issuing agency. Following proper procedures, the Corps

^{37/} Letter dated April 8, 1982 from Dr. Richard H. Jordan and Glenn Sheehan to Ms. Cathy Auerbach.

^{38/} To the extent that the Petition seeks consideration of operational impacts associated with these elements of the PPD Project, the operating license proceeding is the proper forum for these considerations. See Diablo Canyon, CLI-81-6, supra.

consulted with the State Historic Preservation Officer (SHPO) for Pennsylvania and sought comments from the Advisory Council on Historic Preservation (ACHP). The Corps then drew up a Memorandum of Agreement (MOA), between itself, the SHPO, and the ACHP. The MOA states that "...it is mutually agreed that the undertaking will be implemented in accordance with the following stipulations to avoid, minimize, or mitigate the adverse effects on the above mentioned properties." The MOA contains stipulations concerning the Canal, the Point Pleasant Historic District, and archaeology.^{39/}

According to the MOA, the possible impacts to the District are to be mitigated by having the Project's designs, plans and specifications approved by the SHPO prior to construction. A landscaping plan approved by the SHPO is also required and there is a stipulation requiring all areas disturbed to be restored as closely as possible to their original appearance.

With regard to the concern raised in the Supplement to the Petition to the effect that no consideration had been given to aesthetic impacts of the pumping station structure in the environmental assessments conducted to date, Petitioner is directed to the Corps Environmental Assessment wherein this matter was specifically addressed. Furthermore, the Corps had before it the views of the SHPO on this matter contained in a September 28, 1981 letter to the Corps wherein the SHPO concluded that

^{39/} The MOA was executed by the Corps, the SHPO and the ACHP in September 1982.

"... the proposed pumping station structure and attendant landscaping is consistent with its surroundings."

The MOA also mitigates the potential impacts on the Canal by requiring blasting activities to be implemented in accordance with the requirements of PA DER. Records of cross sections and other Canal construction information recorded through appropriate photographs and drawings will be required during trenching operations and before blasting or laying of pipeline to assure restoration of the Canal, towpath, and adjacent areas as closely as possible to their original appearance. The MOA also states that care must be taken to minimize machinery disturbance during construction in the vicinity of the Canal in accordance with the requirements of the PA DER.

There are two stipulations with regard to archaeology. The first describes the required archaeological testing program to be conducted in consultation with the SHPO and the Pennsylvania State Archaeologist to identify sites which might be disturbed by construction. The second stipulation requires that measures will be taken to avoid, preserve, or recover resources if significant archaeological resources are identified.

In summary, the areas identified by the Petitioner have been the subject of the MOA between the Corps and the SHPO and ACHP. The MOA demonstrates that proper procedures have been followed with regard to the resources discussed above and that a consensus was reached with regard to activities required to minimize adverse impacts. In light of these facts, I see no basis to take any further action with respect to cultural and historical resources.

5. Impairment of Water Quality.

The Petition claims at p. 4 that the PPD Project would impair the quality of water for drinking and commercial uses. A specific concern raised in Petitioner's September 3, 1982 letter is that various toxic substances recently identified in the Delaware River water would be transported into the Neshaminy and Perkiomen Creeks. Also of concern was alleged contamination of ground water by losses from the SCWS system through seepage and leakage. See Petition, pp. 16, 25 and 33.

Water diverted from the Delaware River by the PPD Project for the Limerick Facility would be used for cooling purposes and would not be consumed by workers or residents. Water subsequently discharged to the Schuylkill River from the facility would not be consumed without adequate treatment.

The water quality of the Delaware River in the vicinity of the PPD Project intake has previously been reviewed and assessed against the protected water uses established for the Delaware River, and the Perkiomen Creek system (i.e., agricultural, industrial and municipal supplies; wildlife, fish and other aquatic life; recreation; navigation; waste assimilation, and other uses provided by the DRBC's Comprehensive Plan).

