BLOOD PRODUCTS LABORATORY - ELSTREE

CONCLUSIONS AND RECOMMENDATIONS OF MEDICINES DIVISION

CONCLUSION

1. The Blood Products Laboratory was developed in stages over a number of years as new products were introduced and new buildings were erected to facilitate their manufacture.

2. With the exception of the Large Fractionation Laboratory, the buildings were designed as laboratories for small scale manufacture and as production increased could not readily be adapted to large scale manufacture.

3. The three main manufacturing departments have operated as separate units; each developing in its own way, and this has resulted in the lack of an integrated manufacturing operation.

4. The key personnel are scientists with research and development experience but have not had the opportunity to gain experience of modern large-scale sterile production requirements in the pharmaceutical industry. This was no doubt the correct policy in a development situation when production was small and research and development was an important feature of the laboratory.

5. Production is now on a scale which must be regarded as a large scale factory-type operation and has out-grown the premises in which it is undertaken.

6. The Laboratory is so short of space for cold storage; quarantine of raw materials, in-process materials and finished products; receipt and despatch; packaging; and warehousing generally, that it is not practical or safe to increase throughput even if the necessary production facilities were available. For these reasons it is not practicable to consider a double-shift system of working if it were possible to employ the appropriate additional staff.

7. If this were a commercial operation we would have no hesitation in recommending that manufacture should cease until the facility was upgraded to a minimum acceptable level.

8. However, as blood products are essential to the health and well-being of the nation and as alternative sources of supply are severely restricted, production at Elstree may continue provided certain aspects of the standards of production and control are improved immediately and that the planning of certain other essential improvements in these standards commences immediately with a view to very early implementation.

RECOMMENDATIONS

9. Our recommendations are therefore as follows:-

a) Under no circumstances should production of any product be increased under the existing manufacturing conditions.

b) There is special need for the manufacture of Freeze-Dried Plasma to be upgraded immediately by locating it elsewhere on the premises as the present facility is totally unacceptable. The alternative is to cease manufacture of this product as the operation as currently undertaken is microbiologically hazardous.

10. Immediate upgrading of product procedures and control must include:-

a) An improvement in hygiene cleaning procedures to be established, written down, evaluated and regularly monitored.

b) Manuals of manufacturing and testing procedures to be drawn up.

c) Specifications for raw materials, eg time-expired plasma, fresh-frozen plasma, plasma specifications to include microbial limits.

d) Packaging components to be clearly defined.

e) Environmental monitoring to be introduced and action taken when the results are outside acceptable (specified) levels.

f) Documentation to be revised and standardised throughout the Laboratory.

g) Standardised procedures to be introduced for scrutinising production and test records, with a nominated person responsible for this task and for the release of products.

h) Job descriptions and responsibilities to be clearly defined.

j) Training procedures to be introduced.

k) Steps to be taken to establish the following key posts and appoint appropriate staff as:

Factory Manager; with industrial experience of the manufacture of sterile pharmaceutical products and preferably blood products or biologicals processing.

Quality Controller; as defined in the Guide to Good Pharmaceutical Manufacturing Practice.

Microbiologist; to provide a fully integrated microbiological service.

Engineer; to provide an engineering service and planned preventive maintenance throughout (should have experience of clean rooms, clean air systems, sterilization, filtration etc).

11. Planning of essential improvements must commence forthwith and, take into consideration the following:-

a) The present facility is totally unsuitable for manufacture of sterile products and incapable of being upgraded to the required standards.

b) The existing buildings would be suitable as, or could be adapted for use as:
in-process and control laboratories, research and development laboratories, office accommodation, warehousing, receipt and despatch, packaging.

c) A new factory-type manufacturing facility is required.

ADDITIONAL COMMENT

12. The arrangements originally intended for increased production (known as "Stop Gap Proposals") should be proceeded with as quickly as possible to provide additional cold storage space, warehousing, goods receipt and despatch, container washing and preparation, but only if such a development can be incorporated into a new manufacturing facility. However, in proceeding with 'STOP GAP' there should be no intention of increasing production in the

present facility as it is already overloaded and seriously deficient in standards. We do not see the need to develop a green-field site for the new manufacturing facility. Instead we would advise that the existing buildings to the north of the Blood Products Laboratory should be demolished and this area utilised. Production could be continued at existing levels in the upgraded existing Laboratory during building of the new production facility. Adequate precautions would need to be taken during such a period to prevent contaminnation of products from the environment. When the new production areas are in operation the existing buildings could be adapted for the ancillary operations. Consideration should be given to amalgamating production from the Plasma Fractionation Laboratory at Oxford, but in the meantime that Laboratory too should be inspected.