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General Accounting Office

DOE's Defederalization Of The Laramie And Grand Forks Energy Technology Centers

In April 1983, the Department of Energy defederalized its government-owned and -operated energy technology centers at Laramie, Wyoming, and Grand Forks, North Dakota, by transferring the centers to the Universities of Wyoming and North Dakota, respectively. Cooperative agreements between the universities and DOE provide continued federal funding for fossil fuel research for up to 3-1/2 years at the centers. DOE also established project offices at each site to provide in part an ongoing federal management presence for the centers. GAO found that

- continued federal funding of the centers is legal. However, the level of funding negates any short-range budget savings which may have been anticipated;
- management of the centers is structured to ensure that both federal and university interests are considered in planning for center operations;
- reduction-in-force actions at the centers were carried out in accordance with Office of Personnel Management regulations. Most center employees were subsequently hired by the universities; and
- Public Law No. 97-394 specifically authorized the transfer of the federal property at the centers to the universities; other federal property laws do not apply.



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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

RESOURCES, COMMUNITY,
AND ECONOMIC DEVELOPMENT
DIVISION

B-211699

The Honorable Jack Brooks
Chairman, Committee on
Government Operations
House of Representatives

The Honorable John D. Dingell
Chairman, Committee on Energy
and Commerce
House of Representatives

The Honorable Don Fuqua
Chairman, Committee on
Science and Technology
House of Representatives

Your March 7, 1983, letter to us expressed concerns about the Department of Energy's (DOE's) defederalization of its Laramie and Grand Forks Energy Technology Centers. The Laramie and Grand Forks centers were transferred from DOE's Office of Fossil Energy to the Universities of Wyoming and North Dakota in May 1983 and April 1983, respectively.

In an April 22, 1983, meeting with your respective offices, it was agreed that we would provide information addressing (1) the legality and impact of the funding arrangements set forth in the cooperative agreements covering the transferred facilities, (2) the roles and relationships of those organizations having responsibility for overseeing and/or directing activities following the transfer, (3) DOE's justification for carrying out a reduction-in-force at the centers, and the circumstances under which employees are entitled to severance payments, and (4) the applicability of several federal property transfer laws.

The following sections describe DOE's energy technology centers and the cooperative agreements implementing the transfer of the Laramie and Grand Forks centers and provide our detailed responses to your specific concerns. Generally, we found that

--DOE's commitment to continue providing federal funding of research at the centers under cooperative agreements with the universities is consistent with the law authorizing the transfer; however, immediate substantial budget savings,

which were part of the original motivation behind the transfers, will not be realized. DOE expects other benefits to be realized in the long run;

- the roles and functions of the post-transfer management structures are designed to facilitate project planning and management of all ongoing work in the assigned research areas. DOE expects that the involved management organizations will complement each other in that they will view the research from both DOE's and the universities' perspectives, and thus will help enhance close industry/government cooperation on fossil energy research;
- the separation of the centers' employees through a reduction-in-force process and determinations of entitlement to severance pay were carried out according to applicable federal regulations. Further, DOE worked closely with the universities to ease the transition for affected employees; and
- the Interior Department and Related Agencies Appropriations Act for Fiscal Year 1983 (Pub. L. No. 97-394) specifically authorized the transfer of the federal property at the centers to the universities; other federal property laws do not apply.

The objectives, scope, and methodology used in carrying out our review are described in appendix I.

DOE'S ENERGY TECHNOLOGY CENTERS

DOE's Office of Fossil Energy develops the policy and plans for fossil fuels research. Before the Laramie and Grand Forks centers were transferred, DOE's fossil energy research activities were conducted primarily at five energy technology centers, each responsible for planning and managing the research and development of one or more major fossil energy technology.¹ The center in Laramie, Wyoming, was responsible for underground coal gasification, tar sands, and oil shale technologies. The center in Grand Forks, North Dakota, was responsible for low rank² coal applications.

Both centers had a long history of serving as fossil fuels research laboratories for the government. The Laramie center, located adjacent to the University of Wyoming campus, began in 1924 as a 2-person Bureau of Mines petroleum research field

¹The other three technology centers and their lead research areas are as follows: Bartlesville, Oklahoma (petroleum); Pittsburgh, Pennsylvania (coal mining and liquefaction); and Morgantown, West Virginia (coal gasification).

²Coals with characteristics such as low heating values that distinguish them from the more common bituminous coals.

office. It became a DOE research facility in 1977, and at the time of defederalization had 124 full-time, permanent employees, with a fiscal year 1982 in-house budget of \$9.5 million.

The Grand Forks center, located on the University of North Dakota campus, was built in 1951 to expand on a Bureau of Mines lignite gasification program established at the university during World War II. It also became a DOE research facility in 1977. At the time of the transfer, the center had 66 full-time, permanent employees, with a fiscal year 1982 in-house budget of \$7.4 million.

