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Fact Sheet for Congressional Requesters

February 1986

SYNTHETIC FUELS

Status of the Great Plains Coal Gasification Project

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GAO/RCED-86-109FS

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

February 28, 1986

RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION

B-207876

The Honorable Philip R. Sharp
Chairman, Subcommittee on Fossil
and Synthetic Fuels
Committee on Energy and Commerce
House of Representatives

The Honorable Mark Andrews
United States Senate

As requested in your July 31 and August 5, 1985, letters and in subsequent meetings with your offices, we have obtained updated information on the Great Plains coal gasification project in North Dakota following the default of a $1.54 billion federal loan by the project's sponsors. Your offices asked that we provide periodic briefing documents on the status of the project. Our first briefing paper was transmitted to your offices on September 18, 1985. We also issued a fact sheet to you on November 8, 1985, (GAO/RCED-86-49FS).

This fact sheet includes updated information obtained through February 14, 1986, on the loan default, Great Plains loan and gas pricing formula, legal matters and agreements, the Department of Energy's options and actions, and Great Plains operations. The new information highlights changes in the gas pricing calculations; legal action concerning gas purchase agreements and mortgage foreclosure; the Department's determination of the project sponsors' outstanding liability; the Department's progress in evaluating its options; revenue, expense, production, and plant employment data; capital improvement projects; and plant maintenance issues. Our November fact sheet included information on socioeconomic issues. We have not obtained any additional information on these issues and are, therefore, not repeating the socioeconomic information in this fact sheet.

We obtained the information in this fact sheet from discussions with, and documents provided by, federal, state, local, and industry officials involved with or affected by the Great Plains project. We also discussed a draft of this fact sheet with Department of Energy officials, and their suggested clarifications have been incorporated where appropriate.

The Department of Energy Act of 1978--Civilian Applications (Public Law 95-238) requires our office to audit recipients of loan guarantees for alternative fuel demonstration projects every 6 months and to report to the Congress on the status of the loans. In accordance with this requirement, we have issued eight reports on the status of the Great Plains project--the most recent on December 24, 1985, (GAO/RCED-86-36). This fact sheet satisfies our auditing requirement under Public Law 95-238, covering the period August 1, 1985, through February 14, 1986. We plan to issue our next fact sheet on the status of the Great Plains project in June 1986.

Please call me on 275-8545 if you have any questions about the fact sheet.

James Duffus III

James Duffus III
Associate Director

Contents

ABBREVIATIONS

ANG	ANG Coal Gasification Company
Btu's	British thermal units
DOE	Department of Energy
FFB	Federal Financing Bank
GAO	General Accounting Office
GOCO	government-owned/contractor-operated
GPGA	Great Plains Gasification Associates

SECTION I: BACKGROUND AND SCOPE OF WORK

The Federal Nonnuclear Energy Research and Development Act of 1974 (Public Law 93-577), as amended by the Department of Energy Act of 1978--Civilian Applications (Public Law 95-238), authorizes the Department of Energy (DOE) to provide loan guarantees for alternative fuel demonstration projects. The Secretary of Energy awarded a loan guarantee to the Great Plains Gasification Associates (GPGA) on January 29, 1982, for up to $2.02 billion of the estimated $2.76 billion cost to build and start up a plant in North Dakota, producing synthetic natural gas from coal.

The federal government, through the Department of the Treasury's Federal Financing Bank (FFB), loaned GPGA 75 percent of project construction and start-up costs and DOE agreed to guarantee that amount up to $2.02 billion. GPGA financed the rest with its own equity. As of July 31, 1985, GPGA had borrowed about $1.54 billion from FFB and had contributed about $493 million in equity to the project.

GREAT PLAINS SPONSORS DEFAULTED ON FEDERAL GUARANTEED LOAN

On August 1, 1985, the GPGA partners terminated their participation in the Great Plains coal gasification project, and the partnership defaulted on its $1.54 billion federal loan guaranteed by DOE. The GPGA partnership includes subsidiaries of American Natural Resources Company, Tenneco Inc., Transco Energy Company, MidCon Corp., and Pacific Lighting Corp. Their action followed a DOE July 30, 1985, decision that a proposed Synthetic Fuels Corporation's $720 million price support and debt-restructuring package for the Great Plains project would not support long-term operations at a reasonable cost to the taxpayer.

