

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C.

BEFORE THE COMMISSIONERS:

Nunzio J. Palladino, Chairman
Thomas M. Roberts
James K. Asselstine
Frederick M. Bernthal
Lando W. Zech, Jr.

In the Matter of : Docket Nos. 50-352
50-353
APPLICATION OF PHILADELPHIA :
ELECTRIC COMPANY : Re: ALAB 785

PETITION FOR REVIEW

Pursuant to 10 C.F.R. §1.786, Intervenor Del-AWARE Unlimited, Inc., petitions for review of the decision of the Appeal Board in ALAB 785 issued September 26, 1984, and avers that the decision is erroneous with regard to the following important questions of fact, law or policy:

1. The Appeal Board failed and refused to consider or deal with the fact (Exceptions ¶7; Motions of May 25, 1984 and August 6, 1984) that the Pennsylvania Public Utility Commission Initial Decision and the Environmental Hearing Board decision (now final in this aspect), found and determined that the diversion, as planned, would cause unacceptably substantial erosion in the East Branch Perkiomen Creek, the intended conveyance channel to Limerick; and failed and refused to consider the fact that the limitations on use imposed by the PUC initial decision would render the

diversion inadequate for Limerick, while those required by EHB would not, as found by the PUC, protect the East Branch.

At the same time, the Appeal Board failed and refused to consider the fact the Applicant had consciously elected to abandon channelization of the East Branch in 1972, despite its knowledge that the use of the East Branch as a diversion channel without channelization would cause substantial erosion, because applicant felt that the NRC staff, at the time, would be more concerned about channelization than about erosion, but did not inform the NRC of its conscious decision to incur this damage. This internal memorandum of this decision was found only in 1984, and was provided to the Appeal Board by Motion of August 6, 1984, and is attached hereto as Exhibit A.

The Commission should review this action because it permits a serious environmental impact of a critical element of a facility, which was knowingly incurred by applicant, but not divulged to the Commission, and has not been considered as required by 10 C.F.R. ch.51.

2. Although the Appeal Board remanded to the Licensing Board because it correctly found that the Licensing Board had erroneously excluded contentions relating to downstream salinity effects in the Delaware River, it failed, or may have failed, to include in such remand potential downstream effects of the diversion on dissolved oxygen levels. (See Exceptions ¶17.)

The Commission should review because it is a serious environmental impact and Commission staff promised to review it in inducing the EPA to allow DRBC to approve the diversion.

3. The Appeal Board failed and refused to properly identify the legal effects of impacts of the diversion American Shad and Shortnose Sturgeon; (See PID 3/8/84; ALAB 785); it failed and refused to recognize that a significant environmental effect could occur from a substantial diminishment of the population, even though the species may not be threatened, and thereby affirmed a similar misapprehension of the law by the Licensing Board; it failed to deal with the fact that the population will be reduced by tens of thousands of fish because the Point Pleasant intake is located in a spawning and nursery area for American Shad.

Likewise, the Appeal Board failed and refused to reverse the Licensing Board's erroneous decision which in turn sustained the refusal of the staff and National Marine Fisheries Service to recognize the potential effect on what may be important habitat shortnose sturgeon, an endangered species, but found it appropriate to proceed despite the absence of any sampling for shortnose sturgeon in the Spring of the year, the only time when they could be expected to be present, despite the fact that they have been taken as close as 8 miles from the intake site.

This Commission should review the matter because it is a serious environmental effect of the project, and a basic legal issue for this Commission.

4. The Appeal Board erred as a matter of law in determining that the Commission need not follow its regulations, requiring that the hearings not be held until the draft environmental statement was issued, and in allowing the staff to present staff views despite the fact that the draft environmental impact statement had not yet been issued. The issue was initially raised by Motion of September 24, 1982, by Exceptions ¶1 and 2).

The Commission should review this issue to perceive the integrity of its procedures to insure compliance with NEPA.

5. The Appeal Board erred in not disqualifying staff witnesses who had exhibited a predetermination and commitment prior to commencing their investigation of the subject matter. Motion of September 24, 1982, Exceptions ¶24), Reason for Review: See ¶5.

6. The Appeal Board erred in failing and refusing to hold that NEPA and the Atomic Safety Act require that the applicant identify and consider, and that the FES identify and consider, all reasonable alternatives to the supplemental cooling water system, as a result of likely changing Limerick from two units to one, and that neither had done so, and therefore failed to require considering of alternatives likely in fact, to be implemented.

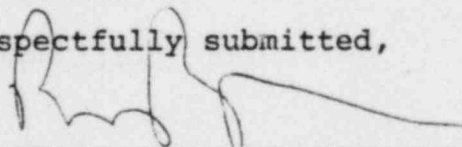
(Contention V16C, and V-24; Board Order of January, 1983; Exceptions ¶19.)

The Commission should review this question because the subject of alternatives is the linchpin of compliance with NEPA, at least where, as here, the potential reduction of Limerick from two units to one unit makes possible a range of alternatives previously not considered. (See 10 C.F.R. §51.71.)

7. The Appeal Board erroneously sustained the Licensing Board's refusal to allow intervenor to litigate the effect on the Delaware Canal, a National Historic Landmark, on the ground that Contention reference to the "Historic District" did not encompass the Landmark within it. (Contention V-16, Exceptions ¶11.)

The Commission should review this matter because of the importance of Historic Landmarks, and the need for Commission compliance with NEPA; and the need to avoid elevation of technicality to importance.

Respectfully submitted,



ROBERT J. SUGARMAN

Counsel for Intervenor
Del-AWARE Unlimited, Inc.

Of Counsel

SUGARMAN, DENWORTH & HELLEGERS
16th Floor, Center Plaza
101 N. Broad Street
Philadelphia, PA 19107
(215) 751-9733

Dated: October 10, 1984
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REC-11
JUN 4 1982

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

SECRETARY AND CLERK

ATOMIC SAFETY AND LICENSING BOARD

WCH

Before Administrative Judges

Lawrence Brenner, Chairman
Dr. Richard F. Cole
Dr. Peter A. Morris

SERVED JUN 02 1982

copy of
encl's
to:
Wells
Sigstad
p. 50 & 51's

In the Matter of



Docket Nos. 50-352 OL
50-353 OL

PHILADELPHIA ELECTRIC COMPANY

(Limerick Generating Station,
Units 1 and 2)

SPECIAL PREHEARING CONFERENCE ORDER

June 1, 1982

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encl 55

Point Nuclear Generating, Units Numbers 3 and 4), ALAB-660, 14 NRC 987, 1009 (1981). Here, because the two segments are concurrent, there will be no later EIS which will consider cumulative impacts. Therefore, if we had been directed to any cumulative impacts arising from the portion of the project solely attributable to the NWRA, we might consider them. However, no such impacts have been pointed out to us and we envision none other than the impact on the total water resources available for allocation by the DRBC. As we found above, DRBC has sole authority to make water allocation decisions. Indeed, DRBC has already evaluated the two projects together under NEPA. As discussed supra, we recognize that there may be cumulative impacts from the jointly utilized parts of the system. These will be considered by the NRC.

In light of the above discussion, we hold that the part of the Neshaminy Water Supply System which is utilized solely by the NWRA need not be considered in the NRC's environmental review of Limerick.

E. Impacts of Construction

Some of Del-Aware's proposed contentions seek to litigate environmental impacts of construction of portions of the supplemental cooling water system. Del-Aware argues that this Board, which is to rule on whether the Limerick facility should receive an operating license, has jurisdiction to consider the impacts specified. Jurisdiction over these impacts of construction would, according to Del-Aware, arise because of changes in both construction plans and circumstances such that the impacts as changed were not evaluated at the construction permit (CP) stage. The changes alleged since the CP approval are an alleged change in location of the proposed Point Pleasant intake.

(Contentions V-15 and V-16a) and the designation of the Delaware Division, Pennsylvania Canal on the National Register of Historic Places (Contention V-13), and the determination by the Pennsylvania historic preservation officer that the Village of Point Pleasant is eligible for the National Register (Contention V-14). In addition, as we noted (note 36, supra), the proposed capacity of the Bradshaw Reservoir has been doubled from 35 to 70 million gallons.

