

National labs reach crossroads

US report looks abroad for ideas

Washington

The Energy Research Advisory Board (ERAB) of the US government has issued its preliminary advice on a critical study of the fate of the Department of Energy's (DoE) national laboratories. This is a key study because the laboratories are also being looked at by the White House, which may not be favourably inclined towards them and will have much to say about their future.

At stake is the role of nine facilities (see below), some of which do the most intensive high technology research in the world — on atomic weapons, fusion and lasers — gobbling up \$2,300 million, or half of DoE's annual research and development budget each year. Apart from their atomic weapons work, they are entirely the creatures of DoE. Starkly put, the choice is whether the laboratories should throw their doors open to become national centres, performing research for other federal departments, private industry, perhaps even other countries, or whether, as budgets decline, they should concentrate on a few things they do well and consolidate, with some of them closing down.

The debate will be joined in the autumn when the ERAB panel makes a final report. At that time, the White House Science Advisory Committee will be studying the fate of the DoE laboratories and those of the Department of Defense. Mr George A. Keyworth II, the President's science adviser and an alumnus of Los Alamos, has said that he thinks some of the laboratories should close down. Last December, the Administration proposed that all DoE research be moved to the Department of Commerce, a suggestion that no one in Washington now takes seriously. And James Edwards, Secretary of DoE, surprised ERAB recently when he told them that, in his view, the laboratories should remain in existence and throw their doors open to become national technical centres. So the discussion, once joined, will be lively.

The ERAB panel is headed by Ivan Bennett, dean and provost of New York University Medical Center. DoE requested the study last September. A preliminary report was sought this spring to feed into the White House's review. Although the group has not decided its own view of the laboratories' fate, the preliminary report outlines the laboratories' strengths and future options.

Some of the institutions, like Los

Alamos, were founded as part of the weapons programme and retain important roles in weapons research. Others, such as Ames Research Laboratory run by the University of Iowa for DoE, do basic research. Oak Ridge has undergone a major transformation into a general applied research laboratory since its beginnings during the Manhattan project.

The appendix to the ERAB panel's report deals with how major laboratories in other countries have adapted to changing times or to the stark fact of having fulfilled their mission. The UK Atomic Energy

mission and that such organizations can indeed change their mission without loss of vitality."

Other examples from abroad are Amersham International, the UK government's source of radioisotopes which has been spun off as a company, and France, where government laboratories commonly create companies to perform specific work for industry. The report notes the Dutch pattern of numerous small laboratories, which are two-thirds government-sponsored and one-third sponsored by industry.

Sweden's Studsvik Energiteknik AB, the government's energy laboratory, had three years' warning that its government funding would be cut by 70 per cent. The three years enabled the group to make a smooth transition to becoming predominantly sponsored by outside interests.

The implication for the US national laboratories is that they can adapt and so probably should.

The carefully worded list of options presented by ERAB includes: "concentrating" the laboratories' efforts through vigorous management by the DoE; freeing them of legal constraints so they can work for other sponsors; transferring other federal tasks to them, making them more multi-faceted or narrowing their mission "to correspond with resources allotted"; closing one or more laboratories, or mergers. The suggestions are intriguing, but to implement any one of them will be a gargantuan task.

Deborah Shapley

National laboratories covered in the ERAB report

Ames Laboratory
Argonne National Laboratory
Brookhaven National Laboratory
Los Alamos National Laboratory
Lawrence Berkeley Laboratory
Lawrence Livermore National Laboratory
Oak Ridge National Laboratory
Pacific Northwest Laboratory
Sandia Laboratories

Authority's laboratories at Harwell are discussed at some length. Founded in 1946 to assist in developing civilian nuclear power, Harwell's task was nearly complete by the mid-1960s. Then, the report notes, Harwell kept the same disciplines but took on new clients outside the government's agency. The lesson of Harwell, it states, is that "once a large laboratory has been assembled, it can be useful to government in fields that extend far beyond its original

