GPU Nuclear

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July 1, 1981

Mr. Boyce H. Grier
Office of Inspection and Enforcement
Region I
631 Park Avenue
King of Prussia, PA 19046

Dear Mr. Grier:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Dilution Pump Improvements

In your Inspection Report No. 50-219/80-30, by Mr. T. J. Jackson, the continuing problems associated with the operation of the plant dilution pumps was discussed. In your recent letter dated February 26, 1981, we stated that an evaluation of the feasibility of undertaking long-term plans for improving operability of the plant dilution pumps would be completed by May 31, 1981 and that your office would be notified by June 30, 1981, regarding the results of the evaluation.

Provided for your information are the following improvements which should be implemented to improve the reliability and operability of the dilution pumps.

EVALUATION/ACTIONS:

1. The pump seal water and lubricating oil cooling water will be restored to a salt water system which will include the following:

   a. The two vertical cooling pumps presently in use were designed to produce 150 gpm each of seawater, specific gravity, 1.03 at a head of 118 feet and standard ambient temperature rise. In order to supply lubricating oil cooling water only, both pumps must be run to support the operation of two dilution pumps. Lubricating oil cooling water requirements for all three dilution pumps lubricating oil coolers is 105 gpm total. The vertical cooling pumps have marginal capacity to supply this water. Fire protection water is supplied to the seal water system because of the inadequacy of the vertical cooling water pumps.

Since the original dilution plant operation was designed for use of seawater in restoring this system, the fire protection system water now being used will in the future only be used as a back-up system.

The cooling water nominal flow is 35.2 gpm at 1.42 psig switching in pressure. Flow switches installed in each line will trip dilution pumps at 26 gpm. The seal water nominal flow is 13.2 gpm at 11.35 psig switching in pressure. Low flow switches installed in each line will trip dilution pumps at 8 gpm. Plant operations indicate that it would be advantageous to install flowmeters at various locations in both seal and cooling water systems to verify correct rated flow capacity.

b. During the summer, the Duplex strainers clog frequently due to the induction of sea grass and require cleaning as often as once a shift, depending on tide conditions. We are presently exploring the use of self-cleaning pipeline strainers designed for the continuous removal of solids from liquids. Debris is quickly discharged from the strainer through the backwash outlet connection; this will prevent the clogging now encountered with sea grass.

c. Seawater is corrosive to metals in general by virtue of its chemistry. In order to upgrade the piping, all carbon steel pipe will be replaced with more corrosion-resistant pipe and fittings.

2. Two temporary wooden structures have been erected at the lower elevation of the dilution pump house, complete with lighting and thermostatically controlled space heaters. Outside of these structures, the heat tracing will be corrected and made operable with the necessary insulation installed.

3. KSB Pump Company is the original fabricator of the three dilution pumps installed at Oyster Creek in 1968. Spare parts have been recommended to allow rebuilding all three pumps (pump end) and auxiliary equipment. Delivery for these items is a minimum of twelve months and it is anticipated that each pump will require one month to complete corrective maintenance.

The above corrective action will improve overall dilution plant performance and manufacturers recommended replacement parts will be stocked to satisfy long term plant operating criteria.

Based upon implementation of the suggested corrective action and considering delivery of equipment and installation, the proposed date for full compliance would be August 1983.

If you have any questions, please call Mr. Ron Lacey, Environmental Licensing Manager at (201) 299-2271.

Very truly yours,

Ivar R. Finfrock, Jr.
Vice President - JCP&L
Director - Oyster Creek

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cc: Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

NRC Resident Inspector
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