

NRC 128

113



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

Docket Nos. STN 50-596
and STN 50-597

JUN 22 1979

Mr. Allen E. Kintigh
Vice President - Generation
New York State Electric & Gas Corporation
4500 Vestal Parkway East
Binghamton, New York 13902

Dear Mr. Kintigh:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION CONCERNING NEW HAVEN 1 & 2

As a result of our review of the New Haven 1 & 2 Preliminary Safety Analysis Report (PSAR), we find that we need additional information to continue our evaluation. The specific information requested in the Enclosure concerns the area of hydrology. Of the major hydrology deficiencies identified during the Acceptance Review, those related to site drainage and ultimate heat sink performance have not been adequately addressed in your PSAR.

After you have had an opportunity to review the information requested in the Enclosure, we would like to meet with you to discuss and resolve the continuing difficulties in this area of review. Appropriate staff and management representatives should be present to allow resolution of the issues.

Please contact us so that we may arrange the meeting.

Sincerely,

Alan D. Parr

Alan D. Parr, Chief
Light Water Reactors Branch No. 3
Division of Project Management

Enclosure:
As stated

cc w/enclosure:
See next page

7909050287

311111

Mr. Allen E. Kintigh

- 2 -

JUN 22 1979

cc: Roderick Schutt, Esq.
Huber, Magill, Lawrence & Farrell
99 Park Avenue
New York, New York 10016

Andrew W. Wofford, Vice President
Long Island Lighting Company
175 Old Country Road
Hicksville, New York 11801

Edward M. Barrett, Esq.
General Counsel
Long Island Lighting Company
250 Old Country Road
Mineola, New York 11501

E. J. Walsh, Jr., Esq.
General Attorney
Long Island Lighting Company
250 Old Country Road
Mineola, New York 11501

Ms. Anne F. Curtin
R.D. 1
Box 82A40
Valatie, New York 12184

Stanley B. Klimberg, Esquire
Acting Counsel
New York State Energy Office
2 Rockefeller Plaza
Albany, New York 12223

Ecology Action
c/o Ms. Helen Daly
W. River Rd. RD #5
Oswego, New York 13126

Safe Energy for New Haven
c/o Ms. Linda Clark
Box #122 RD #1
Mexico, New York 13114

Oswego County Farm Bureau
c/o Ms. Nancy K. Weber
RD #3
Mexico, New York 13314

Paul Voninski, Ph.D.
Vice President
Mexico Academy and
Central School
Mexico, New York 13114

Mr. Peter D. G. Brown
Chairman of the Board
Mid-Hudson Nuclear Opponents, Inc.
P. O. Box 666
New Paltz, New York 12561

Robert J. Kafin, Esquire
Miller, Mannix, Lemery & Kafin, P.C.
P. O. Box 765
11 Chester Street
Glens Falls, New York 12801

William Kepping, Supervisor
Town of Gardiner
Gardiner, New York 12525

Dr. Stephen J. Egemeier
Chairman
Environmental Management Council
300 Flatbush Avenue
Kingston, New York 12401

911112

ENCLOSURE

371.29
(2.4.1.2)

In response to question 371.4 you have incorporated a copy of the Current Velocity and Stream Flow subsections of section 2.4.1.2 of the Environmental Report into the PSAR. We found those sections to be inadequate in our environmental review and conclude they are not an adequate response to question 371.4. Specifically, provide general hydrologic descriptions of the nearby streams. Discuss drainage areas, gradients, streamflow characteristics (average and extreme) and velocities. The discussions contained in section 2.4.1.2.7 are of limited use in describing the hydrologic characteristics of the streams. In particular, an average streamflow (or velocity), obtained at various times from several locations with different drainage areas and on separate tributaries, has little hydrologic meaning for use in this document. Note also, that the revisions to the ER contained in Amendment 2, while eliminating the averages discussed above, do not provide the descriptions called for in Regulatory Guide 1.70.17 and would, therefore, not constitute an adequate response to this question.

