Panel Asks Weapons Labs Contingency Plan

Study group favors University of California management, but says pressures could force changes in the future

A Department of Energy study group has recommended that the University of California continue to operate the Livermore and Los Alamos nuclear weapons laboratories and make an effort to improve the existing relationship. But the group also advised DOE to examine alternative forms of management for the labs in case pressures against the UC role should make it necessary in the future to terminate the connection.

The study group's recommendations were adopted on 3 May by the Energy Research Advisory Board (ERAB) for transmittal to DOE Secretary James R. Schlesinger. The board, however, modified the language of the report to put greater weight on opposition to UC management and added a "statement of reservations" amounting to a minority report on several aspects of the panel's work.

The special weapons labs study group was headed by Solomon J. Buchsbaum, a Bell Laboratories vice president, who is also ERAB chairman. Schlesinger, in a late December letter, asked that ERAB undertake an evaluation of the UC-weapons labs relationship and that Buchsbaum chair the study. The study group has come under fire from West Coast critics of the UC-labs link who charge both that the study group was biased because its members had close ties to the labs or their parent organizations, and that the panel, on procedural issues, had transgressed federal legislation on the operation of advisory groups (*Science*, 4 May).

Discussion of the panel report at ERAB's spring meeting on 3 and 4 May in Washington produced criticism from board members on three main points. There were objections to the manner in which the study group had been formed and to some of its procedures in carrying out the study. The view was also expressed that the study group underestimated the seriousness of opposition to university management of the labs. And some board members said they felt that the terms of reference applied in the study were narrower than were called for in Schlesinger's letter. These were the major points incorporated into the statement of reservations. The statement has not yet been circulated in final form, but four board members said at the meeting they would sign and two others who were absent have indicated they would endorse the minority views. ERAB has 26 members of which 19 attended all or part of the meeting.

The study group report gave ERAB its first encounter with a controversial issue and with the question of how the board, with the wide range of assumptions and attitudes represented among its membership, would deal with such an issue. ERAB operates under new federal legislation which requires both that advisory groups reflect a spectrum of public opinion and that the meetings of such committees be open to the public. Dealing with the study panel report caused the board not only to focus on substantive issues raised by the report but also on such questions as how the board will choose the topics it will advise on and handle the appointment of study groups.

It was evident at the meeting that the board gravitates toward a minority formed by members with backgrounds in universities and environmental organizations and a majority made up of members from industry and with past government connections. However, the board on the first day of the meeting seemed amicably prepared to agree to disagree. Efforts to avoid a split on the second day, however, apparently did leave a residue of tensions on both sides.

On the first day of the meeting after a full morning's discussion, ERAB had voted 13 to 4 to accept the report with minor modifications to the text. A decision on how objections to the report would be handled in transmitting it to Schlesinger was deferred until the second day of the meeting, although it appeared there was agreement that a statement by the minority would be included. On Friday, the question of what form in the report the minority views should take led to renewed negotiations with some members holding minority views saying they felt under pressure from the majority to avoid a split decision. The outcome of the discussion, however, was to attach a statement of reservations.

Buchsbaum after the meeting ended said it was desirable that the members of a large and diverse board like ERAB have an opportunity to express themselves, and emphasized that he was "pleased with the strong support from the board" on the major thrust of the study group's report. He pointed out that even the members who had aligned themselves with minority view had "taken no issue with the basic recommendations."

As a basis for its recommendations, the weapons labs study group in the body of its report said that "we find that past arrangements between the university and the laboratories have served the nation and the laboratories well. We do note some faltering in this relationship in the most recent past stemming from inadequate attention being paid to certain needs of the laboratory. There is, however, such a reservoir of goodwill within the university toward the laboratories that the existing shortcomings, we believe, can be rectified."

Special stress was placed by the panel on the role of the university regents in the relationship. The report notes that it is the regents who formally hold the contract with DOE and that if "sufficient numbers of regents could not support the laboratories' 'mission' " the tie might then have to be cut. The panel urged that the regents assume active trusteeship over the labs themselves or form a closely linked organization to do it.

The study panel acknowledged that pressures inside and outside the university could build to the point where DOE might find that the university was unable to continue operating the labs. The panel, therefore, recommended that DOE "forthwith" make a serious effort to find an "alternate arrangement" for management of the labs.

In the draft report given ERAB, the study group, in estimating the possibilities of opposition forcing severance, said, "We believe they are remote." The report did not deal in detail with the opposition to the weapons labs, but did observe in passing that "Among the faculty and students, there is a small (in proportion to total numbers) but vocal opposition to continued nuclear weapons R & D in any form, especially if it is managed by the university."

The panel's appraisal of the weight of opposition was questioned most vigorously by ERAB member John P. Holdren of the Energy Resources Program at the University of California, Berkeley. Holdren said that the report "understated and oversimplified" opposition to continuance of university management of the labs. He also argued that by minimizing the degree and character of oppo-

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sition the board had "diverted itself" from serious discussion of alternative management schemes.

