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March 19, 1985

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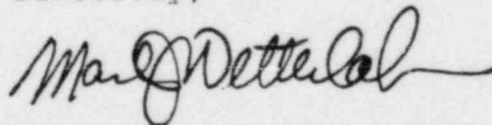
Dr. Reginald L. Gotchy  
Atomic Safety and Licensing  
Appeal Board  
U.S. Nuclear Regulatory  
Commission  
Washington, D.C. 20555

In the Matter of  
Philadelphia Electric Company  
(Limerick Generating Station, Units 1 and 2)  
Docket Nos. 50-352 and 50-353-0C

Dear Board Members:

Inasmuch as the Staff has requested a copy of Philadelphia Electric Company's March 15, 1985 Application under Section 3.8 of the Delaware River Basin Compact, copies are being sent to the Appeal Board and parties.

Sincerely,



Mark J. Wetterhahn  
Counsel for Philadelphia Electric  
Company

MJW/ac  
Enclosure  
cc: Service List

DS03

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# PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET

P.O. BOX 8699

PHILADELPHIA, PA. 19101

(215) 841-4000

EDWARD G. BAUER, JR.  
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AND GENERAL COUNSEL

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IRENE A. MCKENNA  
ASSISTANT COUNSEL

March 15, 1985

Ms. Susan Weisman, Secretary  
Delaware River Basin Commission  
P. O. Box 7360  
West Trenton, New Jersey 08628

Dear Ms. Weisman:

Transmitted herewith for filing with the Commission is Philadelphia Electric Company's Application under Section 3.8 of the Compact for approval of the temporary substitution, during 1985, of in-stream monitoring of dissolved oxygen levels in place of the 59°F temperature constraint on withdrawals for Limerick Generating Station Unit No. 1 incorporated in Docket Decision 69-210CP (Final) November 5, 1975, and as necessary release of varying amounts of water, not exceeding 32.5 cfs, from water supply storage during 1985.

This filing consists of six copies of the following documents: a) completed DRBC application form, including Attachments 1 and 2 and Exhibits 1 through 8 thereto; b) completed DRBC Environmental Form; and c) completed Applicant's Statement - Project Review Fee Form.

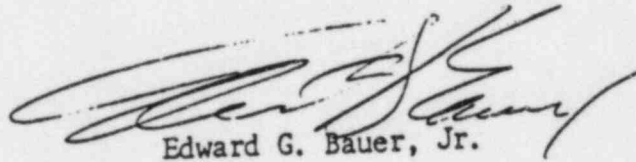
Enclosed is Philadelphia Electric Company's check in the amount of \$100 to cover the Project Review Fee.

The affidavit of Vincent S. Boyer, Senior Vice President, Nuclear Power, Philadelphia Electric Company, which is part of Attachment 2 of the application, indicates that issuance of a full power license from the Nuclear Regulatory Commission for Limerick Unit No. 1 can be anticipated about May 1, 1985; that in order to proceed with the power ascension program after issuance of the license it is necessary to have in place a supplemental cooling water system; that delays in proceeding to full power will delay commercial operation of the unit, and that the cost of not operating the unit for lack of water is estimated to be \$49 million per month.

Accordingly, the Company requests immediate action on its application, pursuant to Section 2-3.9(c) of the Commission's Rules of Practice and Procedure to protect the public interest and to avoid substantial and irreparable injury to the public and to the Company.

Communications regarding this application should be directed to the undersigned.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Edward G. Bauer, Jr.", is written over a horizontal line.

Edward G. Bauer, Jr.

EGB, JR:pkc

Enclosures

## DELAWARE RIVER BASIN COMMISSION

Type of Application: (Check one or more - see reverse side)

- (a) Addition to the Comprehensive Plan.....( )
- (b) Change in a Comprehensive Plan Project.....( )
- (c) Approval under Section 3.8 of the Compact.....(X)
- (d) Inclusion in "A-List" of the Water Resources Program.....( )

Pursuant to the Delaware River Basin Compact and the Rules of Practice and Procedure of the Delaware River Basin Commission, application is hereby made for review of the project described below:

(A) Application From:  
 Name Philadelphia Electric  
Company  
 Mailing Address 2301 Market Street,  
Philadelphia, PA 19101  
 Telephone (215) 841-4000  
 Name of Counsel Edward G. Bauer, Jr.  
and Eugene J. Bradley  
 Name of Engineer V. S. Boyer

For Use of Commission Docket No. _____ Date Received _____ Action by Commission _____ _____ _____ _____ _____ _____ _____ _____ _____
--

- (B) Type of Project: (Check)
- (1) Impoundment.....( )
  - (4) Stream Encroachment.....( )
  - (2) Withdrawal of Water.....(X)
  - (5) Well.....( )
  - (3) Disposal of Wastes.....( )
  - (6) Other.....( )

(C) Description of Project:

For 1985, withdrawal of water from the Schuylkill River for consumptive use at Limerick Generating Station Unit No. 1 by temporary substitution of in-stream monitoring of dissolved oxygen levels in place of 59°F temperature constraint incorporated in Docket No. 69-210 CP (Final) (November 5, 1975); and as necessary, release of varying amounts of water not exceeding 32.5 cfs, from water supply storage as appropriate, the flow constraint contained in said docket to be inapplicable to any such releases.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Signature of Authorized Person Vincent A. Boyer  
 Name V. S. Boyer  
 Title Senior Vice President,  
 Date 3/15/85 Nuclear Power

Delaware River Basin Commission

ENVIRONMENTAL FORM

Applicant Philadelphia Electric Company  
Title of Project Interim Consumptive Water Supply  
Location Limerick Generating Station

Date 3/15/85

DRBC Docket No. \_\_\_\_\_

1. List any significant environmental impacts, beneficial and adverse, caused by the proposed action.

The beneficial impact of the requested temporary substitution of instream monitoring of dissolved oxygen levels in place of the 59°F temperature constraint and the requested release of water from the Blue Marsh Reservoir or other basin water supply storages as a back-up supply will be to permit scheduled operation of Limerick, already evaluated by the DRBC. See, DRBC FEA for Neshaminy Water Supply System (August 1980); DRBC Level B Study; and AEC/NRC FES for Limerick (November 1973 and April 1984). There will be no adverse impacts from the temporary suspension of the 59°F temperature constraint. (See Paragraph below). There will be no adverse impacts from the release of water from Blue Marsh Reservoir. See, COE ES for Blue Marsh (April 1971); the Supplement to the COE FES for Blue Marsh (June 1973); and the DRBC Level B Study (May 1981). See Attachment 1.

