119496

BY THE COMPTROLLER GENERAL

Report To The Congress

OF THE UNITED STATES

Status Of The Great Plains Coal Gasification Project--August 1982

Construction of the Great Plains coal gasification plant in Mercer County, North Dakota, is 4 to 6 weeks behind schedule, but no long-term impacts are anticipated. Cumulative project costs are lower than originally estimated. Overall, the management system established to oversee project construction appears comprehensive. However, some weaknesses exist in the computerized information system, which produces most project data.

The Department of Energy complied with statutory requirements in awarding the Great Plains loan guarantee for an alternative fuel demonstration project and is actively working to fulfill its responsibilities as the project's overseer. However, the Department needs to audit the costs incurred by Great Plains to determine that funds are being used only for eligible projects costs.

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

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To the President of the Senate and the
Speaker of the House of Representatives

This is the second in a series of reports on the loan guarantee for an alternative fuels demonstration project awarded to the Great Plains Gasification Associates. The report is required by the Department of Energy Act of 1978--Civilian Applications (P.L. 95-238). We reviewed the status and management of the project, the funds disbursed, the Department of Energy's (DOE's) monitoring to ensure timely completion and proper release and use of Government funds, and DOE's compliance with the statute. The report discusses matters relating to these issues for the period January 29 through June 30, 1982.

Copies of this report are being sent to the Director, Office of Management and Budget; the Secretary of Energy; and other interested parties.

Milton J. Socolar

Acting Comptroller General
of the United States

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

STATUS OF THE GREAT PLAINS
COAL GASIFICATION PROJECT--
AUGUST 1982

D I G E S T

The Department of Energy (DOE) awarded a loan guarantee for an alternative fuels demonstration project on January 29, 1982, to the Great Plains Gasification Associates. The loan guarantee covered costs up to $2.02 billion for construction and startup of the project. The Federal Government, through the Department of the Treasury's Federal Financing Bank (FFB), is lending Great Plains the money to build the project.

GAO reviewed

--the status of the project in terms of cost and schedule;

--the management of the project by Great Plains' project administrator, ANG Coal Gasification Company (ANG);

--DOE's monitoring of the project; and

--DOE's compliance with legislative requirements.

GAO findings relating to each of these issues are summarized below.

PROJECT IS BEHIND SCHEDULE, BUT COSTS ARE LESS THAN EXPECTED

The Great Plains project consists of the gasification plant, a coal mine, and a pipeline. Full-scale construction started in August 1981. As of June 30, 1982, progress on the gasification plant was 4 to 6 weeks behind schedule. Great Plains initiated actions to get the project back on schedule and no long-term impacts were anticipated. The development of the coal mine was on schedule, and Great Plains expects to begin construction of the pipeline in April 1983. (See pp. 1 and 7.)

Commensurate with less work accomplished, cumulative project costs were $51.4 million lower than Great Plains originally estimated. Approximately one half of this amount resulted from lower inflation and prudent business management by the company. (See p. 8.)

PROJECT MANAGEMENT SYSTEM APPEARED ADEQUATE BUT FURTHER TESTING NEEDED

The project administrator, ANG, adopted extensive procedures to manage, direct, and oversee the construction and startup of the project. As part of these procedures, several internal audit groups have been established to assist management and oversee contractors at the project site in Mercer County, North Dakota. ANG also has a computerized management information system which produces most of the data on the project. Some weaknesses exist in this system, and further testing is needed to ensure its integrity and reliability. (See pp. 11 to 15.)

DOE'S MONITORING DID NOT ENSURE THAT FUNDS WERE PROPERLY SPENT

DOE established and implemented procedures for reviewing all aspects of the project, identifying problems, and initiating corrective actions with Great Plains. DOE expects to spend at least $2.5 million each fiscal year monitoring project construction and ensuring appropriate release and use of guaranteed debt funds. However, DOE had not audited costs incurred to determine that expenditures had been made in accordance with the limitations in the loan guarantee agreement. (See pp. 17 to 20.)

LEGISLATIVE COMPLIANCE COMPLETE

Prior to awarding the loan guarantee, DOE certified that all relevant statutory requirements were met. GAO's review indicated DOE complied with the requirements of Public Law 95-238. (See pp. 22 to 29.)

RECOMMENDATION

GAO recommends that the Secretary of Energy:

--Audit costs incurred by Great Plains to determine that project funds are properly spent. Such audits should begin as soon as possible because the longer DOE delays in initiating them, the more difficult it will be to verify and validate the costs on a current basis.

AGENCY COMMENTS

GAO requested and received comments from DOE, FFB, the Rural Electrification Administration, ANG, and Arthur Andersen & Co. Generally, these officials agreed with the report although they offered some clarification in their specific areas. In preparing the final report, GAO incorporated these suggested changes as appropriate.

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GAO's review of the Great Plains project is required by the Department of Energy Act of 1978--Civilian Applications (P.L. 95-238).

Contents

ABBREVIATIONS

ANG	ANG Coal Gasification Company
DOE	Department of Energy
FFB	Federal Financing Bank
GAO	General Accounting Office
ICE	Independent Cost Estimating staff, DOE
REA	Rural Electrification Administration

CHAPTER 1

INTRODUCTION

This is the second in a series of status reports required by the Department of Energy Act of 1978--Civilian Applications (P.L. 95-238), which authorizes the Department of Energy (DOE) to provide loan guarantees for alternative fuel demonstration projects and requires the Comptroller General to audit recipients of such guarantees and report every 6 months from the date of enactment on February 25, 1978. 1/ The Secretary of Energy awarded the first and only loan guarantee under the act to the Great Plains Gasification Associates, Detroit, Michigan, on January 29, 1982, for up to $2.02 billion for a project to produce synthetic natural gas from coal.

The Federal Government, through the Department of the Treasury's Federal Financing Bank (FFB), is lending Great Plains the money for the project. The financial terms and conditions of the guarantee allow FFB to periodically disburse funds to Great Plains upon DOE's approval and to provide up to approximately 75 percent of total project costs, with repayment not to exceed 20 years or 90 percent of the expected useful life of the major project assets, whichever is less. The loan and guarantee are "nonrecourse," which means that if Great Plains defaults DOE's recourse is limited to the project assets.

DESCRIPTION OF PROJECT

The Great Plains coal gasification plant will be the Nation's first commercial plant producing synthetic natural gas from coal. The facility, being built on about 700 acres in Mercer County, North Dakota, consists of three separate components: the gasification plant, a lignite coal surface mine, and a pipeline connecting the plant to an interstate network of natural gas pipelines. The architects' drawing on page 2 shows the principal project buildings.

