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Collision Course: Beseiged by Congress, SSC Awaits Key Decisions on Its Fate

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the lab by its director at the time, David A. Shirley. When hired she became the first woman associate director in the whole DOE national laboratory system. One of her early duties was to win the support of Congress for the Advanced Light Source, which Shirley had succeeded in getting DOE to support, with the backing of George Keyworth II, President Reagan's science adviser. Shirley, now senior vice president at Pennsylvania State University, strongly endorsed Krebs for her new position at DOE. In a letter to the Clinton Administration, Shirley praised her work at the lab as "spectacular" and noted that her efforts had led to the recent commissioning of the ALS.

Another backer of Krebs's nomination was Glenn Seaborg, the longtime chairman of the Atomic Energy Commission, which became the principal component of the Energy Department when it was created in 1976. His letter to Vice President Gore stated that Krebs "has been involved in the development of nearly every initiative that has come to LBL in the last 10 years. . . . She understands the changing context in which scientific programs must be developed, with an emphasis on their contribution to society. Her familiarity with DOE programs, her understanding of broad scientific opportunities, her ability to bring people together and her deep interest in having science make a difference make her an excellent candidate to lead [the office of] energy research and be a member of the Clinton–Gore science and technology team."

Krebs received a PhD in theoretical physics in 1966 from Catholic University of America in Washington, DC. Her husband, Philip Coyle, is principal associate director of Lawrence Livermore National Laboratory.

Both Lane and Krebs are required by law to be confirmed by the Senate before their appointments.

—IRWIN GOODWIN

COLLISION COURSE: BESEIGED BY CONGRESS, SSC AWAITS KEY DECISIONS ON ITS FATE

The SSC crisis is by now a hardy perennial. For the past three years the Superconducting Super Collider has been on a collision course with some members in Congress who would micromanage the project or just as soon dismantle it. Only a week after President Clinton reiterated his support for the project in a letter to Representative William H. Natcher, the Kentucky Democrat who is chairman of the House Appropriations Committee, the entire House voted overwhemingly, 280 to 150, to eliminate $400 million of the $620 million allocated by Natcher's committee for the gigantic proton-proton collider in fiscal 1994 and to use the remaining $220 million to close it out.

The devastating vote on 24 June was the second time in as many years the House decided to take such drastic action. On a similar amendment to abandon the SSC last year the margin was narrower, 232 to 181. A year before that the project squeaked by after an acrimonious debate on the House floor and, in the end, got $484 million—some $50 million less than the Bush Administration had sought for fiscal 1992. But even that allocation wouldn't have been possible without strong advocacy in the Senate. Now, with so many adversaries in the House, the SSC's scientific, industrial and political proponents have joined forces in a last ditch effort to save the project yet again.

The Senate came to the SSC's rescue last year when it rejected an amendment that would doom it. The amendment was defeated by a vote of 62 to 32. Weeks later the appropriations conference committee, made up of members from both chambers, worked out the differences appearing in the House and Senate bills, using such customary techniques as compromise, back-scratching and pork-barrel deals. In the end, the senators prevailed and the SSC received $515 million—$135 million below the request. The collider's prospects for this year will depend mightily on the Senate's action.

The outcome in the Senate is uncertain. One of the SSC's greatest champions in previous years was Lloyd Bentsen, the patriarchal Texan who as chairman of the Senate finance committee was in a position to grant favors and twist arms. But in January Clinton elevated Bentsen to Treasury Secretary, where he no longer has the same kind of hold on senators. The current finance committee chairman, New York Senator Daniel Patrick Moynihan, who is up for reelection next year, is known to be less than enthusiastic about the SSC. In addition, one-third of the senators, minus two or three who plan to retire, will be running again in 1994, and to many of these lawmakers and to most of their constituents, the $10-billion SSC, now being built in a tunnel 54 miles in circumference, around Waxahachie, Texas, is not at the top of their wish list.

