



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

October 11, 1990

Dockets Nos. 50-334
and 50-412
Serial No. BV-90-016

Mr. J. D. Sieber, Vice President
Nuclear Group
Duquesne Light Company
P. O. Box 4
Shippingport, Pennsylvania 15007

Dear Mr. Sieber:

SUBJECT: BEAVER VALLEY POWER STATION, UNITS 1 AND 2: AUTHORIZATION TO USE
ALLOY 690 FOR STEAM GENERATOR TUBE PLUGS (TAC NOS. 77604 AND 77605)

By letter dated September 7, 1990, Duquesne Light Company (DLC) requested approval, pursuant to 10 CFR 50.55a(g)(3), for the use of steam generator tube plugs fabricated of nickel-chromium-iron UNS N-06690 material (Alloy 690) at the Beaver Valley Power Station, Units 1 and 2. The alloy would be used for both mechanical and welded applications in accordance with the requirements of the ASME Boiler and Pressure Vessel Code as an alternative to Alloy 600.

Your request referenced Code Case N-474-1 (Approved March 5, 1990) of the ASME Boiler and Pressure Vessel Code. This code case addresses Alloy 690 and authorizes its use in other forms for the construction of Section III, Division 1, Class 1 components. Alloy 690 is specified in ASME Section II, material specifications SB-163, SB-167, SB-168, and SB-166. Alloy 690 in tubing form (SB-163) was authorized previously for Class 1 components. The use of Alloy 690 was endorsed by the NRC in Bulletin 89-01, Failure of Westinghouse Steam Generator Tube Mechanical Plugs, dated May 15, 1989.

The DLC request asserts that the use of Alloy 690 for the proposed application will provide an acceptable level of quality and safety, and that Alloy 690 has superior anti-corrosion properties and similar mechanical properties to Alloy 600 used previously for this application. Furthermore, the design Stress Intensity stipulated by the Code Case and used in the design and qualification of the plugs is the same for both Alloy 690 and Alloy 600 of the same form.

In accordance with the provisions of Footnote 6 to 10 CFR 50.55a, we may authorize the use of Code Case N474-1 for applications not precluded by regulatory or other requirements or Regulatory Guide recommendations. We have reviewed your request and supporting material. We conclude that the use of Alloy 690 as an alternative to Alloy 600 will provide an acceptable level of safety and quality. Therefore, its use for steam generator tube plugs is authorized under the provisions of 10 CFR 50.55a(a)(3). DLC is cautioned,

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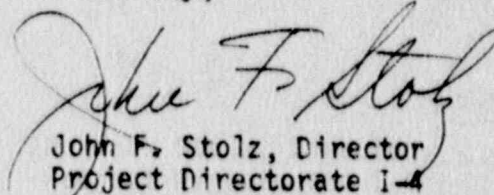
Mr. J. D. Sieber

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October 11, 1990

however, to ascertain that no regulatory requirements are violated, and that there are no conflicts with other recommended limitations resulting from usage of this code case.

Sincerely,

A handwritten signature in cursive script, reading "John F. Stolz". The signature is written in dark ink and is positioned above the typed name and title.

John F. Stolz, Director
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

cc: See next page

however, to ascertain that no regulatory requirements are violated, and that there are no conflicts with other recommended limitations resulting from usage of this code case.

Sincerely,

original signed by

John F. Stolz, Director
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

cc: See next page

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[77604 APPROVAL]

Mr. J. Sieber
Duquesne Light Company
cc:

Jay E. Silberg, Esquire
Shaw, Pittman, Potts and Trowbridge
2300 N Street, N.W.
Washington, DC 20037

Nelson Tonet, Manager
Nuclear Safety
Duquesne Light Company
P. O. Box 4
Shippingport, Pennsylvania 15077

Commissioner Roy M. Smith
West Virginia Department of Labor
Building 3, Room 319
Capitol Complex
Charleston, WV 25305

John D. Borrows
Director, Utilities Department
Public Utilities Commission
180 East Broad Street
Columbus, Ohio 43266-0573

Director, Pennsylvania Emergency
Management Agency
Post Office Box 3321
Harrisburg, Pennsylvania 17105-3321

Beaver Valley Power Station
Units 1 & 2

Bureau of Radiation Protection
Pennsylvania Department of
Environmental Resources
ATTN: R. Janati
Post Office Box 2063
Harrisburg, Pennsylvania 17120

Mayor of the Borough of
Shippingport
Post Office Box 3
Shippingport, Pennsylvania 15077

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

Resident Inspector
U.S. Nuclear Regulatory Commission
Post Office Box 181
Shippingport, Pennsylvania 15077