

many researchers as cavalier in their handling of public funds. In the universities, especially among faculty, there is a tendency to deplore a "bean counter" mentality on the part of federal auditors. HHS auditors are charged with following standard accounting procedures suited to auditing the procurement of goods, but inappropriate when applied to R & D. The critics note that there has been little friction with auditors from the Defense Department's auditing agency or Office of Naval Research, who are regarded as knowledgeable about research.

There is agreement on both sides, however, that the root of the difficulty is that faculty duties include both teaching and research and it is, in practical terms, very difficult to allocate time for federal reimbursement only to research activities as the law requires.

The conflict over accountability for salary costs is relatively new since federal auditors only recently turned their attention to direct-cost charges—those for salaries, materials, and other specific costs of research. For years, arguments about accountability had been dominated by indirect costs—charges by universities for use of lab space and offices for research, library facilities, and various support services. The sharper focus on direct costs is due not only to auditors' keenness, but to critical comment from the General Accounting Office and from Congress.

One result of the new interest in direct-cost issues was an effort by the HHS inspector general's office to prod universities to adopt better "on line" auditing measures to keep tabs on spending in a more timely fashion, rather than certifying research activity retrospectively, for example, 6 months or a year after the fact.

Another response is the HHS-funded experiment. The idea is that the individual institution will engage independent auditors—private accounting firms or state auditing agencies, for example—to carry out an audit of federally supported R & D activities which can be reviewed by federal auditors. The University of Pennsylvania apparently pioneered the scheme and Harvard has recently completed such an audit using the same firm, Coopers & Lybrand. A more broadly based pilot program initiated by HHS is now in progress. Some 22 major research institutions are participating and the program is being extended to 25 smaller colleges and universities.

The idea has definite attractions for the government. As the pressure for more frequent audits has increased so

Gore Proposes Oversight of Genetic Engineering

Legislation for a federally mandated committee to oversee genetic engineering is likely to be introduced when the new Congress convenes in January. On the basis of a recommendation from the President's Commission for the Study of Ethical Problems, Representative Albert Gore, Jr. (D-Tenn.) plans to introduce a bill to create some kind of oversight body, but its exact nature and the extent of its authority have yet to be determined.

The commission's recommendation of an oversight body was echoed again and again during three full days of hearings that Gore, chairman of the House subcommittee on investigations and oversight, held recently on all aspects of human genetic engineering. Some two dozen researchers, ethicists and legal scholars testified and reached what one House staffer called an "amazing consensus" in favor of a federal watchdog for the research and medical application. "Different people testified that the proposed body be essentially educational, others wanted it to have real regulatory authority, but no one was against the idea altogether," he said. "The congressman was surprised at that and very encouraged to go ahead."



Representative Albert Gore, Jr.

Testimony revealed a consensus for a watchdog committee

The hearings also reached near consensus on the idea that there are no fundamental ethical objections to gene therapy for debilitating diseases such as thalassemia and sickle cell anemia but there are serious issues to be resolved before using genetic engineering for "enhancement" of human characteristics including height or intelligence. In addition, the witnesses opposed far-out applications such as the hybridization of a human being and a chimpanzee. "The prospect of creating an actual being with partially human characteristics offends a deeply held taboo," said attorney Alex Capron of the President's commission. "There is, however, no legal or regulatory prohibition of such a step," he told Gore.—BARBARA J. CULLITON

Synfuels Program Runs Out of Projects

"The scope of this project is greater than the sum total of the interstate highway system, the Marshall Plan, and the space program all combined," President Carter said in 1980 as he installed the first chief of the Synthetic Fuels Corporation (SFC). Now, just 2 years after that grand christening, the SFC finds itself embarrassingly free of commitment, with a shrinking agenda. Five major synfuels sponsors have quit the market since 1980. Three of them gave up promised federal support.

The withdrawal of Ashland Oil on 22 November left the SFC with only one project in its portfolio, Union Oil's scheme to convert Rocky Mountain shale to crude oil. The plant, near Rifle, Colorado, is supposed to begin producing late next year at a rate of about 10,000 barrels a day. Even this was not an SFC original, but a hand-me-down commissioned by the Department of Energy (DOE) in July 1981 and passed along to the SFC for monitoring.

In the agreement with Union Oil, the government promised to support a price of over \$40 a barrel for synthetic fuel produced in Colorado, with a maximum federal outlay of \$400 million. That leaves the SFC today with \$14.8 billion in uncommitted assets.

Ashland was the backer of one of two major synfuels projects that came

through as finalists in the competition run this year by the SFC. Ashland proposed to build a coal liquefaction plant in Breckinridge, Kentucky. The goal at first was to produce 20,000 barrels a day; then, reflecting more realistic cost estimates, the project was cut in half. Now Ashland has given up entirely.

