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ROBERT J. SUGARMAN

JOANNE R. DENWORTH

July 20, 1982

Director  
Division of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

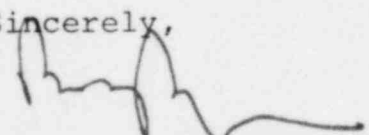
Re: Application of Philadelphia Electric  
Company Docket Nos. 50-352 and 50-353-cp

Dear Sir:

On July 2, 1982, I forwarded to you on behalf of Delaware Unlimited, Inc., a Request for Revocation or Suspension under Section 2.206 of the regulations of the construction permits for the Limerick Generating Station. On July 15, 1982, I received a copy of Mr. A. Schwencer's letter of July 9, 1982, addressed to the applicant, and referring to our above mentioned Request. I have responded to that letter as enclosed, and felt that to make sure the loop was closed, I should send you a copy.

In addition, we have now obtained copies of some of the documents quoted in our Request, and I enclose them herewith for your information and files. These include a memo from Goodell to Howlett dated November 4, 1969, referred to on page 12, a memo from Goodell to Howlett dated January 5, 1970, referred to on page 12, and a memo from Goodell to Howlett dated February 25, 1970, and referred to on page 27. We request that these be associated with our Request, and considered together with the Request promptly.

Sincerely,

  
Robert J. Sugarman

RJS/js

enclosures

cc: Service List in 50-352, 50-353(OL)  
(Without enclosures)

BOOI

SUGARMAN & DENWORTH

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July 16, 1982

Mr. A. Schwencer  
Chief, Licensing Branch #2  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington D.C. 20555

Re: Del-Aware-NRC, Docket Nos: 50-352/353; Request for  
Additional Information - Point Pleasant Diversion Plan (July 9,  
1982)

Dear Mr. Schwencer:

I have received a copy of your letter of July 9, 1982 addressed to Mr. Edward Bauer, relating to the Point Pleasant Diversion Plan.

I wish to comment to you concerning the intentions of the staff with respect to the dimensions of its inquiry concerning the Point Pleasant Diversion Plan. Your request indicates that the staff will "consider any environmental impacts associated with changes to the Point Pleasant Diversion Plan". It does not indicate clearly whether this includes the addition of the Point Pleasant Diversion Plan to the scope of the staff's inquiry as a change in the plan, but the implication is that only physical changes in the plan since issuance of the construction permits will be included in the staff's evaluation. Such a limitation on the scope of inquiry by the staff is unjustifiable, in Del-Aware's view, under the Board's decision of June 1, 1982, and the facts and law.

I, therefore, wish to urge upon you the recognition of the fact that the Point Pleasant Diversion Plan was not considered at all (except with respect to increased water diversion) in 1974 because it was assumed that Point Pleasant would be built with or without Limerick. Since that is no longer the case, it is necessary for the staff to review

~~8207200393~~

Mr. A. Schwencer  
Page 2  
July 16, 1982

Point Pleasant ab initio, and to evaluate the environmental impacts of the plant as a whole, as well the alternatives thereto.

In view of the Board's accelerated consideration of contentions related to operational impacts associated with changed circumstances regarding Point Pleasant and the \$2.206 Request filed by Del-Aware, both referenced in the second paragraph of your letter, it is respectfully submitted that your inquiry should be broadened to include these considerations, and that broadening should take place immediately.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Robert J. Sugarman', with a long horizontal flourish extending to the right.

Robert J. Sugarman

RJS/nk  
cc: Service List

DELAWARE RIVER BASIN COMMISSION

MEMORANDUM

TO Mr. Herbert A. Howlett DATE November 4, 1969  
FROM Mr. Robert L. Goodell SUBJECT Meeting with Montgomery  
County - Point Pleasant  
Diversion

A meeting was held on November 3, at the Montgomery County Court House, Norristown, Pennsylvania, to explain to the County Commissioners our tentative plans for the diversion of water from the Delaware River to Neshaminy Creek for Bucks County and to the Perkiomen watershed for the proposed Philadelphia Electric Nuclear Plant near Pottstown. Those present at the meeting included:

