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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

August 1, 1979

Docket No.: 50-546/547

Dr. James Coughlin
Vice President, Nuclear
Public Service of Indiana
1000 E. Main Street
Plainfield, Indiana 46168

Dear Dr. Coughlin:

SUBJECT: SECONDARY WATER CHEMISTRY CONTROL
(Marble Hill)

In late 1975 we incorporated provisions into the Standard Technical Specifications (STS) that required limiting conditions for operation and surveillance requirements for secondary water chemistry parameters. The proposed Technical Specifications for your plant(s), as well as for other Pressurized Water Plants that have been issued an Operating License since 1974 or are now under review for an Operating License, contain either these provisions or a requirement to establish these provisions after baseline chemistry conditions have been determined. The intent of the provisions was to provide added assurance that the operators of newly licensed plants would properly monitor and control secondary water chemistry to limit corrosion of steam generator tubes.

In a number of instances the Technical Specifications have significantly restricted the operational flexibility of some plants with little or no benefit with regard to limiting corrosion of steam generator tubes. Based on this experience and the knowledge gained in recent years, we have concluded that Technical Specification limits are not the most effective way of assuring that steam generator tube corrosion will be minimized.

Due to the complexity of the corrosion phenomena involved and the state-of-the-art as it exists today, we believe that, in lieu of Technical Specifications, a more effective approach would be to institute a license condition that requires the implementation of a secondary water chemistry monitoring and control program containing appropriate procedures and administrative controls.

The required program and procedures would be developed by the licensee (or applicant) with any needed input from their reactor vendors or other consultants, and thus could more readily account for site and plant-specific factors that affect chemistry conditions in the steam generators. In our view, plant operation following such procedures would provide assurance that licensees would devote proper attention to controlling secondary water chemistry, while also providing the needed flexibility to allow them to deal more effectively with any off-normal conditions that might arise.

Consequently, we request that you submit within 60 days your proposed secondary water chemistry program which will be referenced in a condition to your operating license and will replace any proposed Technical Specifications on secondary water chemistry. A model license condition is enclosed. We have concluded that such a license condition, in conjunction with existing Technical Specifications on steam generator tube leakage and inservice inspection, would provide the most practical and comprehensive means of assuring that steam generator tube integrity would be maintained.

If you have any questions, please contact us.

Sincerely,

Calvin W. Moon

for

L. S. Rubenstein, Acting Chief
Light Water Reactors Branch No. 4
Division of Project Management

Enclosure:
Model License Condition

cc w/enclosure:
See next page

Public Service of Indiana

cc:
Charles W. Campbell, Esq.
Vice President and General Counsel
Public Service of Indiana
1000 E. Main Street
Plainfield, Indiana

Mr. William Kortier
Atomic Power Distribution
Westinghouse Electric Corporation
P. O. Box 355
Pittsburgh, Pennsylvania 15230

Mr. P. L. Wattelet
Sargent & Lundy Engineers
55 East Monroe Street
Chicago, Illinois 60603

Harry H. Voigt, Esq.
LeBoeuf, Lamb, Leiby & MacRae
1333 New Hampshire Avenue, N.W.
Washington, D. C. 20036

George A. Leininger, Jr., Esq.
City Attorney, City of Madison
P. O. Box 826
Madison, Indiana 47250

Mr. Robert Gray
Rural Route #1
Hanover, Indiana 47243

J. Bruce Miller, Esq.
Jefferson County Attorney
1129 Kentucky Home Life Building
Louisville, Kentucky 40202

Ted R. Todd, Esq.
Attorney for the Board of
Commissioners of the County
of Jefferson, Indiana
427 East Main Street
Madison, Indiana 47250

Thomas M. Dattilo, Esq.
Metford & Dattilo
311 East Main Street
Madison, Indiana 47250

Public Service of Indiana

cc (continued)
Joseph B. Helm, Esq.
Brown, Todd & Heyburn
Sixteenth Floor
Citizens Plaza
Louisville, Kentucky 40202

Michael J. Walro, Esq.
Attorney for the Planning Board and
the Board of Zoning Appeals of
Jefferson County
427 East Main Street
Madison, Indiana 47250

Mr. Robert C. Slover
Save the Valley, Inc.
P. O. Box 813
Madison, Indiana 47250

Walker C. Cunningham, Jr., Esq.
1129 Kentucky Home Life Building
Office of the Jefferson County Attorney
Louisville, Kentucky 40202

David K. Martin, Esq
Assistant Attorney Generals
Room 34, State Capitol
Frankfort, Kentucky 40601

Donald J. Ridings, Esq.
Attorney for Jefferson County
610 Old Louisville Trust Building
Louisville, Kentucky 40202

Bill V. Seiller, Esq.
Ewen, MacKensie and Peden
2100 Commonwealth Building
Louisville, Kentucky 40202

Ms. Marie Horine, President
Save Marble Hill
Rural Route #2
Lexington, Indiana 47138

Mrs. David G. Frey
Indiana Sassafras Audubon Society
2625 S. Smith Road
Bloomington, Indiana 47401

cc (continued)
Mr. Ralph C. Pickard
Indian State Board of Health
1330 West Michigan Street
Indianapolis, Indiana 46205

Mr. Donald L. Cox
Assistant Director of Law
City of Louisville
200 City Hall
Louisville, Kentucky 40202

Mr. Richard S. Salzman, Chairman
Atomic Safety and Licensing Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. John H. Buck
Atomic Safety and Licensing Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 2055

Mr. Michael Farrar
Atomic Safety and Licensing Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

ENCLOSURE

MODEL LICENSE CONDITION

SECONDARY WATER CHEMISTRY MONITORING

The licensee shall implement a secondary water chemistry monitoring program in accordance with (reference Licensee's Procedure) to inhibit steam generator tube degradation. This program includes:

1. Identification of a sampling schedule for the critical parameters and of control points for these parameters;

2. Identification of the procedures used to measure the value of the critical parameters;

3. Identification of process sampling points;

4. Procedure for the recording and management of data;

5. Procedures defining corrective actions for off-control point chemistry conditions; and

6. A procedure identifying (1) the authority responsible for the interpretation of the data and (2) the sequence and timing of administrative events required to initiate corrective action.