After GPGA defaulted, to maintain continuity, DOE directed the plant operator, ANG Coal Gasification Company (ANG), to continue operations temporarily while DOE completed a transition plan. The loan guarantee agreement provided that ANG could be required to operate the plant in the event of a loan default. The Secretary of Energy agreed to keep the plant operating until the spring of 1986 to give DOE time to determine the plant's future.

DOE BORROWS FROM TREASURY TO PAY OFF DEFAULTED LOAN

On August 6, 1985, DOE paid FFB the approximately $401 million principal and interest payment that was due at the time GPGA defaulted on the $1.54 billion DOE-guaranteed loan. The funds for the payment were obtained from the project's appropriated loan guarantee default reserve fund, which totaled about $673 million at the time of default, leaving a balance in the reserve of about $272 million.

To protect the government's rights in foreclosure proceedings and to reduce the interest from the FFB rate of 11 percent to the Treasury rate of 8 percent, DOE exercised its authority to borrow from the Treasury under Section 19 of the Federal Nonnuclear Energy Research and Development Act of 1974, as amended. DOE then paid the principal balance of the FFB note of $1.138 billion plus accrued interest of $31.9 million on September 30, 1985. After expenses for the operation, maintenance, and preservation of the project assets, pending final disposition of the facility, the balance in the loan guarantee default reserve fund will be available to be applied against the Treasury note. According to a DOE Assistant Secretary, DOE intends to submit a fiscal year 1986 Supplemental Request to the Congress to provide whatever additional appropriations may be needed to retire the Treasury loan.

OBJECTIVES, SCOPE, AND METHODOLOGY

Senator Mark Andrews and Congressman Philip Sharp, Chairman of the Subcommittee on Fossil and Synthetic Fuels, House Committee on Energy and Commerce, asked GAO to obtain information on the government's options, responsibilities, and potential costs in deciding what to do with the project. Senator Andrews also asked GAO to address the socioeconomic impact issues. We prepared this fact sheet in order to provide the requesters with information obtained as of February 14, 1986, on the various issues, legal matters, and problems the government is facing or will be faced with in deciding Great Plains' future.

The scope of our work included interviewing and obtaining pertinent documents and information from federal, state, local, and industry officials involved in or affected by the Great Plains project. We spoke with officials at DOE headquarters in Washington, D.C., DOE's Chicago Operations Office, GPGA, ANG, the state of North Dakota, and local governments. DOE officials reviewed a draft of this fact sheet and their comments were incorporated where appropriate.

Our November 8, 1985, fact sheet (GAO/RCED-86-49FS) included information on socioeconomic issues. We have not obtained any additional information concerning these issues and are, therefore, not repeating that information in this fact sheet.

SECTION II: GREAT PLAINS LOAN AND GAS PRICING FORMULA

Four pipeline companies, subsidiaries of four parent companies of the Great Plains partners, agreed to purchase all the gas produced by the Great Plains plant. The plant's production is the equivalent of about 1 percent of the pipeline companies' average annual gas requirements. The price of the gas is controlled by gas purchase agreements that contain a pricing formula. The pricing formula provided that the gas would be sold to the pipeline companies at a base price of $6.75 per million British thermal units (Btu's) in January 1, 1981, dollars. The price would vary quarterly on the basis of changes in the Bureau of Labor Statistics' Producer Price Index and changes in the price of No. 2 fuel oil. The $6.75 price was comparable to the 1980 prices paid by interstate pipelines for unregulated natural gas.

However, the pricing formula set various "caps" on the prices. Specifically:

--For 5 years after the initial delivery of gas, the price could not exceed the price of unregulated No. 2 fuel oil.

--From the 6th through the 10th year, the price would be the greater of the average prices paid by the pipeline affiliates for the highest 10 percent of domestic natural gas or for Canadian and Mexican gas. In neither case would it be higher than the unregulated price of No. 2 fuel oil.