To be sure, the SSC's opposition in the House has its roots in the country's economic recession and the enormous national debt. The House class of 1993, consisting of 114 first-term members—many of whom represent disadvantaged inner-city residents—came to Washington to change the economic condition of the country, hoping to stimulate stable jobs, reduce the budget deficit and national debt, and generally improve the social, medical and educational services. The action to delete the collider, say those familiar with the House, such as George E. Brown Jr of California, chairman of the Committee on Science, Space and Technology, was a metaphor for red ink and lowered expectations. A day before the House voted to stop the SSC, the same lawmakers had scotched an amendment to jettison NASA's space station by a single vote—215 for, 216 against. A decisive factor was jobs—some 75 000 at stake if the space station was defeated and about 4000 for the SSC. An analysis of the House vote reveals that 63 new members opposed the space station and 81 voted to terminate the super collider.

Proponents in the House contend that many of their colleagues turned against the super collider as a symbol of their commitment to cost cutting. Representative Jim Chapman, a Texas Democrat, claims: "There was a sense that House members didn't want to nail both programs but still wanted to show some fiscal discipline. That put the super collider right in the cross hairs." "We were hostage to the public debt," says Representative Martin Frost, another Texas Democrat who is the project's point man in the House.

Compounding the problem, the Clinton Administration did not pour on the kind of heat for the SSC that it directed to the space station. After the House vote, Clinton told news reporters, "Maybe the Senate will save it and then we can fight for it in conference. I always anticipated that if we were going to save the

super collider we would fight for it in conference."

Space station *Freedom* has already cost the US government $11.2 billion and its foreign partners (Canada, Japan and 12 nations in the European Space Agency) some $3 billion. By contrast, the government has spent $1.6 billion on the SSC and Texas so far has laid out $390 million of its $1 billion pledge.

To place as much distance as possible between the House's defeat of the SSC and the Senate vote, the floor manager of the Energy and Water Development Appropriations bill, J. Bennett Johnston of Louisiana, wants to postpone any shoot-out on the Senate floor until after the August recess. Nevertheless, to ensure that any questions about the project are laid to rest, Johnston is conducting a joint hearing on 4 August of the two committees he heads—the Energy and Natural Resources authorization committee and the Energy and Water Development appropriations subcommittee. The witnesses: John H. Gibbons, Clinton's science adviser; Robert Galvin, retired CEO of Motorola Inc and now chairman of the company's executive committee; Steven Weinberg of the University of Texas; Philip W. Anderson of Princeton University; Energy Secretary Hazel R. O'Leary; and SSC laboratory director Roy Schwitters.

The witness sure to be most pivotal is O'Leary, whose review of the project's accounting procedures and top people will be due. She promised a House committee to complete her examination of the SSC's management by the end of July. O'Leary's report has as its starting point a nine-hour hearing on 30 June before the House energy and water oversight and investigations subcommittee, whose chief inquisitor is its chairman, John D. Dingell. As the leadoff witness, O'Leary provided a forceful prelude to later testimony by the General Accounting Office, the DOE's inspector general, the project's principal construction contractors and the SSC's top managers.

Although the SSC has been subjected to House interrogations before—mainly by the investigations panel of the Committee on Science, Space and Technology—none have been as volatile or stinging as the one before Dingell. After all, Dingell and his committee were involved in some of the big news stories and hilarious sideshows of the 1980s and 1990s: the indictment of Reagan's White House aide, Michael Deaver, and the ousting of EPA Administrator Anne Burford; the Pentagon's $640 toilet seat and the Defense Department billing for kennel fees for the dog owned by the CEO of General Dynamics; the arguments with David Baltimore on scientific misconduct and with Bernadine Healy on her handling of fetal tissue research and other issues at the National Institutes of Health; the exposé of Wall Street insider trading and of "indirect" research costs at universities, including payment for a wedding reception for Stanford University's president.