A. Russell Parkhouse, Chairman, Montgomery County Board of Commissioners  
Frank W. Jenkins, County Commissioner  
John Carson, Bucks County  
Arthur Loeben, Executive Director, Montgomery County Planning Commission  
E. H. Bourquard, Consulting Engineer, Bucks County  
H. A. Howlett, Delaware River Basin Commission  
R. L. Goodell, Delaware River Basin Commission

Mr. Carson opened the meeting by stating that the purpose of the discussion was to acquaint Montgomery County Commissioners with the events to date with regard to the subject diversion. Montgomery County is involved due to the fact that Bucks County will sell potable water from its Neshaminy development plan to the North Penn-Landsdale area of Montgomery County. Therefore, any change in the original plans of Bucks County for providing water from the Delaware River would affect the negotiations between Bucks and Montgomery Counties.

Mr. Carson asked Mr. Howlett and Mr. Bourquard to describe the plan in as much detail as was available to date. Mr. Howlett reviewed the entire background of the Commission involvement with Philadelphia Electric Company as long ago as five months when the tentative proposal for the Pottstown Nuclear Plant became known. He reviewed the prior decisions that rules against the development of Schuylkill River water for the consumptive use of an average of about 35 mgd for the Nuclear Station. Mr. Jenkins was extremely surprised to learn that this amount of water was involved with the Philadelphia Electric facility. He stated that at a public meeting about a month ago when Philadelphia Electric announced its plans to the local communities no mention was made of the amount of water that would be consumed by such a plant.

Mr. Howlett described the prior discussions with Philadelphia Electric and the State of Pennsylvania leading to the decision that Delaware River water should be imported to the Perkiomen Creek. He explained how this new situation could be tied in with the original plans of Bucks County to divert water at Point Pleasant to the Neshaminy Creek. With the aid of the large DRBC drawing that was used

with our Staff Paper, he showed the relationship of all of the facilities in our Comprehensive Plan to the area in question. This included some discussion of the unsuitability of the use of the Blue Marsh Project and the Evansburg Project for the solution of this problem. He stressed the fact that all of the Schuylkill River water is now committed to uses within that basin and that even with near future development of the Blue Marsh Project known customers for that water, principally for municipal use, would soon require that all of that water be allocated. He also discussed our studies which showed that off-stream storage on the Schuylkill River or the use of the Evansburg Project would not compare favorably economically with the Point Pleasant scheme. Mr. Howlett also reviewed the reasons included in our Staff Paper, which point toward Commission financing, construction and operation of the pumping station and transmission facilities for delivering the water to both the Neshaminy Creek and the East Branch of the Perkiomen. There did not appear to be any dissenting opinions that the Commission should be the owner and operator of this facility.

Mr. Bourquard reviewed in more detail his studies of the three schemes for the diversion of Delaware River water. He pointed out that the present worth estimates for the three schemes were very close and that further refinement would be necessary before a final decision was made. He pointed out that the cost of delivering the raw water for any of the three schemes would be on the order of five cents per thousand gallons, not including DRBC charges for the raw water. Mr. Howlett explained that those DRBC charges were likely to range between one and a half to three cents per thousand gallons, so that we were talking about a total charge on the order of six and a half to eight cents per thousand gallons.

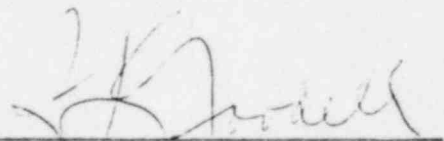
Mr. Bourquard also noted that the inclusion of the Philadelphia Electric proposal would be very beneficial to the Bucks County plan because it adds a large immediate demand on the order of 35 million gallons per day to the system. This would, in effect, reduce the early charges to all participants. He also pointed out that there were also economies in scale by incorporating both diversions in one pumping station and partly combining the transmission facilities.