Initial design of the plant started in 1973. After years of negotiations, Great Plains started site preparation in 1980 and full-scale construction in August 1981. 2/ Initial gas production is scheduled to begin during August 1984, with full gas production scheduled for December 1984. Under the loan guarantee agreement, the inservice date for full gas production could be

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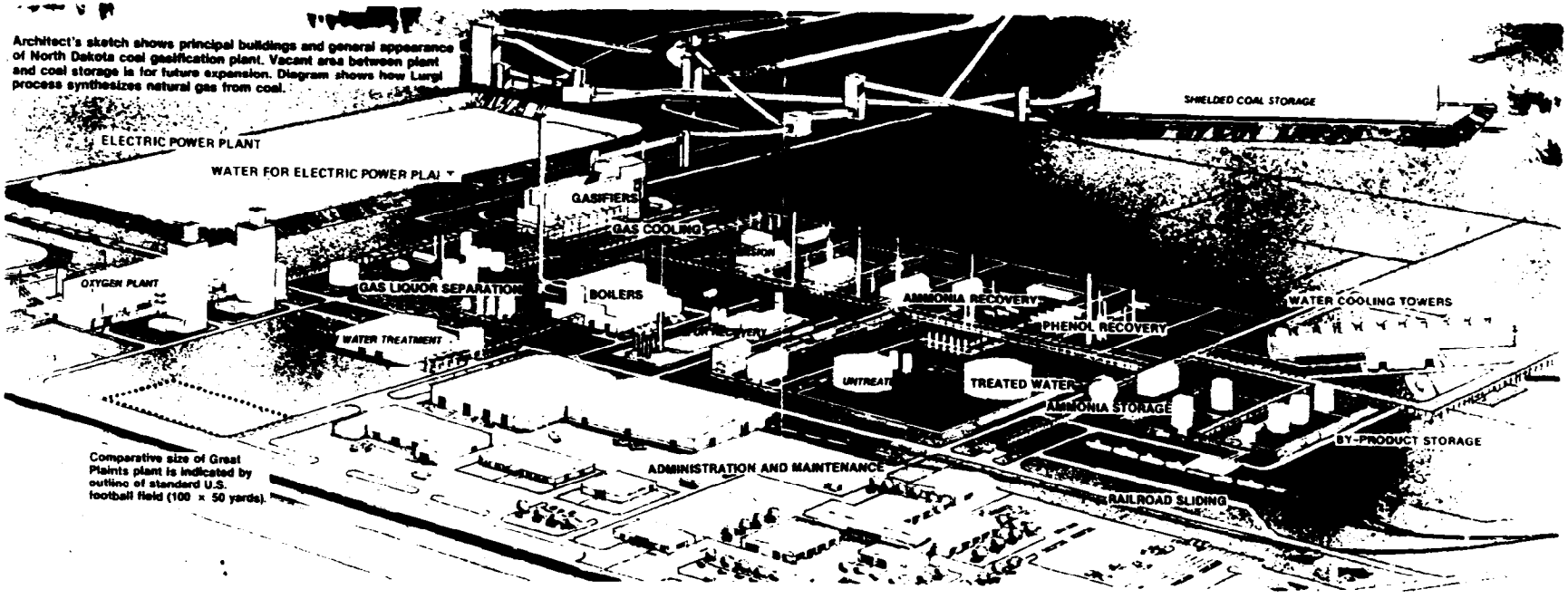
1/The first report was entitled "Status of the Great Plains Coal Gasification Project Loan Guarantee--February 1982," EMD-82-55, Mar. 6, 1982.

2/For more information concerning the background of the project, see U.S. General Accounting Office, "Status of the Great Plains Coal Gasification Plant," EMD-81-64, Mar. 16, 1981.



GREAT PLAINS GASIFICATION PLANT

as late as June 1986. However, Great Plains is to make every effort to meet the December 1984 inservice date.

The plant will have a daily design capacity of 137.5 million standard cubic feet of high-Btu (British thermal unit) gas. It is designed to operate at 91 percent of capacity and use about 14,000 tons of lignite coal a day to produce 125 million cubic feet of synthetic gas, 93 tons of ammonia, and 85 tons of sulfur daily. Pipeline companies affiliated with the Great Plains partners have agreed to purchase all the gas produced by the plant during its initial 25 years of operation. The production of the plant represents about 1 percent of the pipeline companies' average annual requirements. The price of the gas is not fixed but will be controlled by gas purchase contracts which contain a pricing formula. 1/

The synthetic gas from the project will be produced using the Lurgi pressurized, fixed-bed gasification process with Lurgi methanation. This process is not new; it has been used in South Africa. The Great Plains project, however, will be the first commercial-scale demonstration of the technology in the United States. The Lurgi process uses lignite coal crushed to about 2-inch-diameter chunks to produce the synthetic gas. Smaller size coal produced during the crushing process will be sold to a steam electric generating plant, owned by Basin Electric Power Cooperative, sited adjacent to the coal gasification plant. The Basic Electric plant will share in the development costs of the coal mine, coal and ash handling facilities, plant access roads, and water intake facilities under a loan guarantee from the Rural Electrification Administration (REA), an agency within the U.S. Department of Agriculture.

PROJECT COST AND OWNERSHIP

The estimated maximum cost of the project is about $2.76 billion. This includes $1.89 billion to construct the gasification plant, adjacent coal mine, and pipeline, $349 million for financing during construction, and about $521 million 2/ for contingencies. Of the total, FFB can lend and DOE guarantee

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1/During the first 5 years, the price cannot exceed the unregulated price of No. 2 fuel oil. From the 6th to 10th year of production, the price will be the lesser of (1) the average price paid by the pipeline affiliates for 10 percent of their highest priced domestic natural gas or (2) the unregulated price of No. 2 fuel oil. After 10 years, the price will be based on the price of unregulated domestic natural gas.

2/Of the $521 million, $200 million is a secondary contingency for unanticipated overruns. (See table on p. 25).

up to $2.02 billion; and the project's participants agreed to contribute up to $740 million of their own equity.

The project is owned by the Great Plains Gasification Associates, a partnership of four companies. On January 29, 1982, when DOE finalized the loan guarantee, these companies and the proportion of equity to be contributed by each to the partnership were:

	Percent of equity
ANR Gasification Properties Company (controlled by American Natural Resources Company (ANR))	32.5
Tenneco SNG, Inc. (Tenneco) (a subsidiary of Tenneco, Inc.)	30.0
Transco Coal Gas Company (Transco) (controlled by Transco Companies, Inc.)	22.5
MCN Coal Gasification Company (MCN) (a subsidiary of MidCon Corporation, formally Peoples Energy Corporation	15.0
Total	100.0

In May 1982, Great Plains reported that Pacific Synthetic Fuels Company, a subsidiary of Pacific Lighting Corporation, will acquire a 10-percent share of the project--7.5 percent from ANR Gasification Properties Company's interest and 2.5 percent from Transco Coal Gas Company's interest. DOE officials confirmed negotiations were in process. DOE had not received official notification for its review and approval as of June 30, 1982.

PROJECT MANAGEMENT AND OVERSIGHT

Although it appointed the ANG Coal Gasification Company (ANG) 1/ as project administrator, Great Plains, as project owner, retains ultimate responsibility for management. It provides overall direction through a management committee comprised of representatives from each of the partner firms. The management committee is assisted by several subcommittees, including technical, finance, and audit subcommittees.

As agent for Great Plains, ANG is responsible for the day-to-day planning, engineering, design, construction, and operation

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1/ANG is a wholly owned subsidiary of American Natural Resources Company.

of the gasification plant and the mine. ANG was established specifically to provide such management. Its staff, totalling 287 as of June 25, 1982, are located at ANG's headquarters, Detroit, Michigan; the plant construction site at Beulah, North Dakota; ANG offices in Bismarck, North Dakota; and at the principal contractors' offices.

The lead contractors for the engineering, procurement, and construction of the gasification plant are The Lummus Company and Kaiser Engineers, Inc. Lummus is responsible for the overall contractor management of the coal gasification plant and for process and design engineering. Kaiser is responsible for civil engineering and onsite construction. In addition, ANG has contracted with the Coteau Properties Company, a subsidiary of North American Coal Corporation, to develop and operate the coal mine.