The DRBC Environmental Assessment of August 1980 concluded that the water quality of the Delaware River near the PPD Project intake is generally good. Diversion of river water to the Perkiomen and Neshaminy watersheds was predicted to improve water quality in these watersheds. The differences in the chemical makeup of the waters to be mixed were judged not to be of significant magnitude to produce major changes in

stream water quality. The DRBC concluded that adverse impacts on water quality in the service area of NWRA and in the Delaware River would be minimal as a result of the PPD Project.

The PA DER in 1978 assessed the raw water quality of the Delaware River, Pine Run and the North Branch Neshaminy Creek and found that these water bodies are all of satisfactory quality to be used for water supply. This assessment also concluded that the PPD Project will not jeopardize public water supply. As noted above, the DRBC Environmental Assessment dated August 1980 agreed with this conclusion.

The PA DER Environmental Assessment dated August 1982 again assessed the effects of the PPD Project on the water quality of the Delaware River, the North Branch Neshaminy Creek, Lake Galena and East Branch Perkiomen Creek. The assessment was based on bacteriological and physical water quality parameters, inorganic chemicals, heavy metals, organic chemicals, EPA-identified priority pollutants and specific carcinogens such as trihalomethanes and trichloroethylene. The review included data collected between September 1971 and December 1981. The assessment concluded that:

- (1) the PPD Project will not compound existing water quality problems in the Delaware and Raritan Canal (used for water supply in New Jersey);
- (2) the PPD Project will not have significant effects on dissolved oxygen, trace organics or suspended solids in the upper Delaware estuary (used for water supply by the City of Philadelphia) nor will it significantly affect the assimilative capacity of the river or estuary (which serves commercial users);
- (3) the PPD Project will not affect the presently nondetectable trihalomethane levels in the river raw water supply for the City of Trenton or in the North Branch Neshaminy Creek water supply for

Philadelphia Suburban Water Company and; (4) there is no substantial evidence that the PPD Project would result in the transfer of toxic substances causing contamination of the Neshaminy or Perkiomen watersheds.

With respect to ground water contamination from pipeline leakage and reservoir seepage, both PECO and NWRA have indicated in their environmental reports to the NRC and the DRBC that the pumping facilities and the water transmission pipelines have been sized to account for an estimated 10% maximum in-transit water loss while reliably delivering up to about 42 MGD to the Limerick Facility and 44 MGD to NWRA's Water Treatment Plants. The water loss associated with the Limerick Facility has been estimated to be up to 4.6 MGD, but this loss has not been specifically apportioned between the various conceivable causes (i.e., pipeline leakage, reservoir seepage, reservoir surface evaporation, Perkiomen Creek system seepage loss or Perkiomen Creek system surface evaporation). However, recognition of in-transit losses has been made in a qualitative sense by the DRBC in its assessment and approval of the PPD Project. In the DRBC Docket No. D-79-52 CP Proceedings, dated February 18, 1981, in-transit water loss was recognized as possibly coming from seepage through the Bradshaw Reservoir boundary and from transmission pipeline leakage. With regard to the former pathway, the Proceedings note the proposed use of impervious soil for the water-side of the dike walls and use of impervious soil or compacted materials from off-site for the reservoir bottom. With regard to the latter pathway, the DRBC conditioned approval of the Project includes the following requirement:

The applicant shall develop a program to monitor all water supply facilities including storage and distribution systems for leakage. The program must be approved by the Executive Director and the monitoring results shall be submitted within six months of this approval and thereafter as requested by the Commission. The applicant shall proceed expeditiously to correct leakages identified by the monitoring.

The potential for contamination of groundwater by seepage from the Bradshaw Reservoir was assessed in the PA DER Environmental Assessment of August 1982. The assessment took note of the use of a clay liner for the reservoir, tight rock formations in the site area, low transmissivity of the local rock formations, relatively high groundwater table in the area, the lack of wells, septic systems, structures or springs within the maximum probable area of influence of the reservoir, and the lack of evidence of the presence of toxic or priority pollutants in the Delaware River water supplying the reservoir. The assessment concluded that whatever limited seepage there would be from Bradshaw Reservoir would have no measurable effect on the quality of groundwater in the area. Since that time, PECO has further developed the specific plans and specifications for the Bradshaw Reservoir. In its September 3, 1982 letter to the NRC, PECO has stated its intention to install an impervious liner on the reservoir bottom and has estimated reservoir seepage, using conservative assumptions. The liner would be a minimum of two feet thick, with a maximum permeability of 0.014 ft/day.