The two County Commissioners asked many questions to clarify in their minds the overall proposal and its effect on the charges to be made to Montgomery County. Most of the questions related to an attempt to understand the economics involved. Mr. Jenkins especially seemed to have difficulty in understanding the computation leading to the unit charge for the water. It may be desirable to present average annual cost data to him for better understanding.

Mr. Howlett also suggested that the County study the need for additional water requirements for communities along the East Branch of the Perkiomen Creek and that we would be amenable to including such demands, if any, in the overall design. Such demands might be included for communities such as Sellersville, Perkasio and Pennridge.

We left with Commissioner Parkhouse a copy of our Staff Paper and the map attached thereto which he requested. The County Commissioners expressed their appreciation for our participation in the meeting and promised to give the scheme presented further thought.

They said that since the key factor for proceeding with the overall scheme was a firm decision by Philadelphia Electric Company to enter into contractual arrangements with the Commission that we should attempt to get Philadelphia Electric to commit themselves at an early date. Otherwise, if Philadelphia Electric backed out of the proposal Bucks County would need to proceed with its original plan. Mr. Howlett believed this to be a fair assessment and agreed to contact Philadelphia Electric Company immediately to determine whether a firm arrangement can now be pursued.



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Robert L. Goodell

RLG:mb



## MEMORANDUM

TO Mr. R. L. Goodell

DATE October 31, 1969

FROM Mr. Herbert A. Howlett

SUBJECT Point Pleasant Diversion

As a result of discussions held informally and during the Executive Session of the Pocono Meeting, it developed that it is essential that George Shanklin be briefed, in detail, regarding all aspects of the Point Pleasant Diversion. Please set up an appointment for you and me to do this next week. Confer with Miss Dougherty to see whether my calendar is open on the 4th and 7th.

We should be prepared, in particular, to present factual information on the impact of the Point Pleasant Diversion on the maintaining of minimum flows at Trenton and the control of salinity to the point designated in our Comprehensive Plan.

It will be necessary for us to revise our staff paper regarding Point Pleasant to include reference to these matters of base flows and salinity control, as well as including up-to-date costs in terms of capital, annual and price of water. This work should be undertaken immediately.

Herbert A. Howlett

HAH:CFD

Dictated by not read

RETURN TO  
CENTRAL FILES

## MEMORANDUM

TO Mr. Herbert A. Howlett

DATE January 5, 1970

FROM Mr. Robert L. Goodell

SUBJECT Meeting with Bucks County  
and Philadelphia Electric Co. -  
Point Pleasant Diversion

A meeting was held with representatives of Bucks County and Philadelphia Electric Co. on December 29, 1969, to make decisions on proceeding with the implementation of the subject diversion. Those present included:

E. H. Bourquard	-	E. H. Bourquard Associates, Inc.
John Carson	-	Bucks County
J. L. Allen	-	Asst. Chief Mechanical Engineer, Philadelphia Electric Co.
D. Marano	-	Branch Chief, Philadelphia Electric Co.
J. B. Mochel	-	Engineer in Charge - Civil Section, Philadelphia Electric Co.
Herbert A. Howlett	-	Delaware River Basin Commission
Robert L. Goodell	-	Delaware River Basin Commission

Mr. Howlett opened the discussion by stating that, pursuant to informal Commission action at the December 11 executive session, the Executive Director was authorized to proceed with feasibility studies needed to finance, design, construct, own and operate the Point Pleasant diversion plan and to the extent necessary, to enter into binding agreements with Bucks County and Philadelphia Electric Company to underwrite their appropriate share of the cost of these studies.

He explained that E. H. Bourquard Associates, Inc. had been chosen, in view of its extensive work already completed on the Bucks County portion of the plan, to provide certain preliminary data on alternatives available and that firm would now be requested to submit a proposal for preparing a formal feasibility report. Mr. Bourquard estimated that he could submit a proposal in about two weeks and that a report could be completed in 60-90 days after acceptance of the proposal. Mr. Howlett suggested that Bourquard, when submitting his proposal but separate therefrom, should recommend what proportion of the costs of the study should be assigned to Bucks County versus Philadelphia Electric and DRBC (combined). Bourquard was felt to be in the best position to accomplish this since he already knows how much Bucks County has paid for the studies to date. (It may be that Bucks County has already contributed its share of the costs and that the remainder should be apportioned to P E - DRBC) Mr. Howlett said that DRBC would want to contribute at least a nominal sum for the feasibility report, but had an upper limit on the amount of funds that could be furnished without formal Commission action. He said that due to the advantages of having the feasibility report completed and available for the Commission's summit meeting, it should be complete by March 15. Bourquard was of the opinion that he could meet this requirement.