2. What mitigating measures will be used to reduce or alleviate the adverse environmental impacts?

There will be no adverse impacts from the temporary suspension of the 59°F temperature constraint. Degradation of water quality of the Schuylkill River below the Limerick Generating Station will be precluded by instream monitoring of dissolved oxygen levels and releases from water supply storage when DO levels fall below acceptable levels. There will be no adverse impacts from the requested releases of water from water supply storage. Thus, no mitigating measures need be undertaken.

3. Summarize the alternatives considered.

The alternatives considered were (1) no action, (2) release of water from the Ontelaunee Reservoir, and (3) release of water from Green Lane Reservoir. See Attachment 2.

4. List any known objectors to the proposed action.

None.

APPLICANT'S STATEMENT - PROJECT REVIEW FEE  
(See Reverse Side For Additional Information)

1. Name and Address of Applicant Philadelphia Electric Company  
2301 Market St., Philadelphia, PA 19101

2. Name of Project Limerick Generating Station  
Interim Consumptive Water Supply Docket # \_\_\_\_\_

3. Type of Project
- Check Applicable Item(s)
- \_\_\_\_\_ (a) impoundments
  - \_\_\_\_\_ (b) diversions of water into or out of the Delaware River Basin
  - \_\_\_\_\_ (c) industrial water use and waste treatment facilities
  - (d) electric generating and transmission facilities
  - \_\_\_\_\_ (e) petroleum product pipelines
  - \_\_\_\_\_ (f) stream encroachments; and
  - \_\_\_\_\_ (g) withdrawal of ground water

4. Project Cost Factors (Complete all lines using Zero where applicable)

Item	Estimated Cost
a. Design	\$ 0
b. Supervision of Construction	\$ 0
c. Legal Services	\$ 0
d. Contract Administration	\$ 0
e. Land	\$ 50,000
f. Materials	\$ 45,000
g. Construction and Fabrication	\$ 0
<b>TOTAL ESTIMATED PROJECT COST</b>	<b>\$ 95,000</b>

Footnotes/Remarks non-structural - temporary suspension of 590F temperature constraint and release of varying amounts not exceeding 32.5 cfs of water supply storage from Blue Marsh Reservoir or other basin water supply storage, as appropriate, in 1985.

5. Filing Fee Schedule (Check applicable item(s))

(The filing fee is the greater of (a) or (b))

<input checked="" type="checkbox"/> (a) minimum fee: \$100. for any project; or	Computation:	(a) \$ 100.
_____ (b) alternative fee:		(b) _____
_____ (1) 1/10 of 1% of estimated project cost up to \$1,000,000.		(1) \$ _____
_____ (2) 1/50 of 1% of remaining cost above \$1,000,000; but not to exceed a maximum fee of \$50,000 as to any one project, exclusive of added environmental fees.		(2) \$ _____
	Total	\$ 100.00

6. Filing Fee Required with Application  
\*Please enclose check in this amount with application. Check should be made payable to Delaware River Basin Commission.

NOTE: Should this project require an Environmental Impact Statement or an Environmental Assessment, you will be notified at a later date and an Applicant's Statement-Environmental Review Fee will be forwarded for completion and payment of applicable fee.

Vincent A. Boyer  
Signature of Certifying Official

Senior Vice President, Nuclear Power  
Title

Date 3/15/85

ACKNOWLEDGMENT BY DRBC OF FEE PAYMENT

Received Check No. \_\_\_\_\_, dated \_\_\_\_\_, Bank No. \_\_\_\_\_  
in amount of \_\_\_\_\_

- COPIES: (1) Administrative Division Copy - white  
(2) APPLICANT - Retain This Copy - pink  
(3) Applicant - DRBC Received Copy - yellow  
(4) Project Review Copy - blue

Signature \_\_\_\_\_

A RESOLUTION requiring the payment of fees for Commission review of certain water resources projects.

WHEREAS, review of proposed water resources projects pursuant to Section 3.8 of the Delaware River Basin Compact has become a substantial program activity representing a major public cost; and

WHEREAS, certain categories of project review cases demand extended staff analysis and the use of expert consultants, the cost of which cannot always be forecast within the Commission's budget; and

WHEREAS, it is timely and in the public interest to initiate a program of allocating a portion of the costs of reviewing water resources projects to the applicant or project sponsor; now therefore

BE IT RESOLVED by the Delaware River Basin Commission:

1. A filing fee shall be paid to the Commission, according to the schedule herein, at the time of filing each application for project review, described in paragraph 2 hereof, pursuant to Section 3.8 of the Delaware River Basin Compact. Government agencies shall be exempt from such filing fee.

2. Project review fees under this regulation shall be required for the following categories of projects, subject to provisions of Section 2-3.5(a) of the Rules of Practice and Procedure:

- (a) impoundments;
- (b) diversions of water into or out of the Delaware River Basin;
- (c) industrial water use and waste treatment facilities;
- (d) electric generating and transmission facilities;
- (e) petroleum product pipelines;
- (f) stream encroachments; and
- (g) withdrawal of ground water.

