



Pennsylvania Power & Light Company

Two North Ninth Street • Allentown, PA 18101 • 215 / 770-5151

January 23, 1985

Mr. Paul J. Koval
Bureau of Water Quality Management
PA Department of Environmental Resources
P.O. Box 659
90 East Union Street, Second Floor
Wilkes-Barre, PA 18701-3296

SUSQUEHANNA STEAM ELECTRIC STATION
DISCHARGES OF CHILLED AND
CLOSED COOLING WATER
CCN 741326 FILE 012
PLE-6628

Dear Mr. Koval:

To update our telephone conversation of November 27, 1984 concerning the discharge of demineralized chilled and closed cooling water containing nitrites from the Susquehanna SES, we would like to provide the PA Department of Environmental Resources (PA DER) with information characterizing this discharge, the volumes and also the frequency of discharges. At the station, sodium nitrite or borated nitrite are added to these systems for corrosion prevention. The nitrite forms a metallic oxygen film protecting piping and heat exchangers. The level of nitrite in the cooling water is approximately 1,000 ppm. Other parameters such as iron, chloride, oil and grease and isotopic analysis are all within National Pollutant Discharge Elimination System (NPDES) limits and U.S. Nuclear Regulatory Commission Radiological Technical Specifications. The pH level, however, may exceed NPDES limits but upon mixing with the receiving bodies of water, would meet the NPDES limit. The following is a list of chilled and closed systems and their volumes:

<u>SYSTEM</u>	<u>NO. OF TANKS</u>	<u>VOLUME/TANK (gal)</u>
Units 1 & 2 Reactor Bldg. Closed Cooling Water	2	4,300
Units 1 & 2 Turbine Bldg. Closed Cooling Water	2	1,150
Units 1 & 2 Gaseous Radwaste Recombiner Closed Cooling Water	2	3,100
Units 1 & 2 Reactor Bldg. Chilled Water	2	4,750

8502040173 850123
PDR ADOCK 05000387
S PDR

IEZS
/U

January 23, 1985

2

CCN 741326

FLE- 6628

File 012

<u>SYSTEM</u>	<u>NO. OF TANKS</u>	<u>VOLUME/TANK (gal)</u>
Units 1 & 2 Turbine Bldg. Chilled Water	2	6,400
-- Constrol Structure Chilled Water	1	650
-- Radwaste Bldg. Chilled Water	1	420
A, B, C, D Diesel Generator* Jacket Water	4	600

* Borated nitrite is used in this system. The other systems use sodium nitrite.

Planned maintenance of these systems would occur annually.

The location of the particular system will determine where the water will be discharged. The following is a list of possible receiving locations:

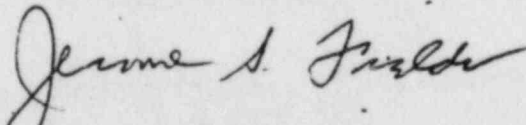
- o Cooling Tower Basin
- o Cooling Tower Blowdown Line*
- o S-2 Pond
- o Storm Drains

* Through radwaste system.

As we indicated previously in letter PLE-6114, October 29, 1984, samples of the water would be sampled prior to discharge.

If you have any questions or comments, please contact me at (215) 770-7889.

Respectfully yours,



Jerome S. Fields
Sr. Environmental Scientist-Nuclear

.JSF:dmk

jsflt10023361

cc: A. Schwencer

NRC