

## PROTEIN FRACTIONATION CENTRE, EDINBURGH

### Background

1. The Protein Fractionation Centre, part of the Scottish National Blood Transfusion Service, was built at Liberton in Edinburgh at a cost of £1.8 million and was opened in 1974. Using a fractionation process it produces from blood plasma a wide range of blood products that are increasingly in demand for clinical purposes in the Health Service. The other centre for production of such products in the UK is at Elstree, and at the planning stage it was agreed that the capacity of the Edinburgh centre should be designed so that the two together could cope with the total processing needs of the United Kingdom. Continuing shortfall in production at Edinburgh therefore has implications for the whole of the UK.
2. The fractionation process employed at the Centre is a continuous flow process and the Centre was therefore designed to operate on a 24-hour basis. At present, however, because of the past difficulties in negotiating any change in working patterns it is operating on a single-shift system. Since it takes one hour to assemble and prepare the equipment and 3 hours at the end of the working day for dismantling and cleaning, this means that in each 24-hour period the plant is actually in production for only 4 hours at the most. In view of the capital invested in the Centre and the fact that that investment was made on the basis of a continuous production process, the present situation represents a quite unacceptable waste of resources.
3. There are 2 inter-related problems:-
  - (a) Because of its position in the Health Service the Centre is treated as an NHS laboratory and the staff are given laboratory gradings; whereas in fact the Centre is more like an industrial process unit, and many of the jobs done in it bear little resemblance to those done in a laboratory.
  - (b) Because of the nature of the processes involved only a shift system can enable the Centre to run properly; but because it is classed as an NHS laboratory, the introduction of such a system is seen as having wide-ranging implications within the Health Service, and the unions involved are unwilling to negotiate such a system for staff who are regarded as being on normal Whitley gradings without raising the much wider question of a shift system to cover these grades as a whole.

### Staffing Structure

4. There are therefore considerable advantages to be gained from recognising that the Centre is a unique institution which is not a laboratory and does not employ people on normal laboratory grades; and from attempting to establish the kind of staff structure that best fits its unusual needs:
  - (a) The routine activities in the production process do not provide a sufficiently broad-based area of experience for graduate staff and this is detrimental to their academic advancement through the usual channels of post-graduate study and the publication of scientific papers. Given the present situation of constant technological development there is a feeling of unease amongst graduate scientists and skilled technicians deriving from the absence of a compensating career structure at the Centre itself.
  - (b) The Centre cannot provide the training facilities and experience required for aspiring medical laboratory technicians and, have accepted employment at the Centre it is doubtful if technician staff now in post, even though they might possess adequate qualifications, could compete successfully for an appointment on promotion elsewhere in the Health Service. The existing employment situation has no doubt made these factors less of a problem, but for the long term the Centre needs to provide a career structure which will attract employees to it and retain them.

- (c) Half the personnel at the Centre consist of plant operators or attendants employed on a ASC laboratory assistant grading. They are engaged as unskilled operatives, but with in-service training they come to undertake duties with a fairly high level of skill and responsibility. In normal NHS laboratory gradings such staff would have to obtain 'O' level passes if they wanted to further their careers by registering as junior technicians, and to qualify as technicians they would require practical experience in an approved laboratory, a facility the Centre is unable to provide.

5. The Common Services Agency, of which the Scottish Blood Transfusion Service is a part, has therefore attempted to produce a self-contained system for staff advancement designed to suit the Centre's particular circumstances which is not derived from NHS laboratory grades. They see the work as being appropriate for three types of employee: the professional; the technician; and those who are either unskilled or who have a basic qualification but require practical experience and on-the-job training to be fully effective. The structure they propose would provide an opportunity for the semi-skilled worker of exceptional ability and attainment to progress to a grading level on which lower-rung technicians and basic grade graduates are employed. To achieve this it would be necessary to have less regard to the rules governing educational qualifications than is the case with employment in Health Service laboratories. The proposed structure consists of 9 grades within which there are channels for upward advancement (to some extent overlapping): one for those who are engaged as unskilled and with no academic qualifications; and others for qualified staff who would enter at the grading level appropriate to their skills and qualifications. The grades are simply listed below; a more detailed description is given in Appendix 1.