Because of anticipated sharp decreases in the fossil energy budget³ DOE decided in 1982 to defederalize the energy technology centers at Laramie, Wyoming; Grand Forks, North Dakota; and Bartlesville, Oklahoma.⁴ DOE sought legislation authorizing the transfers of the Laramie and Grand Forks centers to the adjacent universities, citing potential budget benefits as well as a desire to encourage the private sector to pursue the type of research done at the centers. Specific authority to defederalize the centers was included in the Interior Department and Related Agencies Appropriations Act for Fiscal Year 1983 (Pub. L. No. 97-394), enacted in December 1982.

TRANSFER OF THE LARAMIE AND GRAND FORKS CENTERS

DOE considers the Laramie and Grand Forks centers to be valuable national resources in terms of accumulated capital equipment and their highly experienced research teams. Thus, DOE wanted to ensure that the centers remained viable resources for ongoing fossil research after they had been transferred to the universities.

Before enactment of Public Law No. 97-394, DOE had planned to transfer the centers to the universities. DOE officials determined that a cost sharing arrangement with continued DOE funding at the centers for a period of time following the transfers would best ensure each center's continued success. During that period of time, the centers were expected to gradually obtain other sponsors, including private industry support, so that ultimately they would not be as dependent on federal funding. Continued federal funding would also permit the continuity of ongoing government research work. DOE determined that other major alternatives of disposal, including selling or leasing the facilities,

³In fiscal year 1983, \$311.3 million was appropriated to the Office of Fossil Energy, a decrease of about \$100 million from fiscal year 1982. DOE expects to receive about the same amount in fiscal year 1984 as in fiscal year 1983.

⁴On February 28, 1983, we issued a report on DOE's efforts to defederalize the Bartlesville center (GAO/RCED-83-109).

were not feasible. DOE solicited cooperative agreement proposals from the universities in preparation for a potential transfer. The University of North Dakota submitted a proposal on September 24, 1982, and the University of Wyoming submitted one on November 2, 1982.

Formal authority for the transfers was contained in Public Law No. 97-394, December 30, 1982, which authorized DOE to enter into a cooperative agreement with the University of Wyoming for the purpose of encouraging research and development activities in the oil shale, underground coal gasification, and tar sands programs, and with the University of North Dakota for encouraging related activities in the low rank coal program. Negotiations were held with both universities, and on March 19, 1983, and February 28, 1983, cooperative agreements were executed between DOE and the Universities of Wyoming and North Dakota, respectively.

Under the agreements, the actual operation of the Laramie and Grand Forks centers is to be conducted by entities set up by and affiliated with the universities--the University of Wyoming Research Corporation and the University of North Dakota Energy Research Center, respectively. DOE agreed to transfer all of the centers' facilities and equipment with an acquisition value DOE set at \$24.3 million and \$15.8 million, respectively, to these organizations. Further, DOE and the universities agreed to a cost sharing arrangement whereby DOE is committed to provide a maximum of \$26.7 million to the University of Wyoming and \$20.5 million to the University of North Dakota for continued research over the life of the agreements.

The agreements were both effective April 1, 1983, with an ending date of September 30, 1986 (3-1/2 years) at the University of Wyoming and March 31, 1986 (3 years) at the University of North Dakota. The additional 6 months at Wyoming is to allow coordination with the convening of the state legislature in anticipation of obtaining state support for research activities. Provisions are included to permit extension beyond these dates by mutual agreement.

The following sections address your specific concerns on the funding of the centers, the established management structures, the use of the reduction-in-force process, and the transfer of the centers' property.

**CONTINUED FEDERAL FUNDING IS LEGAL:
HOWEVER, THE BUDGET SAVINGS OF THE
TRANSFER ARE MINIMAL**

We reviewed the cooperative agreements which were used to provide funding to the centers to determine if they were appropriate, in part because of the provisions for funding indirect operating costs. We also questioned whether the budgetary savings DOE cited as part of the motivation for the transfer were realized.

Our review showed that the continued federal funding committed to the centers under the cooperative agreements, including funds for indirect costs, is consistent with the law authorizing the transfers. The funding is also consistent with DOE's goal of assisting the private sector in assuming increased responsibility for this research. However, we found that the short-range budget savings following the transfers are minimal, although DOE believes that the long-range benefits of increased private research support in fossil fuel could be substantial.

Public Law No. 97-394 provides that continued federal funding for the centers may be used to encourage research and development within the boundaries of each center's area of research expertise. Our review of the statements of work in the cooperative agreements and the centers' annual research plans for the first year following the transfer showed that the planned research is limited to the areas specified in the act. (See apps. II and III for excerpts of each center's objectives and plans for the first year's operations).

The law does not prescribe the nature of any funding arrangements under the cooperative agreements, e.g., cost-shared or full government funding. The cooperative agreements call for cost sharing by the universities and the federal government over the life of the agreements. The amount of DOE funding for continued research under the cooperative agreements was negotiated between the universities and DOE. The agreed upon amounts were roughly based on continuing the government-financed research over the life of the cooperative agreements at the level of ongoing research at the time of transfers. In a December 1982 transition plan, DOE estimated that the annual cost of operating the centers, including in-house research and administration for the 3 years preceding the transfer, was about \$9.1 million at Laramie and \$7.2 million at Grand Forks. The total shared funding over the 3-1/2-year life of the Laramie agreement and 3-year life of the Grand Forks agreement is shown in the following table.