Disarray on chemicals control

Brussels

Fears are growing in environmental circles that the special programme on the control of potentially hazardous chemicals set up by the Paris-based Organization for Economic Cooperation and Development (OECD), is running into difficulties as a result of the Reagan Administration's pro-industry and protectionist policies. The downgrading of the US Environmental Protection Agency (EPA) has coincided with a loose implementation of the toxic substances control act (TOSCA). Jacqueline Warren of the Natural Resources Defence Council, a leading environmental pressure group, has cited EPA figures on the premarketing notifications for new chemicals submitted since April 1979 showing that 66 per cent of submitted notices failed to include toxicity data, thus undermining progress to establish procedures to reduce the risk of new chemicals.

Officials at OECD's headquarters are cagey, in view of the United States'

negotiating weight, about admitting allegations that the enthusiasm evident under the Carter Administration for the OECD programme has waned. A legislative gulf has certainly grown between the United States and the EEC, as a result of the way that TOSCA is being implemented and the changes within the EEC after the Sixth Amendment came into force last September. This is likely to impair prospects for rapid agreement within OECD.

Under the Sixth Amendment of the 1967 directive on dangerous substances companies must submit a stringent pre-marketing dossier on a new substance not only to national authorities but also to the European Commission and to the other member states. Not surprisingly, EEC countries are now disappointed that disagreements within the OECD still loom large in two crucial areas which appear to have been resolved by the 6th Amendment. In October this year a high level OECD meeting will be tackling the areas in

question — how to ensure satisfactory quality controls for the implementation of the "Good Laboratory Practices" scheme agreed on last year, and how the confidentiality of data is to be guaranteed.

The Good Laboratory Practices scheme represents a commonly applied definition of the standards and procedures to be used in laboratories testing new chemicals. Unfortunately mistrust has clouded the agreement. High standards cost money and governments are not convinced that everyone is abiding by the rules as strictly as they ought to be, so the October meeting will examine proposals for methods to check that the practices are properly upheld.

This will be another small step towards the programme's ultimate aim of guaranteeing that the marketing authorizations handed out nationally are acceptable elsewhere. Only by using the Good Laboratory Practices scheme can a standard dossier of data on a new chemical substance, the minimum pre-marketing data, be accepted by other national authorities.

The scheme involves, though, a free flow of allegedly valuable commercial information, and this is causing worries in the chemical industry that such information will not remain confidential. The issue is complicated by the fact that there are large differences among OECD countries in the laws relating to freedom of information. Environmentalists are equally worried that poor access to information on toxicity considered confidential by industry will violate the principle of public participation in the assessment of the hazards of chemicals to which the public are exposed.

The OECD's agreement on exactly what information is relevant to hazard assessment has disappointed both the industrial and environmentalist lobbies. The various OECD working groups have come up with a document which defines what data should not be considered confidential and which specifically excludes information such as spectroscopic data which might reveal the chemical identity of a substance before a manufacturer wishes it to be generally known. A final agreement has yet to be reached in sensitive areas such as pharmaceuticals. The United States is held to be particularly responsible for back-tracking on this question as the list of non-confidential data continues to be reduced. If too much remains confidential, hazard assessment made by industry or government will be harder to question, especially if there is consistency on marketing authorizations.

So it seems there is still considerable work to be done within OECD before guidelines are agreed on what hazards can be considered acceptable, and this may prove to be the biggest stumbling block to further international cooperation in this field.

Jasper Becker

How Dr Melamed lost his degree

In 1976, new regulations came into force in the Soviet Union governing VAK, the "Higher Attestation Committee" responsible for conferring the degrees of Candidate (PhD) and Doctor (DSc/DLitt). The full text was not published at that time (a booklet was promised for "later") but the media placed considerable stress on the fact that the new regulations demanded scrutiny of the political attitude of the postulant for the degree.