- Grade 1 - Assistant Plant Attendant
- Grade 2 - Plant Attendant
- Grade 3 - Process Controller/Plant Operator/Trainee Technician
- Grade 4 - Process Controller/Senior Plant Operator/Basic Graduate
- Grade 5 - Section Leader/Senior Process Controller/Senior Graduate
- Grade 6 - Section Manager/Senior Graduates with relevant scientific qualifications and experience.
- Grades 7,  
8 & 9 - Top Management.

6. The Common Services Agency has also suggested the kind of salary structure that might be appropriate, and the details are set out in Appendix 2. The proposed structure has a disjointed pay-spine. At the lower end it extends from £1,110 to £2,345 (the NHS junior tracer scale has been used because of its incremental length and the suitability of its pay points which appropriately remunerate staff on grading levels 1 to 3). On grade 1 there would be only 1 increment for those recruited at age 21 or over (the grade has a high turnover of staff); on grades 2 and 3 the incremental scales lengthen; and for those who remain there is the added prospect of promotion. The upper end of the pay-scale is intended for the senior grades, ie 4 and above. A number of different Whitley PTB scales have been used to build up the spine, and the aim has been to provide salary differentials between grades that are reasonable and are of a size normally to be found in the public service.

7. The underlying premise in all this is that the Centre is quite exceptional in the NHS and has little relation to the normal work of NHS laboratories. It is true that some Blood Transfusion Service laboratories are tending to become involved with production of clinical elements - eg antibodies, reagents, dried plasma - but the scale and function of the Centre put it in a quite different category. This suggests that a strict tying of their pay to scales negotiated by the Whitley Council for normal NHS grades is not the most sensible way to deal with the staff of the Centre. Nonetheless the proposed salary structure is put together from various PTB scales, and this has the advantage that when pay increases are given on the basis of broad percentage increases little further negotiation would be needed. However if adjustments



in the Whitley structures and differentials were made it would be necessary to set up machinery for negotiating the implications for the staff at the Centre with their representatives. The Common Services Agency is reasonably well equipped to take on this responsibility. The Management Committee consists of senior Civil Servants, senior Health Board officials, and prominent members of Health Boards, one of whom is Chairman. It has a personnel department which with background support from this Department could consider and negotiate claims for salary and conditions of employment adjustments.

8. At present many of the salaries of staff employed at the Centre are determined by Variations of Whitley agreements approved by the Secretary of State on the basis of the qualifications they hold. For example, staff at Grade 4 level have been given appointments as probationary graduates, technicians, medical physics technicians, engineering craftsmen, and animal technicians. If a separate staffing structure were set up which required some further negotiations by the Common Services Agency, the appropriate method for introducing the grading and salary structure would be by approval by the Secretary of State under Regulation 4 of our Remuneration and Conditions of Service Regulations which give him power to authorise pay and conditions for staff not covered by Whitley agreements. Any subsequent renegotiation of pay etc would also come into effect only with such a Regulation 4 approval, on which of course we would undertake to consult central Departments.

9. We would therefore like agreement to discuss further with the Common Services Agency their proposals for a reorganisation of the grading and salary structure along the lines proposed. They have not yet come up with a proper costing of the proposal, and that would be an important element in further discussion, on which we would come back to central Departments.

#### Shift System

10. As was indicated earlier the present mode of operation of the Centre is wasteful and uneconomic to an unacceptable degree. The majority of the production capacity for which funds were invested is being lost and the cost of what is produced is therefore unnecessarily high. An extension of the working day by means of a 2-shift system would greatly increase the time given to production and reduce the proportion of time spent on assembling, dismantling and cleaning the machinery. A 3-shift system would mean that constant production could be maintained. Current procedures make it possible to process 40 litres of plasma per hour - ie around 160 litres per day or 800 litres per week; in fact in some weeks it is nearer 1,000 litres but that level cannot always be maintained. With a 24-hour day on 3 shifts the theoretical production level would be 960 litres per day, but making allowances for normal contingencies it is estimated that in practical terms the output on a 24-hour system would be at least 650 litres a day - 4 times as much as on a single shift system - giving around 3,300 litres per week.

