



# MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

31 JUN 8 5P 1981

JAMES P. McGAUGHY, JR.  
ASSISTANT VICE PRESIDENT

Office of Inspection & Enforcement  
U.S. Nuclear Regulatory Commission  
Region II  
101 Marietta St., N.W., Suite 3100  
Atlanta, Georgia 30303

Attention: Mr. J. P. O'Reilly, Director

Dear Mr. O'Reilly:



SUBJECT: Grand Gulf Nuclear Station  
Units 1 and 2  
Docket Nos. 50-416 and 50-417  
File 0262/0472/L-860.0/L-401.0  
Evaluation of IE Bulletin  
No. 81-03  
AECM-81/174

Mississippi Power & Light Company has completed its evaluation of IE Bulletin 81-03 for Grand Gulf Nuclear Station and is providing the following response for those actions requested of Holders of Construction Permits:

1. Determine whether Corbicula Sp. or Mytilus Sp. is present in the vicinity of the station by completing items 1 and 4 above that apply to operating licenses (OL).

## Response

The presence of Corbicula Sp. in the Mississippi River in the area of the Grand Gulf Nuclear Station was first identified in the Preconstruction Environmental Monitoring Program conducted at the site in 1972 and 1973. While Corbicula was found in the river, its numbers were small and scattered. More recent surveys conducted at the site by the GGNS plant staff and the Army Corps of Engineers - Waterways Experiment Station has again indicated the presence of Corbicula Sp. but in smaller numbers than encountered in some of the oxbow lakes and back waters of the Mississippi River. Reasons for the small numbers of Corbicula in the river itself may be the high density of suspended solids present in the Mississippi River water (approximately 300 mg/l), and the fast current present in the river channel.

Mytilus Sp. is not present in the vicinity of the Grand Gulf Nuclear Station as their habitat is normally restricted to salt water.

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Member Middle South Utilities System

2. If these organisms are present in the local environment and potentially affected systems have been filled from the station source or receiving water body, determine whether infestation has occurred.

Response

After receiving IR Bulletin 81-03, Mississippi Power and Light Company initiated a Corbicula Sp. Environmental Monitoring Program for the Grand Gulf Nuclear Station. The program and results are described in detail by our response to Action 3a below. The results of the program show that infestation by Corbicula Sp. has not occurred to date at GGNS.

3. Describe the actions taken in items 1 and 2 above for Construction Permit holders and include the following information:
- a.) Applicable portions of the Environmental Monitoring Program including last sample date and results.

Response

The Mississippi Power & Light Company has developed an Environmental Monitoring Program for Grand Gulf Nuclear Station including the visual inspection of various systems cooling water flow paths as well as sampling of the plant receiving water (Mississippi River). The results of this program are outlined below:

<u>System Inspected</u>	<u>Date Inspected</u>	<u>Corbicula Present</u>
Stand-by Service Water Basin	4/27/81	0
Cooling Tower Basin	4/27/81	0
Turbine Building Cooling Water Heat Exchangers	4/27/81	0
HP Condensor	4/27/81	0
IP Condensor	4/27/81	0
LP Condensor	4/27/81	0

<u>River Mile Inspected</u>	<u>Date Inspected</u>	<u>Corbicula Present</u>
406.0	5/08/81	0
407.0	5/08/81	0
408.0	5/08/81	0
Barge Slip	5/08/81	0

- b.) Components and systems affected.

Response

The Plant Service Water System (PSW) supplies cooling water to the various heat exchangers and chillers at the Grand Gulf

Nuclear Station. This system receives its supply of water from three radial wells located on the Mississippi River bank approximately 2000 feet west of the plant. The radial wells are large reinforced concrete vertical caissons which extend approximately 150 feet into the ground with a concrete plug in the bottom of the caisson. Perforated pipes called laterals are horizontally projected from the vertical caisson into the surrounding aquifer near the bottom of the vertical caisson. As water is pumped from the radial wells, water from the aquifer flows into the laterals and the aquifer is recharged via induced infiltration of river water which filters through the sand and gravel underlying the Mississippi River bed.

Some makeup is also derived from the ground water supply. It is estimated that after one year of continuous operation of the radial wells, the plant service water will be made up of 70% river water and 30% ground water.

