



LONG ISLAND LIGHTING COMPANY

175 EAST OLD COUNTRY ROAD • HICKSVILLE, NEW YORK 11801

MILLARD S. POLLOCK
VICE PRESIDENT - NUCLEAR

April 21, 1983

SNRC-846

Mr. Edward L. Jordan
Director, Division of Engineering and
Quality Assurance
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19404

I&E Bulletin 81-03
Long Island Lighting Company
Shoreham Nuclear Power Station - Unit 1
Docket No. 50-322

Dear Mr. Jordan:

In response to your request for additional information concerning the subject bulletin, we have enclosed a copy of our letter SNRC-682, dated March 30, 1982. We believe that this letter, which was supplementary to our original response, SNRC-590, dated July 7, 1981, provides the major portion of the information presently being requested.

In our original response it was stated that during normal operation of the plant, the attachment and growth of biofouling organisms in the salt service water systems serving the plant will be controlled by application of hypochlorite at the maximum rates allowed by the U. S. Environmental Protection Agency. In complying with your request for additional information concerning application of hypochlorite, the following update to that response is provided:

At present, our New York State Department of Environmental Conservation (NYSDEC) discharge permit allows for a maximum daily discharge of 0.5 milligrams per liter free available chlorine during test and startup operations. The level of chlorination to be applied during normal plant operation has not as yet been mutually agreed upon by NYSDEC and LILCO. The discharge permit has established the guidelines for determination of an acceptable level.

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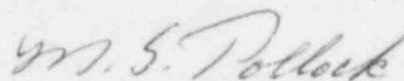
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Because the permit was issued on December 1, 1981, it reflected the then draft EPA regulations which controlled the discharge of chlorine (40CFR 423.13b). These regulations prohibited the discharge of total residual chlorine unless a chlorine minimization study was conducted which demonstrated the necessity of discharging chlorine. The permit requires that LILCO submit a plan of study for the chlorine minimization program to NYSDEC for approval within 180 days of the initiation of Reactor Low Power Testing, and also requires that the discharge of chlorine will reflect applicable EPA BAT Limits. It also noted that chlorine discharge would be limited to two hours per day unless it is required for mollusk or crustacean, or any other biota EPA should permit.

On December 3, 1982, EPA issued final regulations (40CFR 423.13b) controlling the discharge of chlorine which established a maximum discharge concentration of total residual chlorine to be 0.2 mg/l. In addition, the regulations allow for chlorine discharge for more than two hours per day if it is required for macro invertebrate control. Therefore, both the current NPDES permit and EPA regulations allow the discharge of chlorine for two hours or longer in order to control macro invertebrates.

We trust the above information has been responsive to your request. If you have any additional information requirements, do not hesitate to contact us.

Very truly yours,



M. S. Pollock
Vice President - Nuclear

RWG/SD/HE:mp

Attachment

cc: Mr. James Allan - Acting Regional Administrator (Region 1)
Mr. J. Higgins - NRC Site Inspector
"All Parties listed in Attachment 1"

ATTACHMENT 1

Lawrence Brenner, Esq.
Administrative Judge
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Peter A. Morris
Administrative Judge
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. James H. Carpenter
Administrative Judge
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Daniel F. Brown, Esq.
Attorney
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Bernard M. Bordenick, Esq.
David A. Repka, Esq.
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

James Dougherty
3045 Porter Street
Washington, D.C. 20003

Herbert H. Brown, Esq.
Lawrence Coe Lanpher, Esq.
Karla J. Letsche, Esq.
Kirkpatrick, Lockhart, Hill
Christopher & Phillips
8th Floor
1900 M Street, N.W.
Washington, D.C. 20036

Mr. Marc W. Goldsmith
Energy Research Group
4001 Totten Pond Road
Waltham, Massachusetts 02154

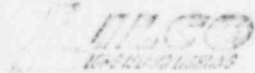
MHB Technical Associates
1723 Hamilton Avenue
Suite K
San Jose, California 95125

Stephen B. Latham, Esq.
Twomey, Latham & Shea
33 West Second Street
P.O. Box 398
Riverhead, New York 11901

Ralph Shapiro, Esq.
Cammer and Shapiro, P.C.
9 East 40th Street
New York, New York 10016

Matthew J. Kelly, Esq.
State of New York
Department of Public Service
Three Empire State Plaza
Albany, New York 12223

Book



LONG ISLAND LIGHTING COMPANY

175 EAST OLD COUNTRY ROAD • HICKSVILLE, NEW YORK 11601

MILLARD S. POLLOCK
VICE PRESIDENT-NUCLEAR

March 30, 1982
SNRC-682

Mr. Ronald C. Haynes
Regional Administrator, Region 1
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19404

I&E Bulletin 81-03
Long Island Lighting Company
SHOREHAM NUCLEAR POWER STATION - UNIT 1
Docket No. 50-322

Dear Mr. Haynes:

In our response to I&E Bulletin 81-03, via letter SNRC-590, dated July 7, 1981, it was stated that bio-fouling had taken place in the non-safety related Turbine Building Service Water System. The following information is provided to update that response based upon recent Startup test experience.

Our initial response stated that the blue mussel Mytilus edulis was found to have fouled the 24 inch supply pipe to the Turbine Building Closed Loop Cooling Water System Heat Exchanger (TBCLCW) with shells and debris found to be in the TBCLCW inlet boxes. This particular system had been operated intermittently for some time in excess of two years. Initially a submersible pump located in the intake canal supplied unfiltered seawater at a lower than normal flow and without adequate chlorination. During the latter part of that two year period, a second temporary pump was utilized providing higher flow but again without filtration. During this period, final dredging of the intake canal was also performed which is considered to contribute to the bio-fouling process which occurred. It should be noted that no safety related heat exchangers were supplied service water through this same time span.

At present, various service water supplied heat exchangers having safety related functions are in the Startup test phase. The water as supplied is from the safety related Reactor Building Service Water System using the plant pumps and strainers. After approximately eight months of intermittent operation, the RHR

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exchangers were visually inspected for bio-fouling and none was noted other than a handful of shells. The Reactor Building Closed Loop Heat Exchangers have also been similarly inspected and found to be free of bio-fouling.

To assure adequate flow to all heat exchangers in safety-related systems using service water, flow elements have been provided on inlet or discharge of each exchanger. Because of the safety and performance implications associated with blockage of these heat exchangers, the station operational procedures will contain requirements for periodic monitoring and inspection. As a minimum, flow for all safety-related service water supplied heat exchangers, as tabulated below, will initially be checked quarterly with visual inspection of exchanger inlet channels to be performed at eighteen month intervals as appropriate. The interval for this periodic program will be adjusted as a result of monitoring and evaluation of test data. This program will help ensure that the safety-related heat exchangers are available when required.

<u>Heat Exchanger</u>	<u>Designation</u>
Reactor Building Standby Ventilation System (RBSVS)	IM50*WC-003A,B
Control Room Air Conditioning (CRAC)	IM50*WC-004A,B
Residual Heat Removal (RHR)	IE11*E-034A,B
Reactor Building Closed Loop Cooling Water (RBCLCW)	IP42*E-011A,B
Diesel Cooler	IR43*E-013A,B,C

We trust the above information has been responsive to your request. If you have any additional information requirements, please do not hesitate to contact us.

Very truly yours,

M. S. Pollock

M. S. Pollock
Vice President - Nuclear

AMA
HE/pg

cc: J. Higgins - NRC Trailer

bcc: W. R. Steiger
R. Gutmann
Dist. #14

Eng. File/SR2 A21.650