Funding of the Centers Following Defederalization

	<u>Maximum DOE share</u>	<u>Minimum university share</u>	<u>Total</u>
	----- (000 omitted) -----		
Laramie Center	\$26,702	\$ 801	\$27,503
Grand Forks Center	20,500	2,700	23,200

In addressing your concern about continued funding of indirect costs, we found that traditionally, federal research contracts contain funding for indirect costs associated with federal research. Further, Public Law No. 97-394 does not specifically preclude DOE from funding indirect costs related to carrying out the research and development activities under the cooperative agreements, nor does its legislative history address this issue.

Therefore, we have no basis to conclude that the funding of indirect costs under the agreements is inappropriate.

The cooperative agreements fund allowable indirect costs as defined and guided by the applicable federal cost principles.⁵ Indirect costs are those which support the overall objectives, but cannot be easily identified with a specific objective or project. Examples of these costs include depreciation, maintenance, and administration. Pending the establishment of final indirect cost rates, the cooperative agreements set a maximum provisional rate for indirect costs which can be paid for with federal funding--33 percent of direct costs at the University of Wyoming and 25 percent at the University of North Dakota.

The indirect cost rates are to be analyzed at the end of the first year by the Department of Health and Human Services--the federal agency responsible for auditing federal contracts and grants with universities--and adjusted as necessary. Health and Human Services performed a preprocurement audit of both university proposals and, in both cases, believe that while the university accounting systems were acceptable, the resulting rates may not be applicable for this type of operation and are therefore provisional until more experience is obtained.

With respect to your concern about budgetary savings, we determined that DOE never made a study of the potential costs to be saved by defederalization of the centers. The total federal commitment for the Laramie and Grand Forks centers for fiscal year 1982 and the total federal commitment projected for the first year following defederalization of the centers are shown in the following table.

⁵DOE is using Office of Management and Budget (OMB) Circular A-122, Cost Principles for Nonprofit Organizations--July 8, 1980 for the the University of Wyoming Research Corporation (a nonprofit corporation), and OMB Circular A-21, Cost Principles for Education Institutions--March 6, 1979 for the University of North Dakota Energy Research Center (a research center).

Government Funding and Commitment Before
and After Defederalization

	Laramie Energy Technology Center		Grand Forks Energy Technology Center	
	Fiscal year 1982	First year of agreement ^a	Fiscal year 1982	First year of agreement ^a
----- (000 omitted) -----				
Research under the cooperative agreement	\$ -	\$8,082	\$ -	\$7,200
Project office (note b)	-	700	-	780
Project office support (note b)	<u>-</u>	<u>500</u>	<u>-</u>	<u>-</u>
Total center operations	<u>\$9,519</u>	<u>\$9,282</u>	<u>\$7,386</u>	<u>\$7,980</u>

^aThe first year of each agreement runs from April 1, 1983, through March 31, 1984.

^bThe costs, roles, and functions of the project offices and related support are explained on pages 8 and 9.

While DOE cited an immediate favorable budget impact as a justification for the transfers, the table shows that DOE's financial commitment to the centers in the year following defederalization is about the same as the fiscal year 1982 in-house costs of government operation of the centers. Also, given the total federal commitment over the life of the agreements, it appears that large favorable budget impacts will not be realized during the next 3 years.

According to the Directors of the Laramie and Grand Forks Project Offices, the potential for increased private research involvement and greater utilization of the centers will be the main benefits of the transfers. While operating as government facilities, all research results at the centers had to be made public, making it almost impossible to market the centers' research capabilities to profitmaking organizations. As a result, the centers were primarily available only for DOE-funded research. This, according to DOE, shut off a potential major source of funding for fossil fuel research at a time when the centers were underutilized because of budget cutbacks. While research capacity is difficult to determine, center officials estimated that, at the time of the transfer, the Laramie and Grand Forks centers were using about 50 percent and 75 percent of their existing capacities, respectively.

In the December 1982 transition plan DOE stated that one objective of the transfer was to encourage expansion of the work performed at the centers by all industry sectors. DOE also hopes that after the period covered by the cooperative agreements, each center will not be as dependent on federal funding; DOE will then be free to place its research dollars with the organization best suited for carrying out the work.

At the time of our review both universities had begun marketing efforts aimed at increasing nonfederal funding of the research carried out at the centers. University officials were confident that in time both private and state sources would support a large portion of the centers' activities. As of September 1, 1983, the University of Wyoming Research Corporation was negotiating four contracts with private organizations totaling \$236,595 and the University of North Dakota Energy Research Center had been awarded seven contracts totaling \$397,937.

MANAGEMENT ROLES OF EACH ORGANIZATION
IN THE POST TRANSFER STRUCTURE ARE
COMPLEMENTARY

The cooperative agreements provide for a project management organization at each location composed of a management and technical committee. DOE also established project offices for each center. We reviewed this organization to determine if one or more of the components had overlapping responsibilities. We found that these components are designed to ensure a continued substantial federal management presence for both the ongoing outside commitments in the assigned research areas and the continuing in-house research at the centers. Complementary, distinct roles exist for each component in the planning and operating phases of management. Further, DOE believes that these structures will allow it to work more effectively toward the goal of a public/private partnership in fossil fuel research.