We conclude that, under the Commission's licensing procedures, subsequent to the construction permit it is the NRC Staff which has jurisdiction, at least in the first instance, to consider changes in impacts of construction resulting from changed circumstances. However, as we discuss below, we are concerned that some of the contentions which allege impacts after operation of the supplemental cooling water system could be rendered substantially moot prior to consideration of their merits by virtue of the construction of the intake and reservoir. We are also concerned that the Applicant will incur the time and expense of major construction work not previously reviewed in a licensing proceeding which may later have to be undone in whole or in part in the event we find a change in location or design is necessary to mitigate impacts which would arise from operation. Accordingly, we attempt below to chart an approach which provides for early review by the Staff of construction impacts and early review before the Board of certain operational impacts. These operational impacts may be greater than thought at the construction permit stage because the proposed construction changes and official recognition of places of historic value were not foreseen.

The Staff itself agrees with Del-Aware that the Board has jurisdiction to consider construction impacts due to changed circumstances (Tr. 436-37), and the Applicant apparently does not disagree with respect to construction attributable to the facility (Tr. 463-67). Notwithstanding the view of the parties, the Board believes we do not have jurisdiction to consider construction impacts. However, we do have jurisdiction to consider the operational impacts of construction changes. *same*

The Board's jurisdiction commences with and is governed by the hearing notice issued pursuant to 10 CFR § 2.105^{42/} The proposed action before us as set forth by the Notice of Opportunity for Hearing (46 Fed. Reg. 42557, August 21, 1981) is to consider the issuance of an operating license. The Notice points out that, consistent with NEPA and 10 CFR Part 51, the Applicant's Environmental Report (ER) "discusses environmental considerations related to the proposed operation of the facilities," and that, in turn, the NRC Staff's EIS will analyze the ER.

^{42/} 10 CFR § 2.717(a). Consumers Power Company (Midland, Units 1 and 2), ALAB-235, 8 AEC 645, 646-47 (1974); Public Service Company of Indiana, Inc. (Marble Hill, Units 1 and 2), ALAB-316, 3 NRC 167, 170-71 (1976). See also, Pacific Gas and Electric Company (Stanislaus, Unit 1), ALAB-400, 5 NRC 1175, 1177 (1977).

The Notice is consistent with 10 CFR Part 51 which contains the Commission's "Licensing and Regulatory Policy and Procedures for Environmental Protection."^{43/} Section 51.21 provides that the Applicant's operating license stage ER discuss "the same matters described in § 51.20" governing the construction permit stage ER, but only to the extent they differ or reflect new information from that discussed in the construction permit stage EIS. The incorporation by reference of "the same matters described in § 51.20" does not require that changes in impacts of construction be considered in the operating license proceeding because § 51.20 does not refer specifically to construction impacts. Rather, the list of matters to be considered in § 51.20(a) pointedly refers to impacts of the "proposed action" or "the proposal." The proposed action before us in this proceeding is operation, not construction, of the facility.

Our view that review of construction changes is to be performed by the Staff is reinforced by the fact that the Limerick construction permit contains, among the general conditions for the protection of the environment, condition 3.E(3) which provides:

^{43/} 10 CFR § 50.57(a)(1) and the Notice of Opportunity for Hearing both require that construction of the facility be substantially completed in accordance with the construction permit and applicable requirements before an operating license may issue. Contrary to Del-Aware's assertion, this does not support the view that this Board should examine the impacts of construction. Indeed, it confirms that the legal and practical posture of an operating license proceeding is to examine the question of proposed operation as if the facility is completed. Often, construction is substantially complete at the time of an operating license decision by the Board. It would make no sense for a hearing timed to be complete at that stage to consider impacts of construction. Section 50.57(a)(1) and the Notice do confirm our view that we may consider construction practices and design where relevant to an issue of the safety or environmental impacts of the proposed operation.

At least two weeks before engaging in a construction activity which may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than that evaluated in the Final Environmental Statement, the applicant shall provide written notification to the Director of Licensing.

Most, and perhaps all, Commission construction permits have a similar condition to govern situations where there are changes in circumstances which could change the previously assessed impacts of construction. This condition has been modified for nuclear plants which have construction permits issued more recently than the June 19, 1974 Limerick permits. The modified version makes clear that the Applicant's environmental evaluation must be a written one, and provides that the prior approval of the Staff must be obtained if there may be significant changes in adverse environmental impacts of construction, as follows:

Before engaging in a construction activity not evaluated by the Commission, the applicant will prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not evaluated, or that is significantly greater than that evaluated in this Environmental Statement, the applicant shall provide a written evaluation of such activities and obtain prior approval of the Director of Nuclear Reactor Regulation for the activities.

Presumably, consistent with NEPA, under the condition in the Limerick CP, the Director of NRR can exercise his authority to stay a construction activity which may cause significant adverse impact not previously evaluated, until the NRC Staff can complete its evaluation of the changes.

The conclusion we reach here is in full accord with a decision of the Appeal Board, issued after the initial drafting of this section, which holds that a licensing board for an operating license proceeding:

✓ ... can authorize or refuse to authorize the issuance of an operating license. It does not, however, have general jurisdiction over the already authorized ongoing construction of the plant for which an operating license application is pending, and it cannot suspend such a previously issued permit.

Consumers Power Company (Midland, Units 1 and 2), ALAB-674, 15 NRC __, slip op. at 3 (May 5, 1982) (Footnote omitted).

✓ Accordingly, Del-Aware's allegations that changes in construction impacts due to either changes in proposed construction or the changes in the 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 CFR § 2.206(a). Id. at 4-5; see also Portland General Electric Company (Trojan Nuclear Plant), ALAB-451, 6 NRC 889, 891 at n.3 (1977) 44/

✓ Although we could refer Del-Aware's contentions alleging changes in construction impacts (V-13, V-14, V-15, V-16(a) and 16(b)) to the Director, 45/ we leave it to Del-Aware to determine whether it wishes to

44/ We note that even if we had determined that this operating license Board had jurisdiction to consider environmental impacts of construction, the NRC Staff would have been called upon to provide its analyses and conclusions as part of the testimony before the Board.

45/ Cf. Public Service Company of Indiana, Inc. (Marble Hill, Units 1 and 2), ALAB-530, 9 NRC 261 (1979) (referring matter in tardy motion to reopen hearings to the Director).

take such action. Furthermore, we observe that it may be incumbent upon Del-Aware to better specify to the Director the alleged changes in construction impacts it believes to be significant and not previously evaluated. Portions of its contentions are too broad and vague to properly provide notice of this. We note that regardless of whether Del-Aware files a request for action before the Director, the Applicant and NRC Staff have an independent obligation to evaluate any impacts within the purview of condition 3.E(3) of the Limerick construction permit.

This does not end the matter. Del-Aware also alleges that there will be significant operational impacts not previously anticipated due to changes in circumstances since the construction permit stage. In our view, some of these alleged impacts, if proven, will be modifiable largely (or perhaps only) by changes in proposed construction. The Board has rewritten these contentions in a manner to facilitate their litigation as follows:

Contention V-14 - The esthetic impacts of the Point Pleasant pumping station, and associated hillside clearance and river-edge rip rap wall will adversely affect the peace and tranquility of the proposed Point Pleasant Historic District.

Contentions V-15 and V-16a (in part) - The intake will be relocated such that it will have significant adverse impact on American shad and short-nosed sturgeon. The relocation will adversely affect a major fish resource and boating and recreation area due to draw-down of the pool.

Contention V-16a - Noise effects and constant dredging maintenance connected with operations of the intake and its associated pump station will adversely affect the peace and tranquility of the Point Pleasant proposed historic district.

Contention V-16b - Seepage of water and toxics from Bradshaw Reservoir will cause a risk of groundwater contamination and hydraulic saturation.

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While it is true that many environmental impacts of operation can best be mitigated by planning before construction, the opportunity for this to be considered is normally available at the construction permit stage. However, the operational impacts in the portions of the contentions summarized above allegedly are caused or substantially exacerbated by changes since the construction permits were issued. Therefore, there was no prior available hearing forum to consider those impacts for the NRC Limerick NEPA evaluation process. It is now within the jurisdiction of this Board to consider environmental impacts of operation. Accordingly, in order to avoid the risks of rendering the above portions of contentions substantially moot and/or requiring the Applicant to undo costly (in time and money) construction work, we determine that every effort should be made to resolve the above summarized issues prior to construction of the Point Pleasant intake and associated pump station and the Bradshaw Reservoir. In conjunction with our examination of these operational impacts, we will compare the alternatives, e.g., designs and locations, under NEPA. For that purpose we will look at the Staff's findings under condition 3.E.(3) of the construction permit or requests pursuant to 10 CFR § 2.206 concerning construction impacts.

