

## NEED FOR SHIFT WORK AT THE PROTEIN FRACTIONATION CENTRE

This Centre which was purpose built was opened in 1974 and the cost of £1.8m covered the building and equipment. The Centre was designed and expected to operate on a 24 hour basis to obtain optimum output at low cost.

The need for a 24 hour system can be explained in layman's terms as follows:

In order to produce the products from plasma it is necessary to heat equipment to a certain degree, before the products can be produced, and, before staff leave, the equipment must be cooled which in all takes 4 hours. This means that in a normal day only 4 hours are given to production. A change of staff after normal hours means that the equipment can be kept at the necessary temperature for a longer period and full 24 hour coverage means that the equipment is producing constantly and this could be continued from Monday to Friday provided the staff worked in shifts.

At present the PFC works flexi-hours which mean that the one shift is spread over slightly longer than 8 hours. By dint of careful planning, Mr Watt, the Director and his staff are able to get 4 hours or more production out of a shift - the remainder of the time is used in running up, running down and cleaning. The production is presently 40 litres per hour which is 160 litres per day or 800 litres per week - in fact in some weeks it is nearer 1,000 litres but it is not always possible to maintain this high level. Working a 24 hour day on a 3 shift basis, the theoretical production level is 960 litres per day, equals 4,800 litres per week. The important point therefore is that even allowing for technical faults it is estimated that on a 24 hour system the output would be at least 4 times as much as on a single shift - probably more.

At present 80 of the 118 staff at the PFC are directly involved in production. The remainder are laboratory staff, quality control staff, secretarial staff, and drivers etc. Some of the production staff are involved in actual process while others are on related production tasks such as filling the finished products into vials etc.

The first impact of a 3 shift system would be on the actual process on which about 16 persons are involved at the present time. As the duties on a 3 shift system would be somewhat different than on a 2 shift system, eg daily terminal cleaning would not be required, it would not be necessary to have as many people on each shift. Mr Watt estimates to work a 3 shift system would require approximately 10 additional staff of which 26 instead of 16 of whom 3 would be technicians in the senior grade. This does not mean that there would necessarily be an even number on each shift as this would depend on the state of the process.

The second impact of the 3 shift system would be on the filling of the finished products into suitable containers, subsequent inspection and where necessary pasteurisation. It is not yet clear how many additional staff would be required for this purpose - indeed it might well be that a 2 shift system would be adequate. Mr Watt feels however that the additional staff required would not be greater than 40% and only the supervisors would be in the technician class.

In terms of staff costs therefore the shift working at the highest estimate will involve another 40% of staff, equals the existing 80 plus 34, equals 114. On the basis of a 30% staff round increase it would be 105. This equates to 14% more workers at ordinary rates and other late the increase in costs. Lancelotti staff and technicians would be of the order of 83%.

To be set against this staff cost increase of 83%, is a production increase of 300% (plus the existing 100%).

The actual cost per litre processed by single shift working, as compared with the 3 shift system, cannot at present be stated with any real accuracy but it is estimated that it will be approximately half - with of course a large increase in the output. As however staff is the main cost item there are likely to be considerable savings.

The commissioning stage of the Protein Fractionation Centre is now over and technically a switch could be made to the 3 shift working at short notice. There is an increasing demand from the Scottish Health Service for blood products but this cannot be met without increasing the number of hours worked at the Protein Fractionation Centre. The alternative of purchasing commercial blood products is not only very expensive but is contrary to the policy of the Health Departments and WHO not to use blood from paid donors in underdeveloped countries. When the PFC was planned it was anticipated that it would fractionate plasma sent from England and Wales and it would appear that, subject to the outcome of negotiations with DHSS, the first supplies might arrive before Easter 1977. There is therefore considerable urgency about the introduction of shift working at the PFC. //