Role of the project offices

Before the transfer, under a decentralized system of management within DOE's Office of Fossil Energy, program management for specific technology development was the responsibility of the five energy technology centers. Each center's role was not only to assure adequate day-to-day operational management of in-house fossil fuel projects but to plan all federal research in their lead areas and to manage the work being conducted by outside contractors, universities, and DOE national laboratories.

Before the transfer in fiscal year 1982, the Office of Projects Management at Laramie had 11 individuals to manage 88 outside, multiyear contracts valued at \$21.5 million as well as \$9.5 million of fiscal year 1982 in-house research work. This office was often substantially supplemented by technical personnel on detail from the center's Office of Research and Development. For example, four specific outside projects during fiscal year 1982 used 61.8 staff years of management support.

Similarly, the Grand Forks center had 16 individuals in its Project Management Division to monitor 44 outside, multiyear contracts valued at \$11.1 million and fiscal year 1982 in-house work amounting to \$7.4 million. Since some of the individuals held dual roles within and outside the division, we were told by the Director of the Project Office that the total effort equated to less than 16 full staff years. The division also received in fiscal year 1982 an equivalent of 7 staff years of management and administrative support from the Office of the Director and the center's Facility Support, Analytical Research, and Engineering and Operations Divisions.

The project offices DOE established to replace the project management divisions at each center are limited to 10 positions. DOE estimates the fiscal year 1984 cost of these offices at \$700,000 and \$780,000 in Laramie and Grand Forks, respectively. As the DOE technical representatives for the cooperative agreements, the project offices have been delegated authority to (1) review and evaluate work done under the cooperative agreements, (2) provide technical direction, and (3) coordinate funding. These offices also are to continue to act as project managers for all research contracts in their area of expertise, including outside contracts previously managed by the centers' project management divisions.

Laramie project office officials presently estimate that they will spend 68 percent of their time on 25 multiyear contracts valued at over \$13 million and 32 percent of their time monitoring the University of Wyoming Research Corporation's first year's budget of \$8.1 million. Grand Forks project office officials estimate that they will spend 65 percent of their time managing about 30 multiyear contracts valued at about \$7 million and 35 percent of their time monitoring the University of North Dakota Research Center's first year's budget of \$7.2 million.

Because all technical operations have been transferred to the universities, the use of center technical staff to supplement project management duties is no longer an alternative. The Laramie project office has obtained an additional 7.5 staff years of general management support valued at \$500,000 through a 10-month agreement that went into effect in December 1982. The support is provided through a contract DOE's San Francisco Operations Office has with Rockwell International's Energy Technology Engineering Center. Under this contract DOE program officials can, through a priority system and with headquarters approval, obtain technical and administrative support for their programs.

The Grand Forks project office does not have a similar support arrangement under any current contract, but in the past the center acquired a small amount of technical and administrative support amounting to about \$23,000 to assist it in monitoring a large coal gasification project. Also, the Grand Forks project office currently is using an operating support contract through the Morgantown Energy Technology Center to provide it with three people onsite for word processing and administrative support.

Management and technical committees

The cooperative agreements established a management committee and a technical committee for each center to permit both DOE and the universities to jointly control program activity. These committees are made up of individuals who are involved in the administrative and technical operations of the universities and in the DOE fossil program both at the headquarters and project office levels. The committees' purposes are to bring the parties together periodically to ensure that the interests of all parties are represented at the policy and planning level. This assists the project offices in coordinating the centers' work with their plan for their research areas. It also provides a basis for the project offices to monitor day-to-day research activities at the centers.

Each technical committee is composed of nine individuals principally from the technical or operating level--five university representatives and four from DOE. In the case of the University of Wyoming, one of these members also serves on the management committee. The technical committee is required to meet at least twice each year to evaluate the quality and direction of the research program, to develop an annual research plan that describes the specific work to be performed during the upcoming year, and to make recommendations for project changes to the management committee.

Each management committee is composed of nine top management officials--five representing DOE and four representing the university. Two DOE officials serve on both management committees. The management committees are also scheduled to meet at least twice each year. The committees' major responsibilities include formally approving the annual research plan, overseeing the progress of the projects contained in the plan, and approving any changes in the plan or projects throughout the year.

USE OF THE REDUCTION-IN-FORCE
PROCESS WAS APPROPRIATE

We reviewed the appropriateness of DOE's use of the reduction-in-force process to terminate employees and the circumstances under which DOE was required to make severance payments. A reduction-in-force action is the personnel process the government uses for terminating employees when, as in this situation, positions have been eliminated. The reduction-in-force was carried out at both centers in accordance with Office of Personnel Management regulations.⁶ Further, severance payments were made to four employees who were not offered comparable positions at the universities. DOE worked closely with the universities throughout the process.

⁶The Office of Personnel Management's regulations for federal reduction-in-force procedures are contained in 5 C.F.R., Part 351.