For the SSC hearing, Dingell, who has represented an ethnically diverse blue-collar district outside Detroit since 1955, read an opening statement that set the acrimonious tone: "While the science of this project is fascinating, it is not the focus of today's hearing. The merits of the science are currently being overshadowed by the basic mismanagement of the program." Four years into the project, said Dingell, the prime contractor, Universities Research Association, still lacks an approved procurement system and a validated cost and schedule control system, though both were promised to be in place more than a year ago. "The subcommittee . . . has examined dozens of defense acquisitions in depth, many of them seriously mismanaged, but the SSC ranks among the worst projects we have seen in terms of contract mismanagement and failed government oversight," said Dingell. "This is a procurement mess that will get worse before it gets better."

Double bookkeeping

He identified nearly a dozen problems found by GAO, the IG and his own staff. Among these: URA, a group of 80 public and private research universities (including two in Canada and one in Japan) that has operated Fermilab since 1965, has "limited experience in construction" and "everyone from the subcontractors to the DOE to the various audit agencies now recognize this choice . . . was a mistake," said Dingell. URA maintains two sets of books—"one shows a management reserve of $250 000, while the other shows a negative management reserve of $40 million to $75 million," suggesting, Dingell allowed, this enabled management to disguise cost overruns. SSC financial data are "dubious at best," said Dingell, because project managers claimed a $36 million "savings," not because of greater efficiencies or lower costs, "but rather because they projected that inflation rates in future years would be lower than planned."

Dingell sometimes put his own spin on documents, as when he claimed the IG's audit found the project contractor and subcontractors "rivaling Stanford University in their lavish spending of taxpayer money on luxuries and entertainment, including an antique rolltop desk, flowers and plants and parties." He said his staff had discovered a contractor's internal estimate indicating the project would incur a $1.3 billion overrun in producing the heart of the collider, the dipole magnets. The cost of producing the magnets, Dingell asserted, might almost double—from $1.4 billion to $2.7 billion. The staff also learned of a $50 million overrun on the initial production of several hundred magnets, Dingell announced in the hearing room, and, if this is projected for the total of some 8600 dipoles, it would, using the words of the contractors, "kill the program."

Considering that the fate of the SSC may be known after Labor Day when the Senate debates the project, some of Dingell's accusations and nitpicking may seem as if he is rearranging the deck chairs on the *Titanic*. Still, as its history in Congress has already shown, the SSC possesses an amazing ability to revive from its death throes.

Under oath, O'Leary attempted to deflect some of the charges. She observed that the project would be about 20% complete at the end of fiscal 1993 on 30 September and she believed that work on the magnets was going well. Despite the reports by GAO and her own IG, she said, "We know of no technical 'show stoppers' that would suggest that the project cannot be completed as specified." But the management problems that were identified made her leery, she asserted. "My view is that while these issues are important, they are only symptoms of a more basic problem," she stated. She was derisive about the way URA and SSC were operated and, by inference, opposed the oversight structure that her predecessor, James D. Watkins, had erected on his watch at the department.

Watkins, a retired admiral who had once worked with Hyman Rickover on the submarine reactor program, turned the procurement and construction parts of the project into a Navy operation. He appointed two former Navy topsiders he had known from his days with Rickover and in the Pentagon—Edward Siskin became the SSC general manager within URA and Joseph Cipriano was made SSC director within DOE. By instituting a hierarchy of managers who reported directly to him, Wat-

kins insulated the project from the department's normal operations and oversight functions, said O'Leary, and "clearly diluted the authority of the director of energy research, who might have exercised closer control over the project," as well as the SSC lab director, who no longer had control over construction or costs.