The Applicant shall advise us within thirty days of the service of this Order of the proposed schedule for commencement of construction of the above facilities. Further, at the time a firm schedule for construction is established the Applicant shall provide formal notice of its intention to begin construction work at least forty-five days (45) prior to the actual commencement of construction. The NRC Staff, the Applicant and Del-Aware, within thirty (30) days of the service of this Order, shall jointly submit a

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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ATOMIC SAFETY AND LICENSING BOARD

SERVED JUL 17 1982

BEFORE ADMINISTRATIVE JUDGES
Lawrence Brenner, Chairman
Dr. Richard F. Cole
Dr. Peter A. Morris

In the Matter of
PHILADELPHIA ELECTRIC COMPANY
(Limerick Generating Station,
Units 1 and 2)

Docket Nos. 50-352
50-353

July 14, 1982

MEMORANDUM AND ORDER
(Concerning Objections to June 1, 1982
Special Prehearing Conference Order)

On June 1, 1982 the Licensing Board issued a special prehearing conference order (SPCO) which ruled on petitions to intervene and admissibility of proposed contentions. Timely objections to that order were received from the Applicant, Limerick Ecology Action (LEA), Del-Aware, Mr. Marvin Lewis, the Air and Water Pollution Patrol (AWPP), and the NRC Staff. The Board has considered the filings, and has reached the following conclusions with regard to each party's objections.

#1

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A. Supplementary Cooling Water System.

The Applicant believes that in its discussion of the supplementary cooling water system in the SPCO, the Board "intimated" that it would stay construction of the Point Pleasant Pumping Station and Bradshaw Reservoir until completion of the Staff's environmental review. The Applicant suggests that the Board find that it lacks jurisdiction to take such action.^{1/}

The Board did not indicate in its order that it had authority to stay the construction in question or that it intended to order such a stay. Rather it indicated that if particular issues cannot be decided before this construction commences, some interim action might be necessary. It is not apparent at this time that a decision cannot be reached before construction begins. Because the situation has not yet been presented, the Board has not decided what action it might take if an early decision proves infeasible. While a stay might be one possible action if the Board determined that it had authority to issue one, there are other possibilities. Among them are the possibilities that the Board might

^{1/} The Staff is similarly concerned that the Board has erroneously determined that it has jurisdiction to stay this construction. See NRC Staff's Request For Reconsideration of Licensing Board's Special Prehearing Conference Order (June 28, 1982) at 13-14.

minimize environmental harm may increase, even to the point where such action is not reasonably possible. Id. at 1128; Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), CLI-78-14, 7 NRC 952, 959-60 (1978); Consumers Power Company (Midland Plant, Units 1 and 2), ALAB-395, 5 NRC 772, 779 (1977). In an effort to comply with Congress's intent in enacting NEPA, the Board intends to consider these contentions before construction has advanced so far that there is no realistic opportunity for it to order actions which it may determine are necessary to minimize harm to the environment.

The Applicant also seeks reconsideration of the admission of particular contentions concerning the supplementary cooling water system. It maintains that since the subjects of contentions V-14, V-15, V-16a, and V-16b have been or will be considered by either the Corps of Engineers or the DRBC, the Licensing Board should not consider them. In the SPCO, this Board discussed at considerable length the extent to which the NRC could rely upon the environmental findings of these other agencies. It provided guidance which neither required the Staff to begin its review ab initio nor permitted the Staff to abdicate all responsibility for a review. The Board reaffirms its previous holding as to the extent to which the Staff may rely on environmental determinations by other agencies. See SPCO at 62-72.

Contention V-14, as rewritten by the Board (SPCO at 87), according to the Applicant concerns construction impacts. Construction impacts, as we found in the SPCO (SPCO at 83-86), are not within the jurisdiction of this

Board. We recognize that it is a close question whether the impacts in contention V-14 result from construction or operation. Having reconsidered this matter we conclude that these impacts, although they will continue after the plant begins operations, are essentially attributable to construction, and, hence, we strike contention V-14 from the admitted contentions.

The Applicant maintains that contention V-16b lacks basis and should not have been admitted. The Applicant relies on findings by the DRBC for its statement that the contention lacks basis. Reliance on these findings, however, requires an examination of the merits and such an examination is inappropriate at this time. The Board has no difficulty in understanding the mechanism by which seepage could occur and, without judging the merits, cannot at this time find this contention lacks basis.

B. Probabilistic Risk Assessment (PRA).

The Board has fully considered Applicant's arguments that the PRA is excluded from the "licensing process" and that we should certify the question to the Commission. SPCO 103-113. Applicant presents no reason to reconsider the discussion and ruling in the SPCO, and we decline to do so. Informal discovery shall proceed as previously ordered, and shall include the PRA issues. The views of the parties is as to whether formal discovery on the PRA should be conducted on a different schedule than other issues,

FOR OFFICIAL USE ONLY

IN THE COURT OF COMMON PLEAS OF BUCKS COUNTY, PENNA.
(CIVIL ACTION-EQUITY)

DANIEL J. SULLIVAN, et al : NO. 83-8358
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COUNTY OF BUCKS, et al : IN EQUITY

Before: HON. ISAAC S. GARB, P. J.
(Sitting as Chancellor)

Doylestown, Pa., November 29, 1983

APPEARANCES

GAY & CHACKER

by: ANDREW G. GAY, ESQ.
Representing Daniel J. Sullivan

RICHARD T. ABELL, ESQ.

Representing North Wales Water
Authority & North Penn Water
Authority

ROBERT W. VALIMONT, ESQ, and
BERNARD CHANIN, ESQ.

Representing Philadelphia Electric Co.

JAMES M. MC NAMARA, ESQ., RICHARD M.
ROSENBLEETH, ESQ., and GLENN S. GITOMER, ESQ.
Representing the County of Bucks

D. DONALD JAMIESON, ESQ.

Representing Neshaminy Water Resources Authority

#11

1 by counsel for PECO?

2 MR. GAY: Yes, since they have been granted status as
3 an intervenor.

4 THE COURT: Is there any objection?

5 MR. ROSENBLEETH: No objection.

6 -----

7 VINCENT BOYER, having been duly sworn, was
8 examined and testified as follows:

9 -----

10 DIRECT EXAMINATION

11 -----

12 BY MR. CHANIN:

13 Q By whom are you employed?

14 A I am employed by the Philadelphia Electric Company. My
15 position is that of Senior Vice-President for Nuclear Power.

16 Q What are your general responsibilities with that company?

17 A I am responsible for the total nuclear program of our
18 company.

19 I have been employed by the company for forty-five years
20 and I worked in the Operating and Engineering Department. I have
21 held my present position for three years.

22 Prior to that for twelve years, from 1968 to 1980, I was
23 Vice-President of Engineering and Research Departments under which
24 new generation projects came. So, I have the responsibility for
25 the Limerick project, essentially, since its initiation.

1 construction approval for the facility.

2 Q Over what period of time has PECO been involved in the
3 process of obtaining approval, planning, designing and implementing
4 this project?

5 A It has been continuous since 1969.

6 Q Now, with respect to the Limerick facility, what are the
7 present estimates as to when the Limerick station facility will
8 require the supplemental water from the Point Pleasant plant?

9 A The number one unit, the current schedule for fuel loading
10 is August 1, 1984.

11 The project has been moving along very well, and at our
12 last monthly meeting, it was felt we could be ready to load fuel
13 by May 15, 1984.

14 We will need supplemental cooling water about one month
15 after that, or a month and one-half after that.

16 Q Assuming that the project is terminated, what, if any,
17 impact will that have on the PECO plant? First from the stand-
18 point of regulatory approval and then from the standpoint of
19 operations?

