

William J. Cahill, Jr.
Vice President

REGULATORY DOCKET FILE COPY

Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, N Y 10003
Telephone (212) 460-3819

December 12, 1978

Re: Indian Point Unit No. 2
Docket No. 50-247

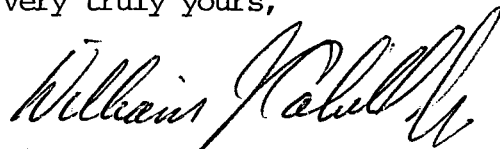
Director of Nuclear Reactor Regulation
ATTN: Mr. A. Schwencer, Chief
Operating Reactors Branch No. 1
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Schwencer:

By letters dated September 14, 1977 and October 27, 1977, the Regulatory Staff requested certain information regarding fracture toughness and the potential for lamellar tearing of the Indian Point Unit No. 2 steam generator and reactor coolant pump support materials. Partial responses to the staff requests for Indian Point Unit No. 2 are provided in Enclosure 1 of this letter.

Additional search effort on the part of both our NSSS vendor and the subcontractors involved in the support fabrication is required to complete our response to the staff information request. We will advise you as to our schedule for submittal of the remaining information upon completion of the ongoing record search.

Very truly yours,



William J. Cahill, Jr.
Vice President

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ENCLOSURE 1

Responses to Staff Requests
for Information on
SG and RCP Support Materials

Consolidated Edison Company of New York, Inc.

Indian Point Unit No. 2

Docket No. 50-247

December, 1978

Staff Request No. 1

Provide engineering drawings of the steam generator and reactor coolant pump supports sufficient to show the geometry of all principal elements. Provide a listing of materials of construction.

Response:

- (a) Drawings - The enclosed UE&C drawings nos. 9321-F-1286, 9321-F-1287, 9321-F-1288, and 9321-F-1289 provide details of the Indian Point Unit No. 2 steam generator and reactor coolant pump supports.
- (b) Materials of Construction - Applicable information below contained in UE&C Specification 9321-01-12-3 (Dec. 12, 1966):

Steel shall conform to the latest standard specifications of the American Society for Testing Materials (ASTM Designation A-36 for structural steel). The Subcontractor shall furnish ladle and check analyses and mill test reports for the material supplied by him.

High strength bolts, nuts and washers shall conform to ASTM Designation A-325, latest revision, unless otherwise specified on the drawing.

Stainless steel plate shall conform to ASTM Designation A-240 TP304, latest revision.

The tie rods shall be ASTM A-108 Gr. 1018, modified to give tensile values in the range of 55 ksi to 70 ksi. Certified mill reports shall be required to assure values in this range.

Turnbuckles shall be AISC Standard.

Pipe Columns shall be ASTM A-53, Grade B, Types E or S.

Expansion plates shall be Standard Lubrite Bronze #237
with Type AE Lubrite lubrication or approved equal.

Staff Request No. 2

Specify the detailed design loads used in the analysis and design of the supports. For each loading condition (normal, upset, emergency and faulted), provide the calculated maximum stress in each principal element of the support system and the corresponding allowable stresses.

Response:

Design loads used in the analysis and design of the supports are described in the Indian Point Unit No. 2 FSAR - Section 5.1.5, Appendix 4B, and responses to questions Q1.5 and Q1.9. We are in the process of obtaining the more detailed information from our NSSS vendor. This response will be provided in a supplementary letter.

Staff Request No. 3

Describe how all heavy section intersecting member weldments were designed to minimize restraint and lamellar tearing. Specify the actual section thicknesses in the structure and provide details of typical joint designs. State the maximum design stress used for the through-thickness direction of plates and elements of rolled shapes.

Response:

We are in the process of obtaining this information from our NSSS vendor. This response will be provided in a supplementary letter.

Staff Request No. 4

Specify the minimum operating temperature for the supports and describe the extent to which material temperatures have been measured at various points on the supports during the operation of the plant.

Response:

The measured minimum containment atmospheric temperature has been 70°F during a shutdown condition. During operation, the containment atmospheric temperature can vary in the range 90° - 120°F. The supports are expected to be at a somewhat higher temperature than the containment atmosphere because of their connection to reactor coolant system components, but no direct measurements of support temperatures have ever been taken.

Staff Request No. 5

Specify all the materials used in the supports and the extent to which mill certificate data are available. Describe any supplemental requirements such as melting practice, toughness tests and through-thickness tests specified. Provide the results of all tests that may better define the properties of the materials used.

Response:

The materials used in the supports are specified in the response to Staff Request No. 1. The remainder of this response will be provided in a supplementary letter since we are in the process of obtaining this information from our NSSS vendor.

Staff Request No. 6

Describe the welding procedures and any special welding process requirements that were specified to minimize residual stress, weld and heat affected zone cracking and lamellar tearing of the base metal.

Response:

Applicable information below contained in UE&C Specification 9321-01-12-3 (Dec. 12, 1966):

All welding shall conform to the latest revision of the American Welding Society Code. Welders shall be qualified in accordance with the "Standard Qualification Procedure" of the American Welding Society.

Staff Request No. 7

Describe all inspections and non-destructive tests that were performed on the supports during their fabrication and installation, as well as any additional inspections that were performed during the life of the facility.

Response

We are in the process of obtaining this information from our NSSS vendor. This response will be provided in a supplementary letter.