3. The project review filing fee is the greater of (a) and (b) as follows:

- (a) minimum fee: \$100 for any project;
- (b) alternative fee:
  - (1) 1/10 of 1% of project cost to \$1,000,000;
  - (2) 1/50 of 1% of remaining cost above \$1,000,000 but not to exceed a maximum fee of \$50,000 as to any one project, exclusive of added environmental fees;
  - (3) environmental report fee: \$1,500 for any project; and
  - (4) environmental impact statement fee: \$30,000 for any project.

4. The project cost shall include the estimated costs of design, supervision of construction, legal services, contract administration, land, materials, equipment, construction and fabrication.

5. Not more than one project review filing fee shall be paid to the Commission as to any one project. Phased review by the Commission of stages in the development of a project shall be considered a single filing for purposes of this regulation. Revision of projects previously approved by the Commission shall be exempt from the requirements of this regulation.

6. Estimated capital costs of electric transmission lines, petroleum product pipelines and stream encroachment shall be calculated for that portion of the project subject to Commission review and the filing fee shall be limited in its application to the cost so calculated.

7. Revenues received pursuant to this regulation shall be covered into the Commission's general fund and be subject to specific appropriation by the Commission.

ADOPTED: June 28, 1972

Amended April 23, 1975 (Res. 75-3)

ATTACHMENT 1

Application of Philadelphia Electric Company  
for Temporary Suspension of 59°F Temperature  
Constraint and Blue Marsh or Other Releases as Back-up Supply

Beneficial Impacts to the environment. The availability of cooling water during 1985 for Limerick will enable the Limerick Generating Station to complete its start-up testing program without delay and to operate at full capacity in order to help meet electric power generation needs for southeastern Pennsylvania.

DRBC has previously determined that the supply of cooling water for Limerick provides a benefit to the environment. As DRBC stated in its most recent environmental review of the supply of supplemental cooling water for Limerick, "documents prepared after DRBC's Final EIS on the Point Pleasant Diversion Plan, issued in 1973, support the conclusion that the proposed project would be a feasible and beneficial use of water resources." DRBC Final Environmental Assessment for the Neshaminy Water Supply System, Part III, p. 2-53 (August 1980). DRBC reached the same conclusion in granting final Section 3.8 approval to the Point Pleasant project in Docket No. D-79-52 CP at p. 5 (February 18, 1981). Accordingly, DRBC has recognized that the use of Basin water resources to provide cooling water for Limerick constitutes a beneficial use.

As to the specific need for the electrical power to be generated by the Limerick Generating Station, DRBC has relied upon the findings of the Nuclear Regulatory Commission (previously the Atomic Energy Commission) in its own environmental statements for Limerick. See Docket No. D-69-210 CP (Final) at pp. 1, 6-8 (November 5, 1975). In



Issuing construction permits for Limerick, the AEC determined that there is a need for the electrical power to be generated by Limerick. See AEC Final Environmental Statement Related to the Proposed Limerick Generating Station, Units 1 and 2, Docket Nos. 50-352 and 50-353, Ch. 9 (November 1973). At the operating license stage, the NRC similarly found a substantial benefit to the environment to be derived from the operation of the Limerick Station in the annual production of approximately 10 billion kWh of base load electrical energy. See NRC Final Environmental Statement Related to the Operation of Limerick Generating Station, Units 1 and 2, Docket Nos. 50-352 and 50-353, Section 6.4.2 (April 1984).

Further, in an order entered August 27, 1982, the Pennsylvania PUC expressly stated that "(t)he public interest requires . . . (t)imely completion of Limerick Unit 1" and further stated "we encourage the Company to complete this unit as rapidly as possible consistent with the public safety." Pennsylvania PUC, Opinion and Order, Docket No. I-80100341 (August 27, 1982) (emphasis added) (pp. 23-25). Accordingly, there exists a substantial benefit to the environment and the public in the commencement of commercial operations at Limerick as soon as possible.

No adverse impact by temporary suspension of 59°F temperature constraint. DRBC Docket No. D-69-210 CP (March 29, 1973) precludes Schuylkill River withdrawals for consumptive use by Limerick whenever river water temperatures below Limerick exceed 59°F, except during April, May, and June when flows measured at Pottstown exceed 1,791 cfs. DRBC's decision to limit Schuylkill River withdrawals when temperatures are above 59°F is intended to reduce stresses on stream

water quality caused by consumptive losses at Limerick when water quality is significantly affected by organic waste assimilation. When temperatures in the river exceed 59°F, the biological oxygen demand accelerates and the dissolved oxygen necessary for waste assimilation becomes more critical.

PECo proposes to monitor the river for DO at several locations below Limerick and to substitute a suitable DO value as the limit on withdrawals from the natural river flow for the present 59°F temperature limit. This substitution of DO for temperature is proposed only for the remaining days of calendar year 1985. PECO will regularly transmit the DO information to the offices of the DRBC so that it can be evaluated by them and so that they may request releases of water from storage to compensate for withdrawals at Limerick at times of low DO values. With this monitoring program in effect, PECO will be permitted to continue operations at Limerick regardless of river water temperature.

The Pennsylvania water quality standard for DO in the Schuylkill River is 5.0 mg/l minimum daily average and 4.0 mg/l minimum instantaneous value. PECO proposes that these two values be established as the critical values limiting withdrawals from natural river flow and the values which trigger releases of water from water supply storage.

The monitoring program proposed to measure DO during 1985 will include water sampling at least six times per day at regular time intervals at six different locations between Limerick (R.M. 48.0) and the Fairmount Dam (R.M. 8.5) in Philadelphia. The monitoring and transmittal of data will be accomplished with automatic equipment where practical and possible.

When automatic equipment is unavailable, manual means will be utilized. Regardless of the means of monitoring, data will be transmitted to the DRBC at least daily and DRBC also will have ready access to all data during any intervening time interval.