20 MR. ROSENBLEETH: Objection.

21 THE COURT: Overruled.

22 THE WITNESS: Well, from the standpoint of regulatory
23 approval, we would certainly have to go back to the Nuclear
24 Regulatory Commission. We have had a review of the operating
25 license stage, the environmental aspects of the Point

1 Pleasant facility and have received approval of the Hearing
2 Board for their system as it is designed.

3 If that system were not to be available, it would
4 make a difference in the availability of water for Limerick
5 and its operation cycle. We would have to go back to the
6 NRC, which would require reopening its permit aspects, and
7 there would have to be a further submission, supplemental
8 information for consideration in the issuance of the
9 operating permits.

10 BY MR. CHANIN:

11 Q With respect to the point of operation, Mr. Boyer, assume
12 that the Nuclear Regulatory Commission permits are granted to go
13 ahead with the operation of the plant, what would be the with-
14 drawal of the permit on the operation of not having the Point
15 Pleasant plant available?

16 A Well, first, if the project is delayed from water not being
17 available when we need it with the completed plant, the cost will
18 run--the incremental costs will increase by 21 million dollars a
19 month for financing, that is, the carrying charges on the number
20 one unit.

21 I am only speaking now of the first unit, which is the one
22 that will be ready on the dates indicated. The carrying charges
23 will amount to 21 million dollars a month.

24 In addition to that, we estimate there will be a five
25 million dollar a month additional costs for maintaining operators

IN THE COURT OF COMMON PLEAS
OF BUCKS COUNTY, PENNSYLVANIA

- - -

DANIEL J. SULLIVAN, : NO. 83-8358-05-5
 :
 Plaintiff, :
 :
 and :
 :
 PHILADELPHIA ELECTRIC COMPANY, :
 et al., :
 Plaintiff-Intervenor, :
 :
 vs. :
 :
 COUNTY OF BUCKS, and :
 NESHAMINY WATER RESOURCES :
 AUTHORITY, et al., :
 Defendants :

- - -

Pretrial examination of
EUGENE J. BRADLEY, taken pursuant to notice, at the
law offices of Sugarman, Denworth & Hellegers, 101
North Broad Street, 16th Floor Center Plaza, Phila-
delphia, Pennsylvania, 19107, on Monday, April 9, 1984,
beginning at 10:25 A.M. and concluding at 12:30 P.M.,
before DEBRA G. JOHNSON, CSR, RPR, Commissioner of
Deeds, and a Federally Approved Reporter of the United
States District Court.

MARGERY NIBLOCK



740 Bainbridge Street
Philadelphia, Pennsylvania 19147
WA 2-2190

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A. I have no knowledge of what was done with respect to this letter.

Q. Now, have you had occasion to make an evaluation as to the length of time that would be involved in arranging for an alternative, permanent alternative source of water for Limerick?

Alternative; that is, to replace Point Pleasant as far as the NRC is concerned?

MR. CHANIN: You are asking the witness whether the witness has formed an opinion as to what the impact of termination of Point Pleasant and the requirements of finding an alternative would be on the NRC?

MR. SUGARMAN: Right.

MR. CHANIN: He can tell you whether he has formed an opinion. I am not certain that -- I want to give some consideration to whether or not it is his legal judgment, whether or not that is an appropriate thing for you to elicit on this deposition.

THE WITNESS: Is the question as to the time?

MR. SUGARMAN: To the time.

1 THE WITNESS: I have not formed an
2 evaluation as to how long it would take.

3 I think no one is capable of forming
4 a real judgment as to how long that will
5 take. One has to abide by the events and
6 see how long it will take.

7 But I have a belief that it would
8 require an NCR review of the environmental
9 aspects of the substitute supplementary
10 cooling water system.

11 - - -

12 BY MR. SUGARMAN:

13 Q Have you made, and I take it from what you
14 are saying then, that you have not evaluated how
15 long that environmental review would take?

16 A No, it is too vague and indefinite.

17 Q Have you had or has anybody on behalf of PECO
18 had any contact with the NRC staff or anybody on the
19 NRC staff as to that question?

20 A Not to my knowledge.

21 Q As to temporary alternatives, have you formed
22 any evaluation as to how long NCR would take to
23 process such an alternative?

24 A No.

Q To your knowledge, has anybody in PECO had any contact with the NRC or its staff concerning the possibility of a temporary alternative?

A The timing or the possibility?

Q First the possibility.

A Not to my knowledge.

Q Second, the timing.

A No, not to my knowledge.

Q To whom does the company's NRC counsel report within the company?

In other words, if the NRC counsel, Mr. Carlin and Waterhand had or their associates had had any contact, to whom within the company would they report?

A To me.

Q With respect --

A To me.

Q To you?

A Yes.

Q Have you been involved on behalf of the company in negotiating contracts with DRBC for water for Limerick?

A Like all contracts, they are reviewed and approved as to form or commented on by the Legal

IN THE COURT OF COMMON PLEAS
BUCKS COUNTY

DANIEL J. SULLIVAN, et al :

vs. : No. 83-8358-0505

COUNTY OF BUCKS, et al :

- - -

Deposition of LUBOMIR B. PYRIH, taken in
the law offices of SUGARMAN, DENWORTH & HELLEGERS, 101
North Broad Street, 16th Floor, Philadelphia,
Pennsylvania, on Thursday, May 31, 1984 at 10 a.m.
before Moira R. Orr, Certified Shorthand Reporter.

- - -

APPEARANCES:

WOLF, BLOCK, SCHORR and SOLIS-COHEN
BY: BERNARD CHANIN, ESQUIRE
JEFFREY S. SALTZ, ESQUIRE
Twelfth Floor, Packard Building
Philadelphia, Pennsylvania 19102

Counsel for PECO

SUGARMAN, DENWORTH & HELLEGERS
BY: ROBERT J. SUGARMAN, ESQUIRE
101 North Broad Street, 16th Floor
Philadelphia, Pennsylvania 19107

Counsel for County of Bucks

- - -

MARGERY NIBLOCK

Handwritten initials or signature.



740 Bainbridge Street
Philadelphia, Pennsylvania 19147

WA2-2190

1 question clearly. I think you answered it.

2 Let's say that you fuel load in
3 December, and go commercial in April, that's one
4 scenario. The other scenario is that you fuel load
5 in September, and go commercial in April.

6 A. Yes.

7 Q. Is there any difference in the expense to the
8 company between those two scenarios?

9 A. I don't know.

10 Q. Who in the company would be the person that
11 would most likely know that?

12 A. Certainly our project manager would.

13 Q. Product manager?

14 A. Project manager.

15 Q. Who is that?

16 A. Dick Mulford.

17 Q. Now, have you been involved or participated in
18 any conversations, discussions, within the company,
19 or outside of the company with regard to obtaining
20 of supplemental cooling water in time for
21 commercial operation?

22 A. I am sure I have talked about it, yes.

23 Q. What do you understand the company's plans to
24 be to provide supplemental cooling water in
25 accordance with the intended commercial operational

1 date of Limerick?

2 A. To assure ourselves of capacity factor
3 capability.

4 Q. You mean the ability to operate the plant as
5 fully as it otherwise would be able to?

6 A. That's correct.

7 Q. What, to your knowledge, is the company's plan
8 to provide supplemental cooling water?

9 A. Point Pleasant.

10 Q. What is the company contingency plan in the
11 event Point Pleasant is not available?

12 A. I do not know of any.

13 Q. What discussions or conversations have you
14 been party to, or witness to regarding that
15 subject?

16 A. I haven't been party to any discussions or
17 conversations that were discussing any contingency
18 plans, if that is your question.

19 Q. Have you heard of any?

20 A. No, I have not.

21 Q. Can you say whether there are any contingency
22 plans?

23 A. No, sir, I can't.

24 Q. Have you been involved, or has anybody under
25 your direction been involved in any inquiry or

1 consideration, or development, or identification of
2 contingency plans?

3 A. No, sir.

4 Q. Have you had any discussions with anybody
5 about whether it would be appropriate to, or
6 possible, or good or desirable to prepare any
7 contingency plans?

8 A. I have not had any discussions like that.

9 Q. Is that within the area of your
10 responsibility?

11 A. No, sir.

12 Q. You are responsible for the application to the
13 NRC?

14 A. Yes, sir.

15 Q. And the application represents supplemental
16 cooling water will be available through Point
17 Pleasant?

18 A. Yes, sir.

19 Q. If there were going to be any consideration of
20 contingency plans, would that have to be reported
21 to the NRC?

22 A. If we were convinced that we needed an
23 alternative, and there was no other way, yes, we
24 would have to report it.