At the Federal level, DOE's Office of Coal, Gas, Shale, and Coal Liquids, Office of the Assistant Secretary for Fossil Energy, is responsible for monitoring construction and operation of the Great Plains project to ensure timely project completion and the appropriate release and use of guaranteed debt. DOE headquarters delegated responsibility to DOE's Chicago Operations Office for the day-to-day monitoring of the project which, in part, includes determining that a reasonable assurance of debt repayment exists and for assessing the reasonableness of the periodic requests for Government funds.

OBJECTIVES, SCOPE, AND METHODOLOGY

This report updates information on all aspects of the project as of June 30, 1982, including its status and the funds disbursed. It also discusses (1) ANG's controls and management, (2) DOE's monitoring, and (3) the extent to which the loan guarantee complies with the legislative requirements of Public Law 95-238, including the Treasury Department's rationale for requiring FFB as the lending institution for the project.

The information provided is based on interviews with DOE, FFB, REA, and project officials; a review of Great Plains internal reports and monthly and quarterly reports submitted by Great Plains to DOE; an analysis of Public Law 95-238 requirements; and DOE reports related to the loan guarantee. We reviewed (1) DOE's plans for monitoring the project; its cost, schedule, and loan disbursement procedures; and the documentation supporting six approved disbursements; (2) ANG's policies, plans, and procedures; and audit plans, work programs, and reports; and (3) the contractual agreements and files of five contractors ANG has identified as critical for the project's completion to ensure that the Federal Government has rights to all technology in the event of default.

Our review was conducted in accordance with GAO's current "Standards for Audit of Governmental Organizations, Programs, Activities, and Functions." We did not verify the cost or schedule

data reported by Great Plains and DOE. However, we did interview officials of ANG and the public accounting firm of Arthur Andersen & Co. to determine the extent to which they tested ANG's computerized information and reporting system and observed Arthur Andersen auditors testing computer system controls at the project site. In addition, we evaluated selected internal controls based on our observations of computer operations at the project site. We did not evaluate REA's monitoring and oversight of the Basin Electric loan guarantee.

CHAPTER 2

PROJECT STATUS AS OF JUNE 30, 1982

Progress on the coal gasification plant was 4 to 6 weeks behind schedule according to data Great Plains provided DOE. However, Great Plains expects to be back on schedule by October 1982. While neither DOE nor Great Plains foresaw any impact on the scheduled December 1984 inservice date, DOE requested Great Plains to perform an impact assessment of the current schedule slippage. Development of the lignite coal mine was reported to be on schedule. In April 1982, Great Plains selected the pipeline route and expected to begin construction in April 1983.

As of June 30, 1982, Great Plains reported to DOE that total project costs amounted to about $442.2 million. This amount was $51.4 million less than Great Plains estimated would be spent as of that date. Funds received amounted to $414 million. Great Plains borrowed $175 million of this amount from FFB, and the partners contributed $239 million in equity.

PHYSICAL PROGRESS AND COSTS

Great Plains reported that overall the plant (engineering, procurement, and construction) was about 41 percent complete as compared to a planned 47 percent. Activities related to development of the coal mine were on schedule, with about 41 percent of the mining project completed. By December 1984, Great Plains expects the mine to produce enough coal to meet the needs of the gasification plant. With respect to the plant's pipeline, Great Plains officials examined two alternative routes, a 40-mile route to the Northern Border interstate pipeline and a 365-mile route to the Great Lakes Gas Transmission Company's pipeline. On April 6, 1982, Great Plains opted for the shorter Northern Border pipeline route and expected construction to begin in April 1983. Pipeline construction is expected to be completed by October 1983.

The following table shows the composite of weighted-value percentages of completion of the three major activities involved in the plant--engineering, procurement, and construction:

	Weighted percentage of total plant	Planned percentage complete	Actual percentage complete	Percentage actually ahead of (behind) planned
Engineering	11.2	9.10	8.88	(0.22)
Procurement	42.1	28.22	25.45	(2.77)
Construction	46.7	9.81	7.01	(2.80)
Overall	100	47.13	41.34	(5.79)

The plant's 33 major activity areas were in widely varying stages of completion. For example, the core of the facility--the building and equipment used in gasifying coal--was 7 percent complete, whereas the construction of access roads and other activities considered a part of "off-site" development was about 95 percent complete.

Great Plains reported several reasons for the delay in progress. Among these were delays in completing engineering drawings and in deliveries of equipment and material, especially structural steel, pipe spools, and roofing/siding. In addition, bad winter weather conditions hampered construction. Corrective actions, such as assigning additional staff to complete the needed engineering drawings and intensified monitoring of vendor activities--including placing staff at one vendor's plant to assure timely material deliveries--had been implemented.

Total project costs were $51.4 million less than Great Plains had estimated they would be by June 30, 1982. Great Plains had expected cumulative project costs 1/ to be about $493.6 million, but actual costs incurred were $442.2 million. Of the $51.4-million difference, about $27.3 million was attributable to reduced funding requirements because of the schedule slippage; and $24.1 million was attributed to a lower rate of inflation, subcontracts awarded for amounts less than anticipated, and higher than expected labor productivity in the construction of coal handling, electric distribution, steam supply, and various other plant facilities.

DOE reported that Great Plains had implemented recovery plans to eliminate the construction slippage by October 1982. DOE did not foresee an impact on the scheduled December 1984 inservice date for the plant but had requested Great Plains to provide an impact assessment of the current schedule slippage.

We believe that, if the project is not on schedule before the winter months, the adverse winter conditions in North Dakota which partially contributed to the current slippage could exacerbate the situation further. The longer the plant construction is delayed, the greater are the chances that Great Plains will not meet the December 1984 inservice date.

FUNDS DISBURSED

As of June 30, 1982, FFB had loaned about $175 million to Great Plains. Interest rates and terms of maturity varied (app. I lists all monies loaned and interest rates applied). All FFB loans to Great Plains include a one-eighth of 1 percent

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1/Excludes pipeline since construction had not started as of June 30, 1982.

lending fee and a three-fourths of 1-percent loan premium. In addition, Great Plains pays a 1-percent-per-annum guarantee fee to DOE at the time of each disbursement.

DOE requires Great Plains to provide a quarterly estimate of funds needed for the project. We found that the company has not only provided DOE these estimates but has also been providing revised estimates almost monthly. Great Plains can request disbursements weekly, and DOE officials said they expect to receive weekly requests for funds during periods of intense construction activities, such as during the summer when weather conditions are favorable. Since March 1982, Great Plains has requested and received weekly disbursements. Each disbursement request projects the amount of Federal funds needed prior to the next scheduled disbursement date.

Funds are disbursed by FFB after DOE approves Great Plains' requests. 1/ Each disbursement to Great Plains can be considered a separate loan. During the construction period, Great Plains has the option of requesting short-term loans, with maturity from 45 days to 1 year, or long-term loans of up to 20 years. When startup operations are completed and the plant is at full production, all loans will be consolidated into long-term loans.

While the first principal payment on these loans is not due until January 2, 1988, interest on disbursements made during the construction period are due and payable quarterly beginning in April 1982. DOE officials told us the decision to delay payments on the principal until approximately 3 years after the plant's scheduled inservice date of December 1984 was made to allow the plant sufficient time to achieve a production level where revenues generated could pay both the loan interest and principal.

OTHER FEDERAL FUNDING IN THE PROJECT

In addition to DOE's loan guarantee to Great Plains, REA authorized the use of $248.6 million of its $2.0 billion loan guarantee to Basin Electric Power Cooperative to develop a portion of the lignite coal mine.