The other SFC finalist was a coal-to-methanol-to-gasoline scheme in Wyoming, known as the Hampshire project. It became unraveled in October when the chief backer, Standard Oil of Ohio, decided to get out. The remaining partners are looking for a new investor, and one of their prime candidates is the U.S. government.

Earlier, on 2 May, Exxon scuttled another plant, the Colony shale oil project in Colorado. The partners in that case had received \$1.1 billion from DOE before the SFC was officially in operation. Now the Colony partners have returned the money, and the Treasury Department is dickering with the SFC over who gets to keep it.

One other project has won government support, the Great Plains coal gasification plant in North Dakota. The congressmen who backed it were so doubtful of the SFC's intentions that they ordered the project kept within DOE, which is solely responsible for monitoring it. With the help of a \$2 billion federal loan guarantee, the Great Plains project should start producing gas by the end of 1984. Work is proceeding on schedule.

The reasons Ashland gave for dropping out were predictable. Costs turned out to be greater than anticipated, and private investors were unwilling to throw in more money. It is particularly hard to find cash now because the demand for energy is slack and new oil sources are appearing, it seems, every week. Oil prices are likely to remain stable for a long time, making synfuels uncompetitive. In addition, Ashland complained that the tax reform bill passed earlier this year made oil investments less profitable.

It seems that the SFC has been put in charge of a mission without missionaries. The SFC chairman, Ernest Noble, insists that the agency will sponsor "half a dozen plants" in the next year. The purpose is "to prove once and for all," Noble says, "for the rest of the world to see, that the United States can convert its reserves of coal and oil shale and tar sands into

liquids and gas. . . ." This will help keep energy prices down, he claims.

Some congressmen are eyeing the SFC's cash reserve hungrily, for they see in it a quick and ready meal for the housing industry. They would like to create new mortgage subsidies, but would also like to avoid appropriating new funds. Thus, if the SFC is to build its half dozen plants, it may have to move quickly. Indeed, Noble announced recently that the agency is adopting a new "more active role" to reach out and help applicants put together the financing they need. Of the 12 candidates for SFC financing now awaiting a decision, two are likely to receive preliminary letters of support from the SFC in December, officials at the agency say. They hope that this will keep enthusiasm alive.

—ELIOT MARSHALL

ACLU 2, Creationists 0

Louisiana's creationism law, passed by the state legislature in July 1981, was struck from the statute book by federal judge Adrian Duplantier in New Orleans on 22 November. Duplantier declared that the law violated the state constitution, which confers authority to determine school curricula on the Board of Elementary and Secondary Education (BESE) not on the legislature.

A similar law enacted in Arkansas was struck down earlier this year because, decided judge William Overton, it violated the federal constitution, specifically the First Amendment clause directing the separation of church and state.

"The Louisiana decision is a tremendous victory," says Jack Novik, a lawyer with the American Civil Liberties Union (ACLU) who was involved in both cases. "We have defeated the creationists at the federal level by showing that so-called creation science is just religion in disguise. And we have now defeated them at the state level by showing that a legislature cannot mandate detailed curricula. They will find it very difficult to come back after this."

Attorney General William Guste, who has been defending the law with the help of creationist lawyer Wendell Bird, has said he will appeal Duplantier's decision.

The tussle between the creationists and the ACLU in Louisiana has been long and tortuous. First, the creationists filed suit in federal court in Baton Rouge, asking for judgment that the law was indeed constitutional. Judge Frank Polozola eventually dismissed this unusual suit on the grounds that his court had no jurisdiction over the issue: federal court cannot compel state officials to enforce a state law.

Meanwhile, the ACLU had filed suit in New Orleans with a complaint like that which had prevailed in Arkansas. This suit was, however, stayed, pending the outcome of the Baton Rouge case. Even with the dismissal of the creationists' suit, the ACLU's case was never revived. Instead, the judge in New Orleans indicated he would be prepared to receive a motion for summary judgment on the purely legal grounds of the provisions of the state constitution. The motion was submitted in October and granted in November.

In his decision Duplantier said: "Specifically, BESE contends that under the 1974 Louisiana State Constitution it, and not the legislature, has the sole prerogative to mandate the teaching of a course of study." The creationists' position was that the constitution gives final responsibility on educational matters to the legislature. Duplantier noted that in only one case had the Louisiana Supreme Court discussed the power of BESE under the new constitution, the case of *BESE v. Nix* (1977). Both parties cited the case in their submissions, but Duplantier decided that "We reject the contention that the legislature has 'absolute authority' over BESE."

Duplantier allowed that the legislature has some authority over curriculum content. But he went on to explain that "By way of analogy, it might be constitutional for the legislature to direct that the public schools teach a course in economics, but clearly the legislature could not require that conflicting theories each be given 'equal treatment'."

If Duplantier's decision were to be overturned on appeal, and the creationist law revived, then the ACLU's suit on the constitutionality of the law could be revived also. Meanwhile there is now no law in the land mandating the teaching of the Biblical account of creation in the guise of science.—ROGER LEWIN