POWER AUTHORITY OF THE STATE OF NEW YORK
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

JOHN D. LEONARD, JR.
Resident Manager

P.O. BOX 41
Lycoming, New York 13093
315-342-3840

October 31, 1979
JAFP-79- 600

Mr. Boyce H. Grier, Director
United States Nuclear Regulatory Commission
Region 1
631 Park Avenue
King of Prussia, PA 19406

SUBJECT: NRC I & E BULLETIN NO. 79-24
FROZEN LINES

Dear Mr. Grier:

The FitzPatrick Plant staff reviewed all process, instrument and sample lines that are safety related. The staff determined that adequate protective measures have already been taken to preclude freeze up of lines during extremely cold weather.

In 1977, the plant submitted a licensee event report because of a loss of off gas vent pipe sample flow due to a line freezeup as a result of the heat tracing being unplugged. A mechanical device was installed to preclude recurrence and no further problems have been evident.

As an additional measure, the plant staff will perform a check out of heat tracing associated with keeping lines from freezing on an annual basis (generally in the fall) to assure proper operation of the circuits.

Further, it should be noted that during the most recent winter (1978-1979), record low temperatures were observed in the Oswego area and the plant did not have any freezeup problems with safety related equipment.

The following table lists the systems that were reviewed that have no lines that are subjected to freezing temperatures.

Main Steam System	Feedwater System
Standby Liquid Control System	Diesel Generators
Reactor Building Closed Loop Cooling	Recirculation System
Automatic Depressurization System	Control Room Ventilation
Residual Heat Removal System	Battery Room Ventilation

The following table lists the systems that have lines that are subject to freezing temperatures, the function of the line, and the measure taken to prevent freeze ups.

298

1579 277

7912140

SYSTEM	FUNCTION OF LINE	MEASURE TO PREVENT
Circulating Water System	Intake Tunnel	88 bar heaters
Residual Heat Removal Service Water	Intake Tunnel (Suction)	88 bar heaters
Emergency Service Water	Intake Tunnel (Suction)	88 bar heaters
Core Spray System	Alternate suction from Condensate Storage Tank (Outside)	Tanks are steam heated, line is heat traced
High Pressure Coolant Injection	Preferred Suction and Test Line-Condensate Storage Tank (Outside)	Tanks are steam heated, lines are heat traced
Reactor Core Isolation Cooling	Preferred Suction and Test Line-Condensate Storage Tank (Outside)	Tanks are steam heated, lines are heat traced
Standby Gas Treatment System	Discharge to Plant Stack	Pipe is below frost line and sloped to keep it drained
Control Rod Hydraulic System	Suction and Minimum Flow-Condensate Storage Tank (Outside)	Tanks are steam heated, pipes are electrically heat traced
Fuel Pool Cooling	Reject to Condensate Storage	Pipe is electrically heat traced
Containment Air Dilution	Atmospheric Heat Exchanger	Periodically has to be defrosted with steam
Fire Protection System	Outside Loop Piping and Hydrants	Pipes are below frost line, hydrants are self-draining to below frost line. Semi-annual inspection.

SYSTEM	FUNCTION OF LINE	MEASURE TO PREVENT
Reactor Building Ventilation System	Cooling Coil In Intake	Drained via remotely operated electrical solenoid valves during cold weather
Off Gas System	Discharge Pipe Line	Sloped to keep water drained and below frost line
Off Gas System	Sample Line	Heat traced

Very truly yours,

John D. Leonard, Jr.
Resident Manager

JDL:RC:sw

CC: George T. Berry, PASNY, NYO
G. A. Wilverding, PASNY, NYO
P. W. Lyon, PASNY, NYO
M. C. Cosgrove, PASNY, JAF
R. J. Pasternak, PASNY, JAF
W. V. Childs, PASNY, JAF
R. J. Converse, PASNY, JAF
Document Control Center