Depressed DO levels usually occur in the pools behind the dams across the Schuylkill River. It is therefore proposed to establish a sampling station behind each of the following six dams: Fairmount Dam (R.M. 8.5), Flat Rock Dam (R.M. 15.6), Plymouth Dam (R.M. 20.7), Norristown Dam (R.M. 23.9), Black Rock Dam (R.M. 36.6), and Vincent Dam (R.M. 44.7). A sampling station at Limerick (R.M. 48.0) was established about 10 years ago and sampling will continue at this location as before. At each of these stations a single probe will be installed. The specific location to be determined based on access, availability of electric power and protection from vandalism. The probe will be positioned vertically in the water column below the mid-point so that it will not be subject to surface effects.

This monitoring program, when substituted for a single temperature measurement, will provide satisfactory water quality protection because of the relationship between DO and organic waste assimilation and also because the entire downriver stretch will be monitored.

In addition to the present 59°F temperature constraint on withdrawals at Limerick, there is a minimum flow constraint of 530 cfs for one unit. This constraint operates independently of the 59°F temperature constraint. Frequently, the flow constraint would preclude withdrawals from the Schuylkill, regardless of the temperature constraint. For example, during the drought of 1965, the flow

constraint of 530 cfs would have prohibited Schuylkill withdrawals 167 days, while the temperature constraint would have prohibited withdrawals for only an additional 29 days. The historic record for the Schuylkill over the past 55 years shows that, on average, withdrawals for one unit at Limerick would have been prohibited by flow and temperature constraints 120 days per year. For 52 of the 120 days in this period, the flow constraint would have been the limiting factor. See DER "59°F Restriction on the Schuylkill River Water Withdrawal, Limerick Nuclear Power Plant" at p. 4 (September 1983). Accordingly, suspension of the 59°F temperature constraint alone would not provide a long-term source of makeup water for Limerick. On the other hand, the same data show that a temporary suspension of that constraint would permit Schuylkill withdrawals for up to an additional 68 days on average.

No adverse impact from existing water storage releases in 1985.

Recognizing that there will be times when stream flow and DO constraints, as proposed above, will operate to prevent withdrawals, another source of makeup water will be necessary for the short interim period until water from Point Pleasant is available. Under those circumstances, releases would be requested from existing water storage supplies.

In view of the inventory of water supply storage facilities under DRBC control, the Blue Marsh Reservoir appears to be the most probable source of such releases. In authorizing construction of the Blue Marsh Reservoir, Congress designated 8,000 acre-feet of storage for downstream water supply needs. See Flood Control Act of 1962, Public

Law 87-874, 87th Congress 2nd Session. The release of water supplies from the reservoir underwent environmental review in two separate environmental statements prepared by COE. U.S. COE Environmental Statement on the Blue Marsh Lake Project (April 1971); Supplement to U.S. COE Environmental Impact Statement on the Blue Marsh Lake Project (June 1973). In neither document did COE determine that there would be any adverse environmental impact from the release of water from the water supply storage for the benefit of downstream users. See COE Supplement at p. 5. To the contrary, COE found that the release of those waters would have a beneficial impact upon overall water quality in that stretch of the Schuylkill River.

In June, 1984, DER undertook an assessment of Bucks County's proposal that Blue Marsh Reservoir storage be used to provide makeup water for Limerick when Schuylkill water would be unavailable. See DER's "Assessment of Bucks County Proposals for Alternatives to the Point Pleasant Water Supply Project" (June 1984). DER stated two fundamental concerns regarding the commitment to Limerick of large amounts of storage from Blue Marsh: (1) the impacts upon the interests of other present and future water users in the Basin and (2) potential impacts on coordinated reservoir operations needed to control salinity in the Delaware estuary (Assessment at p. 29). PECO has requested releases, however, on a far more limited basis than suggested by the Bucks County proposal. First, PECO is not requesting releases from water quality storage, but only from water supply storage. Second, PECO is merely requesting releases from storage for 1985. PECO acknowledges that the long-term use of Blue Marsh as suggested by Bucks County "would conflict with anticipated needs of public water suppliers" along the Schuylkill. See Del-Aware Unlimited, Inc. v. DER, EHB Docket Nos. 82-177-H and 82-219-H, Adjudication at 46 (June 18, 1984).

PECo also recognizes that Blue Marsh must be available to assist in meeting the needs of downstream users in a drought and that DRBC has authority to utilize the water supply storage of Blue Marsh to meet downstream water quality objectives. Nonetheless, the temporary short-term use of Blue Marsh should not be precluded simply because drought conditions might arise which require releases from the water supply storage. Under the "pooled water" concept, drought hardships must be shared on an equitable basis among all Basin users. Equitable demands upon other impoundments (e.g., Beltzville) would be made to meet flow augmentation needs for water supply and water quality in a drought. See DRBC Level B Study at pp. 19, 57 (May 1981).

The COE Blue Marsh Lake Water Control Manual (Final) states at p. 7-13 that the 8,000 acre-feet of water supply storage in Blue Marsh is equivalent to a continuous yield of 55 cfs. Of this amount, 9 cfs is currently under contract with the Western Berks Water Authority and an additional quantity used under the control of the DRBC to provide for the needs of other existing downstream users. The remaining amount is therefore available to meet other "current water supply needs" as determined by DRBC. Accordingly, it appears that release of an average of 27 cfs for Limerick for the short interim period requested by PECO would have no adverse effect upon other users or potential users along the Schuylkill River below Blue Marsh. Further, inasmuch as PECO proposes merely to receive releases of water from an existing reservoir by utilizing the same facilities, structures, and mechanisms already in use, there will be no adverse impact to the environment.

