PHILADELPHIA ELECTRIC COMPANY
NUCLEAR GROUP HEADQUARTERS
955-65 CHESTERBROOK BLVD.
WAYNE, PA 19087-5691
(215) 640-6000

NUCLEAR ENGINEERING & SERVICES DEPARTMENT

EPP 3.2

March 12, 1992

Docket Nos. 50-352
50-353

License Nos. NPF-39
NPF-85

NPDES Permit No. PA 0051926

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Subject: Limerick Generating Station, Units 1 and 2
Proposed Changes to the National Pollutant
Discharge Elimination System Permit

Gentlemen:

The Limerick Generating Station (LGS), Units 1 and 2, Environmental Protection Plan (EPP), Section 3.2, stipulates that the NRC shall receive a copy of any proposed change to the LGS National Pollutant Discharge Elimination System (NPDES) permit at the same time the proposed change is submitted to the permitting agency.

By letter dated February 14, 1992 to the Pennsylvania Department of Environmental Resources (PA DER), Philadelphia Electric Company (PECo) requested a change to the LGS NPDES Permit No. PA 0051926 to allow a chemical additive (i.e., Foam Trol CT) to be used on a daily basis. This chemical additive has been previously authorized for use, as specified in the enclosed PA DER letter dated September 25, 1991, to control foaming in the secondary cooling water system at LGS. However, the PA DER letter dated September 25, 1991, stated that this chemical additive was to be used at a rate of 70 pounds per day but only added a few days per year. Recently, foaming has become a problem at LGS, and therefore, we are requesting that this chemical be added daily at the previously approved usage rate of 70 pounds per day to control this problem.

In addition, by letter dated February 24, 1992 to the PA DER, PECo again requested that the LGS NPDES Permit No. PA 0051926 be amended. The February 24, 1992 letter indicated that this Permit is scheduled to be reissued for a five (5) year period, and that we wanted to take advantage of this opportunity to request changes prior to it being reissued.

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Therefore, in accordance with the LGS EPP Section 3.2, a copy of the February 14, 1992 and February 24, 1992 letters to the PA DER requesting the changes to the LGS NPDES permit are enclosed.

If you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,

D M Beck for

G. J. Beck
Manager
Licensing Section

Enclosure

cc: T. T. Martin, Administrator, Region I, USNRC (w/ enclosure)
T. J. Kenny, USNRC Senior Resident Inspector, LGS (w/ enclosure)

PHILADELPHIA ELECTRIC COMPANY
2301 MARKET STREET
P.O. BOX 8699
PHILADELPHIA, PA 19101
(215) 841-4000

February 14, 1992

Mr. Sohan Garg
Department of Environmental Resources
Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428

Dear Mr. Garg:

Limerick Generating Station NPDES Permit ~~PA0052221~~ PA0051926

Attached is a copy of an approval letter, sent by you, for usage of Clam Trol CT-1, Betz DTS and Foam Trol CT. In your letter, you stated that these additional chemical additives may be used at the approved usage rate a few days a year.

We are requesting that the Foam Trol CT be approved to be used daily at the previously approved usage rate of 70 lbs./day. Foaming has become a problem at the station, so a favorable response would be appreciated by February 24, 1992.

If you have any questions or require additional information, please contact Robert M. Matty, Jr., at 841-5177.

Very truly yours,

George M. Morley

George M. Morley, Manager
Environmental Affairs

Attachment

cc J. A. Feola w/o attachment

bcc J. [illegible] Madara, Jr. w/o attachment
G. M. Leitch " "
R. W. Dubiel " "
R. M. Krich " "
T. J. Jackson " "
G. J. Madsen " "
CCD

rmm/cg/02149201

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

FIELD OPERATIONS - WATER QUALITY MANAGEMENT
Suite 6010, Lee Park
555 North Lane
Conshohocken, PA 19428
215 832-6130

September 25, 1991

Philadelphia Electric Company
2301 Market Street
P.O. Box 8699
Philadelphia, PA 19101

Attention: Mr. George H. Morley
Director, Environmental Affairs

Re: Industrial Waste NPDES
Permit No. PA0051926
Limerick Generating Station
Limerick Township
Montgomery County

Dear Mr. Morley:

This is in response to your May 1, 1991, May 30, 1991 and September 13, 1991 letters requesting approval to use additional chemical additives for a few days per year to control Asiatic Clams in the cooling water system at the subject facility.

We have completed our review and hereby approve your request to use the following additional chemical additives in the cooling water system at the Limerick Generating Station. The wastewater will continue to discharge on an average rate of 14.27 million gallons per day through Outfall 001. The approval is subject to the following conditions:

1. The approved additives and usage rate are the following:

Name	Usage Rate (lbs/day)
Clam Trol CT-1	1491
Betz DTS	6716
Foam Trol CT	79

2. The usage rate of 1491 lbs/day of Clam Trol CT-1 will produce 1 mg/l concentration of the whole product at Outfall 001. Such concentration level is harmful to the aquatic life of the river therefore detoxifying agent Betz DTS shall be used effectively to reduce the concentration to an acceptable level as required under Conditions 3 and 4 below.