Mr. Allen asked what kind of arrangement between the parties would be needed subsequent to the completion of the feasibility report. Mr. Howlett said that a binding agreement between Philadelphia Electric Co. and DRBC for construction would be required as well as a water sales contract. These could be combined into one document, however.

Mr. Howlett discussed the concern of Philadelphia Electric Co. of minimizing the "sunk costs" in advance of an AEC and DRBC permit for the nuclear plant. Bourquard was directed to consider this aspect in the study and also to consider the time difference of about 1 - 2 years between the schedules of Bucks County and Philadelphia Electric Co. Bucks County will need to begin operations in early 1973, whereas P E does not expect an operating license for the first nuclear unit prior to October 1974.

Philadelphia Electric wishes to have Bourquard study and show the economics for a staged construction alternative, but using a common site pumping plant. Philadelphia Electric will consider the best scheme is that which gives the most reliable supply of water at the least cost.

Bourquard asked several questions concerning the scope of the feasibility report, as follows:

1. Should the report concentrate on a particular alternative which may have been already selected by the parties of interest, or consider all possible alternative schemes?

It was determined that all possible schemes should be studied and a recommendation made. However, Philadelphia Electric Co. will study the various alternatives available and will consider any special requirements that should be considered by the consultant. P E and DRBC will meet during the week of January 5 to discuss.

2. Does P E have any special requirements for furnishing power to the site. It is understood that a dual power supply is desired. Who pays for it? P E and DRBC will meet during the week of January 5 to discuss.

3. What power rates should be used for determining operating costs? Commercial power rates should be used rather than preference power rates. P E and DRBC will meet during the week of January 5 to discuss whether any special power rates can be furnished by P E for low load factor operation.

4. What are the applicable bond interest rates for the various organizations?

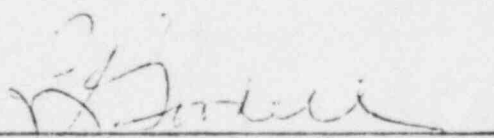
DRBC - 6% limit, but seeking to change to  
no ceiling (1st priority)  
or 8% limit (2nd priority)

P E - 10-12%, use 12%

Bucks County - recently available at 6 1/2 %.

5. Are the flow requirements assumed by DRBC for the Perkiomen Creek firm? DRBC will check out previous assumptions with Pennsylvania Department of Forests and Waters.

Philadelphia Electric Co. intends to submit its application for the nuclear plant on February 15, 1970. Normally, it takes 15 to 18 months for review by AEC and issuance of a construction permit. The utility does not wish to have public disclosure of its forthcoming application to DRBC prior to that date, even if this might mean no significant financial participation of DRBC in the feasibility studies. A draft application form and report outlining the use of Delaware River and Schuylkill River water for the nuclear plant was reviewed by Mr. Briganti during the progress of the meeting. He found that the draft application was satisfactory for initial review for 3.8 approval pending the development of further details. However, in view of the request by P E for no public disclosure prior to February 15, the application was returned to Marano.