--After 10 years, the price would be based on the price of unregulated domestic natural gas. If gas prices were regulated at that time, then the price paid for Canadian and Mexican gas would set the ceiling.

Great Plains began producing gas in July 1984. From July 28 through December 31, 1984, the formula price ($6.75 per million Btu's adjusted) ranged from $6.98 to $7.28 per million Btu's. However, Great Plains' synthetic gas sales price ranged from $5.69 to $6.10 per million Btu's--the price of No. 2 fuel oil, which controls the sales price during the first 5 years of gas production. As of July 31, 1985, Great Plains had produced and sold about 28.3 billion cubic feet of gas, totaling about $153 million.

Actions not related to the Great Plains default have altered the gas pricing calculations. Effective July 1985, the Bureau of Labor Statistics ceased publishing the price of No. 2 fuel oil as a separate item. Because that published price had determined the cap under the gas pricing formula, it became necessary to devise an alternate approach. In accordance with the gas purchase agreements, pending the adoption of an alternative approach, ANG continued to bill at the June published price for No. 2 fuel oil ($5.3717 per million Btu's).

On September 5, 1985, ANG proposed a substitute pricing formula to the four pipeline company purchasers for their approval. Under the proposed substitute formula, the last published price would be adjusted monthly according to changes in the Bureau of Labor Statistics' Producer Price Index for No. 2 fuel oil. Using this method, the gas price from July through December 1985 would have ranged from a low of $5.0184 for August deliveries to a high of $6.2730 for December deliveries. As of February 14, 1986, only one of the pipeline companies had formally agreed to the proposed substitute formula. At varying times, however, all four of the pipeline companies have used the substitute formula to compute payments they have submitted for the delivered gas. DOE directed ANG to begin billing for January 1986 and subsequent deliveries using the substitute formula rate.

SECTION III: LEGAL MATTERS, AUTHORITY, AND AGREEMENTS

After GPGA defaulted on its loan, the Secretary of Energy directed his staff to review the status of Great Plains. Before DOE can make final decisions concerning its options, it must obtain title to the property. Other matters concern DOE's authority, foreclosure processes, ANG's operating agreement, coal and electric power supply contracts, gas purchase agreements, and the liability for expenses incurred during the June 24 to July 31, 1985, "standstill period" (see p. 10).

DOE AUTHORITY

- Under the loan guarantee agreement and the Nonnuclear Act, DOE believes it has broad authority to protect the government's interests in the Great Plains project.

- Generally, DOE is authorized "to complete, maintain, operate, or otherwise dispose of" the mortgaged property (42 U.S.C. §5919(g)(2); Loan Guarantee Agreement, §7.02(b)(iii)).

- DOE is of the opinion that, as a general matter, it needs no additional legislative authority to deal with GPGA's default.

FORECLOSURE

- Until DOE obtains title to the property, DOE believes its options are fairly limited; for example, without title to the property, DOE cannot sell the property.

- To obtain title and increase its options, DOE filed action to foreclose on the property on August 29, 1985, in the federal district court in North Dakota.

- DOE filed for summary judgment on October 16, 1985.

- On January 14, 1986, the federal district court for the district of North Dakota granted DOE's motion for summary judgment for foreclosure. The court ruled that the North Dakota state law, which would have permitted GPGA to redeem the property within 1 year of foreclosure, was not applicable.

- If DOE obtains title upon foreclosure, DOE would have available a wide range of options--operate, lease, sell, mothball, or scrap the project--and would be in a position to exercise the option it considers to be in the best interest of the government.

- According to DOE, legal documents are currently being prepared to file with the court to proceed with foreclosure. DOE said a foreclosure sale could take place by late spring.

PROPOSED ANG AGREEMENT

- DOE is negotiating an interim agreement with ANG under which ANG will operate the project until DOE decides on its future.

- According to DOE, under the proposed interim agreement

  --ANG would not be an agent of DOE; ANG would be responsible for operating the plant, assuring supplies, and distributing and selling the products produced.

  --ANG would operate the plant on a no-profit/no-loss basis to ANG.

  --DOE could terminate the agreement at will.

- As of February 14, 1986, the proposed agreement was still under discussion between DOE and ANG.