She would do things differently, O'Leary asserted. "My view is that [the SSC] has been managed very gently and by that I mean inappropriately," she told John Bryant, a Texas Democrat who was the lone defender of the project on Dingell's panel. "The relationship of the department and the contractors has been far too casual. I've asked for some very strong actions." She said she has given "full responsibility for all aspects of the SSC" to the director of energy research and ended all formal reporting to her by project managers and officials. "I do not believe this project should be run out of the secretary's office, nor should it be shielded from the normal oversight functions of the department." What's more, she agreed with Dingell's accusation that officials at URA and the lab had not been willing to share data with investigators and had adopted a siege mentality toward examiners and most everyone else. O'Leary told the subcommittee that the "negative and adversarial attitude" of project officials to the department, the GAO and the committee staff was "offensive to me personally" and that the SSC laboratory "lacked the leadership and consistent good judgment which I believe are necessary for the success of the project."

O'Leary's harsh criticism came as a shock to SSC supporters, who had expected her to defend the project from allegations of waste and mismanagement. Instead, she asked for 30 days to review the whole situation, particularly the practices of URA. At the end of that period, she said, she would report her decision on three options: terminating URA's contract, renegotiating the contract to allow increased DOE oversight, or splitting the contract so that URA would retain responsibility for science but engage another organization to deal with construction. O'Leary said DOE lawyers were examining her authority to dismiss key figures at URA, the lab and her department.

Cipriano—also under oath, as was every witness—told the subcommittee that he had questioned URA's competence shortly after he arrived in 1991 and again in 1992, only to be overruled by Watkins, who argued that the action would be a major disruption that would jeopardize the project.

SSC LABORATORY PHOTO

At SSC magnet test lab, Roy Schwitters (left), the director, explains project to Energy Secretary Hazel O'Leary (right) on her first visit.

While project officials have repeatedly proclaimed that the project continues to be substantially on schedule and under budget, Victor S. Rezendes, director of GAO's energy and science issues division, said URA's internal records show that additional costs of as much as $75 million have accumulated since the double accounting system was set up in March. In fact, said Rezendes, the overruns arising from undocumented engineering changes in subcontracts and for work on the SSC magnets performed at Brookhaven, Fermilab and Berkeley amount to $203 million. DOE's IG, John Layton, charged URA with failing to "exercise prudent business judgments."

In response to Dingell's bullying tactics, Siskin stated that while the project is nearly 20% completed, only 4% of the $840 million contingency fund has been used so far, and anticipated costs not already on the budget are likely to be no more than 12% of the contingency. As to the $203 million in alleged overruns, said Siskin, he found it difficult to understand why the auditors considered the engineering changes involved would be imprudent and why work might be done cheaper or better than at DOE labs, where the expertise exists in designing and fabricating superconducting magnets.

URA president John S. Toll seemed startled by the extent of the criticism directed at his organization. "I had thought that on the whole the working relationship [with DOE] was a rather good one," he told the Dingell panel. "We obviously have got to do more with high priority to cooperate wholly." While many of the concerns are legitimate, Toll admitted, they do not diminish the scientific and technical merits and achievements of the project. He regretted that O'Leary and others appearing before the subcommittee had found those associated with the project to be arrogant and secretive. "The thing that disturbs me most is the perception of our attitude," he said. "That must change. But I do not believe there has been waste. There have been errors of judgment and we must correct those."

Possibly the most important part of the hearing, dealing with some magnet changes, was virtually undisputed by the subcommittee. Walter Robertson, a General Dynamics vice president, reported that the cost of producing the dipole beam-bending magnets would increase by nearly $50 million to offset requirements for new materials, revised production processes and more extensive testing. "The requirements and design of the magnets were not as fully developed as we had anticipated" when GD signed on with URA, said Robertson. "Mass production of the magnets is much harder than we had originally thought."

Sources close to O'Leary say she is "disturbed" by the charges of mismanagement and hubris by those directing the SSC project. She was not averse, she was quoted as telling associates, to "grabbing them by the throat and giving them a throttle. I know how to do that."

—IRWIN GOODWIN ■