REA makes billions of dollars of financing available to power supply systems to meet the electric energy needs of rural consumers. 2/ REA interprets its guarantee-making authority to

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1/See chapter 4 for a discussion of DOE's procedures and methodology for approving these requests.

2/For further information see: U.S. General Accounting Office, "Financing Rural Electric Generating Facilities: A Large and Growing Activity," CED-81-14, Nov. 28, 1980.

include any items related to and needed for construction and operation of power facilities. A portion of REA's total guaranteed loan funds has been used, for example, to develop coal mines and purchase mining equipment and railroad cars.

Basin Electric is building two coal-fired electric generating units immediately adjacent to the Great Plains project site. Since both facilities require large amounts of coal, Great Plains and Basin Electric have agreed to share the development costs of the 9.9 million-tons-a-year coal mine to be operated by Coteau Properties Company. Great Plains plans to purchase about 4.7 million tons of the mine's annual production and Basin Electric about 5.2 million tons. Financing of the mine's development is prorated based on the amount of coal each will use. Great Plains' estimated share of the costs of developing the mine is $155 million, $116 million of which will be financed through its loan guarantee with DOE and the remaining $39 million financed from equity contributed by the partners. Basin Electric's share of the mine, $248.6 million, is being financed as part of the REA loan guarantee for the electric power station.

By mutual agreement between DOE and REA, ANG directs the development, construction, and operation of the mine for both Great Plains and Basin Electric. According to the Director, Power Supply Division, REA will provide some oversight of the mine's development through an annual review of Coteau's work plan which includes budgets, staffing, and material requirements, among other things. Onsite visits and monitoring will be made as part of REA's monitoring of the construction status of the electric generating stations. While officials could not be specific concerning the frequency of these visits, the Power Supply Division Director estimated such visits would be made about once every 9 months. We did not evaluate REA's monitoring and oversight of Basin Electric's loan guarantee.

CHAPTER 3

GREAT PLAINS PROJECT MANAGEMENT REVIEW

Although we have not determined their ultimate effectiveness, ANG's policies, plans, and procedures for managing the Great Plains project appear sufficient to provide direction and oversight for all project activities. As part of its management controls, ANG and Great Plains established a computerized management information system which provides most of the data on the project. In addition, several groups have been set up to provide independent evaluations and oversight of management and contractor performance. The planned work of these groups appears to be adequate in scope to achieve these objectives, and the groups have sufficient independence. Furthermore, a coordinator had been designated to avoid duplication of effort.

While several of these internal groups had ongoing audits, only one group had completed a substantial amount of audit work as of June 30, 1982. We found that its evaluations were adequately planned and implemented and its reports timely. We also found that management had acted on the recommendations made. In addition, the public accounting firm of Arthur Andersen & Co. will audit and report annually on Great Plains financial statements and will certify quarterly how Great Plains spends the funds received.

ANG'S MANAGEMENT CONTROLS

As a guide for day-to-day management of the project, ANG prepared and Great Plains adopted a comprehensive management plan. In conformity with the plan, ANG has established numerous detailed written procedures and an integrated computerized information system to manage the project. While the entire system has not been tested to ensure its integrity and reliability, at least one of ANG's internal audit groups and Arthur Andersen & Co. plan to periodically test the system's reliability.

Policies, plans, and procedures

Great Plains has formally adopted an ANG-developed project management plan and has designated it as the plan that Great Plains and ANG shall follow for the project. DOE requires ANG to comply in all material respects with all provisions of the plan. The plan, in our view, is thorough and well organized. It describes, for example, the project organization; chain of authority; project functional components; and policies, subplans, and procedures. The organizational arrangements appear to segregate duties to avoid duplication and conflict and to assign responsibilities and accountability for all project activities.

To implement the management plan, ANG has established various policies and comprehensive written procedures covering

all major categories of activities, such as accounting, engineering, procurement, and construction. In essence, the policies and procedures are intended to provide close management control of the project and contractors. For example, ANG has established a policy which requires the plant contractors (Kaiser and Lummus) and the mine developer (Coteau) to solicit bids for goods and services only from vendors and subcontractors which ANG had determined to be qualified. Other important requirements of this policy are that the contractors

--make an effort to obtain all subcontracts for goods and services on a firm lump sum basis or firm unit prices and

--seek to negotiate various physical milestones with subcontractors and to condition payment upon the completion of these milestones in the case of major items.

ANG has also established formal change order procedures requiring the plant contractors and the mine developer to obtain ANG approval of proposed changes in work scope that have an estimated plus or minus value of $10,000 or more for the gasification plant and of $5,000 or more for the mine. In addition, ANG has established a cost deviation procedure which requires the plant contractors to submit notices of suspected future cost differences of $10,000 or more as early as practical. The procedure is meant to allow ANG time to initiate corrective action where possible.

Initial reliability assessment of computerized information system not yet completed

In order to effectively manage plant construction activities and identify potential problems, ANG has a computerized information system which consolidates the systems operated by Kaiser and Lummus, the plant contractors. Cost and schedule data reported by ANG to Great Plains, DOE, and others are largely derived from this system. As of June 30, 1982, data on the coal mine were still manually produced; but Coteau was in the process of installing an automated system. ANG did not complete integrating its management information system with those of the plant contractors until the spring of 1982. As of June 30, 1982, only one major segment of this system had been tested to ensure its integrity and reliability. While neither ANG nor Arthur Andersen & Co. plan to test its overall reliability, both companies plan to test segments of it throughout the construction period.

Arthur Andersen & Co. had completed some initial tests of ANG's information system. For example, in May 1982, Arthur Andersen & Co. tested the computerized system of the primary construction company, Kaiser Engineers, Inc. In conducting this analysis, Arthur Andersen & Co. tested Kaiser's input, processing, output, and general controls for its payroll; accounts payable;

and equipment. Although the final report on the results of this testing was not available as of June 30, 1982, Arthur Andersen & Co. officials told us they noted some weaknesses in the system. We observed Arthur Andersen & Co. conducting tests of the system's reliability and, in our opinion, its procedures were thorough and the scope and depth of its testing were sufficient. Also, we independently evaluated certain controls relating to access to computer files and computer room security.

The specific weaknesses we noted were that

--computer room access keys were left unguarded on desks outside the computer room, which could allow unauthorized personnel to tamper with the equipment and

--the computer operator has access to input and file maintenance programs, which is contrary to normal industry practices.

An ANG official told us that, subsequent to our evaluation of its system, it took corrective actions on the weaknesses identified. We plan to follow up on the effectiveness of these actions and conduct further evaluations of ANG's computer system controls.

AUDITS AND EVALUATIONS

Several internal groups established by ANG and Great Plains assist management and oversee contractors' activities. These include a Great Plains Audit Committee, ANG Internal Audit Activity, and ANG Field Accounting. As of June 30, 1982, ANG's internal audit and field accounting groups had reviewed or were in the process of reviewing various project controls. ANG also established a construction and technical services group which is responsible for monitoring the technical aspects of the project. We did not evaluate this group's activities during this reporting period.

Great Plains Audit Committee

Great Plains established the audit committee to protect the interests of the partners. The committee can, at its discretion, evaluate ANG's management. Committee officials told us that for project oversight they will rely primarily on the work done by ANG Internal Audit Activity. The only exception is that costs incurred by ANG for services obtained from American Natural Resources will be audited by the Great Plains Audit Committee, since ANG is a wholly owned subsidiary of ANR. The audit committee appraises the adequacy of the internal audit group's scope, frequency, and coverage. The Great Plains partners may provide additional auditors to the internal audit activity on particular audits as they desire.