25 Q. What would be the NRC process for dealing with

1 that?

2 A. I don't know. I haven't really thought about
3 it.

4 Q. Whose responsibility is it to consider the
5 timing involved in the NRC licensing process?

6 A. Among others, mine.

7 Q. Who else?

8 A. All of my bosses, I report up the line.

9 Q. Have there been any discussions as to what the
10 procedures and the timing would or might be in the
11 NRC with regard to any contingency water plans?

12 A. I haven't had any discussions, no.

13 Q. Have you heard anything?

14 A. No, but I would think that they would open up
15 environmental hearings.

16 Q. They would open up. What are the environmental
17 hearings?

18 A. It would open up the environmental report to
19 potential for hearings because of the fact that now
20 we would have to change the water supply and it
21 might change the cost benefit analysis.

22 Q. Your understanding is that the NRC reviews the
23 cost benefit analysis of the operating license
24 stage?

25 A. If there is new information, if there is a

1 change.

2 Q. Have you received any confirmation of that
3 from anybody?

4 A. No, sir.

5 Q. Has the NRC asked the company whether it
6 intends to submit any information on a contingency
7 plan? When I say the NRC, I mean the staff.

8 A. Not to my knowledge.

9 Q. When you say open up the environmental report,
10 what do you mean by that?

11 A. I would have to revise it.

12 Q. How many times has it been revised up until
13 now?

14 A. Quite a few.

15 Q. More than thirty?

16 A. Well, perhaps it has, I just don't recall.

17 Q. What is the reason for not, if you have one,
18 for not submitting a contingency plan to the NRC
19 now, so it can be reviewed?

20 MR. CHANIN: Don't answer the
21 question, that's a legal judgment. We have Point
22 Pleasant. We have approval for Point Pleasant. We
23 are seeking to build Point Pleasant.

24 BY MR. SUGARMAN:

25 Q. Is it on the advice of counsel that the

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

APR 02 1984

Docket Nos. 50-352/353

The Honorable Peter H. Kostmayer
United States House of Representatives
Washington, DC 20515

Dear Congressman Kostmayer:

I am responding to your letter of February 29, 1984 to Chairman Palladino concerning the supplemental cooling water supplies for the Limerick Generating Station now being constructed by the Philadelphia Electric Company near Pottstown, Pennsylvania.

With respect to the regulatory requirements of the NRC, there are two aspects of water supplies for the operation of the Limerick Generating Station that are considered in the NRC's review process. One aspect is that of the radiological safety review and concerns the availability of a supply of water to permit the safe shutdown of the reactor in the event of loss of the normal cooling water supply. This requirement is met at the LGS by the provision of an onsite spray pond which does not depend on the supplementary cooling water system. Thus, the supplementary cooling water system is not safety-related and is not reviewed as part of the NRC's radiological safety review. Rather, the supplemental cooling water supply is needed only to optimize operation of LGS.

A second aspect of the NRC's review of water supplies for the LGS is the assessment of the environmental impact of operation of the LGS. This review is conducted pursuant to the National Environmental Policy Act and in accordance with the Commission's implementing regulations. The results of this review are set forth in a Draft Environmental Statement, which was issued for public comment. After consideration of public comments, the document is issued as the Final Environmental Statement. The statement contains the staff's assessment of the benefits and costs, both economic and environmental, of the project under consideration, as that project is proposed by the applicant. Since the supplementary cooling water system does have an impact upon the environment, it is included within the applicant's environmental report and was evaluated in the staff's DES published in June 1983. Comments on the DES have been received and evaluated and the Final Environmental Statement is currently being prepared.

412

Your first question related to when PECO would require supplemental cooling water to replace evaporated cooling water. Since, as discussed above, the supplemental cooling water is not required for safety reasons, the NRC has virtually no regulatory requirements relating to the source of cooling water or the quantities that would be required at the various stages of normal plant operation for the cooling towers. The applicant's proposal for use of Delaware River water as supplementary cooling water is a derivative of regulatory requirements imposed by the Delaware River Basin Commission on usage of Schuylkill River water. The supplementary cooling water would not be required for fuel loading. The supplementary cooling water system is needed only when DRBC limitations preclude PECO from taking water for consumptive usage from the Schuylkill River. Power production would be possible only part of the year without the supplemental water.

Question No. 2 asked for the NRC schedule for milestones relevant to the need for supplemental cooling water. At the present time, the completion of hearings now being held before the NRC's Atomic Safety and Licensing Board regarding PECO's application for full power operating license is not expected before January 1985. However, under 10 CFR 50.57(c) an applicant may make a motion to the Licensing Board for an operating license authorizing low power testing and further operation short of full power operation. If PECO should make such a request in the future, it is possible that the limited operations sought could be authorized earlier provided the specific findings required by 10 CFR 50.57(c) are made and support such operations. PECO has not informed the staff of any plans in regard to 10 CFR 50.57(c). One or the other of the above approaches would be a prerequisite to licensing and subsequent fuel loading, and startup testing prior to power operation. Typically, two to three months elapse from fuel loading until a BWR is ready to operate above 5% power. Due to the uncertainty on when these events may take place, the staff is unable to provide, at this time, a more precise schedule of the Licensing milestones as they may relate to the applicant's need for supplemental cooling water.

Question No. 3 asked whether NRC would have any permitting function with respect to replacement supplemental cooling water sources. The NRC does not issue permits with respect to the allocation of water resources. That is within the purview of other governmental agencies including, in this instance, the Delaware River Basin Commission.

As noted previously, the NRC's interest in the supplemental cooling water extends to evaluating the environmental impacts of the system as currently proposed by the applicant in the LGS Environmental Report pursuant to NEPA. Should an alternative to the present supplemental system be proposed by PECO, the staff would have to consider the matter with respect to whether the NRC's environmental impact statement adequately disclosed the costs and benefits of station operation. Absent a specific proposal from PECO describing such a change the NRC staff considers it to be premature and no more than speculation to comment on the nature or timing of further required reviews or the need for further hearings.

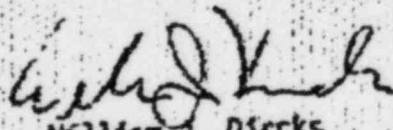
Question No. 4 asked whether supplemental cooling water from an existing reservoir could be made available to PECO.

The allocation of the water of the Delaware River Basin is not under the jurisdiction of the NRC and therefore is not affected by the rules of the Commission. Should the Limerick application before the Commission be amended to include a supplemental cooling water supply from an existing reservoir, the rules of the NRC would require that this aspect of the amended application be given the customary environmental review prior to the issuance of an operating license for the facility. Again, the NRC staff considers that absent such a specific proposal from the applicant accompanied by a detailed description and supporting schedules, it is premature and no more than speculation to predict the answers to this question.

Question No. 5 asked whether there is any reason to believe that NRC procedures and requirements would delay the operation of Unit 1. The applicant's current estimate of readiness for fuel loading is August 1, 1984. As noted above, an initial decision by the ASLB on the operating license application is not expected before January 1985. On this basis, there would be a regulatory impact of about five months. This impact could possibly be reduced by some amount if the applicant were to request and be granted an operating license authorizing less than full power operation pursuant to 10 CFR 50.57(c) as discussed earlier.

I trust that these discussions have been responsive to your concerns. If you have further questions, please contact us.