The release of water from the Blue Marsh Reservoir in amounts required by PECO would not adversely affect recreational use of the reservoir. The COE Blue Marsh Lake Water Control Manual (Final)

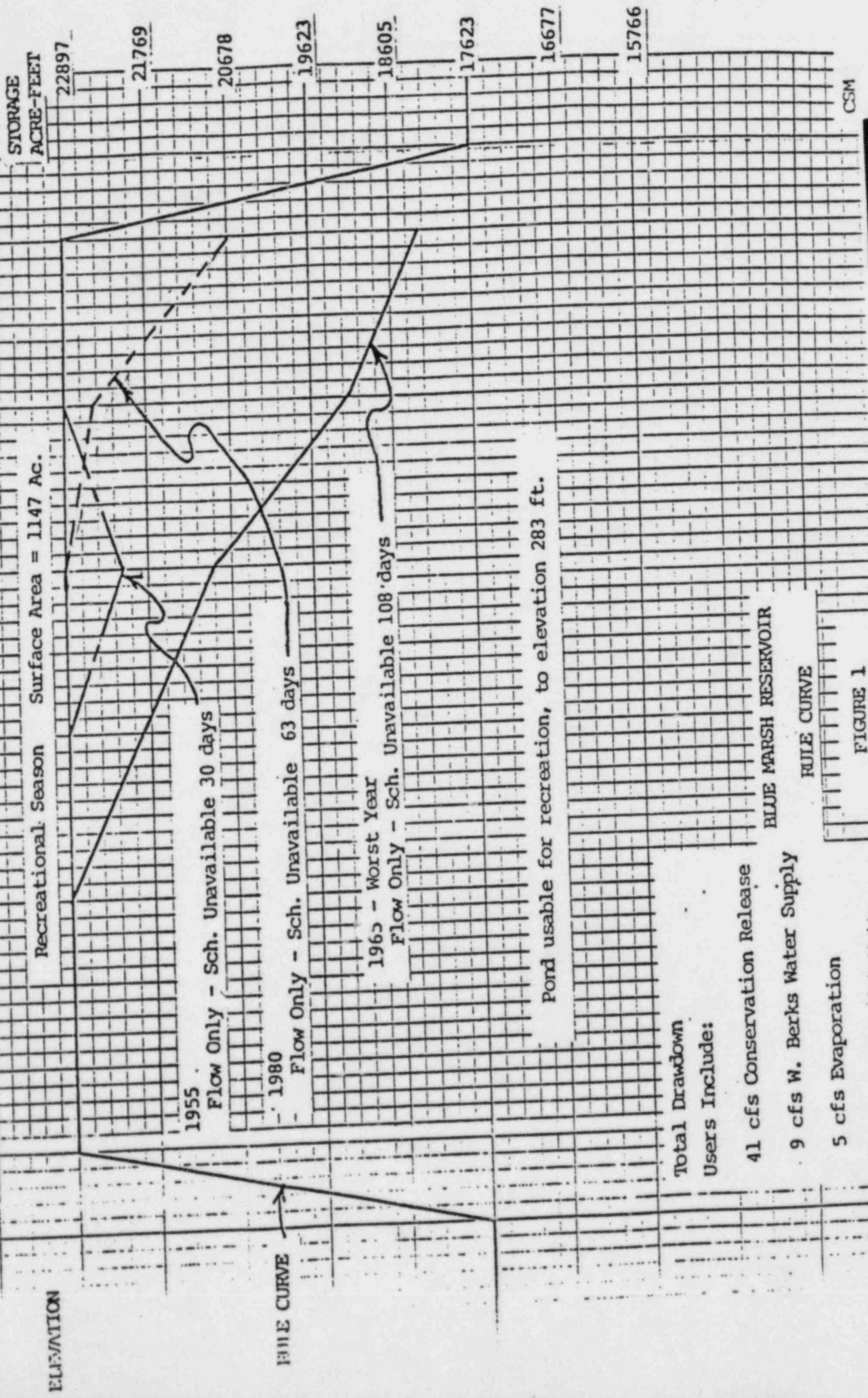
states that the Reservoir should be maintained at elevation 290 feet throughout the summer months for the benefit of recreational use. The Manual states at p. 8-3 that the recreational facilities are usable from the top of the summer pool (elevation 290 feet) to a drawn down elevation of 283 feet. As explained below, releases from the reservoir during the recreational period will not result in a detrimental lowering of the water level.

PECo analyzed several critical years to determine the possible effects of the drawdown resulting from its requested releases. In its analysis, PECO assumed one unit at full load operation at an average consumptive use of 27 cfs throughout the period of water unavailability from natural flows of the Schuylkill River until September 30, the end of the recreation season, and included the 9 cfs under contract to the Western Berks Water Authority, the full conservation release of 41 cfs, and 5 cfs as evaporation. For 1955, an average year for flow in the Schuylkill River, PECO found that during the summer months, the pool elevation would be drawn down less than 1 foot.

PECo also analyzed the situation for 1980 because that year Schuylkill flows were 20% below average. It was determined that drawdown from the requested releases would have been about 2 feet. PECO also simulated withdrawals for 1965 because it represents the worst year of record for low flows in the Tulpehocken Creek and therefore the year of lowest supplies to the reservoir. PECO determined that its requested releases would have resulted in a drawdown at the end of the recreational season of approximately 4.5 feet. Thus, the requested releases of water for PECO and the resulting drawdown of the reservoir, under worst case conditions,

would result in the Blue Marsh water level 2.5 feet higher than the designed drawn down elevation 283. This margin of drawdown would remain available for other concurrent users of Blue Marsh water and would have no detrimental effect on recreation. This analysis is reflected on the attached Figure 1.