ANG Internal Audit Activity

ANG's internal audit group is primarily responsible for evaluating the effectiveness of ANG's administrative and financial controls. Its audit plans indicate that it will concentrate on controls in major functional areas, including manpower, material and inventory, and subcontractors. Although part of ANG, the internal audit group maintains its independence because it is not directly responsible to officials whose activities will be audited; and it reports to project management at high levels, i.e., the Great Plains Audit Committee and the Chief Executive Officer of ANG. ANG has made provisions for avoiding duplication of audit efforts by making the internal audit group responsible for coordination among the various groups.

ANG's internal audit group had completed a review of Lummus' home office costs and was in the process of completing reviews of project cost and schedule controls, change orders, procurement, Kaiser home office costs, and manpower and equipment usage. We plan to review and report on the internal audit group's work during the next reporting period.

ANG's Field Accounting

ANG's field accounting group, stationed at the project site, is responsible for verifying the accounting operations of Kaiser on a continuing day-to-day basis and of Lummus' and Coteau's operations periodically. It serves to ensure that contractors comply with the internal procedures established for controlling costs. The field accounting group is responsible directly to the ANG Controller and submits weekly reports on work completed.

The field accounting group had written audit plans and, for most of its area of responsibility, detailed work programs. The group manager told us that all work programs would be completed by the end of calendar year 1982. The plans and completed work programs were sufficient in scope and procedural detail to provide adequate audit coverage. We found that reports issued were timely, concise, clear, and supported by factual evidence. They included recommendations and were submitted to officials responsible for taking the corrective actions needed. In addition, the field accounting group has established procedures to follow up on the recommendations made and corrective actions taken by management.

As of June 30, 1982, ANG's field accounting group issued 21 reports to management concerning contractor accounting operations (such as payroll and accounts payable). Management took corrective action on the deficiencies noted. During a review of Kaiser's inventory control system, for example, the field accounting group identified certain weaknesses in the system such as the following:

--Kaiser did not have a detailed inventory/warehousing management plan.

--Kaiser's staff were inadequately trained to operate the inventory control system.

--Kaiser experienced delays in processing material receipts and issues through the system.

Kaiser officials discussed the audit findings with ANG and detailed the corrective actions they were taking to resolve the problems. ANG officials indicated satisfaction with the corrective actions planned but expect to evaluate their effectiveness after allowing sufficient time for them to be implemented. We plan to follow up on these matters during the next reporting period to ensure that Kaiser's corrective actions are taken.

OTHER AUDIT ACTIVITY

Arthur Andersen & Co. is required to audit and report annually on Great Plains' financial statements on the project and whether it became aware of any evidence from the accounting records that the project could default. In addition to the annual reports, the firm was required to report at the time the first disbursement was made, 30 days later, and then every quarter concerning Great Plains' cash expenditures and the application of proceeds received from the Government and the partners. We found that Arthur Andersen & Co. met its interim reporting requirement and issued reports on January 29, 1982; February 26, 1982; and April 1, 1982.

Arthur Andersen & Co.'s written plans for the conduct of the required audits show that, among other things, the firm plans to audit the costs of the plant contractors, the mine developer, other ANG incurred costs, and the amount of Federal funds and partners' equity contributed to the project. As part of these audits, Arthur Andersen & Co. also plans to evaluate internal controls such as reliability of computer systems, controls over subcontractors, and construction quality.

As of June 30, 1982, the firm had not issued an annual report. In its three completed reports concerning Great Plains' cash expenditures and the application of proceeds from FFB and the partners, Arthur Andersen & Co. certified that Great Plains' statements of proceeds reflected fairly the application of equity and Federal funds to project expenditures in accordance with the loan guarantee criteria. Arthur Andersen & Co. also certified that Great Plains' statements of cash expenditures reflected fairly project expenditures in accordance with generally accepted accounting principles. As discussed previously, the company also evaluated Kaiser's information system in May 1982.

CONCLUSIONS

ANG's plans and policies for managing, directing, and overseeing the construction of the Great Plains project generally appear to be comprehensive. The company's numerous, detailed

written procedures and the development of its integrated computerized management information system appear to further strengthen ANG's control. The corrective actions planned to overcome weaknesses in ANG's computerized information system, however, need to be closely monitored because of the importance of having accurate information for ANG management, DOE, and others. In addition, the remaining system should be tested to ensure the system's integrity and the reliability of the information produced.

We believe that the audit groups established for the project can provide a useful service to management in their oversight of contractors' performance and by conducting independent evaluations of project activities. However, the groups' current independence, timeliness of reports, and quick management action on recommendations must continue to be emphasized.

CHAPTER 4

DOE PROJECT MONITORING

DOE has written plans and procedures requiring extensive review and analysis of the project. Because of time constraints, we limited our review to assessing DOE's cost and schedule monitoring activities. While DOE followed its cost and schedule procedures, it had not audited the costs incurred by Great Plains to ensure that project funds were spent only for eligible project costs. DOE also reviewed and assessed the reasonableness of, and necessity for, each funding request from Great Plains. DOE approved these requests without knowing whether funds had been properly spent.

ORGANIZATION

The primary objectives of DOE's monitoring are to assure that (1) Great Plains complies with the contractual commitments of the loan agreement, (2) drawdowns or disbursements of funds are reasonable and will be used for eligible costs, and (3) a reasonable assurance of debt repayment exists.

As of June 30, 1982, DOE Chicago had five persons on a full-time basis and five persons part-time to monitor the Great Plains project. In total, this staff will spend an equivalent of about 8 staff years during fiscal year 1982 to oversee the project. In addition, about 3 staff years are available at DOE headquarters. DOE's Grand Forks and Morgantown Energy Technology Centers are also providing assistance to DOE Chicago. Grand Forks performs process-related monitoring of critical project factors which could jeopardize the design and construction schedule, plant operations or cost, or its ability to meet environmental requirements. As part of its monitoring activities, Grand Forks provides data to the Morgantown Energy Technology Center for inclusion in DOE's data base on gasification technologies. Morgantown serves as the central repository for all data collected from the project and provides specialized technical assistance to DOE Chicago and Grand Forks at the request of DOE headquarters. DOE assigned three full-time people from the Grand Forks Energy Technology Center and plans to assign staff from Morgantown Energy Technology Center to the Great Plains project on an as-needed basis.

DOE expects to spend between $2.5 million and $3.0 million each fiscal year monitoring the project through fiscal year 1986. In fiscal years 1982 and 1983, funding for these activities will be from residual amounts appropriated to DOE under the Department of the Interior and Related Agencies Appropriations Act for fiscal year 1980 (P.L. 96-126, Nov. 27, 1979) and the fiscal year 1980 Supplemental Appropriations and Rescission Act (P.L. 96-304, July 8, 1980). However, DOE is uncertain as to how it will fund these activities beyond that time.

In addition to its own staff, DOE awarded a contract, effective July 14, 1982, to a private company to assist in monitoring the project. This contractor will (1) provide technical assessments of the status of design, procurement, construction, startup testing and operation of the plant; (2) identify potential technical problems which could affect key or control milestones and/or project cost; (3) attend meetings regarding the technical status; (4) perform indepth technical audits of specified process and utility systems; and (5) conduct an annual independent analysis of the anticipated impact of economic changes on the project. This is not the only contractor providing DOE assistance. DOE Chicago also received assistance from the Argonne National Laboratory to computerize the model used in assessing the project's economics and Great Plains' ability to repay the loan. It also has a support contractor which assists in monitoring the project's cost and schedule status.