3. During the event of a discharge containing Clam Trol CT-1 through Outfall 001, a daily grab sample shall be collected at the Outfall 001. The sample shall be analyzed for Clam Trol CT-1.

4. The concentration of the chlorine product of Clam Trol CT-1 at the effluent shall not exceed 0.06 mg/l (average) and 0.20 mg/l (instantaneous maximum). Also the use of Clam Trol CT-1 and Betz DIS shall be controlled to meet a total suspended solids net effluent limitations of 30 mg/l as an average monthly and 100 mg/l as daily maximum.

5. Usage rates of additives, and blow-down discharge rates shall be controlled by the permittee to ensure that toxic effects in the receiving stream are prevented. Usage rates shall be limited to the minimum amount necessary to accomplish the intended purposes of chemical addition.

6. Accurate records of usage (name of additive, quantity added, date added, concentration of Clam Trol CT-1 in the effluent) of any approved chemical additive and of blow-down discharge volumes must be maintained and kept on-site by the permittee.

7. Whenever a change in additives or increases in usage rates is desired by the permittee, a written request, which includes proposed usage rates and human health toxicity and aquatic life toxicity data of each additive, shall be submitted to the Department for approval.

The existing NPDES permit will be revised to include these chemical additives once our review of the permit renewal application is completed.

If you have any questions, please feel free to contact Sohan Garg of our Permits Section.

Very truly yours,

Joseph A. Fegla

JOSEPH A. FEGLA
Regional Water Quality Manager

cc: EPA (3WM51)
Delaware River Basin Commission
Limerick Township
Operations
Permits and Compliance
Re 30 (1)248

PHILADELPHIA ELECTRIC COMPANY
2301 MARKET STREET
P.O. BOX 8699
PHILADELPHIA, PA 19101
(215) 841-4000

February 24, 1992

Mr. Joseph A. Feola
Regional Water Quality Manager
D artment of Environmental Resources
555 North Lane
Lee Park, Suite 6010
Conshohocken, PA 19428

Dear Mr. Feola:

Limerick Generating Station NPDES Permit PA0051926

A review of Limerick Generating Station's last NPDES permit application was performed as requested by Mr. Sohan Garg. There have been no significant changes in any of the permitted discharges. However, since this permit will be reissued for the next five years, we would like to take this opportunity to request that the following amendments be made:

1. Perkiomen Water Storage Tank Freeze Protection Overflow

Currently, freeze protection for the Perkiomen storage tank is achieved by providing a continuous flow of Perkiomen Creek water to the storage tank. Overflow from the tank is discharged to Possum Hollow Run. This method is acceptable per the present NPDES permit. However, it is not the designed method and involves temporary plant alterations to the operation of the station.

The designed method utilizes a continuous flow of 55 GPM from the cooling towers to the storage tank. Since freeze protection would not start until the Perkiomen make-up pumping system is shut down, there would be very little mixing of Perkiomen Creek and cooling tower water. Therefore, the overflow to Possum Hollow Run will essentially consist of cooling tower water after a short period of time. This method has never been used because the overflow outfall is only permitted for Perkiomen Creek water.

We are requesting that this designed method be approved for use and included in the reissued NPDES permit. It is anticipated that this method of freeze protection would be in service from November 15 to March 15. Since the flow rate of cooling water to the tank is 55 GPM, the overflow rate to Possum Hollow Run will also be 55 GPM. The flow to the storage tank is initiated by temperature control valves when tank water temperature reaches 34 degrees F. and is secured when tank temperature reaches 44 degrees F. As stated, the water is cooling tower water and was characterized in our previous permit application and is currently a permitted discharge to outfall 001.

2. Outfall Redesignation

Due to the inclusion of storm water outfalls, the numbering scheme at the station is being redesignated to simplify the plan. Attached is a table listing the present outfall numbers and the redesignated (new) outfall numbers. Also included in this table are the longitudes and latitudes for the outfalls.

Storm water sampling and analysis will be done in compliance with the new storm water regulations and submitted later this year.

3. Holding Pond Operational Description (monitoring point 201)

The current permit describes the holding pond as receiving "power plant wastes and water treatment plant wastes." While the types of waste being routed to the holding pond have not changed since our last application analysis, we wish to ensure that this description is accurate.

As stated in previous supplements, Borax, Boric Acid, and Sodium Nitrite are used in treating various plant systems such as closed-loop cooling and the stand-by liquid control system. These systems are drained a few times a year for maintenance and testing. They are not a normal discharge to the holding pond.

Also, discharge of chemistry laboratory facilities is routed to the holding pond. Solvents and hazardous wastes are collected for disposal, but non-hazardous aqueous chemical reagents are flushed to the holding pond.

We would like to reiterate that these discharges are not new additions. They existed during the sampling and analysis done during the first permit application.

4. Use of Anti-foamants

We are presently permitted to use Foam Trol CT at a usage rate of 70 lbs./day. We are requesting that this limit be amended to 700 lbs./day and the use be approved on a year round, as needed basis.