Total Drawdown  
Users Include:  
41 cfs Conservation Release  
9 cfs W. Berks Water Supply  
5 cfs Evaporation  
27 cfs 1 Limerick Unit

BLUE MARSH RESERVOIR  
RULE CURVE

FIGURE 1

## ATTACHMENT 2

### Application of Philadelphia Electric Company For Temporary Suspension of 59°F Temperature Constraint and Blue Marsh or Other Releases as Back-up Supply

#### Alternatives Considered

PECo has considered various alternatives for a temporary supply of supplemental cooling water to Limerick for the period of 1985 when docket decision constraints preclude withdrawals from the Schuylkill and Perkiomen. An alternative is not realistic and need not be considered unless capable of being promptly implemented. Thus, an alternative cannot require construction or major modification of existing facilities. The alternatives considered and a brief discussion of each follow:

- (1) No action - Due to flow and temperature constraints imposed by DRBC on withdrawals of water from the Schuylkill River for consumptive use, the Schuylkill will be largely unavailable for such withdrawals during the period June to October, 1985. Because the permanent supplemental water supply from the Point Pleasant project will be unavailable for this period, Limerick cannot continue with start-up testing, and ascend to full power without an interim source. The cost of not operating Limerick for lack of water during that period is estimated to be \$49 million per month. See Affidavit of Vincent S. Boyer, Senior Vice President, Nuclear Power (March 15, 1985) (attached).

- (2) Ontelaunee Reservoir - This reservoir is located on Maiden Creek, a tributary to the Schuylkill River upstream of the Limerick plant, and is owned by the City of Reading for use as a water supply source. Ontelaunee has 11,640 acre-feet of total storage. The City of Reading was granted an allocation of 35 million gallons per day of water by the DRBC on August 27, 1969 in Docket No. D-69-139 CP. The water supply system is presently reported to use an average of 20 mgd with a maximum usage of about 25 mgd. The City of Reading and the municipalities served by the water system are served by comprehensive systems of sewerage collection which discharge to complete treatment facilities and thence into tributary streams and the Schuylkill River.

Inquiries have been made to the City of Reading and a presentation was made to the City Council as to the city's interest in selling unused water from their allocation to PECO. An application for approval of such usage would have to be made by the City to the DRBC. To date, the City has not indicated an interest in making any water available to PECO for 1985, or any other period of time.

- (3) Green Lane Reservoir - This reservoir is located on the Perkiomen Creek. It is owned by the Philadelphia Suburban Water Company ("PSW Co.") and is used in combination with other reservoirs and wells for water supply. Total storage is 13,430 acre-feet. Green Lane is not large enough to meet the combined needs of PSW Co. and Limerick. (Letter to Nicholas DeBenedictis, DER Secretary from Robert A. Luksa, Executive Vice President, Philadelphia Suburban Water Company, June 4, 1984).

COMMONWEALTH OF PENNSYLVANIA

:

ss.

COUNTY OF PHILADELPHIA

:

VINCENT S. BOYER, being first duly sworn, states as follows:

1. My name is Vincent S. Boyer, I am Senior Vice President, Nuclear Power of Philadelphia Electric Company ("the Company"), owner and operator of the Limerick Generating Station.

2. On October 26, 1984, the U. S. Nuclear Regulatory Commission issued a license authorizing fuel loading and low power testing of Limerick Unit 1. Fuel loading was completed in November, 1984, and the low power testing program has been completed. The schedule for the power ascension phase of operation of Unit 1 of the Limerick Generating Station is such that the Plant will be ready to proceed to power levels greater than allowed under our existing license by the end of March, 1985. In view of the current status of the NRC licensing proceedings, issuance of a full power license can be anticipated about May 1, 1985.

3. In order to proceed with the power ascension program for Unit 1 after the issuance of a full power operating license by the NRC, it is necessary to have in place a supplemental cooling water supply.

4. The partially constructed Point Pleasant diversion will not be completed in time to supply Unit 1's supplemental cooling water needs in the second quarter of 1985 when it is anticipated that the NRC will authorize the Company to proceed to full power operation.

5. Consequently, an interim supply of supplemental cooling water will be required to operate Unit 1 at sustained high power levels until the Point Pleasant Project is completed.

6. Delays in proceeding to full power will result in a delay in the commercial operation of the unit. Such delays will increase the costs of Limerick Unit 1 by \$34 million per month. This cost figure is made up of \$24 million per month Allowance for Funds Used During Construction (AFUDC) and \$10 million per month operational, security and maintenance costs. In addition, the fuel costs of the Company's customers will be increased by \$15 million a month for each month of delay.

7. Delays in the full power operation of Unit 1 may also impact on the restart of construction of Unit 2. The Pennsylvania Public Utility Commission is presently holding hearings on whether construction at Unit 2 should be continued, but in compliance with a prior order issued by the PUC, construction of No. 2 unit has been suspended unit No. 1 is placed in commercial operation.

Vincent S. Boyer  
Vincent S. Boyer

Sybscribed and sworn to  
before me this 15<sup>th</sup> day  
of March, 1985.

Patricia D. Scholl  
Notary Public

PATRICIA D. SCHOLL  
Notary Public, Philadelphia, Philadelphia Co.  
My Commission Expires February 10, 1986

Exhibit 1

Application of Philadelphia Electric Company for  
Temporary Suspension of 59°F Temperature  
Constraint and Blue Marsh or Other Releases as Back-up Supply

Abstract of Proceedings Authorizing Project

DRBC imposed the 59°F temperature constraint in its docket decision regarding the withdrawal of Schuylkill River water for Limerick. DRBC Docket No. D-69-210 CP at p. 5 (March 29, 1973). While this temperature constraint has been reviewed by DRBC and DER and deemed appropriate to provide a margin of safety in maintaining desired dissolved oxygen levels, those conclusions were based upon long-term consumptive use of Schuylkill River water without alternative measures to assure that DO objectives are met and, as such, are inapplicable to the proposed short-term usage.

The Blue Marsh Lake Project was authorized by the Flood Control Act of 1962, Pub. L. No. 87-874, 76 Stat. 1173, 1182 (1962). Congress intended that Blue Marsh provide, among other things, water supply. H.R. 13273, 87th Cong., 2d. Sess. 123 (1962). The DRBC has contracted for 8,000 acre-feet of storage from the U.S. Army Corps of Engineers ("COE") for municipal and industrial water supply, as documented in Contract No. DACW61-71-C-0145, dated May 14, 1971.

