PSNH PUBLIC SERVICE
Company of New Hampshire

SEABROOK STATION
Engineering Office:
1671 Worcester Road
Framingham, Massachusetts 01701
(617) - 872 - 8100

March 6, 1981
SBN-153
T.F. B4.2.7

United States Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Attention: Reactor Construction and Engineering Support Branch

Subject: NRC Letter of January 8, 1981 (Combined Inspection 50-443/80-10 and 50-444/80-10)

Dear Mr. Carlson:

This refers to your letter of 8 January 1981 which responded to our letter of 2 December 1980 (SBN-141) and will clarify any misunderstanding that may exist relative to the corrective action taken regarding structural steel connections and the justification for the actions taken.

It is a common practice in structural steel industry to use gas torch for cutting slotted holes in heavy plates and structural shapes. The holes, after flame cutting, are ground to clean surface and walls of the hole. Flame hardening is very minimal and is removed in the process of grinding.

The framing connections are designed for friction-type joints using ASTM A325 bolts. Friction joints have only been used in the Containment Annulus because of possible reversal of forces in the frame structure during a seismic event. Seated connections designed for calculated sliding are identified as such on the drawings and use shoulder bolts to assure unhindered movement.

The friction type framing connections have slotted holes for adjustment during erection. The ASTM A325 bolts are tightened to the specified torque after the clips have been slid to fit properly and the outstanding legs welded. This process assures proper functioning of the friction type-joint under all designed conditions. It is understood that during the erection stage, prior to torquing up of the high strength bolts, the end connection may slide into bearing to take the dead weight of the member and other construction loads. The erection load is a small portion of the maximum design load on the member and will only utilize a small contact area between the bolt and the wall of the hole to transmit load to the connection.

The partial contact obtained during erection does not transmit further bearing load on the connection after the bolts have been torqued up to the required values. Since no load is transmitted through the hole's wall and bolt contact in a normal friction type-joint the unevenness of the walls of the bolt holes does not affect the behavior of the joint.

It is our intention that fabricators shall prepare slotted holes on bearing-type connections with a final surface that has been machined or dressed by grinding to provide a mill-like texture. We will continue to impress this requirement upon our vendors, surveillance representatives, receiving inspectors, and personnel. If for some reason a specific case is found otherwise, engineering will evaluate and disposition as appropriate.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

W. P. Johnson
Vice President

COMMONWEALTH OF MASSACHUSETTS)
)ss
MIDDLESEX COUNTY )

Then personally appeared before me, W. P. Johnson, who, being duly sworn, did state that he is a Vice President of Yankee Atomic Electric Company, that he is duly authorized to execute and file the foregoing request in the name and on the behalf of Public Service Company of New Hampshire, and that the statements therein are true to the best of his knowledge and belief.

Robert H. Groce Notary Public
My Commission Expires September 14, 1984

ROBERT H. GROCE NOTARY PUBLIC MASSACHUSETTS