Since all employees would have to be formally terminated, DOE's Director of Personnel approved a reduction-in-force action as the appropriate method to use to carry out the centers' defederalization. DOE believed that this method would result in fair and equitable treatment of all employees, regardless of whether they were offered positions with the universities. An official in the DOE Office of Personnel told us that delaying formal notices of termination would have aggravated employee uncertainty over the future.

The cooperative agreements provided that all qualified center employees were to be given the opportunity to obtain university positions. While the universities' methods varied slightly, in both cases job offers came before reduction-in-force notices, thus minimizing uncertainties about employment. Specifically, at Laramie the reduction-in-force notices for all employees were issued March 27, 1983, with an April 19, 1983, termination date. The University of Wyoming offers were made on March 25, 1983. At Grand Forks, the reduction-in-force notices went out to all employees on March 8, 1983, and had an April 8, 1983, termination date. The university offers were made on February 22, 1983. At both universities the starting dates of actual employment were timed so that center employees would not miss any work.

As the table on page 12 shows, most of the fulltime, permanent employees of the centers as of January 10, 1983, were hired by the universities. Others retired from federal service or accepted positions with the newly established project offices. Only a total of four nonretiring employees at both centers did not accept either a position with the universities or a new federal job.

Summary of Centers' Personnel Data

	<u>Laramie</u>	<u>Grand Forks</u>
Employees rehired by federal project office (note a)	10	8
Employees taking other federal jobs	2	1
Employees accepting jobs with the universities (note b)	102	55
Employees receiving severance pay	3	1
Employees retiring and not taking university jobs	<u>7</u>	<u>1</u>
Total center employees	<u>124</u>	<u>66</u>

^aOffers were made based on seniority as prescribed in 5 C.F.R. 351. 501, et seq.

^bSeventeen employees at Laramie and 5 at Grand Forks retired from their government jobs before accepting university jobs.

DOE did not perform an analysis of salary comparability for the individuals receiving and accepting university job offers. However, DOE and university officials at both locations believe that most of the offers were at or above the federal salary being received by center employees. Also, officials at both universities said that they intended to offer benefit packages comparable to what these employees had been receiving. We were also told that the universities did not treat these people as new state employees but allowed credit for federal employment longevity when determining the level of vacation and retirement benefits. Other benefits, such as sick pay, holidays, and life and health insurance were also offered.

Federal employees who are involuntarily separated from civil service status through no fault of their own generally are entitled to receive severance pay under 5 U.S.C. § 5595. Severance pay provides income for separated employees during their transition to a new career and provides compensation for the lost job, lost seniority, and disrupted life. However, Office of Personnel Management regulations (5 C.F.R. § 550.701 (5)) exclude certain federal employees from receiving severance pay. An employee of a federal agency or subdivision is not entitled to severance pay when the agency or subdivision is replaced by a public, nonfederal organization created in whole or in part by an act of the Congress, and the employee (1) is offered comparable employment at the time of replacement or (2) accepts any employment with the successor within 90 days after replacement.

The Universities of Wyoming and North Dakota are federal land-grant colleges established by the Congress. On this basis DOE determined that 5 C.F.R. § 550.701(5) precluded DOE employees who either receive comparable job offers, or within 90 days accepted any employment with the universities, from receiving severance pay. At Laramie, three people received a total of \$26,538 in severance pay as of August 1983. These individuals were not offered the jobs for which they applied because the university determined that they were not qualified. They were given the opportunity to apply for other noncomparable positions but declined. At Grand Forks one individual received \$3,042 in severance pay, as of August 1983, after the university determined that he was unqualified and did not offer him a job.

PUBLIC LAW 97-394 AUTHORIZES THE
TRANSFER OF THE CENTERS' PROPERTY

We reviewed the issue of whether any federal laws affect or impede the transfer of the centers' property to the universities under the cooperative agreements. We found that the cooperative agreements provided for the transfer of center property and equipment, amounting to an acquisition value⁷ of \$24.3 million at Laramie and \$15.8 million at Grand Forks. DOE officials believe that Public Law No. 97-394 supersedes any other property transfer laws. Based on our review of the applicable laws, we believe that Public Law No. 97-394 provides specific statutory authority mandating the transfer of real and personal property at the energy technology centers. We also believe that section 111(b) of the Energy Reorganization Act of 1974, as amended, 42 U.S.C. § 5821(b), and the Federal Property and Administrative Services Act of 1949, 40 U.S.C. § 471 et seq. do not apply to the transfer of property to the universities.

Public Law No. 97-394 provides that the Secretary of Energy shall,

" . . . subject to any terms and conditions which the Secretary may impose, transfer to the [University of Wyoming], all or any part of the Government's right, title, and interest in and to the land, buildings, improvements, fixtures, equipment and furnishings in the Secretary's custody of the Laramie Energy Technology Center at Laramie, Wyoming (including leasehold interests, buildings, improvements, fixtures, equipment and furnishings in the Secretary's custody on land not owned by the Government but which is a part of the center, where the Secretary determines that such transfer is integral to the future activities of the university). . . ."

⁷DOE decided that an appraisal to determine fair market value of the property and equipment transferred would have been expensive, time consuming, and not needed.