It now appears that this requirement can work retroactively. During the past year, at least seven Jewish scholars have been deprived of their degrees, for having exhibited "anti-patriotic" attitudes in applying to emigrate to Israel. A document — which claims to be a transcript of such a deprivation process — has just reached *Nature*, and is reproduced here in a slightly abridged form.

Vera Rich

From the stenographic transcript of the Scientific Council of the Faculty of Geology of Moscow State University, 20 January 1982.

Chairman (Professor Adonis G. Gayanov): Members of the board already know the agenda for today's session: *inter alia* the stripping of Vladimir Grigor'evich Melamed of his academic titles due to his anti-patriotic dealings, unworthy of a Soviet scientist.

Melamed is not present, he is ill. On 18 January, two days before this session, he notified me that he had a sickness certificate (*reads Dr Melamed's notification*).

I feel it is particularly necessary to point out the problem of his absence for the following reason. According to paragraph 5 of the regulations of VAK on the conduct of sessions for the stripping of academic titles, the person from whom the title is to be stripped has to be present.

(*After some discussion, — including pressure from the public gallery — it was decided to proceed in Melamed's absence*). *A.G. Lyubimov:* Allow me to read the material from the special committee of the board, set up to investigate the activities of V.G. Melamed, who expressed the desire to emigrate to the state of Israel:

Melamed has been working at Moscow State University for approximately thirty years. Latterly he was in charge of one of the laboratories, and was dealing with pressure-modification of the permafrost process. He distinguished himself by his energetic attitude and was therefore admitted to the Party. In 1975, he received the degree of DSc, specializing in geophysics.

In November 1980, he submitted a request to emigrate to the state of Israel, which is known to be capitalistic and no friend of the Soviet Union. In view of the increasing severity of the international situation and all that has been stated previously, we find that the decision of Melamed is an anti-patriotic act, unworthy of a Soviet scientist.

We are of the opinion that Article 104 of the VAK on the stripping of scientific titles can be applied to him. Dated 18 December 1981. Signed by all members of the committee

Chairman: Who wants to comment?

Professor Epinat'eva: I have a question about Melamed's scientific profile. Would you please specify what he has achieved in the scientific field?

Chairman: This is not the question. We are concerned with something else, not science. We are not going to discuss the

scientific work of Melamed, so this is not relevant.

Professor Dmitriev: Will the minutes of the decision of the committee be added to the documents that VAK receives from us?

Chairman: Yes.

Dmitriev: Then I want to point out an error. Melamed did not defend his doctoral thesis in 1976, as the committee says, but in 1977. And it is an ill-chosen expression to say, "and all that has been previously stated". From this one might conclude that he should be deprived of his degree, not only because of his wish to emigrate from the Soviet Union but also because he worked for Moscow State University for thirty years.

Chairman: Good, we shall correct this. Any further comments? (*Silence*). Good. I call on Arkadii Vasilevich Kalinin, member of the committee.

Kalinin: Today our board has a rather difficult task, which is, however, completely justified by VAK regulations. As you all know, Article 104 of the VAK regulations deals with the stripping of academic degrees due to conduct unworthy of a Soviet scientist. This includes offences such as anti-patriotism. This leaves our board one choice, to decide whether or not Melamed's offence can be interpreted as anti-patriotic or not.

According to the law, emigration is permitted for the sake of reunification of families. Melamed informed the departments which grant exit visas that this was his intention. However, no law prohibits public organizations from judging Melamed's activities.

Academic titles in the Soviet Union are conferred not only on the grounds of scientific criteria. . . We consider the function of an academic title to be more important than in the capitalist world. It confers not only the right to a function, but a salary. If Melamed remained a doctor, he would continue to do things to which he no longer has a right. . . His titles should be taken away from him. . .

Professor Nikitin: I should like to add something in order to show two aspects of the anti-patriotism of Melamed. First, he was a Party member for a number of years and also a propagandist. When submitting his papers applying for an exit visa, he turned his back on all his early ideas.