Sincerely,



William J. Dircks
Executive Director for Operations



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

RECEIVED

JUN 29 1984

JUL 02 1984

Docket Nos. 50-352/353

S. D. & H.

Mr. Robert J. Sugarman, Esq.
Sugarman, Denworth & Hellegers
16th Floor, Center Plaza
101 North Broad Street
Philadelphia, PA 19107

*Del
NRP
Corresp?*

Dear Mr. Sugarman:

I am in receipt of your letter to me of May 23, 1984. Your letter requests that the Nuclear Regulatory Commission advise the Philadelphia Electric Co. (PECO) of a need to supplement its pending application for an operating license to provide alternative sources of supplemental cooling water for the Limerick facility. As you are aware, both of PECO's applications, for a construction permit for the Limerick facility and for an operating license for that facility, described a supplement cooling water system for the Limerick facility for consideration by the Nuclear Regulatory Commission. That supplemental cooling water system was evaluated at the construction permit phase and is currently being evaluated as part of the operating license proceeding. Your letter suggests that the Commission should direct PECO to provide alternatives to the supplemental cooling water system presently under consideration. This is essentially a repetition of the request contained in the "Application of Del-AWARE Unlimited, et al. under Section 2.206" filed by you with the Commission of December 16, 1983, on behalf of Del-AWARE and to which I responded in my "Director's Decision Under 10 CFR 2.206" dated on April 25, 1984.¹

In my Decision, I determined that action on the part of NRC would be appropriate to review alternatives to the currently proposed supplemental cooling water system if the current proposal should for some reason fail and if PECO should then identify an alternative proposal to supply supplemental cooling water for the Limerick facility. I noted that any alternative would then have to be reviewed in the same fashion as the original proposal was examined by the agency prior to the issuance of a construction permit. In my Decision, I further noted that PECO's current actions appear clearly directed at insuring completion of the presently proposed supplemental cooling water system and that concerns that the project may not be complete and consequently that alternative sources of cooling water may be required for the Limerick facility are thus premature and speculative. On this basis, I declined to commit the agency's resources to examine such questions given their

¹Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), DD-84-13, 1984--NRC(1984)

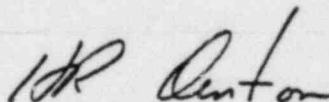
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speculative nature.² There is nothing in your letter which would cause me to reconsider this question. You should be advised that the Commission has declined to review my Decision and, accordingly, that Decision became final agency action on May 21, 1984.

With respect to your request for documents, many staff documents are routinely placed in the Public Document Room and would be available for your review there. Additional document requests may be appropriate in individual adjudicatory proceedings pursuant to 10 CFR Part 2, "Rule of Practice For Domestic Licensing Proceedings" or under the more general provisions of the Freedom of Information Act. See 10 CFR Part 9.

With respect to your letter of May 23, 1984 directed to Ms. Ann Hodgdon, Esq., a copy of which was appended to your letter to me, I note that that letter contains a number of characterizations by you of the substance of a briefing given to the Commission on April 24, 1984, by the NRC staff. I do not share your belief that the staff mischaracterized the issues. The staff routinely briefs the Commission in a professional and objective manner assessing the facts as it sees them. This was done in this instance. I can understand that there may be differences of opinion with respect to the issues at hand. However, I believe your charges with respect to the presentation of the staff are unfounded.

Sincerely,



Harold R. Denton, Director
Office of Nuclear Reactor Regulation

cc: See next page

²If PECO changes its plan on sources of cooling water, some delay may result. However, this is a matter of concern to PECO. Absent a revised submittal, as indicated above, I do not intend to take action.

BC-9

EXHIBIT
NWRA
1045

7435

4/17/81 w/ NRC re: Pt. Pleasant/H₂O etc.

PECO

NRC

WHD

Schroener Lehr.

JD

May do

slow power det

- 1. Can you lower fuel w/o make-up? JRL - no problem.
- 2. PUC - only 10 mgd thru SB until operating data shows no irreparable harm?

WHD: we appealed NRC decision ^(EXCEPTIONS) as did Dad-SW&S.

PECO has delegated problem to a study committee of staff.

No date set for decision.

PECO is saying, if there is no PP, is there a "necessity for treatment"?

Our exceptions were 1) 1 of 4 pumps to be installed. (4 are req'd for full LW capacity)

1 pump is not enough to provide rapid augmentation in flow.

- 3. RE STOP WORK ORDER ON MEXICANING. PECO was able to GET RELIEF TO FINISH IN WATER WORK IN DELAWARE. STATUS OF STOP ORDER & OF MEXICAN WORK.

WHD: PECO did not get relief. We're interested by tandem.

NWRA claimed defective workmanship, invoked section of gen. conditions permitting this.

Mexicaning filed suit saying alleged work was a subterfuge to shut down jobs.

Judge said his review but that ~~canal~~ river work & canal work could be completed (@ urging of PADEP & Fish Comm.).

River work now complete. Canal crossing was ~~being finished~~ (after flooding of canal xing of pipeline)

Lehr: Commonwealth was to maintain one of the locks?

WHD: Yes. Explained.

- 4. What all of land easements for CTR have been obtained? & Braker?

WHD: True, 80-85% has been acquired.

Schroener: to Pt. Pleasant/Braker and Mexicaning

WHD: No. 1st Theo H (of 22 mi. total) is water (up the hill). It's done & will

Hereafter will be a separate contract.

Schwarz: Remainder of CTM left?

WHD: Work has stopped should visit prison.

5. Braashaw?

WHD: It's all PGO's, PERMITS ~~and~~ need from URSC

Field work is waiting for PLR finaly of necessity. Judge felt we could have gotten a blog permit.

6. Schedule estimate on Braashaw?

WHD: Good estimate. Last evaluation was less than 10 months. (Braashaw 4 pgs to EB)

7. Schwarz: Asking schedules removed from Argentina, how long.

WHD: In Feb, they had 6 months to go.

Schwarz => could be done by Oct 1.

8. Sch. Bally CTM

WHD: 4 months

9. Sch: Historical. How long has it taken to get easements?

WHD: WRO was ready to condemn.

////

JR -> This info not for \$ community

AS -> Had call on whether plant is licensable w/o offsite H₂O

AS had no info on plans w/o ~~costs~~ offsite water.

May want to put on record that we can start up w/o water.

JR -> we don't want to put on record.

AS -> Has been asked by his mgt if we can start up w/o ^{offsite} water. Knowing that we have 2-4 mo that we can operate w/o offsite water.

Recent response to 2.206 report just delayed question, ~~spec~~ ^{spec} ~~speculation~~ ^{speculation}.

Although no discussion yet, ASB could ask.

10 AS/Lehr - Had ~~not~~ heard Del-PWALB had gotten PAID to ~~evaluate~~ ^{evaluate} ~~relaying~~ ^{relaying} H₂O qual. stds. for silviculture?

3/

WHD: Lots of activity. There are 2 criteria which prevent use of river.
Flow & temp.

DEL-ALW. was questioning applicability of criteria.

" " has spoken to DEL to relax temp. criteria.

DEL staff has reviewed. Temp. was for water quality. Some plants have ignored so temp. is not as important. Staff found that even w/o temp., could do it on flow. In light of review w/ DEL Secy, criteria still stands.

Re: Blue Marsh (B) We were told years ago that we could get it.

However Bm was only be adequate for 1 unit in an average year.

11. AS: Best judgment, the threshold trigger does happen except may-be not.

WHD Yes. What you we would have been prohibited 280+ days.

12. AS: If NRC was prepared to issue licenses w/ no guaranteed water, could you do it from an eng. pt. of view.

JR: No. No water, no run!

13. Lehr: Peric pipeline & purchase.

WHD: Pipeline in & hydro.

Pump sta. essentially complete. S/V buying of mag.

14. AS: Clarif. We said we could go to warranty run from Schuykill.

JR:

AS: Was informal. Will act if we need funds.

JR: Make decisions before you ask funds.

AS will do.

June 1, 1984 - Management Meeting Notes

MWRB 2

WATER ISSUE -

COULD HAVE DECISION BY AUG.

6 MOS OF CONST TO COMPLETE

NEED WATER BY MAY '85, SO COULD BE

READY WHEN NEEDED

FALL BACK? REQUEST FOR WATER FROM BLU

MARSH RESERVOIR

REQUEST WOULD BE FOR TEMPORARY SUPPLY

PT PLEASANT PLAN LOOKING BETTER, BUT ST

HAS SOME QUESTIONS & POTENTIAL FOR LEG

DELAYS

DO HAVE WATER ALLOCATION; QUESTION/DIST

IS WHERE TO TAKE IT FROM

BUT, TAKING IT FROM SOMEWHERE ELSE

WOULD TAKE TIME -- ~ 5 YEARS & \$1

MORE --

June 1, 1984 Management Meeting
Notes

WATER ISSUE Pt. Pleasant - N.W.R.A. - auth. of
Bucks County settled w/ contractor -
in opposition to shut down. COURT CASE - Temporary
stoppage of work.

Riverwork completed
Dept. of Env. Svc. of PA - Judge ruled work for Canal
ok to fix

JMP HOUSE - CONSTRUCTION STOPPED

BUCKS COUNTY → CONTRACTS NOT BINDING BECAUSE
BENEFIT Phil Elec.

