UNITED NATIONS
DEVELOPMENT PROGRAMME

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Reference

December 16, 1975

Dear Tracy,

I hope this finds you well and ready to go back to work in Utah after your Asian sojourn. Below are some points which might be of interest to you:

- The heating control arrived at NPL on December 1, 1975. It had been standing in New York for one month as the best of my detective work seems to indicate. I do not know why it took U.N. New York so long to forward. Virginia obviously did a very good job. I traced the circuits inside the boxes and realized that the new unit was intended for 110 Volt. The transformer box had no 220-110 Volt auto-transformer mounted. So, we have two possibilities:
1) Use the "old" transformer box and new control box;
2) Mount and wire in 220-110 transformer and use entire new unit.
For the time being I have chosen number one. Except for some loose pilot lamp connections all seemed to work well.

- The press has been down for a week - Reason; to make a long story short, severe leak in one of the seals of the alignment rods. Real problem; it was almost impossible to move the rod, turn or along its axis. The details I'll tell you later, but I finally exposed the "damaged" seal and found the back up washer (rubber, not the felt one in front) wrapped around the "O"-ring. I pried out the washer and reassembled the system with existing "O"-ring. Result; no more leak and press is back in operation.

I have some observations and possible suggestions.

- It is almost impossible to back-off the cylinders without, towards the end, "popping" the control rods. This spills a lot of oil, is messy, and bad for the seals. In spite of my efforts to center the rods (those that could be moved) this still happened. A simple center indication (one turn of lathe tool in the right spot) would save hours of misery.

- Are the back up washers really necessary, or of the right design? I am afraid that the other end of the rod in question suffers from the same malady and possibly two others also, although at the moment they are not leaking but only hard to turn. Misalignment of the magnitude necessary for this effect does not seem to be indicated. I backed off the retraction pressure to 500 lbs. from the original 1600.

Dr. H. Tracy Hall
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This should help. It only slows the press down in retraction but this is no problem.

- I believe that the provision of flats in the center of the rods or a shoulder with flats in case this weakens too much would be ideal to:

1) Indicate center;
2) Make turning of rods far easier with standard tools;
3) Make it in principle possible to quickly check all rods practically simultaneously for center position during full retraction (i.e. no need to spend five minutes to remove and reinstall tool on each rod one after the other);
4) Make it possible to check the "looseness" or "tightness" of the rods relative to each other to check out and/or analyze suspected misalignment.

- Have you any suggestions as to how to proceed when a rod which is "frozen in" needs seal replacement? I would suggest a two part rod with center coupling would enhance the possibility for removal on future designs.

- A capability of moving one cylinder at a time would save enormous amounts of time and greatly facilitate repairs.

I realize that you will say, "Yes, good and fine, but this costs lots of money." Agreed. The point is only that my remarks are intended as constructive criticism only with possible use for the future. Remember the press is operating again and doing well.

Receive our best wishes for the holiday season for you and yours, from all of us here.

Dr. Agarwala and staff send regards also.

Cordially,

Bruna

for Dr. P.J. Gielisse

P.S. Since the writing of this letter, we have had to give up on use of the temperature control box. None of the set-ups seem to work. We are back on the rheostat again so as to be able to finish our program. Dr. Agarwala will, I trust, be in touch with you on this.

Please send reply, if you think necessary, to: C/o 35 Limietlaan, Hertogenbosch, Netherlands, OR, to University Address U.S.A.