The COE estimates that the water supply volume can continuously yield 55 cfs of water. U.S. Army Corps of Engineers Blue Marsh Lake Water Control Manual (Final) (March 1984) at par. 7-09(a), p. 7-13. The Western Berks Water Authority has contracted with the DRBC to purchase 9 cfs of this water through 1989. The remaining water supply, 46 cfs, is available to meet the needs of other users.

## Exhibit 2

### Application of Philadelphia Electric Company for Temporary Suspension of 59°F Temperature Constraint and Blue Marsh or other Releases as Back-up Supply

#### Standard Regarding Temporary Suspension of 59°F Temperature Constraint on Schuylkill Withdrawals

The DRBC's objective in imposing the 59°F temperature constraint on Schuylkill withdrawals is to reduce stresses on stream water quality caused by consumptive losses at Limerick when water quality is significantly affected by organic waste assimilation. So long as the stream capacity to assimilate organic waste is not impaired by Limerick withdrawals above 59°F, as assured by PECO's instream monitoring, DRBC's objective will be achieved (see Attachment 1). There is no indication in the history of DRBC's consideration of this criterion that it has any significance apart from indirectly maintaining control over desired DO levels in the lower reaches of the Schuylkill and the Delaware estuary.

#### Standard for Minimizing Releases From Water Supply Storage for Limerick During 1985

In authorizing construction of the Blue Marsh Reservoir, Congress expressly designated 8,000 acre-feet of storage for downstream water supply needs. See Flood Control Act of 1962, Public Law 87-874, 87th Congress, 2nd Session. The policy of utilizing a discrete block of storage of the Blue Marsh Reservoir to meet downstream water supply needs was restated in both environmental statements prepared by COE.

See U.S. COE Environmental Statement on the Blue Marsh Lake Project at p. 1 (April 1971); Supplement to U.S. COE Environmental Impact Statement on the Blue Marsh Lake Project at pp. 2, 4 (June 1973)).  
See also COE Blue Marsh Lake Design Memorandum No. 15A at p. 8-2 (June 1975); COE Blue Marsh Lake Water Control Manual (Final) at pp. 2-1, 7-12 to 7-13, 8-4 to 8-6 (March 1984).

DRBC has implemented the stated policy of utilizing Blue Marsh to meet downstream water supply needs in granting Section 3.8 approval to the application on behalf of Western Berks Water Authority for Blue Marsh water supplies in Docket Nos. D-69-55 CP (August 27, 1969) and D-69-55 CP (3.8) (December 15, 1971).

In order to minimize water storage releases for Limerick during 1985, water would be released from water supply storage only when river flow as measured at the Pottstown gage is less than 530 cfs and when dissolved oxygen as measured by our proposed monitoring program falls below acceptable levels; the flow constraint imposed in Docket No. 69-210 CP (Final) (November 5, 1975) to be inapplicable to any such releases.

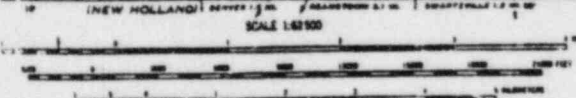
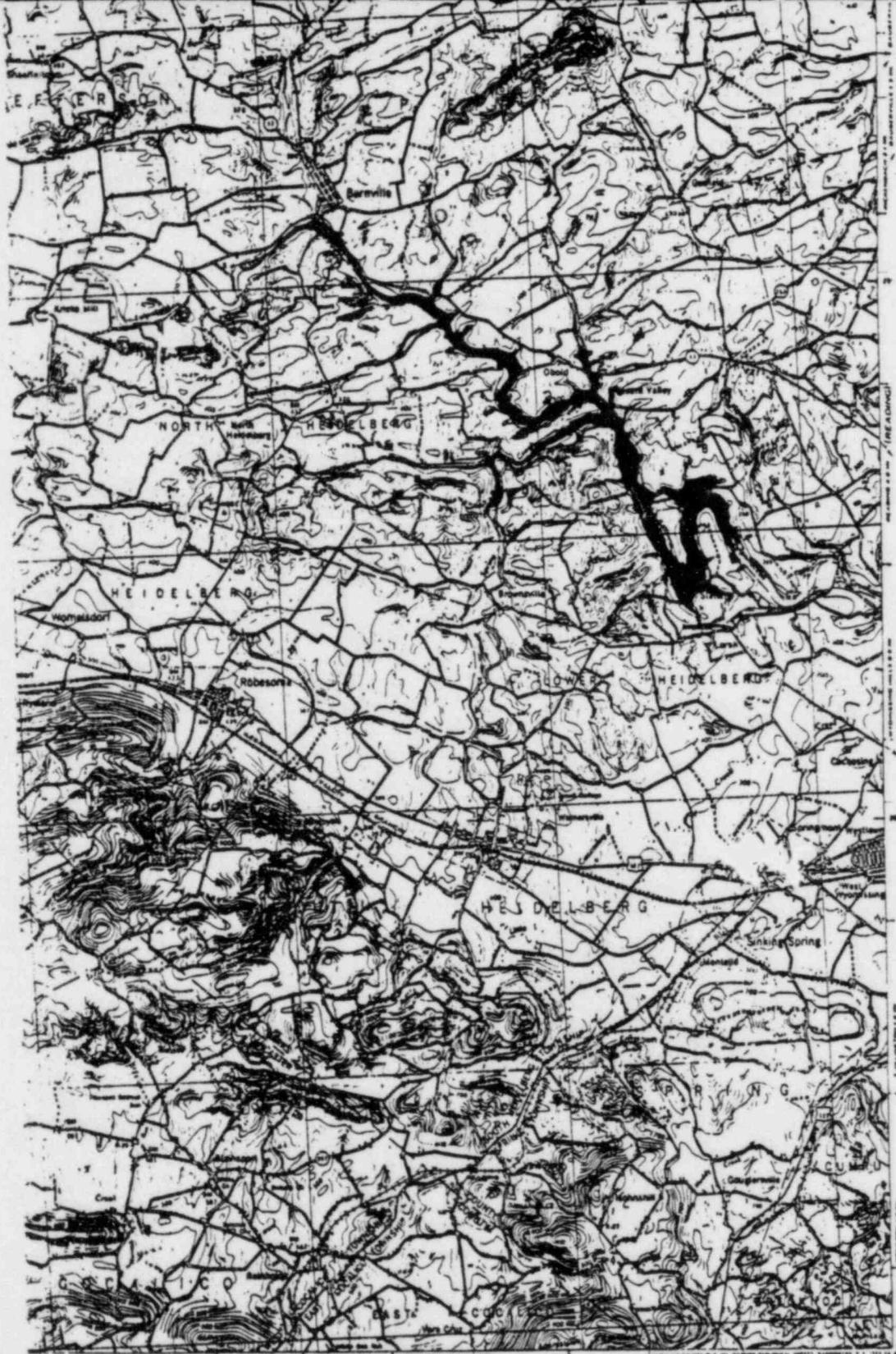