SUPPLY CONTRACTS

- The contract for supplying electric power to the plant is a 35-year contract between Basin Electric Power Cooperative and ANG that requires a 10-year advance written notification to terminate. Under a new payment structure, effective June 1986, ANG's cost for electric power will be about $20 million per year in 1986 dollars.

- The contracts for supplying coal to the project and Basin Electric's power plant are separate 25- to 35-year contracts between ANG and Coteau Properties Company, Basin Electric, and Great Plains.

- According to DOE officials, DOE has no liability under current supply contracts (e.g., coal purchase agreements, Basin Electric agreement) because it is not a party to any of those contracts.

GAS PURCHASE AGREEMENTS

- Following the August 1, 1985, default by the partners, DOE took the position that the separate 25-year gas purchase agreements with the affiliated pipeline companies remained valid and enforceable and that the pipelines were obligated to continue purchasing gas from the project.

- On August 19, 1985, Natural Gas Pipeline Company, a unit of MidCon Corporation, filed action in Washington, D.C., and Illinois asking the federal district court for the District of Columbia and the circuit court of Cook County, Illinois, to declare its gas purchase agreement void. The Illinois case has been dismissed, but the Washington case was still pending as of February 14, 1986.

- As part of its August 29, 1985, foreclosure lawsuit in the federal district court in North Dakota, DOE asked the court to uphold the gas purchase agreements; the state of North Dakota intervened in the case on the side of DOE.

- On October 25, 1985, Tennessee Gas Pipeline Company, an affiliate of Tenneco, Inc., filed action in North Dakota asking the federal district court to either terminate its gas purchase agreement or approve its payment for Great Plains gas at the lower market value of other gas in its system.

- Since the August 1 default, all four pipeline companies have continued to accept their proportionate share of the synthetic natural gas produced at the plant. However, at varying points, three of the four companies discontinued payment at the formula price and began paying at market price.

- On January 14, 1986, the federal district court in North Dakota upheld the validity of the gas purchase agreements.

STANDSTILL PERIOD EXPENSES

- Faced with the uncertainty of federal price supports and the financial impact of continuing operations, a standstill agreement was effected between DOE, GPGA, and the GPGA partners for the period from June 24 to July 31, 1985.

  --The agreement was aimed at keeping the plant in operation through July 1985 while negotiations for federal price support were expected to be settled.

  --The agreement enabled the Great Plains partnership to delay interest and guarantee fee payments and additional equity contributions until August 1, 1985.

- According to DOE, the standstill agreement provided that the Great Plains partners and their parent companies are liable for all expenses incurred during the standstill period (including operational costs and capital and inventory costs).

- According to DOE, the partners contend that they are only responsible for the operational costs incurred during this period.

- The partners' auditors (Arthur Anderson & Co.) stated in a September 10, 1985, report that GPGA's accounts payable and accrued liabilities were presented fairly, as of July 31, 1985, and that they found no unrecorded liabilities.

- On September 23, 1985, GPGA made a cash contribution of $441,000 as its final payment of costs under the standstill agreement with DOE. This was in addition to $13 million the partners contributed in August 1985 as equity funding to Great Plains.

- DOE sent an October 2, 1985, letter to ANG stating that DOE does not consider GPGA's contributions the final payment due.

- On November 7, 1985, DOE requested its Inspector General to conduct an audit and render an advisory opinion on the GPGA partners' standstill period costs. On January 27, 1986, the Inspector General reported that the partners' and their parent companies' remaining liability totaled about $44 million. ANG billed the partners for the amount owed on February 12, 1986.

SECTION IV: DOE OPTIONS FOR GREAT PLAINS

DOE is studying its options on the future of the Great Plains coal gasification project. The study is to identify and consider the pros and cons of each option in terms of the potential federal costs and socioeconomic impact on the state of North Dakota. DOE plans to use various assumptions to evaluate each option and will disclose the results of its study after the Secretary of Energy has reviewed the assumptions and options. DOE said that the options are to continue to operate the plant, sell it or lease it, shut down the plant until a buyer or lessor is found, mothball it, or scrap the plant.

OPERATE

- DOE could operate the project as a government-owned/contractor-operated plant (GOCO) by competitively procuring the services of an operating contractor.