  
Robert L. Goodell

RLG:mb

cc: Mr. P. J. Gordon

## MEMORANDUM

TO Mr. Herbert A. Howlett DATE February 25, 1970 *Final*

FROM Mr. Robert L. Goodell SUBJECT Point Pleasant Diversion

A meeting was held on February 20, 1970, in the Commission office to discuss the progress of the feasibility study being done by E. H. Bourquard Associates, Inc. This meeting was scheduled in accordance with the study outline, part IV F, calling for consultation with staff after completion of the study through Part IV - Economics of Staged Construction. Those present at the meeting included the following:

Harold Ostergren	-	Dillon, Reed & Co. Inc.
William Kerr	-	Dillon, Reed & Co. Inc.
E. H. Bourquard	-	E. H. Bourquard Associates, Inc.
Leonard R. Grimes	-	E. H. Bourquard Associates, Inc.
Terry L. Fought	-	E. H. Bourquard Associates, Inc.
John T. Carson, Jr.	-	Bucks County
John B. Mochel	-	Philadelphia Electric Company
David Marano	-	Philadelphia Electric Company
J. L. Allan	-	Philadelphia Electric Company
R. L. Goodell	-	Delaware River Basin Commission
H. A. Howlett	-	Delaware River Basin Commission

Bob Goodell opened the meeting by requesting those responsible for input to the report to get the material to Bourquard as soon as possible, since we have less than a month remaining for completion. Dave Marano said that he had the material requested by Bourquard (letter dated February 16, 1970), with him and would make it available at this time. Marano requested a review of previous discussion as to the handling of the apportionment of future project costs to the individual parties. It was concluded that the feasibility portion of the costs would represent sunk costs and that project costs would include the design and construction phases which would be supported by a DRBC bond issue backed up by DRBC contracts with Bucks County and Philadelphia Electric. Any costs already incurred or to be incurred (topo surveys) which would normally be "project costs" would be eligible for reimbursement.

John Carson said that he would estimate that future water needs in the East Branch, Perkiomen Creek area would support a 10 mgd increase in pumping by 1990 and 30 mgd by 2020. He said, however, that he had not discussed with his Commissioners the possibility of Bucks County underwriting the additional costs for including these water supply needs in the project.

Narano asked Carson and DRDC to make available any water quality data for the Perkiomen Creek.

E. H. Bourquard distributed copies of Table No. 1, Projected Water Needs and Pumping Requirements and briefly described its contents. Bourquard also distributed copies of tables dated February 20, 1970 entitled:

Tabulation of Construction Costs of Pumping Schemes

Schema I

Schema II

Schema III

Comparison of Present Worth of Pumping Schemes  
(1971 cost level)

Comparison of Unit Water Cost of Pumping Schemes  
(1971 cost level)

A graph showing possible staged construction of  
Schema II in four stages

Mr. Howlett expressed dismay at the increase in the unit annual cost of water delivered to about 14.5 cents/1000 gallons compared to previous estimates of 7 to 8 cents. Bourquard explained that the current estimates were intentionally conservative, represented 1971 costs, and were based on a 7% interest rate. He also explained that the demand factor for power had not been correctly applied in previous estimates. A 50% increase in the average monthly pumping rate is now being used to estimate the demand electrical charge (e.g., if average monthly rate is 20 mgd, the maximum pumping rate during the month would be 30 mgd to determine the electrical rate). Bourquard indicated that a slight reduction in cost to the advantage of Schema II could be applied by increasing the HP of the pumps from 2500 HP to 3300 HP and going to a smaller transmission line. This could decrease the unit annual cost of water delivered in Schema II to about \$145/mg and in Schema III to about \$142/mg.

Leonard Grimes reviewed the possible staging of construction of Schema II through four possible stages beginning in 1971, 1975, 1981 and 1986 (III A and III B) and 1994.

PHILADELPHIA ELECTRIC COMPANY

	<u>Pumps Installed</u>	<u>Operating through year</u>
1st stage	1 P.E. (for 1 1/2 yrs) 2 Bucks Co.	1975
2nd Stage	2 P. E. 2 Bucks Co.	1981
3rd Stage	2 P.E. 4 Bucks Co. (+new Intake)	1995
4th Stage	2 P.E. 6 Bucks Co.	2011

Grimes reviewed the fixed cost investment (present worth) of various combinations as follows:

	<u>Bucks County</u>	<u>Philadelphia Electric</u>
Separate 4 stages	\$7,800,000	\$5,200,000
Combine Stages 1 & 2	7,700,000	4,900,000
Combine Stages 1, 2 and 3	7,400,000	4,900,000

Bourquard recommended combining stages 1 and 2 while minimizing the sunk cost of Philadelphia Electric Company as much as practicable. Representatives of both Bucks County and Philadelphia Electric agreed that a two-staged construction combining stages 1 and 2 together and stages 3 and 4 together was preferable.