With respect to the sections of the Perkiomen Creek system to be affected by the PPD Project, these have not been identified as groundwater recharge streams in the assessments conducted to date. Furthermore, these sections appear to be perennial in their flow, which further supports

the conclusion that they are effluent rather than influent streams. Consequently, groundwater contamination would not be likely to occur from stream travel in-transit water losses associated with the PPD Project. Also, the quantity of flow to be diverted into East Perkiomen Creek has not changed since the Construction Permit Stage; hence no changes in impacts on the East Perkiomen are expected as a result of modifications to the Project design. Finally, stream or reservoir surface evaporation does not represent a mechanism for groundwater contamination.

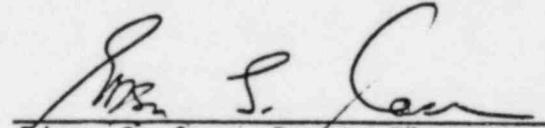
The water transmission system description as presented by PECO and NWRA in their environmental reports shows that the in-transit water loss estimate was meant to be a reasonable upper bound estimate and was prepared before the decision was made to use an impervious liner for the Bradshaw Reservoir. The subsequent decision to install the liner, the resulting low estimated seepage rate, the PA DER assessment that the Bradshaw Reservoir seepage will not have any measurable effect on nearby ground water quality and the DRBC requirement to monitor all of the SCWS water supply facilities for leakage and expeditiously correct such leakage, leads to the conclusion that the potential impact of the PPD Project for groundwater contamination has been carefully considered in previous environmental assessments of the Project. On this basis, I decline to taken any action on the matter of water quality.

Conclusion

Based on the foregoing discussion of Petitioner's allegations, I find no reason to disturb the construction permits issued for the Limerick Facility. The Petition has failed to identify major changes in facts material to the resolution of major environmental issues properly before

the NRC. Therefore, I have determined that Petitioner's requests that PECO be compelled to submit an alternative SCWS system and that construction of the planned PPD Project be barred should be denied.^{40/}

A copy of this decision will be placed in the Commission's Public Document Room located at 1717 H Street, N.W., Washington, D.C. 20555. A copy of this decision will be filed with the Office of the Secretary of the Commission for its review in accordance with 10 CFR 2.206(c) of the Commission's regulations.


Edson G. Case, Deputy Director
Office of Nuclear Reactor Regulation

Dated at Bethesda, Md.
this 7th day of December, 1982

^{40/} With respect to the condition of the construction permits to which the Petition refers (at pp. 38-39) and which relates to reporting by the licensee of significant adverse environmental impacts, my review of the many studies examining the environmental impacts associated with the Limerick Facility and the SCWS System leads me to conclude that the licensee has satisfied that condition to date. Also, in the absence of any sound basis for delaying the commencement of construction of the PPD Project now scheduled for December 15, 1982, Petitioner's arguments in its Supplement at pp. 10-11 that construction need not commence by that date in order to insure timely completion of the Limerick Facility are irrelevant.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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December 9, 1982

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SUBJECT: 2.206 DENIAL FOR LIMERICK GENERATING STATION, UNITS 1 & 2

Two signed originals of the Federal Register Notice identified below are enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies () of the Notice are enclosed for your use.

- Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s); Time for Submission of Views on Antitrust Matters.
- Notice of Availability of Applicant's Environmental Report.
- Notice of Proposed Issuance of Amendment to Facility Operating License.
- Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- Notice of Availability of NRC Draft/Final Environmental Statement.
- Notice of Limited Work Authorization.
- Notice of Availability of Safety Evaluation Report.
- Notice of Issuance of Construction Permit(s).
- Notice of Issuance of Facility Operating License(s) or Amendment(s).
- Other: 2.206 DENIAL FOR LIMERICK GENERATING STATION, UNITS 1 & 2

Office of Nuclear Reactor Regulation

Enclosure:
As Stated

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