  --DOE stated that it does not have funds to operate the plant as a GOCO.

SELL

- DOE could try to sell the plant on the open market and try to recover some of the $1.54 billion it has invested.

LEASE

- DOE could lease the plant on the basis of estimated monthly revenues and expenses.

SHUT DOWN

- If the plant is shut down, DOE believes that:

  --It could be maintained up to 3 months in a nonoperating mode without serious deterioration of equipment.

  --The estimated cost for routine security and maintenance would be about $1.5 million a month.

MOTHBALL

- DOE could shut the plant down and mothball the equipment, piping systems, control systems, buildings, and other facilities and maintain the plant in a mothballed condition.

- DOE testified in May 1985 that it would cost an estimated $100 million to mothball the plant, about $6 million annually to maintain it, and an estimated $100 million to restart the plant.

- A DOE contractor reviewing mothballing alternatives estimated in August 1985 that it would:

--Cost $12.4 million to mothball the plant for up to 6 months and $4.6 million to maintain it for the 6 months in a condition so that it could be restarted in a short time frame or mothballed for a long term.

--Cost $19.4 million to mothball the plant for 6 months to a year and $11.7 million annually to maintain it in a condition so that it could become fully operational within 2 or 3 months after it is restarted.

--Cost $20 million to mothball the plant for 1 or more years and $6.5 million annually to maintain it in a condition so that it could become fully operational in 6 months.

- The contractor's estimates excluded costs for insurance, taxes, consultants, contract severance, restarting the plant, and DOE expenses.

- According to DOE, the contractor's August estimates are more realistic and in line with normal decommission and mothballing experiences.

SCRAP

- DOE could dismantle and salvage plant equipment and facilities.

- According to DOE, the project would be scrapped as a last resort.

DOE's PROGRESS IN EVALUATING OPTIONS

- DOE told us in February 1986 that it has not eliminated any of its options.

- In November 1985, DOE's Assistant Secretary for Management and Administration filed a deposition in the federal district court in North Dakota which stated, among other things, that, following foreclosure, DOE may sell or lease the Great Plains project to an appropriate buyer, who would be bound by the gas purchase agreements, and would make a good faith effort to keep the facility in operation for the duration of the gas purchase agreements.

- On February 13, 1986, DOE placed an announcement in the Federal Register requesting any public and private sector organizations that may be interested in acquiring the plant to submit statements of interest and informational proposals by April 4, 1986. The announcement emphasized that DOE was not soliciting specific proposals for the purchase of the facility, but was seeking information to assist the department in identifying qualified prospective offerors and determining which option for disposition of the facility would be the most appropriate and advantageous for both the citizens of North Dakota and the U.S. taxpayer. It also indicated that any submissions of interest must state the organization's commitment to operate the facility for the duration of the gas purchase agreements. A DOE news release concerning the announcement stated that DOE's objectives are to:

--Transfer ownership of the plant and remove the federal government as a direct competitor in the gas production business.

--Recover as much of the federal funds provided to cover the loan default as possible.

--Assure continued long-term operation of the plant to avoid disruptions to the local economy and to capture the benefits associated with extended plant operations.

SECTION V: GREAT PLAINS OPERATIONS

The Great Plains plant is the nation's first commercial-scale facility producing synthetic natural gas from coal. Project construction began in August 1981 and was completed in December 1984, as scheduled. The plant has been producing and selling synthetic gas since July 1984 as part of the operational startup and testing process. During 1985, the plant met production performance standards for commercial operations. Some technical problems remain and modifications are needed to meet design specifications and environmental control agreements. Great Plains was scheduled to complete required air quality control testing by September 1985, but the date has been extended to September 1986.

GPGA appointed ANG as project administrator responsible for the construction, startup, and operation of the gasification plant. A management committee composed of representatives from each of the sponsoring partners provided overall direction to ANG. DOE's Office of Assistant Secretary for Fossil Energy was responsible for monitoring project construction and operations. The day-to-day monitoring of the project was delegated to DOE's Chicago Operations Office. When GPGA defaulted on its federally guaranteed loan on August 1, 1985, DOE directed ANG to continue plant operations until further notice.