DOE MONITORING PROCEDURES

Both DOE headquarters and DOE Chicago prepared and adopted detailed procedures to monitor the Great Plains project. Some of these procedures are evolutionary and will be revised as DOE gains more experience. The primary objectives of DOE's monitoring are to assure that Great Plains complies with the contractual commitments of the loan guarantee agreement and that drawdowns or disbursements of funds will be spent on eligible project costs. In meeting these objectives, DOE Chicago officials told us it assessed and reported on the project's cost and schedule status and reviewed and approved the reasonableness of Great Plains' funding requests.

DOE's implementing activities

DOE Chicago assigned a project manager who is responsible for monitoring the project. The project manager is assisted by three teams--technical, planning and control, and contracting. The technical team compares actual performance against technical and schedule baselines, identifies and analyzes problems, and evaluates corrective actions planned. The planning and control team analyzes project information and independently forecasts and develops project cost, schedule, and financial trends. The contracting team assures that Great Plains complies with the provisions of the loan guarantee.

We assessed DOE's cost and schedule monitoring activities for this report. DOE Chicago did assess and report on the project's cost and schedule status. It also analyzed cost and schedule data received from Great Plains, verified the accuracy of the calculations on these reports, prepared trends, and analyzed problems identified to determine impacts on the plant's scheduled inservice date and costs. We found that these activities were done in a timely manner and that DOE Chicago followed up with Great Plains as a result of its evaluation. When DOE found,

for example, that the project was behind in its scheduled activities, it held a special meeting to discuss the problems and the corrective actions planned.

DOE's monitoring did not ensure that funds were spent properly

As part of its monitoring function, DOE Chicago must assess and approve each request for funds from Great Plains prior to authorizing FFB to disburse them. As part of the approval process, the loan guarantee agreement stipulates that DOE must determine that funds were spent for eligible project costs. Since March 1982, Great Plains had requested and received funds weekly. DOE had never reduced or denied a request for funds.

When DOE received a request, it was disseminated to the various monitoring teams for analysis. They evaluated the reasonableness of, and necessity for, the funds by using various specific standards such as whether (1) the amount requested was within the guarantee ratio of 75 percent, (2) the request would negatively affect the project's scheduled inservice date, (3) there was any evidence of default, and (4) the request approximated the disbursement estimates Great Plains submitted to DOE. The teams relied primarily on, among other things, monthly information submitted by Great Plains. By design, the information included in these reports is for a time period of at least 1 month prior to the disbursement requests. Following their individual analysis, the teams met with the project manager to discuss the reasonableness of, and necessity for, the proposed disbursement. We randomly sampled 6 of the 18 disbursement requests received through June 30, 1982, and found that DOE followed the prescribed procedures for each disbursement.

We noted, however, that in assessing whether the disbursement request was within the guarantee ratio of 75 percent, DOE only considers the request, cumulative funds disbursed, and the amount of equity contributed. As long as the amount of equity contributed exceeded the amount of Federal funds invested in the project, as had been the case as of June 30, 1982, DOE officials told us they could approve these requests without assurance that project funds had been spent properly. However, during the last calendar quarter of 1982, this balance will change and an assessment of the use of project funds will be needed.

DOE Chicago was initially responsible for determining whether Great Plains spent funds only for eligible project costs. However, on March 15, 1982, by DOE Order 2321.1, the Office of Inspector General was delegated this responsibility for the entire Department. Based on the DOE order, DOE Chicago requested the Office of Inspector General to audit costs incurred by Great Plains. However, the Office of Inspector General informed DOE Chicago that, while it recognizes the importance of such audits, it does not have sufficient staff to initiate them. As a result, no organizational unit in DOE was conducting such audits as of June 30, 1982.

According to DOE Chicago officials, they currently rely in part on the Arthur Andersen & Co. certification statements as an indication that funds have been properly spent. (See p. 15.) According to an Arthur Andersen & Co. official, however, the certification statement refers only to those items identified by Great Plains as costs applicable to the project as a whole. We noted that the standardized text of the certification statement corroborates this information. We were told by an Arthur Andersen & Co. official that DOE is responsible for determining eligibility of costs. Therefore, in conducting its cost certification audits, Arthur Andersen & Co. officials believe they are precluded from making other than a general evaluation of eligible costs and identifying blatant or obvious errors.

In addition to not knowing if funds have been spent properly, DOE did not adequately document the rationale used to assess the reasonableness of, and necessity for, each funding request. Rather, it was an informal process which relies heavily on the teams' discussions of their evaluations. DOE officials told us they were reassessing the adequacy of their procedures for approving requests. For our next report, we will evaluate DOE's revised procedures for approving disbursement requests, whether DOE adequately protects the Government's interest when approving them, and whether DOE has audited the costs incurred by Great Plains.

CONCLUSIONS AND RECOMMENDATION

Overall, DOE was working to fulfill its responsibilities as overseer of the loan guarantee by establishing and implementing procedures for reviewing all aspects of the project, identifying problems, and initiating corrective actions with Great Plains. However, DOE has yet to satisfy a need to audit incurred costs and thereby ensure that project funds are being used only for eligible costs. Under the agreement, DOE may guarantee up to 75 percent of total project costs; and the project's partners agreed to contribute the rest. In order to ensure that it approves funds only up to 75 percent, DOE must determine that funds have been spent properly. The most expeditious way for DOE to make this determination is by continually auditing the costs incurred by Great Plains throughout the construction period.

We believe that, in view of the expected cost of the Great Plains project--in excess of $2 billion--and the shared funding concept, it is imperative that DOE initiate an audit to determine that project funds are being properly spent. Therefore, we recommend that the Secretary of Energy:

--Audit costs incurred by Great Plains on a continuous basis throughout the construction period. Such audits should begin as soon as possible because the longer DOE delays in initiating them, the more difficult it will be to verify and validate the costs on a current basis.

AGENCY COMMENTS

DOE officials agreed with our recommendation and explained they are taking actions to initiate the audits suggested.

CHAPTER 5

LEGISLATIVE COMPLIANCE

Criteria for administering the program on loan guarantees for alternative fuel demonstration facilities and the basic terms and conditions for guaranteed financing are set out in section 19 of the Federal Nonnuclear Energy Research and Development Act of 1974 (42 U.S.C. 5901, 5919), as amended by Public Law 95-238, and implementing regulations that became effective April 9, 1980. It appears DOE complied with the statute.

In our March 1981 status report on the Great Plains project, 1/ we reported on (1) actions DOE reported it had completed, (2) those actions which were subsequently repealed by other legislation, (3) actions DOE did not intend to complete, and (4) those actions which would not be completed until the loan guarantee agreement was signed. This chapter discusses the legislative criteria, largely pertaining to legal or financial matters, which had not been complied with at the time of the previous report.

REASONABLE ASSURANCE OF REPAYMENT

Section 19(c)(3) requires that DOE determine, both prior to awarding a loan guarantee and continually thereafter, that there will be a reasonable assurance of full repayment of the loan. Prior to signing the Great Plains loan guarantee, DOE made this determination, and DOE Chicago is required to revise it at least annually. According to DOE's Director, Office of Coal, Gas, Shale, and Coal Liquids, he has requested that DOE Chicago submit this analysis to him at least semiannually. If DOE determines Great Plains cannot repay the loan, DOE can withdraw the guarantee at any time, stop further disbursements of funds, and declare a default.