Also, we are investigating the use of other anti-foamants sold by Betz, Calgon, and Nalco. We anticipate that these products will be of equivalent toxicity as Foam Trol CT and will be used at the same daily rate. We are requesting that the use of these alternatives be approved for use as substitutes to Foam Trol CT. Information on these products will be provided by the end of February.

5. Lubricating/Hydraulic Fluids

In our previous application, Supplement I contained a list of chemicals used on site that could potentially be present in the discharge. Although not specifically identified, various lubricating and hydraulic fluids, especially Fyrquel EHC fluid, could periodically be present in the discharge. These substances would be detected and reported as oil and grease during our weekly monitoring requirements. Therefore, this does not represent a change in the makeup of discharge but an operational description change/clarification.

6. Tolytriazole (TTA)

Nalco 1336 is presently authorized for use in our NPDES permit. The monitoring limitation is based on the whole product. Since Nalco 1336 is 42% TTA and it is the only active ingredient in the product, we are requesting that the monitoring requirement be based on TTA.

Also, we are requesting that alternative products be approved as substitutes to the Nalco product. Attached are Material Safety Data Sheets for Betz Powerline 3023 (43% TTA) and Calgon PCL-50 (43% TTA). Total site usage for any of these products is not expected to exceed 220 gallons per day (2178 lbs./day).

7. Additional inputs to Schuylkill River Pumphouse Traveling Screen Backwash, Outfall 011 (previously outfall 007)

Three additional inputs have been identified as contributing to outfall 001. They are: river water used as pump cooling water, river water leakage from piping, and condensation from an air compressor.

The pump cooling water is supplied from the pump discharge at approximately 5 GPM per pump. The discharge drains to the wet pit and only occurs when the pump is in service. Piping leakage is minor, and flow rates are difficult to determine. The condensate drain from the air compressor is also minor, and a flow rate cannot be determined.

8. Discharge of Reactor Enclosure/Refuel HVAC Room Water Via Outfall 003

Located in both Units 1&2 reactor enclosure/refuel HVAC rooms are floor drains that are routed to storm water outfall 003. These drains are intended to collect precipitation that enters the room via ventilation louvers. Also, chilling and heating coils are located in the room, and 3-4 gallons per day of condensed boiler steam leaks to the drain. The chillers, which are chemically treated with sodium nitrate, do not normally leak to the drain. They only represent a potential discharge to the drain via a system failure. Current procedures exist calling for the coils to be drained and laid up at the end of each service season. They are then pressure treated prior to being put back in service. Therefore, we believe it is unlikely that this treated water will enter the floor drain.

During normal operations, flow to outfall 003 is routed to the holding pond via a diverter valve. The operation of the valve is administratively controlled by plant procedures. A red blocking tag is secured to the valve operator and is removed only with approval from supervision. The valve is only operated during periods of excessive rainfall which cause the input rate to the holding pond to exceed the discharge rate (approximately 1000 GPM). Once the rainfall subsides and the flows normalize, the diverter valve is repositioned, and flow is again routed to the holding pond.

We are requesting that this discharge be approved in our NPDES permit. Understanding that water quality criteria is based on the receiving stream's Q 7-10 flow, we believe that an exception can be made in this case. As stated, discharge from the HVAC room would only go to outfall 003 during periods of excessive rainfall. Therefore, the discharge would only occur when the flow in Possum Hollow Run is at a high point and not during low flow conditions (i.e. Q 7-10). Administrative

procedures are in place to assure that this operation occurs as described.

Samples have been taken, and the analysis will be submitted as soon as the results are received.

9. Detection Level for Clam Trol CT-1

In your approval letter for the subject chemical additive, a limit on the concentration of the whole product not to exceed .06 mg/l was required as part of the approval. In our original request, we indicated that the lower limit of detection was .2 mg/l. The test method was developed by Betz, and they feel that the analysis for this detection level is unreliable. We are requesting that you review this information and reconsider the limitation.

10. Discharge of Cooling Tower Water to Storm Water Outfall 021

Outfall 021 has been identified as possibly receiving cooling tower water from two sources. The first is overspray at the cooling tower base (drift loss). The cooling towers, by design, will lose a certain percentage of cooling water by this method. It is clear that the overspray could reach the Schuylkill River via outfall 021, but the amount is not determinable.

The second method is from a preventative maintenance practice of washing the cooling tower screens. The screens are removed from the basin and placed on the ground to be washed. Debris from the screens is collected and disposed of properly. While the water does not discharge directly to the outfall, the potential does exist.

We are requesting that outfall 021 be permitted to receive cooling tower water on the basis just described. Since 021 discharges to the Schuylkill River and outfall 001 is permitted for cooling tower water, we feel that this minor addition will not impact the river.

We would like to arrange a meeting among PADER, Limerick Station, and Environmental Affairs personnel to discuss the enclosed information or any questions you might have on this submittal. If you concur, please contact Robert Matty at 841-5177 so that a time can be set up for the meeting as well as a site tour, if desired.

Very truly yours,

George M. Morley

George M. Morley
Manager
Environmental Affairs

bcc J. M. Madara, Jr. w/o attachment
G. M. Leitch " "
R. W. Dubiel " "
R. M. Krich " "
T. J. Jackson " "
G. J. Madsen " "
CCD

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