According to DOE, any decision on plant operations will be made independently of the decision on the ultimate future of the project. Further, DOE does not believe that operating the project during the transition period will result in further costs or economic risk to the U.S. taxpayer as long as project revenues continue to exceed project expenses.

PROJECT MANAGEMENT

- Since the notice of default, DOE's Assistant Secretary for Fossil Energy has been providing direction to ANG through DOE's Chicago Operations Office.

- DOE is working closely with ANG to cut costs and increase operating efficiencies.

- DOE and ANG have agreed to a new financial operations reporting system that includes:

  --A weekly cash flow report detailing actual and projected receipts and disbursements.

  --A monthly project cost statement that reports end-of-month revenues, operating costs, and other costs on an accrual accounting basis.

PLANT EMPLOYMENT

- The following table shows the month-end employment at the gas plant of both full-time and contract employees for the period July 1985 through January 1986.

	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Permanent	977	966	961	934	882	873	873
Contract	376	211	187	176	99	86	77
Total	1,353	1,177	1,148	1,110	981	959	950

- From October through January, 56 full-time employees were involuntarily terminated as part of a reduction-in-force to reduce operating costs. ANG told us that probably none of those employees would have been terminated at that time if it had not been for the need to reduce operating expenses. An additional 113 contract personnel were released during November and December to reduce costs further. Many of the released personnel were field and office technicians and the others were building and equipment maintenance workers, supervisors, engineers, and support staff.

  --ANG officials told us that personnel costs related to the contract personnel ceased immediately upon their termination, and there were generally no penalty charges associated with the terminations.

  --ANG expects the termination of the full-time employees to result in a monthly cost savings of about $100,000. However, under company severance policies, the full-time employees will generally continue to receive from 1 to 2 additional months of pay and benefits depending upon their length of employment. Therefore, ANG anticipates that the full savings will not be achieved until February 1986.

- From August 1985 through January 1986, 55 full-time employees voluntarily terminated their employment at the plant. ANG estimated that 45 were either highly skilled technically or were in key supervisory positions.

  --The most seriously felt skill losses have involved electronic instrumentation technicians and certain key engineering positions. In certain cases, contract personnel are being used to cover these areas while full-time staff are trained internally to fill the positions.

PLANT PRODUCTION

- During 1985, Great Plains produced about 40.4 billion cubic feet of gas. Plant production averaged about 80.6 percent of the design capacity of 137.5 million cubic feet per day.

- Gas production during the 5 months of August through December exceeded that average as follows:

	Aug.	Sept.	Oct.	Nov.	Dec.
	-----(million cubic feet per day)-----				
Average daily production	118.6	125.3	140.7	135.4	119.1
Average percent of design capacity	86.3	91.1	102.3	98.5	86.6

- The 137.5 million cubic feet per day design capacity is based on an anticipated operating mode using 12 of the 14 gasifiers. Production levels achieved during August through December resulted in part from running the plant for all of October using 13 gasifiers to determine the operating economics in that mode and again in December after adopting that operating mode.

- The production drop in December was due to operational problems.

  --The plant operated at about 50 percent of capacity for about 4 days early in the month when one gasification train (the plant has two rows of seven gasifiers called trains) was shut down for maintenance. During this shut down, distillation equipment in the ammonia recovery unit also failed.

  --A second production drop occurred later in the month when an electrical problem led to a loss of oxygen pressure in the power supply system at the oxygen plant causing the plant to be out of the pipeline for 13 hours.

REVENUES AND OPERATING EXPENSES

- From August through December 1985, monthly revenues earned from the sale of gas and by-products (ammonia, tar oil, and sulfur) and from other sources averaged about $21.8 million, and monthly plant operating and other expenses averaged about $16.7 million. The actual cash receipts averaged about $22.2 million a month, and the actual cash disbursements averaged about $19 million a month.

Revenues

- The monthly revenues earned for the 5 months are shown below.

Aug.	Sept.	Oct.	Nov.	Dec.	Average
--------(millions of dollars of revenue earned)---------					
$19.6	$21.6	$24.3	$22.6	$20.7	$21.8

- Actual cash receipts for the 5-month period varied from revenues earned for the following reasons.

