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Vogtle Project

July 18, 1981



United States Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

Reference:

R11: JPO
50-424
50-425

File: X7BC24
Log: GN-138

Attention: Mr. James P. O'Reilly

Gentlemen:

The following is submitted in response to your letter dated April 10, 1981, requesting information concerning IE Bulletin 81-03. The information format provided herein is similar to the Bulletin question format.

1. a) Corbicula sp. is present in the Savannah River at the Vogtle jobsite.
- b) The design of the Vogtle Nuclear Plant (VNP) incorporates a chlorination system to control biological growth and a travelling screen is used to prevent foreign matter from entering the river water makeup system. There is no instrumentation specifically designed to indicate the presence of organisms.

The potential for Corbicula to enter the VNP river makeup water system piping is credible, as the only physical barrier to infestation is the travelling screen with a 1/4" mesh. Because this is larger than the size of the Corbicula larva, it is possible for the larva to enter the river makeup water stream at high flow, low water conditions. However, the river is only a backup source of makeup water. The safety-related cooling water systems normally receive makeup water from the plant's demineralized water system or makeup wells, which have no evidence of Corbicula. Therefore, it is highly unlikely that safety-related cooling system would be degraded due to Corbicula infestation.

2. At the present stage of construction, no potentially affected systems have been completed to the point of filling. Thus, there is currently no infestation at Plant Vogtle.

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The potentially affected systems are:

- a) River Water Makeup System (RWMS)
- b) Turbine Plant Cooling System (TPCS)
- c) Nuclear Service Cooling Water System (NSCWS)
- d) Waste Water Effluent System (WWES)

The RWMS, TPCS, and NSCW systems are provided with chlorination capability. However, only the RWMS and TPCS are felt to have chlorination capabilities sufficient to successfully combat Corbicula.

- 3. a) Environmental monitoring on May 13, 1981, revealed the presence of Corbicula in quantity both upstream and downstream of the jobsite.
- b) The RWMS is the only direct interface with the affected water. The RWMS is to be continuously chlorinated at a level of 10 ppm, providing a residual-free chlorine level of 1 ppm.

The TPCS, which receives makeup water from the river, will be chlorinated on a periodic basis depending upon season. This chlorination will vary from once or twice per day in the summer to once a week during the winter, with continuous chlorination during the Corbicula spawning seasons as required. Maximum free residual chlorine will be limited to .5 ppm at the condenser discharge.

The NSCW system primarily obtains its makeup water from the plant makeup wells. The only time the NSCWS interfaces with the river water makeup system is during "low-low" water conditions in the NSCW cooling tower basins, and then only by administrative control. Thus, there is only a remote possibility of the NSCW system becoming contaminated with Corbicula. In addition, the NSCWS is chlorinated on a periodic basis (from one hour/day in the summer to one hour/week in the winter) to a level of .2 to .5 ppm maximum residual-free chlorine at the outlets of the heat exchangers. Should river water makeup be provided for the NSCW, procedures will insure that there is no infestation of NSCW by Corbicula (e.g., continuous chlorination for a prolonged period of time).

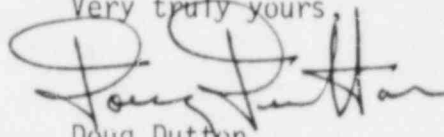
The seismic Category 1 standpipe portion of the fire protection system derives its water from the NSCWS; however, these lines are normally isolated from the NSCW system and are "dry" lines.

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The WWES uses RWMS water to dilute liquid radwaste discharges when required to meet 10 CFR 20 radioactivity level requirements. Due to this requirement, there is direct communication between the RWMS and the WWES at the blowdown sump, and contamination may occur in this case. There are no means provided for the control of Corbicula in this system.

This reply contains no proprietary information and may be placed in the NRC's Public Document Room.

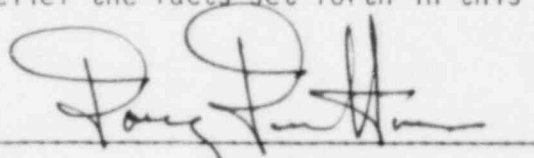
Very truly yours,


Doug Dutton
Project General Manager

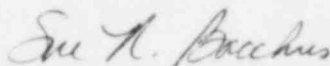
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Doug Dutton states that he is Project General Manager of Georgia Power Company's Vogtle Project and is authorized to execute this oath on behalf of Georgia Power Company and that to the best of his knowledge and belief the facts set forth in this letter are true.

GPC:


Doug Dutton

Sworn to and subscribed before me this 21st day of July, 1981.



Notary Public, Georgia, State at Large
My Commission Expires March 21, 1985

xc: U. S. Nuclear Regulatory Commission
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