Exhibit 3

Application of Philadelphia Electric Company  
for Temporary Suspension of 59°F Temperature  
Constraint and Blue Marsh or Other Releases as Back-up Supply

Section of the United States Geological  
Survey Topographic Map Showing the  
Territory and Watershed Affected

The map attached detailing the Blue Marsh Reservoir was prepared from the United States Geological Survey Quadrangle, Wernersville, Pennsylvania.



CONTOUR INTERVAL 20 FEET  
 ELEVATION IN FEET MEAN SEA LEVEL  
 PUBLISHED 1927  
 FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON 25, D. C.



**Exhibit 3**

WERNERSVILLE, PA.  
 H4015-W7600/15

Exhibit 4

Application of Philadelphia Electric Company  
for Temporary Suspension of 59° Temperature  
Constraint and Blue Marsh or Other Releases as Back-up Supply

Description of Specific Effects  
of Non-Structural Project

The specific effects of this non-structural project are discussed  
in Section 1 of the Environmental Form and Attachment 1 hereto.

Exhibit-5

Application of Philadelphia Electric Company  
for Temporary Suspension of 59°F Temperature  
Constraint and Blue Marsh or Other Releases as Back-up Supply

Report of the Applicant's Engineer Showing the  
Proposed Plan of Operation of the Project

The continuation of the startup program and approach to full power for the Limerick Generating Station Unit No. 1 is expected to begin about May 1, 1985, following authorization by the Nuclear Regulatory Commission. A gradual ascension to full power is planned with tests being conducted at several discrete power levels. The total test program is estimated to require a period of approximately six months, this estimate providing time for review and approval of test results and for some adjustment and tuning of control systems.

Based on the availability of consumptive water requirements, the following program is envisioned. For the first two months of the startup program, May and June, 1985, the unit will be operated at power levels progressively increasing to 50% of full power and the average consumptive water requirements will be about 10 cfs. During July 1985, testing will occur at power levels up to 75% of full power with the consumptive water requirements averaging about 17 cfs. From August through October, it is planned to conduct tests at full power output with consumptive water needs averaging about 22 cfs. When operating at full power, the average consumptive usage amounts to 27 cfs, which figure can increase to 32.5 cfs under adverse meteorological conditions.

During the test program, PECO will utilize withdrawals from the Schuylkill River and Perkiomen Creek as authorized by DRBC. When river temperatures approach 59°F, PECO will conduct instream monitoring of DO levels in the Schuylkill at selected locations as described in Attachment 1.

When further withdrawals from the Schuylkill River and Perkiomen Creek are precluded by the DRBC docket decision flow constraint or by low DO levels, PECO requests, during 1985, release of water from existing water storage facilities. The water released will flow into the Schuylkill River to be withdrawn at the Schuylkill River Intake for Limerick. The flow constraints imposed in Docket No. 69-210 CP (Final) (November 5, 1975) to be inapplicable to any such releases.

Application of Philadelphia Electric Company  
for Temporary Suspension of 59°F Temperature  
Constraint and Blue Marsh on Other Releases as Back-up Supply

Map of Any Lands to be Acquired or Occupied

This is a non-structural proposal involving the temporary suspension of the 59°F temperature constraint on withdrawals from the Schuylkill River for consumptive use at Limerick and an interim supply of water from water supply storage during 1985. There are no lands to be acquired or occupied.

Exhibit 7

Application of Philadelphia Electric Company  
for Temporary Suspension of 59°F Temperature  
Constraint and Blue Marsh or Other Releases as Back-up Supply

Estimate of Cost of Completing  
the Proposed Project

This is a non-structural proposal involving the temporary substitution of a dissolved oxygen monitoring system for the 59°F temperature restriction on withdrawals of water from the Schuylkill River for consumptive use at Limerick and a back-up interim supply of water from water supply storage during 1985. The only physical field work involved will be the installation of DO monitors at six locations between Limerick and the Fairmount Dam in Philadelphia.

The cost to purchase and install the six monitoring stations and a spare unit is estimated to be \$95,000.

Exhibit 8

Application of Philadelphia Electric Company  
for Temporary Suspension of 59°F Temperature  
Constraint and Blue Marsh or other Releases as Back-up Supply

Description of Construction Procedures

This is a non-structural proposal involving the temporary substitution of a dissolved oxygen monitoring system for the 59°F temperature restriction on withdrawals of water from the Schuylkill River for consumptive use at Limerick and an interim supply of water from the water supply storage during 1985. Work involved will be the installation of DO monitors at six locations between Limerick and the Fairmount Dam in Philadelphia.

The monitoring equipment at each location will be similar and will consist of a small instream probe, connecting to a mini-computer located on shore in a protective enclosure and a connection to a leased telephone line to transmit data to a central point (or points) where the data will be evaluated.