--At varying points during that period, three of the pipeline companies began paying at market price rather than the formula price.

--One of the four companies initially withheld all payments from August through October before making catch-up payments in November based on the market prices for August, September, and October deliveries.

--Under terms of the standstill agreement, the GPGA partner companies contributed $13 million in August and an additional $441,000 in September.

- The actual cash receipts are shown below and generally represent prior month deliveries.

Aug.	Sept.	Oct.	Nov.	Dec.	Average
--------(millions of dollars of cash receipts)----------					
$32.5	$17.9	$19.4	$20.3	$21.0	$22.2

- According to DOE, as of January 24, 1986, the net amount owed to the project by the pipeline companies for underpayments of amounts billed and accrued interest assessments totaled about $39.7 million.

Operational expenses

- Monthly plant operating expenses have generally declined from August through December 1985, as shown below.

	Aug.	Sept.	Oct.	Nov.	Dec.	Average
	----------(millions of dollars)------------					
Operating expenses	$16.5	$16.3	$15.3	$14.1	$16.1	$15.7
Other plant expenses	2.8	2.1	.1	.2	.1	1.0
Total	$19.3	$18.4	$15.4	$14.3	$16.2	$16.7

- Reduced plant expenditures since August 1, 1985, are primarily attributable to:

--Cancellation of all capital projects other than those essential to the continued operation of the plant.

--Reduced personnel costs.

- Additional personnel cost savings of approximately $100,000 per month are expected as a result of the reduction-in-force of permanent staff that occurred during November and December.

* Monthly cash disbursements over the 5-month period are shown below.

	Aug.	Sept.	Oct.	Nov.	Dec.	Average
	-----------(millions of dollars)-----------					
Cash disbursements	$19.3	$23.5	$19.9	$14.1	$18.1	$19.0

* An August payroll of about $1.6 million was paid from funds that had been transferred from the project's appropriated loan guarantee default reserve fund. ANG restored the $1.6 million to the default reserve fund in December 1985. All other operating expenses since August 1, 1985, have been paid from project revenues.

* Meridian Land and Mineral Co. owns two coal lease tracts containing about 35 million tons of coal within and around the Freedom Mine that supplies Great Plains. On November 8, 1984, ANG approved an agreement whereby Meridian would sell all remaining unmined coal for $15 million. Under the agreement, ANG and Basin Electric were to share in the cost on roughly a 50/50 basis by making periodic payments through March 1989. According to ANG officials:

  --ANG paid the scheduled March 1985 coal lease payment of about $95,000.

  --ANG did not pay the approximately $2.3 million that was due on October 1, 1985, in order to preserve available funds for operating capital. ANG has renegotiated the coal lease payment schedule and has agreed to pay the $2.3 million plus interest by making monthly payments through July 1986.

CAPITAL IMPROVEMENTS/CRITICAL PROJECTS

* Prior to the loan default, the Great Plains budgets for 1985 and 1986 provided $81 million for 150 plant modification projects, including modifications to meet odor, air, and water quality standards.

* After the loan default, DOE instructed ANG not to make any capital improvements without its approval.

* In August 1985 ANG identified 50 capital improvement projects for further consideration. About $10 million had already been spent or committed for many of these projects. ANG estimated that an additional $15 million would be needed to complete all 50 projects.

* In September ANG reviewed capital improvement projects to identify those that are essential for plant operations and to assure workers' health and safety, or those that would increase operating efficiencies.

- ANG requested approval of three "urgently needed" capital improvement projects estimated to cost an additional $571,600.

  --DOE approved two of these projects with combined estimated costs of $71,600. The projects, which were intended to provide cost-effective solutions to address environmental situations requiring immediate attention, have been completed.

  --DOE rejected ANG's request for a cooling tower windwall project estimated to cost $500,000. This project provided for the erection of steel structures to prevent the wind from causing water losses and ice buildup in the plant's cooling tower.

- ANG, in consultation with DOE, is working with the North Dakota State Department of Health to review projects aimed at reducing odor problems.