When Buchsbaum at the start of the meeting described the work of the study panel, he said that the group, in view of limited time and other factors, had decided to concentrate on the question of whether the university was "willing and able" to manage the labs, rather than on broader issues, such as those of nuclear weapons policy or whether having two weapons labs was desirable.

The narrowness of the scope of the panel's study drew particular criticism from Thomas Cochran of the Natural Resources Defense Council. Cochran and others asserted that matters such as the quality of management of the labs were germane to the question of the UC-labs relationship. Cochran also expressed reservations about the process by which the study group had been formed and operated. He was joined by Margaret Kivelson of the Space Science Center of the University of California, Los Angeles, who raised the question of how the board should make choices of subjects to be considered.

Joining those who said they would sign at the meeting were John Gibbons, director of the Energy Center at the University of Tennessee, who, during the week the meeting was held, was named new director of the congressional Office of Science and Technology Policy. The others were Holdren, Kivelson, and Dennis Hayes of the Worldwatch Institute. Other board members who were not present but say they will sign are Cochran and David Pimentel of Cornell.

Whatever the impact of the minority views, it seems clear that the major significance of the study group report is that an officially sanctioned panel made up of members favorable to nuclear weapons research says that the sands may be running out on UC management of the weapons labs and that DOE better be prepared to make other arrangements.

—JOHN WALSH

Academy Elections Raise Question of Quirkiness

But quirks may be hiccups of complex machine

Do the right people get elected to the National Academy of Sciences? Does merit invariably triumph over the natural human instinct for clubbiness? If so, why do some scientists receive the accolade bestowed by a faraway committee in Stockholm before their own compatriots see fit to elect them to the National Academy, a signal but less exclusive honor? Why does the Academy sometimes separate those who by other standards are of equal merit?

This year's intake to the Academy raises several such problems. The Nobel physics prize went last year to Arno Penzias and Robert W. Wilson, both of Bell Telephone Laboratories. But Penzias was elected to the Academy in 1975, Wilson only this year. Winners of last year's Nobel prize for medicine included Daniel Nathans and Hamilton O. Smith, both of Johns Hopkins; Nathans made the Academy this year; Smith has not yet done so. A third separation in this year's intake, though one that does not involve the Nobel system, concerns the husband and wife team of Gertrude and Werner Henle of the Children's Hospital of Philadelphia. Werner Henle was elected in 1975; Gertrude Henle was voted in only this year.

What do these differences tell about the efficiency of the Academy's merit-recognition procedure? With the doubtless temporary exception of the case of Smith, they tend in fact to corroborate Academy officials' claim of how their system works, which is that justice is done in the end, even though it is impossible to elect all worthy candidates at once. On the other hand the discrepancies indicate a certain measure of arbitrariness in the system.

The Nobel prize is a rarer honor than Academy membership and is usually given some 10 years or so after the discovery being recognized. Both are reasons for expecting that Nobel laureates would be members of the Academy first. In the 15 or so cases since 1950 when an American scientist has won the Nobel prize first, the Academy has subsequently elected him, as if agreeing with the Nobel people's judgment.

On the other hand the discrepancies between the two merit-recognition systems do not necessarily mean that the Academy is in error. The systems are viewed as following different criteria. "The prize is given for a single achievement whereas Academy membership is rather more for a body of work," observes Penzias. Academy members value their independence of judgment, and stress that neither system is free of error. "The Academy doesn't want to be pushed by the Nobel prize: Academy people want to do their own thing," says NAS Home Secretary David Goddard, the official responsible for overseeing elections: "We don't believe the Nobel prize people are totally free of error, just as we know we are not free of error."

Both Nathans and Wilson had been nominated for Academy membership before their Nobel prizes were announced last October, and so might well have been elected without the prize. The Academy may perhaps have been late in electing them, but then it does not claim punctuality.

More difficult to assess is the Academy's arbitrary-seeming separation of individuals of apparently equal standing. The Henles are widely perceived as equal colleagues. "The Henles have worked together as a husband and wife team, in the same lab, on the same projects. It would be very difficult to separate their contributions on any of their projects," says Evelyn Linette, a research associate of Werner Henle. On what basis did the Academy put them asunder?

"I think it was a mistake not to elect her when we elected her husband," says Goddard. He notes that it is "only in recent years that the Academy has been generous in electing women." Last year the husband and wife team of Elizabeth and James Miller was elected simultaneously.

The separation of the Henles may have arisen in part from the complexity of the Academy's election procedures. The Academy's members are grouped in five major classes subdivided into a total of 23 disciplinary sections. The chief, though not the only, route to election is to be nominated and receive at least two thirds of a section's votes. The class committees choose a selection of names from the sections under them but work under a stiff quota: this year the medical sciences class, with three sections, could offer only eight candidates to the final ballot, and the physical and mathematical sciences, comprising six sections, on-

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