With respect to the Grand Forks Energy Technology Center, the law directs the Secretary to

". . . transfer to the [University of North Dakota] all or any part of the Government's right, title, and interest in and to the land, buildings, improvements, fixtures, equipment and furnishings in the Secretary's custody of the lignite coal research laboratory . . . at Grand Forks, North Dakota."

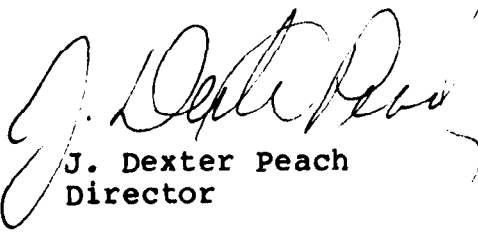
In contrast, section 111(b) of the Energy Reorganization Act of 1974 is a general statute that applies where the Secretary of Energy has made a discretionary determination that ownership of facilities and major items of equipment should be by an entity other than the United States. However, since Public Law No. 97-394 covers a specific property transfer mandated by the Congress, the principles of statutory construction dictate that it should apply in this situation. Thus, the Secretary's transfer of the centers' property to meet the mandate of Public Law No. 97-394 is not subject to section 111(b)'s required notification of the House Committee on Science and Technology and the Senate Committee on Energy and Natural Resources. Further, the Congress specifically required notification for the Bartlesville center in Public Law No. 97-394, but did not include a notification requirement for Laramie or Grand Forks.

Other arguments also support the position that section 111(b) does not apply. For example, section 111(b) applies to facilities or major items of equipment constructed or acquired with operating expense funds. However, it appears that appropriated funds for constructing and modifying the centers have come from other than DOE's "operating expenses." The Laramie center's oil shale laboratory was established pursuant to the Synthetic Liquid Fuels Act, Public Law No. 290, 58 Stat. 190(1944), and the coal research laboratory at Grand Forks was established pursuant to 30 U.S.C. § 401, et seq., directing the Secretary of the Interior to establish a research laboratory for lignite coal. Further, while section 111(b) states that no funds used under that subsection shall be used to acquire land, Public Law No. 97-394 includes the transfer of land to the universities. In addition, section 111(b) covers the acquisition or construction of "facilities or major items of equipment." Public Law No. 97-394 directs the transfer of all items of property, including land, buildings, improvements, fixtures, equipment, and furnishings.

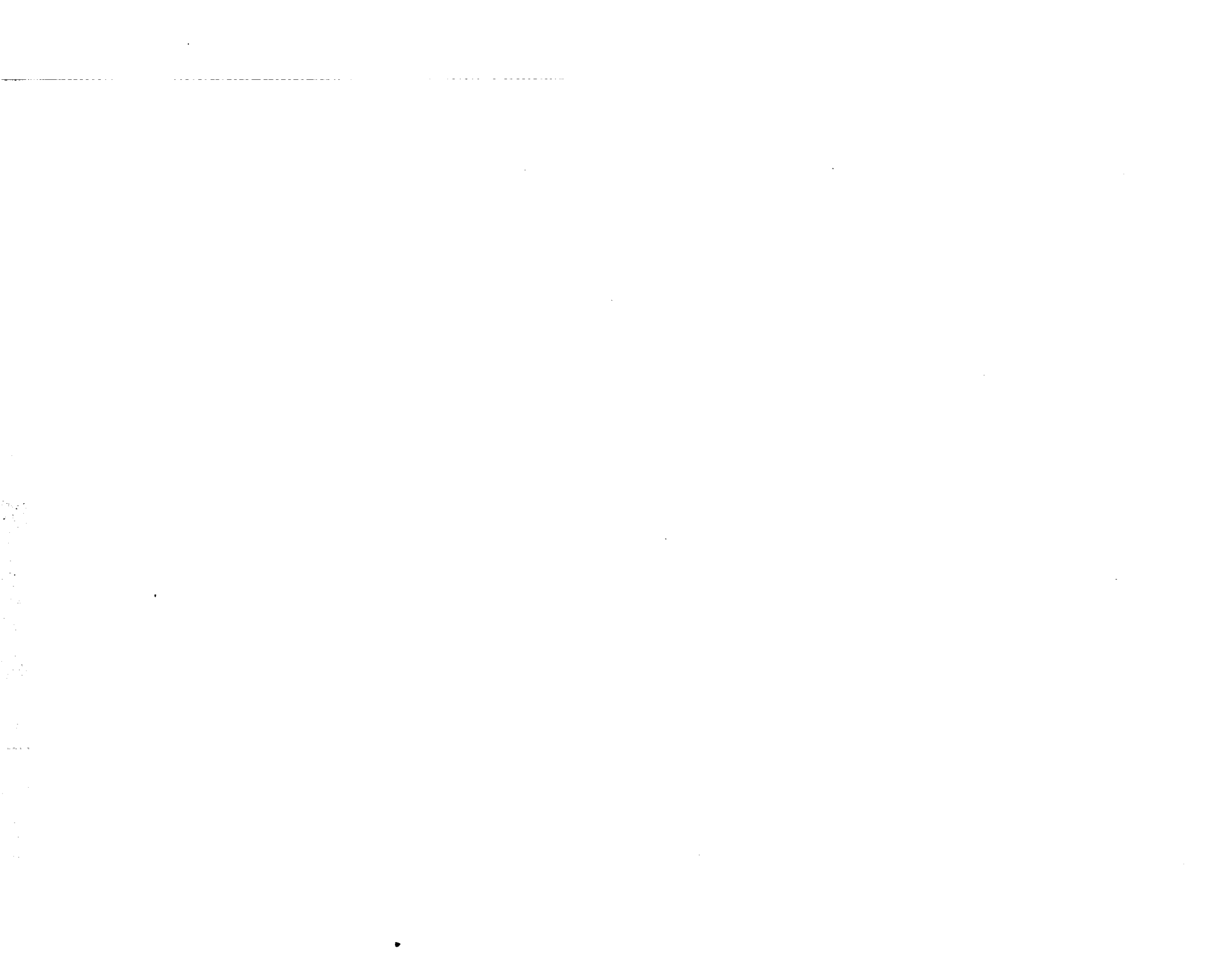
We are not aware of any other laws that affect or impede the transfer of property mandated by Public Law No. 97-394. Since Public Law No. 97-394 granted the Secretary of Energy a specific mandate to transfer the property, the administrative authority that might otherwise have been vested in the General Services Administration under the Federal Property and Administrative Services Act of 1949, 40 U.S.C. § 471 et seq., for the disposal of real property or surplus property also does not apply to this transaction.