- The plant's sulfur recovery process has not met the design specifications for sulfur dioxide emissions and is one of the most serious operational problems needing modification. ANG has identified a "caustic wash" process that has the potential to alleviate this problem. DOE has approved continued testing of the caustic wash process, which can only be tested in a situation where the system has become plugged. Pluggage occurred on January 22, 1986, and a first test of the caustic wash process was made at that time. The test, which was expected to take 8 hours to conduct, was completed in about 2 hours with encouraging results. According to ANG's test plan, the caustic wash process will be tested on three successive pluggage situations, with the last test expected to occur in May 1986.

- ANG submitted its 1986 capital projects budget to DOE on January 30, 1986. The budget recommends expenditures of $15 million, which would be paid out of plant revenues.

  --ANG recommended an expenditure of $5 million for six priority 1 projects that ANG believes would begin to bring the plant into regulatory compliance by reducing plant odors and decreasing sulfur emissions. Four of these projects ($2 million) are odor-related. Another project ($2.5 million) would go toward implementing the caustic wash process to reduce sulfur emissions. The sixth priority 1 project ($.5 million) would provide for testing of untreated gas streams to reduce sulfur emissions.

  --ANG recommended an additional expenditure of $9.25 million for priority 2 projects that ANG considers necessary to maintain or improve the plant's operating efficiency. The projects are considered to have a short-term payout and to contribute to plant profitability. The budget does not identify a full list of projects included in priority 2, but does cite 10 specific project areas that would be addressed.

--The remaining budget request of $750,000 would provide for a new ash disposal pit ($500,000) and other capital expenses ($250,000).

- As of February 14, 1986, DOE was reviewing ANG's capital projects budget.

PLANT MAINTENANCE

- In accordance with DOE's instructions, ANG has continued to maintain plant equipment and facilities to assure efficient plant operations. According to ANG, all routine maintenance has been performed on schedule through January 1986.

- DOE authorized ANG to proceed with winterization of the plant facilities at an estimated cost of $12,000 plus ANG labor valued at an estimated $110,200. The total estimated cost was later reduced to $65,000 due to reduced project scope and greater use of in-house materials and supplies. The winterization has been completed and was necessary to restore various parts of the plant affected by discontinued capital improvement projects to a state where they could survive the winter conditions.

- Seven gasifiers (train B) were shut down in May 1985 for 2 weeks for scheduled routine annual maintenance.

- The other seven gasifiers (train A) were shut down in August for scheduled maintenance that cost $347,000 and critical capital improvements that cost $415,000.

- According to ANG, the next scheduled shutdown of train B will begin on March 31, 1986, for 6 days and is expected to cost about $1.5 million.

OPERATIONAL ALTERNATIVES UNDER STUDY

- On the average, over 95 percent of the plant's earned revenues are from the production and sale of synthetic natural gas. The three by-products being marketed (sulfur, ammonia, and coal tars) represent a small percent of revenues recorded. ANG is studying the potential for increasing revenues by developing and marketing additional by-products.

- ANG officials indicated in February 1986 that, because of falling oil prices, carbon dioxide, a major by-product not now marketed, potentially could yield about $10 million or more annually in additional revenues if an adequate supply could be guaranteed for a long period. We were also told that the tar oil and other by-products could ultimately earn several million dollars annually with some additional capital investment and the development of new customer markets.

- ANG has also explored the potential for increasing revenues by reconfiguring the plant to produce other liquid products from the gas which have a higher market value. ANG's preliminary studies indicated that it may be feasible to reconfigure a portion of the plant's capacity to produce other principal products. In a September 3, 1985, letter to DOE, ANG recommended further investigation of seven such other products; its first preference was jet fuel followed by a combination of jet fuel and gasoline. Ammonia and methanol were included among the other products recommended for study. DOE authorized an in-house study by ANG to evaluate the potential of those products further.

- ANG spent about 5 staff-months in reviewing operational alternatives and discussed the results with DOE on November 26, 1985. Citing the gas pricing agreement litigation and cash flow constraints, DOE instructed ANG in December 1985 to discontinue further work on the study and to submit copies of the draft report covering work to date. As of February 14, 1986, DOE had not received the draft report.

(308774)

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