Hayward Tyler
PUMP COMPANY

P.O. Box 492
80 Industrial Parkway
Burlington, Vt. 05402
(802) 863-2351

June 3, 1983

Mr. Uldis Potapovs, Chief
Vendor Program Branch
Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

JUN - 9 1983

SUBJ: Docket No. 9990345/82-02 and 82-03

Dear Mr. Potapovs:

This responds to your letter of May 13, 1983. Each item raised in that letter is discussed in turn:

Item F.2

The additional information you provided has not enabled HTPC to identify the document to which you refer nor, therefore, to verify or refute the non-conformance asserted. However, all actions concerning process control, training, inspection and documentation described in HTPC's letter as applicable to Item F.3 would apply to the F.2 situation as well. Once again, let me confirm that HTPC does not condone any unauthorized machining operations in contravention of its Q.A. Program.

Item P

NRC Report 99900345/82-04 notes the inspector's examination of Dr. Durham's report and goes on to state, "On the basis of a review of the above information (including Dr. Durham's reports) no significant degradation of pump shafts' material properties is expected to occur in service because of flame-straightening." (p. I-5) The specific basis for that conclusion by the NRC team, which included a metallurgist, (and with which HTPC agrees) are set forth in detail at pp IV-29 to IV-33 of the NRC report.

Not all of the materials tested by Dr. Durham were, in fact, used to manufacture shafts for ASME Code pumps to be used in nuclear power plants. As the NRC report points out, of those materials which were so used, HTPC's records revealed evidence of only two of those materials, 410 stainless steel and Class A Monel alloy, being in flame-straightened shafts supplied to nuclear power plants. Moreover, of the materials tested by Dr. Durham, only Class A Monel exhibited any surface or subsurface cracking.

In addition, the 410 stainless steel test material (the only material other than Monel for which there was evidence of flame-str ightening) did not manifest cracking and as stated on Page IV-31 of the NRC Report "The heating and cooling, as might have occurred during the flame-straightening operation performed at HTPC, is not expected to significantly affect the mechanical or corrosion properites of the material, because the heating did not exceed the critical temperature (A_c) of the material." Accordingly, all ASME Code pump shafts produced by HTPC of which there is evidence of flame-straightening have either been recalled or are made of a material which Dr. Durham's report and NRC Report 99900345/82-04 indicate is not a basis for concern.

In sum, Dr. Durham's testing showed no cracking and Mr. Georgiev's evaluation reached the conclusion that "no significant degradation of material properties is expected to occur in service." In light of these findings and of the small in-service loads on the shafts in relation to their diameters, HTPC concludes the 410 stainless steel shafting remains suitable for design service conditions. As to the Monel, HTPC is still preparing its testing program.

Item Q

The HTPC Q.A. program did not allow the wrong route sheet to be in the welder's possession; in fact that it was in his possession is, as stated in HTPC's letter of January 26, 1983, therefore, a recognized nonconformance. As explained in HTPC's letter of April 8, it was HTPC's practice (to protect the route sheets from damage by sparks) for the foreman to keep the route sheets for work in the welding shop in a nearby file cabinet. In the instance cited in Item Q, the welder went to draw out weld rod and pulled the wrong route sheet from the file cabinet. As noted in the April 8 letter, HTPC has discontinued use of the file cabinet and route sheets are now kept with the job at all times while welding work is being performed. In addition, extensive training has been completed to ensure that each welder performs work on a part using the correct route sheet. HTPC constantly monitors code work in the welding shop to make certain that the right procedures and materials are being used.

We trust that this additional information will permit you to complete your review.

Very truly yours,

B.P. Lyons
Chief Executive

BPL/jpd