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Unless you publicly announce its contents earlier, we plan no further distribution of this report until 7 days from the date of its issuance. At that time, we will send copies to the Secretary of Energy and make copies available to others upon request.



J. Dexter Peach
Director



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ABBREVIATIONS

DOE	Department of Energy
GAO	General Accounting Office
UND	University of North Dakota
UWYRC	University of Wyoming Research Corporation

OBJECTIVES, SCOPE, AND METHODOLOGY

The objective of our review was to respond to specific concerns about the defederalization of the Laramie and Grand Forks Energy Technology Centers raised in a March 7, 1983, joint letter from the Chairmen, House Committees on Government Operations, Energy and Commerce, and Science and Technology. To address their concerns about the legality, justification for, and impact of continued federal funding arrangements following the transfers, we (1) examined correspondence and other internal Department of Energy (DOE) documents detailing DOE's actions leading up to the transfers, (2) interviewed headquarters officials in DOE's Offices of Fossil Energy and Procurement and officials of the current Laramie and Grand Forks project offices, (3) reviewed the appropriate law, legislative history, and regulations concerning the transfers, and (4) reviewed the cooperative agreements, the annual research plans, and related budget documents.

To address concerns about the roles of established management structures, we (1) reviewed the cooperative agreements and related management plans and (2) interviewed pertinent DOE headquarters and field officials. To determine the legality and appropriateness of the reduction-in-force process used at the centers, we (1) interviewed DOE headquarters and field officials, including representatives of DOE's Office of Personnel and (2) reviewed the reduction-in-force and severance pay procedures used in this particular case. Finally, to evaluate specific congressional concerns about the application of federal property laws, we reviewed the relevant laws and legislative histories concerning the property transfer.

In accordance with the request we did not obtain official agency comments, but we did discuss our findings with Office of Fossil Energy program officials and incorporated their comments where appropriate. In general, these officials agreed with our report and aided in clarifying budget and personnel data cited in the report. Our review was performed between May and August 1983, and, except as noted above, was conducted in accordance with generally accepted government auditing standards.

EXCERPTS¹ FROM THE
UNIVERSITY OF WYOMING RESEARCH CORPORATION
FIRST ANNUAL RESEARCH PLAN

June 24, 1983

SCOPE OF RESEARCH EFFORT

Goal

The goal of the Department of Energy - University of Wyoming Research Corporation (UWYRC) cooperative agreement is stated in article 2 of the agreement.

"The UWYRC will accomplish a focused research program for oil shale, underground coal gasification, and tar sands, including the definition of the geochemical make-up of these resources; development of an understanding of the fundamental chemistry and physics of the conversion reactions; characterization of the pollutants in the waste streams; and development of control technologies to mitigate the adverse emissions."

In order to advance oil shale, tar sand, and underground coal gasification information bases, this work must proceed now. This work will result in the consolidation of in situ and surface process oil shale and tar sand technologies and environmental assessment for the high-risk payoff of results to allow industry to risk venture into commercialization.

Objectives

The general areas of the UWYRC research are:

- Obtain chemistry, kinetics, and physics of the oil shale conversion and pollutant formation reactions as a function of process variables and develop models of the conversion and pollutant formation process.
- Pursue novel concepts evolving from the oil shale technology base to the proof of hypothesis stage.
- Identify significant operating parameters that control retort performance in the uniform rubble and fracture conditions at low void volumes (12 to 15 percent) and develop experimental relationships between flow distribution and oil yield losses in nonuniform rubble beds.
- Characterize emissions and wastes from oil shale conversion processes; design, develop, and test control technologies

¹Prepared by GAO.

to mitigate the environmental impact of air, water, and solid wastes.