The advantage of this type of water intake system is that all organisms as well as most of the suspended solids present in the river water are filtered out as the water percolates down through approximately 100 feet of sand and gravel to the underlying aquifer. This natural filtering action is more than adequate to preclude the entrainment of Corbicula Sp. or its larvae in the Plant Service Water.

c.) Extent of fouling if any existed.

Response

No fouling identified in samples taken to date for the Environmental Monitoring Program at GGNS.

d.) How and when fouling was discovered.

Response

No evidence of fouling identified to date at GGNS.

e.) Corrective and preventive actions.

Response

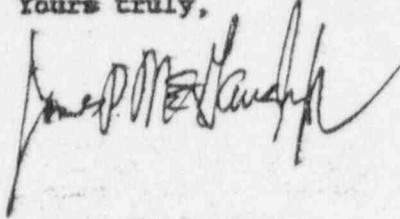
The method of water makeup utilized at the Grand Gulf Nuclear Station inhibits the entrainment of Corbicula Sp. or its larvae in the Plant Service Water System and therefore prevents the blockage of cooling water to safety system components. This conclusion is further reinforced by the visual inspection of several safety related systems which have been flushed or contain flushing water from the PSW System.

In order to ensure that Corbicula Sp. are not present in the PSW System and that they will not cause fouling of safety systems once Grand Gulf begins operation, several of the

safety system component cooling water paths will again be visually checked for the presence of Corbicula Sp. prior to commercial operation. If this check again indicates the lack of Corbicula Sp. in safety systems, no further monitoring will be deemed necessary except for those inspections which take place during routine maintenance.

This constitutes our complete response on this subject, therefore no further action is planned. Should you have any further questions regarding this matter, please advise.

Yours truly,



JPM:ad

cc: Mr. N. L. Stampley  
Mr. G. B. Taylor  
Mr. R. B. McGehee  
Mr. T. B. Conner

Mr. Victor Stello, Jr., Director  
Office of Inspection & Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555



BEFORE THE

UNITED STATES NUCLEAR REGULATORY COMMISSION

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DOCKET NOS. 50-416 AND 50-417

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IN THE MATTER OF

MISSISSIPPI POWER & LIGHT COMPANY

and

MIDDLE SOUTH ENERGY, INC.

and

SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

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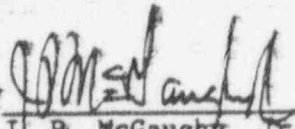
IE BULLETIN 81-03 RESPONSE  
FOR ACTIONS TO BE TAKEN BY LICENSEES

Mississippi Power & Light Company for itself on behalf of Middle South Energy, Inc. and South Mississippi Electric Power Association herewith files this response to IE Bulletin 81-03 in connection with the Construction Permits for the Grand Gulf Nuclear Station, as requested by the United States Nuclear Regulatory Commission, Region II Office of Inspection and Enforcement, in a letter to Mississippi Power & Light Company, dated April 10, 1981.

Respectfully submitted,

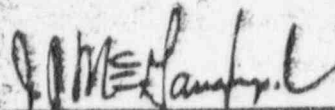
Mississippi Power & Light Company

BY

  
J. P. McGaughy, Jr.  
Assistant Vice President  
Nuclear Production

STATE OF MISSISSIPPI  
COUNTY OF HINDS

I, J. P. McGaughy, Jr., being duly sworn, states that I am Assistant Vice President-Nuclear Production of Mississippi Power & Light Company; that on behalf of Mississippi Power & Light Company, Middle South Energy, Inc. and South Mississippi Electric Power Association I am authorized by Mississippi Power & Light Company to sign and file with the Nuclear Regulatory Commission, this response to IE Bulletin 81-03 in connection with the Construction Permits of the Grand Gulf Nuclear Station; that I signed the foregoing letter containing said response as Assistant Vice President-Nuclear Production of Mississippi Power & Light Company; and that the statements made and the matters set forth therein are true and correct to the best of my knowledge, information and belief.

  
J. P. McGaughy, Jr.

SUBSCRIBED AND SWORN TO before me, a Notary Public, in and for the County and State above named, this 5<sup>th</sup> day of June, 1981.

(SEAL)

  
Notary Public

My commission expires:

February 13, 1981