JUDGE denied request. CONTRACT VALID.

EXT. DAMAGES TO BUCKS COUNTY IF CONTINUE TO
STOP PROJECT. GOOD RULING - JUDGE SUPPORTIVE.

Discovery + Prep. OF Testimony for trial

Judge issue dec. or hold hearings end of
June or July. 6 mos. required to
complete.

Need water 2/3 mos. after fuel load.

Allow proj. to be completed by that time.

Bradshaw Res - awaiting ruling - Zoning
variance - Certificate of necessity.

June 8th decision. Contr. of res want
started do in warm weather.

Need 6 mos. Fit in

Blue Marsh Res → existing

8,000 acre ft. of storage

Delaware River Basin Commission.

Bucks County - applied to commission

Com. want res for smaller.

Temporary Basis?

(Firm support by Del. River Basin - moving in
favorable decision.

Request relief from 59 temp. } in summer time
limited by flow + temperature } put in years ago.

Temperature restriction.

1/2 Time AT 100%. Need water.

Eco issue, NOT SAFETY issue. Will not
impede NRC lic.

Longer term - move in take position.

5 years to redesign system.

12 ALTERNATIVE SOLUTION.

June 1, 1984 Inge Meeting Notes

Point Pleasant -

NESHAMINY WATER RESOURCES AUTHORITY (Bucks^{Co})

All River Work Completed

All Pipeline under land

Pumphouse CONSTRUCTION STOPPED

Bucks^{Co} Alleged CONTRACTS NOT legal & BINDING

Couple of days ago - Judge ruled contracts ARE

legal & BINDING. Indicated that Bucks^{Co} County could be subject to substantial damage if continued to proceed.

Now

In discovery stage for injunction against STOP-work order. 6 month contract needed to complete all work, when need water 2-3 mo after fuel load. Schuylkill

needed
can provide ^{needed} water in winter thru
MAY!

∴ need Point Pleasant completed
by MAY, 1985.

Reservoir - Relying on this expects
const. 6 month for this \approx 16/8 by PUC

If not approved

Alternative:

Blue Marsh Reservoir

Schuybell

Limitations

: D/O/W

Temperature (can't take
above 54° F)

NRC views all this as economic issue
and NOT a safety issue

Long term solution (5 yrs)

at the
reservoir

Permitting etc.
- take water from location other
than Point Pleasant

June 1, 1984

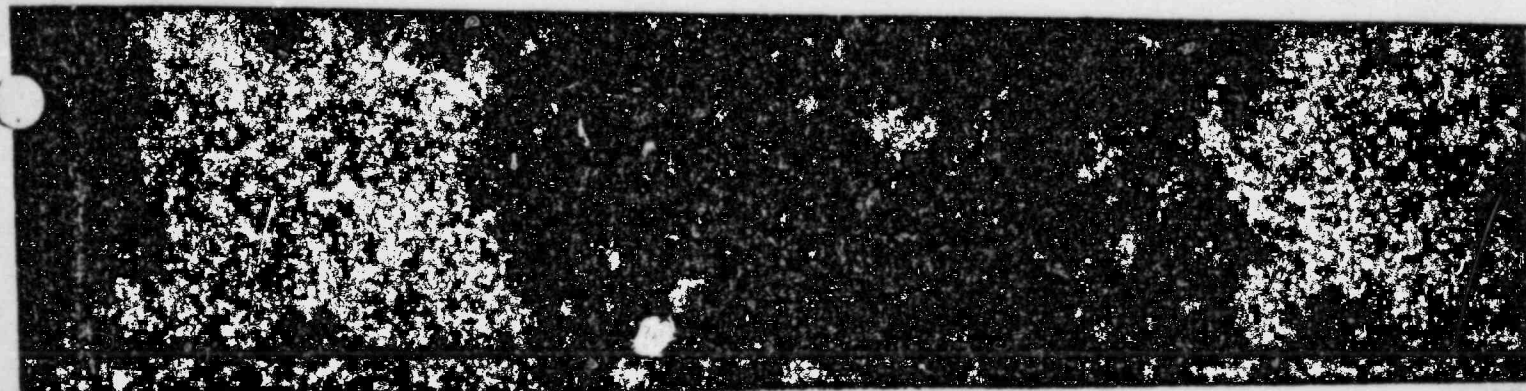
Management Meeting

supportive.

Point Pleasant Project, to be constructed and operated by Bucks County and Neshaminy Water Resources Authority has been the subject of extensive litigation and local political opposition. There is a temporary stoppage of work. Bucks county contends contracts are not binding, Judge ruled valid. Management is confident issue will be resolved favorably - need water by May 1985. Will not impair license since it is an economic issue. Six months of construction to complete project. Alternative - Blue March reservoir, would be a temporary supply. Co. has water allocation but the question and dispute is where to take it from. Taking it elsewhere would take 15 years and an additional

This report is for internal use only

\$100 million.



Bc-10
7/10/83

Bel
Edmon

ENVIRONMENTAL IMPACT STATEMENT OF PHILADELPHIA ELECTRIC
ON THE LIMERICK NUCLEAR POWER PLANT

MEETING OF DECEMBER 12, 1972

Scope:

This meeting was in connection with usage of the stream channel of the East Branch Perkiomen Creek to convey water pumped from the Delaware River to a point along the main stem of Perkiomen Creek where it will be picked up and transmitted to the Limerick Plant.

Attendance:

Philadelphia Electric Company:

Mr. Dave Marano
Mr. Lou Pyrih
Mr. Haines Dickinson
Mr. Edward Purdy

Ichthyological Associates:

Edward C. Raney, Director
Paul L. Harmon, Project Leader
Mr. Robert Molzahn

E. H. Bourquard Associates, Inc.

E. H. Bourquard
Terry L. Fought

The meeting started with a discussion by E. H. Bourquard of the proposed channel improvement of the East Branch. This would consist of a 20-foot bottom width low flow channel starting where water is pumped into the East Branch from the Delaware River and extending 2500 feet downstream thereof (Later considerations were that this channel should extend at least to the Route 313 bridge, a total distance of about 8000 feet). The proposed channel would carry the 65 cfs maximum pumpage rate at a depth of 1.2 feet and the minimum pumpage rate provided in the DRBC water allocation of 18 cfs at a depth of 0.6 foot. We are reasonably certain that this proposed channel, with grassed banks, would conform to the requirements of the Impact Statement that there be no erosion; however, some maintenance would be required as a log or other flood debris could lodge in the channel and upset the regimen of

INFORMATION ONLY,

FROM OLD FILES

15

the stream. In explanation of the fact that the stream channel should be able to withstand erosion, E. H. Bourquard described a visit to the stream channel on November 10, 1972, when he and T. L. Fought inspected the upper reaches of the stream channel to note erosion from a flood which occurred on November 8th. This flood was roughly estimated to be approximately 400 cfs at Elephant Road Bridge and travelled down the stream channel at a depth of about 5 to 6 feet (4 to 5 feet above stream flow at time of visit). The only signs of erosion that were noted were along the outside bank of sharp bends where the water cut into the bank until it became an almost vertical face and continued to erode the unprotected surface, evidently for the duration of the flood flow. The other portions of the stream seemed to suffer only very minor erosion due to this flood. The existing vegetation and the soil forming the stream banks, which is plastic, appear to offer relatively high resistance to erosion. Also, the existing stream channel did not have much capacity for flood flows and when such flows occur the depth increases considerably and overbank flooding occurs. Pictures taken on November 10th, which showed the condition of the stream channel and the height of the November 8th flood, were passed around the group. Dave Marano stated that Dr. Rancy had felt that no stream channel work of any type would be the best solution for the East Branch ecological problem and questioned why a channel should be installed. The existing stream channel can handle the peak pumping rate (65 cfs) at a depth of about 2 feet and, in general, should be within the banks of the stream which are approximately 3 to 6 feet high. Prints were passed around the group which showed computed flow lines for various discharges and the location of sections utilized in the flow line computations. Probably the only reason for the improved channel would be to firmly establish P. E.'s liability with regard to passage of the peak pumping rate; without such a channel, it is possible that P. E. might be blamed for any damage that was incurred as a result of a flood on the stream. It was pointed out that, at present, State laws pertaining to work on stream channels are primarily direc

at prevention of floods and do not necessarily take into account ecological matters. Also, the property owners along the stream channel are more likely to be concerned about flooding than the biota of the stream channel. Accordingly, P. E. might be considered liable for any difference in water level between the normal flow of the stream and the flow line of the 65 cfs peak pumping rate. Another item is the matter of stream crossings by property owners, such as farmers, who own land on both sides of the stream and are able, throughout most of the year, to ford the stream. With the passage of a 65 cfs flow, such fording would not be possible. P. E. will have to install some type of crossing where this situation exists. E. H. Bourquard stated that a general inspection of aerial photographs and property lines along the stream channel did not indicate very many places where a property owner worked across the stream channel; however, this must be checked in more detail later.