--Build upon the existing oil shale data base to further define the geophysical and geochemical make-up of the western shales.

--Develop ground water contaminant monitoring techniques, flow and transport models, and contaminant mitigation measures for underground coal gasification (UCG) sites; develop UCG process models; and conduct post-test evaluations.

--Conduct process studies, including laboratory block and tube tests, on tar sand; evaluate tar sand process emissions and develop environmental control technologies.

Research Plan

To accomplish the stated goal, UWYRC has fit these general research areas to the 1983-84 DOE oil shale, tar sand, and underground coal gasification research program plans in the following outline of resource program activities, tasks, and major milestones.

- 1.0 Oil Shale
 - 1.1 Chemistry and Physics
 - 1.2 Retort Bed Analysis
 - 1.3 Novel Processing Methods
 - 1.4 Environmental Impact Mitigation

- 2.0 Tar Sand
 - 2.1 Recovery Processes
 - 2.2 Preparation
 - 2.3 Novel Processing Methods
 - 2.4 Environmental Impact Mitigation

- 3.0 Underground Coal Gasification
 - 3.1 Recovery Processes
 - 3.2 Field Project Evaluation
 - 3.3 Novel Processing Methods
 - 3.4 Environmental Impact Mitigation

EXCERPTS¹ FROM THE UNIVERSITY OF NORTH DAKOTAENERGY RESEARCH CENTER FIRST ANNUAL RESEARCH PLANJuly 12, 1983RESEARCH PLAN SUMMARY AND OVERVIEW

The research program on low-rank coals under the Department of Energy - University of North Dakota (UND) cooperative agreement consists of 17 projects which are described in detail in the research plan. Projects are grouped in accordance with their assignments to the corresponding three operating divisions of the UND Energy Research Center: Coal Conversion Research, Coal Utilization Research, and Coal Science. There is substantial technical interchange between projects, both inside and across divisional lines.

Research Program

The overall research program shows a balance of effort between the conversion technologies in liquefaction and gasification, utilization technologies, and coal science. These studies cut across all low-rank coal technologies and emphasize the gathering of fundamental information needed to develop a basic understanding of low-rank coal behavior and environmental impact. The emphasis on generic, technology-based research complies with the President's delineation of the appropriate role of government research and development. It is assumed that almost all proof-of-concept work and commercial demonstration of new technologies will be left to the private sector for completion.

Coal Conversion Research

- A. Gasification Wastewater Treatment and Reuse
- B. Hydrogen Production from Low-Rank Coals
- C. Fine Coal Cleaning
- D. Coal/Water Slurry Preparation
- E. Coal Liquefaction

The Coal Conversion Research Program reflects this overall trend to study fundamentals and to attack environmental problems. In gasification, the primary stress is on developing public data for future use in management of organically contaminated wastewater from synfuel plants. Operation of the center's slagging fixed-bed gasifier is scheduled to decrease as waste products for testing becomes available from the Great Plains Gasification Plant. Liquefaction research will involve greater attention to understanding the role of disposal catalysts. Most testing will be done in tubing bombs and autoclaves. Physical treatment of coal by fine coal cleaning--an area in which little previous work

¹Prepared by GAO.

related to low-rank coals has been done--and preparation of slurry feeds for advanced combustion and conversion processes will receive increased emphasis. Evaluation of the special characteristics of low-rank coals as a source of lower cost hydrogen is also being pursued.

Coal Utilization Research

- A. SO_x/NO_x Control
- B. Particulate Characterization
- C. Waste Characterization
- D. Combustion Research and Ash Fouling
- E. Fluidized Bed Combustion
- F. Coal/Water Slurry Combustion

The Coal Utilization Research Program, projected to be in an expanding mode over the period of the cooperative agreement, stresses the increasing importance of the environmental consequences of low-rank coal combustion and the need for additional fundamental reaction data on the combustion of coal. In the area of environmental control technology, studies focus on the (1) use of a high temperature baghouse for simultaneous removal of SO_x and NO_x, (2) characterization of particular emissions in order to understand fundamental mechanisms impacting collection efficiency in baghouses, and (3) solid waste mineralogy and opportunities for altering leachability through the addition of fireside additives. Key combustion research topics include detailed examination of the combustion processes associated with individual particles of pulverized coal and the adaptation of advanced concepts for fluidized-bed combustion and of coal/water slurry combustion of low-rank coals.

Coal Science

- A. Ash and Slag Characterization
- B. Organic Structure
- C. Distribution of Inorganics
- D. Physical Properties and Moisture
- E. Supercritical Solvent Extraction
- F. Pyrolysis and Devolatilization

The program of the Coal Science Division represents three classes of research activity. First, the projects on organic structure and distribution of inorganics represent a long-term, painstaking effort to uncover fundamental information concerning the coal itself and to provide the foundation for systematic planning of research in later years. Second, the ash and slag characterization and physical properties work will provide key data with relatively immediate application for current coal technology. Finally, the supercritical extraction and pyrolysis projects are exploratory efforts to evaluate concepts believed to have potential merit and will be either dropped or expanded depending on the success of the initial effort.

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