In June 1981, DOE reported the results of its initial analysis of the potential financial success of the project. Four construction cost scenarios were compiled in order to measure the impact of different interest rates and cost overrun assumptions on total project construction costs. DOE also identified risk areas which could affect the project's success such as whether cash flow during the first 3 years of operation would adequately cover operating expenses and service debt, and what effect cost overruns resulting from construction delays would have on the scheduled startup of the plant. In its report, DOE concluded that, even under the most adverse conditions hypothesized, the plant would be in a positive cash flow position after 3 years of

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1/"Status of the Great Plains Coal Gasification Plant," EMD-81-64, Mar. 16, 1981.

operation. As a result, principal payments on the loan have been deferred until January 2, 1988.

Prior to signing the loan guarantee, DOE reevaluated its analysis to determine whether, in the interim, the economic outlook of the project had changed. In conducting this reevaluation, DOE (1) revised operating and maintenance expense projections, (2) revised gas prices, (3) eliminated certain debt and escrow requirements which were no longer applicable since FFB would lend the money, and (4) modified certain tax assumptions based on the Economic Recovery Tax Act of 1981. The new analysis showed that project economics had improved slightly over the June 1981 forecast. However, DOE concluded there was still some risk because of the uncertainty of the plant's performance and unforeseeable future economic events. Despite this assessed risk level, DOE determined there was reasonable assurance Great Plains could repay the loan.

In conducting the periodic reevaluations required by the statute, DOE officials stated they will (1) update the estimated cost of the plant based on its monthly analysis of data submitted by Great Plains, (2) revise fuel prices by relying on the Energy Information Administration's reports and other sources, and (3) revise interest rates used in its assumptions by referring to appropriate publications. For subsequent reports, we will discuss DOE's reevaluation of the project's economics and the methodology used.

DEFAULT

Section 19(g) requires that loan guarantees include provisions to protect the interest of the Government in case of default. Default could occur if, for example, Great Plains does not make a scheduled payment on the loan's principal or interest. According to the statute, in the event of default, (1) FFB has the right to demand payment of the unpaid balance from DOE, (2) DOE will pay the principal and interest unless DOE finds no default or the default has been remedied, (3) all patents and technologies resulting from the facility as well as other proprietary rights necessary to complete the facility and operate it will be available to DOE, and (4) DOE will notify the Attorney General who will take appropriate action to recover the amount of payment made by DOE to FFB. DOE's rights in the event of default are set out not only in the loan guarantee but also in a variety of other agreements (i.e., mortgage, housing program land trust, partners' consent, ANG stock pledge, licensor, and assignment agreements).

The loan guarantee agreement states that DOE has first lien on all assets including land, buildings, patents, insurance, and technology as well as the stock of ANG, which holds essential permits and contract rights for the construction and operation of the plant. In addition, each partner pledged its partnership interest to DOE which assures DOE the option of

foreclosing on these interests and succeeding to ownership of the project assets.

It should be noted that the owners of certain patents, trade secrets, and other technology rights necessary for the plant's construction and operation are third parties which are not sponsors of the project. Since many of the original contracts with ANG provided that contract rights were not assignable, it was necessary for DOE to obtain separate agreements from each of the contractors consenting to an assignment to DOE in the event of default. In addition to the assignment of contract rights, DOE also had to be assured access to proprietary data of certain patents and technology. We reviewed the files of five contractors Great Plains determined as critical for the project and found the necessary agreements were finalized at the time the loan guarantee was signed. However, three of the agreements contain provisions which limit DOE's direct access to proprietary technology. DOE agreed that in case of default it would select a non-governmental entity to act as project administrator and have access to this technology. According to DOE officials, it agreed to the assignment of contract rights to a designee because the three companies involved have a currently marketable proprietary technology and a strong interest in maintaining secrecy.

The loan guarantee agreement provides that in case of default DOE would act through the Attorney General to protect the rights of the United States. According to DOE officials, DOE would exhaust all other remedies before revoking the loan guarantee and notifying the Attorney General to liquidate the project's assets. For example, DOE could waive the default or pay FFB the principal or interest.

DEPENDENCE OF GUARANTEE ON PROJECT COSTS

Section 19(c) requires that the amount guaranteed cannot exceed an amount equal to 75 percent of the project's construction and startup costs as estimated at the time the guarantee is issued. Project costs may also include costs for facilities and equipment for extraction of coal to the extent the coal is converted to an alternative fuel. Section 19(c) also allows DOE to fund 60 percent of cost overruns, and section 19(j) requires that DOE charge a fee of at least 1 percent of the outstanding debt to cover administrative expenses.

According to the loan guarantee agreement, DOE agreed to guarantee 75 percent of total project costs plus 50 percent of a $200 million secondary contingency for unanticipated cost overruns. The following table shows a breakdown of the project costs, guaranteed debt, partner equity, and contingency:

	Total	Guaranteed debt	Equity
		(millions)	
Plant expenditures	$1,575	$1,182	$393
Coal mine costs	155	116	39
Pipeline	160	120	40
Debt-related expenses	349	262	87
Management reserve and pipeline contingency	321	240	81
Secondary contingency	200	100	100
Total	$2,760	$2,020	$740

Source: ANG.

In September 1980 and April 1981, Great Plains provided DOE detailed cost estimates for the project. DOE's Independent Cost Estimating (ICE) staff in the Office of the Controller analyzed these estimates, developed its own estimates, and concluded that the costs appeared reasonable and sufficient to complete the design, construction, and startup of the project. At the time of the April 1981 review, the ICE staff expressed some reservation regarding the eligibility of the costs associated with the coal mine. Subsequently, DOE determined that the coal mine was directly related to the project, that the coal would be converted to an alternative fuel, and that the costs were eligible.

DOE's Contract Pricing and Support Division in the Office of Procurement Operations also reviewed the project's costs. In a November 23, 1981, memorandum, two elements of costs were considered ineligible under DOE's guidelines. On the same day, Great Plains submitted revised cost estimates totalling $91 million. DOE's Office of Project and Facilities Management reviewed this revised estimate, and in a January 1982 memorandum, raised some concern about $36 million of these costs. After contacting other DOE organizational units, $22 million of this amount was determined to be eligible but the remaining $14 million was deemed ineligible. After making these adjustments, DOE concluded that Great Plains' estimate of $2.76 billion was reasonable to complete construction and startup of the project. We did not evaluate the reasonableness of the projected costs.

While section 19(c) allows DOE to fund 60 percent of the cost overruns, DOE agreed to guarantee 50 percent of unanticipated cost overruns up to $200 million. According to DOE officials, the agency negotiated the 50-percent criterion to be

consistent with the percentage of overruns the Synthetic Fuels Corporation finances in the loan guarantees it issues.

COLLATERAL

Section 19(c) requires that the obligation not be subordinated to any other financing. In the case of Great Plains, DOE complied with this provision by requiring that the guaranteed loan be secured by a first and superior lien on the assets of the project and that the project assets not be employed as collateral for any other debt incurred by the project without DOE's consent.