11. The fact that the Centre is falling so far short of this figure gives rise to two main problems:

- (a) In 1965 a proposition from the then Ministry of Health that plasma from England should be fractionated in Scotland was accepted by SHHD, and subsequently by the Treasury, and still stands. The intake of blood in England is rising and consequently with it the amount of plasma to be processed. Elstree has now almost reached production capacity and at a recent meeting between SHHD and DHSS it was stated that England would be making available 25,000 litres of plasma per year for fractionation at the PFC, and this material would be available from this autumn. If this plasma cannot be accepted then DHSS will be faced with an ever-increasing stock of plasma which cannot be processed; it cannot be destroyed either and it would have to be stored under expensive cold storage arrangements. This would mean a consequential lack of essential blood products and a continuing need for health authorities to purchase from commercial sources.

- (b) The costs of the present production are far higher than they ought to be. The most recent costings suggest that the present method of working results in the processing of one litre of blood costing £53.40. Detailed estimates have not been made recently, but it is estimated that a 2-shift system covering 16 hours of the day would reduce the cost to around half of that figure. A 3-shift system could bring it well below £20. Given the amount of capital that was invested in the Centre the Department will be in an extremely embarrassing situation if it is questioned about production and cost, eg by the Public Accounts Committee, unless every effort has been made to use the capacity economically.

12. The increasing demands from the Health Service in Scotland for blood products cannot be met without increasing the number of hours worked at the Centre. (The alternative of buying blood products commercially is very expensive and - in that it is based on blood from paid donors in underdeveloped countries - contrary to Health Departments' and W.H.O. policy.) The same is true of the increasing flow of plasma from English transfusion centres. The alternatives are therefore a very large amount of overtime or a shift system; and of these the latter is much preferable on grounds of safety, reliability and cost.

13. Shift work would involve about 33 additional staff in the production and processing sections and the kind of shifts envisaged are 6 am to 2 pm (for most production staff), 2 pm to 10 pm (for a lesser number), and 10 pm to 6 am (for even less staff). The non-shift work-force would work from 8 am to 4 pm. There would, of course, be a cost - mainly the increased pay that would have to be given to those staff who became liable for shift working. Detailed figures are not available, but it seems clear that even if the premium was of the order of 30% on basic pay, the savings in the cost of the products would be considerably greater than the increased wage bill. In any event, since the plasma now available and increasingly becoming available must be processed the alternative to shift work is not the status quo but a very substantial use of overtime. This will itself be very costly, and apart from its other disadvantages will not help - indeed it will positively hinder - progress towards the continuous 24-hour operation which should be the final aim.

14. Negotiations on the introduction of a shift system took place during the first half of 1976 with the appropriate trade unions - ASTMS, NUPE, and NALGO - but they made little progress. The main difficulties were the current pay policy and the position of ASTMS that any shift arrangement should be negotiated as a general agreement by the Whitley Council. Pay policy has now changed and seems to offer more scope for agreements that allow extra payments for increased productivity; the extent of that scope in the particular situation of the Centre needs to be explored. The Whitley Council seems unlikely to pursue the question of shift working in the near future, and the unions may therefore be more prepared to talk seriously about a scheme for the Centre - all the more so if the proposals for a separate staffing structure are pursued which tend towards treating the Centre as a separate entity rather than a health service laboratory. A further stumbling block to the negotiation of a "realistic" shift agreement - ie one that the unions concerned were prepared to consider - was the fear that any agreement here could have wide repercussions elsewhere in the health service and in the public sector generally. The extent to which this is well-founded requires some discussion, but the points made earlier in the paper indicate the grounds on which use of an agreement at the Centre as a precedent could be resisted by management - the different nature of the work done in the Centre and the productivity to be gained and the cost savings achieved for management by the introduction of shift working.