

(NVLAP), which despite the plethora of certifying bodies is slowly becoming accepted throughout the country. Under the recent agreement, laboratories covered by the two schemes will recognize each other's reports and will recommend third parties to do likewise. Calibration certificates for measuring instruments are excluded from the memorandum, but may become recognized for certain quantities in which national measurement standards are deemed to be equivalent to specified accuracy.

Although nobody pretends that trade between Britain and the United States

will be greatly affected by the NATLAS/NVLAP agreement, the deal is seen as a significant pointer to future developments: Britain is already actively negotiating similar understandings with Australia and New Zealand. But many British manufacturers will really become interested only when comparable agreements are reached with West Germany, and, especially, France, which is held by many to have been particularly obstructive in the past.

Tim Beardsley

**Facing International Competition: The Impact on Product Design of Standards, Regulations, Certification and Approvals. ACARD, July 1982, HMSO.*

West German biotechnology

Labs fight shotgun marriage

A DISPUTE is simmering in West Germany over the recommendations on state-financed biotechnology made to the Federal Ministry of Research and Technology (BMFT) by a specially appointed commission. Two institutions are principally involved: the Gesellschaft für Biotechnologische Forschung (GBF) at Braunschweig-Stockheim and the Institut für Biotechnologie (IBT), part of the Jülich nuclear research establishment east of Cologne.

GBF evolved from a molecular biology research institute founded with the help of the Volkswagen Foundation in the 1960s to provide research materials for universities and Max-Planck Institutes. Since 1976, it has been financed 90 per cent by the federal government and 10 per cent by Lower Saxony, conducting research in biosynthesis, animal and plant cell culture and enzymology, but also being actively involved in education and process development. It is the home of the German collection of microorganisms and has a staff of 350 scientists, 10 departments and a budget of DM27 million (£7 million) a year.

IBT at Jülich is smaller, with a staff of 100 in three departments: microbiology, chemical engineering and algae. Its main focus is on enzymatic polysaccharide degradation, biocatalysis and biological water purification.

The commission was set up by BMFT, in part in recognition that West Germany lags behind the United States in this economically important area. BMFT has meanwhile decided to increase investment in biotechnology from DM63 million in 1983 to DM70 million in 1984. The commission's chief recommendation is that the two institutes should be amalgamated and that research support be orientated towards "special project" financing, on the grounds that it would be more flexible than institutional support.

Despite several important exceptions, the report criticizes the patchy standard of research at GBF. It says there is a lack of internal collaboration and recommends that GBF should be reformed into four departments: process development, enzyme

technology, microbiology and cell biology, and that plant cell culture and cellulose degradation should be dropped, as should the algal research at IBT.

The report also says there is "no meaningful future for GBF" without a radical reorganization designed to raise the scientific competence of the supervisory board, including more external members, and unless its part in the management, control of quality and direction of research and staffing is redefined and strengthened. The report goes on to say that the "healthy cores" of GBF and IBT should be concentrated in one institute at Braunschweig or, as a second best, that some GBF departments should be moved to Jülich, leaving a group of industrially-orientated projects, akin to those of a Fraunhofer organization, at Braunschweig.

Three-way negotiations (with BMFT) are going on, but first reactions at both institutes have been outspokenly negative. Each complains that the commission failed to publish details of the scientific assessments behind its conclusions. GBF points out that its total budget is equal merely to the electricity bill at the DESY high-energy physics laboratory at Hamburg and that, unlike the other eleven large research institutes, it has an income of DM1.3 million from licences and research. It also argues that the commercial potential of projects at GBF have been underestimated.

The departments at Jülich say that they would be used to revamp GBF in a way that jeopardizes their incontestable effectiveness and success and would destroy valuable academic and industrial links. They also feel that the research on algae which is aimed at water purification has been undervalued.

According to a BMFT estimate, total investment in biotechnology in West Germany is running at an annual DM300-500 million, some four-fifths of it in industry. A particular complaint at the two institutes is that a commission comprised 50 per cent of industrial representatives should advocate increased support for the "special project" system.

Sarah Toozie

Soviet spaceflight

Evacuation of Salyut begins

SOVIET cosmonauts Vladimir Lyakhov and Aleksandr Aleksandrov will be preparing to return to Earth "within a few days", Moscow radio announced last weekend. Mothballing of the Salyut station began on Sunday, and experimental material had been transferred to the Soyuz-T9 transporter.

This apparent commitment to bring the cosmonauts back aboard the Soyuz-T9 has confounded Baikonur-watchers who, for the past two months, have been predicting disaster, because the Soyuz-T9 has overrun by half as much again the 115-day safe working life accepted by the Soviet space planners. Since a replacement Soyuz craft blew up on the launch-pad on 26 September, there has been considerable alarmist speculation about how the two cosmonauts would return. But Mr Geoffrey Perry, of the group at Kettering School in England which has been monitoring the cosmonauts' conversations, has maintained throughout that the cosmonauts were never in any jeopardy, that their conversations with ground control have consistently reported everything normal and that his group had no evidence for or against the fuel leak of 7 September reported by *Aviation Week*.

The implication is that the 115-day safe working life of the older Soyuz model is no longer relevant for the improved Soyuz-T. In contrast with the earlier Soyuz, which used hydrogen peroxide as a separate propellant for the reaction control system, the Soyuz-T uses the same fuel system (hydrazine plus a nitrogen oxide, tetroxide) for both the main propulsion system and the control thrusters. This eliminates a major factor in calculating the lifetime of the on-board consumables — the long-term storage of hydrogen peroxide. It also gives a high degree of manoeuvrability, "especially in unforeseen circumstances" according to Soviet sources.

The outstanding problem now is to identify the source of the rumours of impending disaster which have been prominent in the Western press during the past two months. *Aviation Week*, although the source of the reported fuel leak, now seems to have tacitly disclaimed the scare by noting in its most recent issue that flight controller Aleksei Eliseev is optimistic about a successful return. Unfounded disaster reports have bedevilled the Soviet space programme for more than twenty years, and seem an unavoidable spin-off from the secrecy with which that programme has always been surrounded. It is ironic, just when a certain degree of openness about Soviet space plans and facilities is becoming apparent, that yet another such rumour should receive so much attention in the West.

Vera Rich