Bourquard pointed out that between the Schemes studied Scheme I had the least total fixed investment cost up to 1995, but that Scheme III had the least unit annual cost of delivered water up to 1995. Scheme II had the highest cost in both categories.

John Carson stated that he favored the lowest cost Scheme, but had thought that Scheme I was previously eliminated. The P.E. representatives indicated that they did not prefer Scheme I, but would prefer Scheme II with the additional objective of minimizing the sunk costs as much as possible. P.E. should know by August 1971 if AEC will give the nuclear plant a preliminary approval. Mochel also stated that if they were not given approval on a nuclear plant they might build a fossil fuel plant at the same location. The question arose

a) to the effect of adding 30 mgd water supply demand to the East Branch, Perkiomen Creek pumping scheme on the comparisons between the three Schemes.

After some additional computations by Bourquard, he explained there would be additional flexibility of using larger pumps and for all schemes it would be more economical to increase the size of the pumps in comparison to increasing only the size of the mains. The following revisions to each scheme would be necessary:

- Scheme I        -        Enlarge pumps - Pa 617  
                                 enlarge transmission main from Pa 617  
                                 cost increase - \$365,000 (initial construction costs)
  
- Scheme II       -        Enlarge pumps  
                                 change 54" to 60" force main  
                                 change 36" to 42" gravity main  
                                 cost increase - \$568,000 (initial construction costs)
  
- Scheme III      -        Enlarge pumps - Point Pleasant  
                                 enlarge pumps - Bradshaw Rd.  
                                 enlarge open reservoir  
                                 change 42" to 48" force main  
                                 change 36" to 42" gravity main  
                                 cost increase - \$600,000 (initial construction costs)

Bourquard pointed out that Scheme I had about a \$1,800,000 investment cost less than Scheme II and about \$1,400,000 advantage over Scheme III. Scheme II would have a possible advantage of only one pumping station while Scheme III would show a saving over Scheme II.

Bourquard inquired if the intention was to have a manned pumping station at Point Pleasant for direct control at that location or to have an automatically controlled station at Point Pleasant controlled from some other location, for instance, Toxas Island. Mr. Howlett was of the opinion that the control would be from a manned station at Point Pleasant. Bourquard also recommended that we start thinking about required instrumentation and stream gaging stations on the East Branch, Perkiomen Creek (headwater and mid-watershed), Perkiomen Creek (Groom Lane and Graterford) and Neshaminy Creek (Chalfont).

P.E. representatives repeated their preference for Scheme II with initial construction through Stage II, without installing the extra pump. Mochel pointed out that they did not favor Scheme I since it depended to an extent on the operation



of a dam and physical facilities associated with it for delivering the water to the nuclear plant via the Parklawn. He pointed out that it could take as long as 30 days to shut down a nuclear plant, if necessary, and any non-delivery of water during such a period could not be tolerated. He doubted whether DRDC would allow P.E. to substitute Schuylkill River water for Delaware water for such a long period.

The question arose as to the additional costs that Bucks County might incur if Schema II were chosen in lieu of Schema I or III. There was some discussion as to the possibility of P.E. being allocated these additional costs in return for selection of its preferred Schema. Or, possibly, P.E. could finance an extra block of costs during the early years to relieve Bucks County. A variable annual charge might be worked out.

Bourquard was requested to estimate the following data for additional help in making a selection of the desired Schema.

1. What would be P.E.'s minimum sunk costs for each schema by August 1971.
2. Compute the differential costs for Bucks County (Capital Investment costs plus Electrical costs) for each of the three schemes.

Bourquard will have the above information available for the next meeting scheduled for February 26, 1970 at 10:00 A.M., in the DRDC office.

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Robert L. Goodall

RLG:mb