371.30
(2.4.2.3)

Your response to question 371.7 is incomplete. Provide the following information:

911113

- a) A topographic map of the site and vicinity as it will exist after construction, with the sub-basins used in your site drainage analysis clearly shown.
- b) The following information for each sub-basin:
- i) drainage area;
 - ii) Time of concentration; and
 - iii) Calculated peak discharge
- c) Water depths and elevations at critical site locations. Cross sections of the site with the maximum water levels indicated should be provided.

371.31
(2.4.5)

Your response to question 371.18 is unacceptable. The reliability of the intake systems has a direct impact on the utilization of safety systems. Provide the requested information on the design flood level at the pumphouse.

371.32
(2.4.7)

Your response to question 371.19 is unacceptable. See 371.31, above. Provide the requested information on the potential of ice blockage of the intake or discharge.

371.33
(2.4.11)

Your response to question 371.20 is unacceptable. See 371.31 above. Provide the requested information on the design low water levels of the intake and discharge systems.

371.34
(2.4.12)

Your response to question 371.22 is unsatisfactory. Provide the called for evaluation of an accident failure of an outside tank that could result in contaminated liquid being released directly to one of the nearby streams. If outside tanks are protected by impermeable seismic Category I dikes, so state and identify the design bases. Discuss how buildup of rainwater is prevented or how is it disposed.

371.35
(2.4.13.3)

You state (page 2.4-25) that "The fractures in the weathered zone at the top of bedrock are distributed so as to reasonably approximate the conditions of homogeneity necessary for the calculation of dispersion." Provide the bases for this statement. You state (page 2.5-42) that the site area primary joint sets trend N45W and N70E. The NE trending joints are about normal to the prevalent groundwater contours shown in Figure 2.5-46, while the NW trending joints are about normal to the groundwater contours east of the reactor buildings. Demonstrate that the joint system does not control groundwater flow with resulting shorter travel times than you calculated. Demonstrate that your analysis of transverse and longitudinal dispersion is conservative, considering the characteristics of the joint system rather than a homogeneous aquifer. Provide the bases for full credit for sorption within the aquifer when the flow is potentially limit to the joints.

371.36
(2.4.13.3)

Justify your selection of a coefficient of permeability of 2×10^{-3} cm/sec, rather than the maximum estimated value of 10^{-2} cm/sec.

371.37
(2.4.13.3)

Your response to question 371.25 is unsatisfactory. Provide justification for the distribution coefficient (K_d) used in your analysis of the groundwater dispersion of Cesium. Since the value of K_d is dependent upon the properties of the groundwater and the aquifer, in addition to those of the ion, values obtained for different rock types at the Nevada Test Site cannot be directly used unless further demonstration of their applicability to your site is provided.

371.38
(9.2.5)

Your response to question 371.28 is not satisfactory. You must provide analysis to substantiate that the cooling towers will meet the criteria of Regulatory Guide 1.27, rather than merely asserting that they will. Your analysis should be based on data shown to be applicable to towers you propose to use. Regulatory Guide 1.27 specifically states that the analysis related to the 30-day cooling supply and the excess temperature should include sufficient information to substantiate the assumptions and analytical methods used. This information should include actual performance data for similar towers operating under thermal loads and meteorological conditions near the specified design conditions, or justification should be provided that conservative drift loss and heat transfer values have been used. If your cooling tower design and specifications have not progressed to the stage where a predictive model can be developed and verified by high-quality performance data from existing towers of similar size and type, then commit to furnish the required analysis and data to NRC, for review and approval, prior to construction of the cooling towers.

371.39
(9.2.5)

Do the cooling tower basins provide a common water supply for their four associated cooling tower cells? Table 9.2-5 implies that each basin is separated into at least two compartments, one for each reactor unit. Please clarify. In addition, your analysis of the sufficiency of the basins' water supply implies transfer of water from the assumed inoperable to the operable basin. Discuss how this would be accomplished.