At this point, Dr. Rancy reiterated his position that no channel work should be performed on the East Branch. He pointed out that stream channels are formed during times of flood and that during the rising stage of the flood most of the erosion takes place, whereas, on the following stage, the water becomes relatively clear except for colloidal materials. He felt that the existing channel, which had been formed by past flood flows, should not be materially affected by the peak pumping rate which is much less than the usual flood. In addition, channel work would destroy the ecology of that part of the stream and the resulting erosion from this work could be expected to deposit silt in the stream as far down as Sellersville. He was asked what measures might be taken to improve the ecology of the stream after channel improvement work had been installed. He stated that his observation of improved channels where definite attempts had been made to restore the ecology by small dams, groins, etc. had, even after a period of 15 years in some cases, not been very successful. He cited the Highway Department and other N. Y. State agencies' attempts to restore the ecology of improved channels as an example of what should not be done. Lou Pyrih pointed out that leaving the channel as is would probably expose

it to erosion with the increased flow over a long duration, as compared with the existing situation where high flows occur for short durations and very low flows are present at all other times. E. H. Bourquard was of the opinion, based upon observations of the West Branch of Codorus Creek, in York County, that the 65 cfs flow would erode a relatively stable channel into the existing stream bed below the point of discharge but that such erosion would be limited in amount and occur over a period of years. The flow of the West Branch of Codorus Creek is effectively controlled by a large dam on the main stream and by a diversion weir-pumping installation on the stream draining the remaining upstream watershed. Between these installations and Spring Grove, where the controlled flow is picked up, there is about seven miles of channel which, for the past 4-5 years has carried a relatively high and constant flow several times greater than the previous median flow of the stream. Inspection of this channel indicated that erosion of the existing East Branch channel would not create a sufficient volume of sediment to be damaging to the downstream channel. Also, it was pointed out that observations of the East Branch watershed and the tributary streams suggested that the major source of sediment carried by the East Branch is the tributary streams and sheet erosion of the watershed. This was somewhat confirmed by the results of total solids tests made on water samples taken during the June 23, 1972 flood on the East Branch. Going in a downstream direction from Elephant Road, where the total solids content, in milligrams per liter, was 208, to State Route 313 with a total solids content of 456, to Route 309 with content of 1196, to State Route 63 with a content of 1406, and finally at State Route 73 with a total solids content of 1568. Dr. Raney stated that any adverse effect of sediment resulting from erosion of the existing channel by the increased flow would be far less damaging to the ecological system of the stream than could be expected if an improved channel was installed. The group generally agreed that the ecological requirements of the stream channel outweigh the hydraulic, or flood factors, particularly with regard to obtaining approval of an application to construct the Limerick Plant. However, another consideration was the possible

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objections of the property owners to introduction of the increased flow without installing compensating stream improvement work. In Pennsylvania, the Commonwealth owns the stream bed and permission to discharge this flow into the East Branch must be obtained from DER. Consideration was given to contacting Vaden Butler, Chief of Dams and Encroachments, concerning the proposed usage of this stream channel; however, it was concluded that such should be delayed until after the Impact Statement is finalized. A draft copy of this Statement has already been furnished the Commonwealth and it is expected that Vaden has or will review the portion pertaining to the East Branch.

Following this was a discussion of the effects of chlorination of the water pumped from the Delaware River. John Carson's letter to DRBC concerning this matter states that "Present plans for diversion of water into the Perkiomen Creek, as part of the Point Pleasant Pumping Station project, do not include disinfection." The Environmental Impact Statement provided only that such disinfection not be harmful to the ecology of the stream. Chlorination had been initially considered in the Point Pleasant project as a means of inhibiting the growth of slime within the transmission mains. It is expected that Delaware River water will contain many varied types of micro-organisms and bacteria and some of these will probably be capable of attachment to the walls of the pipe line and continuing their growth. Also, the Health Department had indicated a need for chlorination because part of the water would go into the North Branch Reservoir where it is expected that swimming will be permitted. Dave Marano indicated that a solution might be to just chlorinate the water going into Neshaminy Creek by means of a chlorination station located near Bradshaw Reservoir. Also, numerous types of pipe were discussed as a possible means of reducing the ability of micro-organisms and bacteria to attach themselves to the walls, but it was generally concluded that the type of pipe would have little effect on the growth of these life forms. In view of the fact that chlorination creates such serious problems, it will probably be desirable to manually clean any such growths off of the walls of the pipe line as part of the project maintenance

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work. Since John Carson's letter to DRBC stated that disinfection was not included as part of the project, at this time, P. E. can state that water to Perkiomen Creek will not be chlorinated.

The next item discussed was the discharge of the Delaware River water into Perkiomen Creek and its effect on the ecology of the stream. One item was the rapid increase or decrease in depth and velocity that would result from starting and stopping the pumps and Dr. Raney was questioned as to whether or not some operational procedure should be set up to slow down the variations in depth. Dr. Raney stated that aquatic life affected by the variation in depth would not benefit by a more gradual rate of variation. When asked about any harmful effect resulting from mixtures of Delaware River and East Branch water, Dr. Raney stated that nothing developed so far had indicated any adverse effects. In fact, Delaware River water appears to be a slightly better quality of water than that of the East Branch. The proposed impact energy dissipator to be installed at the outlet of the transmission main was discussed and it was pointed out that it would increase the DO content of the water. Dr. Raney asked if the actual pumping of the water would not increase the DO and it was agreed that there would be some increase solely as a result of the pumping. The question then arose as to whether or not it would be advisable to further increase the DO content by means of spray-aeration or other such methods. Dr. Raney said "No". The discussion then turned to the probable temperature of the water as it emerges from the impact basin. A rough estimate by Lou Pyrih and Haines Dickinson indicated that when pumping at the minimum rate (18 cfs), the water would be at about ground temperature, approximately 50°. This would have the effect of increasing stream water temperatures during the winter and decreasing stream water temperatures during the summer. Dr. Raney thought that this might convert the East Branch into a trout stream but that it also could have some harmful effects, particularly if there were sudden changes of temperature (5° or more). Consideration was given to installation of a small reservoir at the outlet of the transmission main

which could be used in the event of a power failure or pipe line break, to supply a limited quantity of water to the stream for the duration of the outage. Dr. Raney is to make a recommendation as to what minimum flow should be provided and, from this, the size of this storage basin can be determined. This storage basin could also have a temperature equalizing effect.

At this point, Lou Pyrih brought up the fact that the pipe lines must be designed for a Seismic II condition. He further stated that such requirements have not usually necessitated a greater strength pipe.

We are to furnish P. E. with a letter briefly summarizing our findings concerning the proposed East Branch channel improvement by December 22, 1972.

The necessity, or desirability, of a stream gaging station on the East Branch was discussed and it was concluded that such a station, particularly if utilized to obtain water quality data, would certainly be most helpful in future design work and in preparation of the additional environmental impact statements anticipated in connection with design of the Point Pleasant Pumping Facilities. Dave Marano indicated that they would take this up with management and attempt to secure approval of such a station, but that until such time as the availability of Delaware River water is confirmed (Tocks Island Reservoir) he did not expect an affirmative response.

Dr. Raney is to furnish us the minimum stream flow for ecological purposes after sudden shut-down of pumping; also, he is sending us some reports which include water quality and other data developed during the course of their study on the East Branch and the Schuylkill River.

P. E. will furnish us the results of the Beltz Laboratory studies of water quality of the Delaware River at Point Pleasant and of the Perkiomen Creek at Graterford, plus a draft of the Environmental Impact Statement pertinent to the East Branch and Delaware River pumping.

E. H. Bourquard
T. L. Fought