MATURITY OF OBLIGATION

Section 19(c) specifies that (1) the maximum maturity of the obligation cannot exceed 20 years or 90 percent of the projected useful economic life of the project, whichever is less; (2) the obligation provides for the orderly retirement of debt by requiring the recipient of the guarantee to maintain a fund to assure this repayment; and (3) 10 years after signing the guarantee DOE must determine the feasibility and advisability of terminating Federal participation and can require recipients to seek other sources of financing within a specified time. If recipients decide not to refinance the loan, DOE is authorized to collect an additional 1-percent fee. The Great Plains loan guarantee agreement includes these provisions. It also provides that Great Plains does not have to make the first payment on the loan's principal until January 2, 1988, about 3 years after the plant's scheduled December 1984 inservice date. According to DOE, this deferral was necessary to permit the plant to have sufficient time to achieve a level of operation so that revenues generated could pay both the interest and principal on the loan.

COMMUNITY IMPACT EVALUATION

In addition to providing financial assistance for large-scale alternative fuel projects, section 19(k) gives DOE extensive authority to assist the local community in mitigating the impact of such projects. This assistance includes planning assessment grants, management grants, loan guarantees, direct loans, tax payment guarantees, and inclusion of assistance costs in the costs of the project. No funds for this purpose have been authorized pursuant to section 19 authority. However, a great deal has been accomplished regarding Mercer County community impact assistance. Since 1975 over $21 million of impact mitigation grants has been made available to Mercer County. Federal agencies acting under other authorities provided about $10 million of this amount and the State of North Dakota the rest.

AVAILABILITY OF INFORMATION TO THE PUBLIC

Section 19(t) requires DOE to make available to the public and other Federal agencies the information it maintains on the project in a manner that will facilitate its dissemination. Such disclosure must be consistent with provisions of the Federal law safeguarding disclosure of confidential business information. The primary document that deals with the availability of information concerning the project is the monitoring agreement. This document provides for three levels of information: licensor proprietary information, which is never physically acquired by DOE but is available for DOE review under strict secrecy restrictions; non-licensor proprietary information, which DOE may obtain upon request but which is subject to nondisclosure restrictions; and all other information generated as a result of the monitoring agreement such as environmental and health, which must be made available to the public and other Government agencies. According to DOE officials, the Morgantown Energy Technology Center was designated the repository for all technical data on the project. In addition, the technical information center at Oak Ridge, Tennessee, receives other data, such as quarterly progress reports, which are available to the public upon request. During our next review, we plan to evaluate the extent to which project information is available and whether or not it is being used by the public or other Federal agencies.

SECRETARY OF THE TREASURY CONCURRENCE ON CERTAIN ASPECTS OF THE GUARANTEE

Section 19(b) requires that DOE obtain the concurrence of the Secretary of the Treasury concerning the timing, interest rate, and terms and conditions of the guarantee. In addition, the Secretary of the Treasury must ensure that the guarantee will have the least possible impact on the capital markets. On August 11, 1981, the Assistant Secretary of the Treasury for Domestic Finance notified DOE that Treasury would condition its statutory concurrence on using FFB as lender. Treasury determined that using FFB was consistent with the requirement that loan guarantees be structured in a manner which is least disruptive to private financial markets and institutions.

Background of the FFB

FFB was established on December 29, 1973, by the Federal Financing Bank Act (P.L. 93-224) to consolidate and reduce the cost of financing a variety of Federal agency obligations which are guaranteed by the Federal Government. It buys agency debt, agency loans and assets, and loans guaranteed by other Federal agencies. FFB is under the direct supervision of the Secretary of the Treasury, who is Chairman of a five-person Board of Directors, and is managed and staffed by Treasury employees.

Currently, Treasury employees annually spend about 12 staff years on FFB activities.

Prior to FFB's establishment, Federal agencies financed their programs by marketing securities directly to private financial markets. During the late 1960s and early 1970s, the number and volume of these securities dramatically increased. Compared to the billions of dollars of securities marketed by Treasury, those offered by Federal agencies were of a smaller size and lacked standardization. This resulted in higher interest rates than could be achieved through larger and more standardized Treasury offerings. Adding to the cost of the securities were expenses for either a financing staff or a private underwriter to administer the sale and other activities associated with these securities.

Originally, it was expected that FFB would finance its activities either by issuing its own securities or by borrowing from Treasury. After one issuance of securities, Treasury officials determined it would be cheaper for FFB to borrow directly from Treasury. Today, Treasury holds all of FFB's securities. The bank borrows at Treasury credit rates and normally lends to agencies and agency-guaranteed borrowers at the Treasury rate plus one-eighth of 1 percent. 1/ According to a January 1982 Congressional Budget Office study, 2/ this rate is probably one-half of 1 percent or more below the rate that agencies or guaranteed borrowers would have to pay if they offered their securities in the market. As a result, agencies and guaranteed borrowers save millions of dollars annually in interest costs. In 1977, we reported that FFB had substantially reduced the cost of borrowing by Federal agencies. 3/

The relationship to the Great Plains loan

Because the Great Plains loan guarantee would be backed by the full faith and credit of the Government, Treasury informed DOE that it would condition its statutory concurrence by requiring Great Plains to borrow the money for the project from FFB. This determination, as pointed out by the Assistant

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1/The premium charged Great Plains is seven-eighths of 1 percent because the loan includes early debt retirement provisions not normally included in FFB loans but which are normal practice by commercial lenders.

2/Congressional Budget Office, "The Federal Financing Bank and the Budgetary Treatment of Federal Credit Activities," Jan. 1982.

3/"Government Agency Transactions With the Federal Financing Bank Should Be Included on the Budget," PAD-77-70, Aug. 3, 1977.

Secretary of the Treasury for Domestic Finance before the Senate Budget Committee on December 10, 1981, is based on the following factors:

--Treasury's experience has been that full faith and credit guarantees placed in private markets are more expensive than Treasury securities because of, among other things, underwriter, attorney, and accountant fees.

--From the perspective of maintaining an orderly market, it is necessary to ensure that guaranteed securities do not compete or interfere with the marketing of Treasury securities nor undermine Treasury's debt management policies.

--Guaranteed securities marketed directly by an agency place Treasury in a position, in those cases where Treasury has approval authority, of approving an agency's market issues on terms which Treasury feels are simply too expensive for the financing of Government programs.

SCHEDULE OF DISBURSEMENTS

Date	Amount disbursed (millions)	Interest rate (note a)	General interest rate	Term of loan (days)
Jan. 29, 1982	$ 58.0	14.243	13.368	62
Feb. 18, 1982	7.0	16.505	15.630	133
Mar. 8, 1982	7.0	14.075	13.20	115
Mar. 15, 1982	6.0	14.495	13.62	108
Mar. 25, 1982	3.0	14.105	13.230	98
Apr. 1, 1982	b/7.5	14.927	14.052	91
Apr. 8, 1982	9.5	14.612	13.737	84
Apr. 15, 1982	5.5	14.168	13.293	77
Apr. 22, 1982	5.5	13.876	13.001	70
Apr. 29, 1982	3.0	13.843	12.968	63
May 3, 1982	7.0	13.849	12.974	59
May 10, 1982	14.5	13.752	12.877	52
May 17, 1982	3.5	13.914	13.039	45
May 24, 1982	4.0	13.115	12.240	120
June 1, 1982	10.0	13.575	12.700	216
June 7, 1982	5.5	13.995	13.120	210
June 14, 1982	11.0	14.145	13.270	203
June 21, 1982	7.5	15.055	14.180	196
Total	$175.0			

a/Interest rate includes the normal one-eighth of 1 percent FFB lending rate plus three-fourths of 1 percent for early debt retirement provisions not normally included in FFB loans.

b/Also included was refinancing of $58 million disbursed on January 29, 1982.

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