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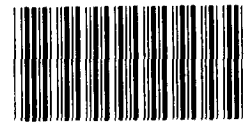
**GAO**

Briefing Report to  
Congressional Requesters

February 1986

# STRATEGIC PETROLEUM RESERVE

## Information on DOE's Fiscal Years 1986 and 1987 Budget Deferrals



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

February 28, 1986

RESOURCES, COMMUNITY,  
AND ECONOMIC DEVELOPMENT  
DIVISION

B-208196

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

The Honorable Mike Synar  
Chairman, Subcommittee on Environment,  
Energy and Natural Resources  
Committee on Government Operations  
House of Representatives

In response to your request of January 28, 1986, the attached briefing report provides information relating to the fiscal years 1986 and 1987 budget deferrals of Strategic Petroleum Reserve (SPR) funds. As agreed with your offices, we obtained information on the specific questions you asked us to address, including the status of development of the SPR sites, the time and money needed to prepare the SPR sites for continued oil fill, the Department of Energy's (DOE's) plans for the SPR under a moratorium, the effects of the deferrals on the SPR's completion, and DOE's plans for using funds appropriated for the SPR.

To obtain this information, we reviewed DOE documents and interviewed officials of DOE and Boeing Petroleum Services, Inc. (the SPR management, operations, and maintenance contractor). We computed costs and time required to complete certain construction activities from data in existing documents or data provided to us by DOE because DOE has not prepared revised cost estimates to complete the SPR development if the moratorium in the fiscal year 1987 budget is rejected by the Congress. We did not verify information obtained but we did assess its reasonableness based on our past and current SPR work. Additional details on the scope of our work are presented on page 9.

As a result of the proposed moratorium and funding deferrals in the fiscal year 1987 budget:

--All activities relating to storage cavern development (leaching) at two sites and the major construction effort planned for the Big Hill, Texas, site were suspended on December 31, 1985.

--Ongoing construction at the Big Hill and Bayou Choctaw, Louisiana, sites will be completed and then all sites will be placed in standby status ready for restart or drawdown.

--Oil fill will be stopped at 500 million barrels.

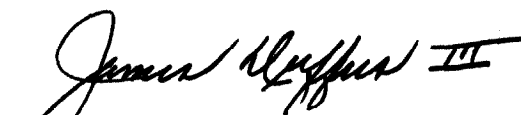
Although site development has stopped, we estimated, based on information provided us by DOE, that the SPR oil storage capacity could be increased from its current level of 511 million barrels to 600 million barrels within 18 months at an estimated cost of about \$20 million. The cost to prepare the 140-million-barrel Big Hill site for oil fill ranges from a minimum of about \$86 million for the first 50 million barrels of capacity without the oil pipeline to a maximum of about \$202 million for all 140 million barrels of capacity with the oil pipeline. It would take about 34 months to prepare for and leach the 50 million barrels of capacity and an estimated 57 months to prepare the entire site for oil fill.

DOE estimated that the cancellation of construction contracts following the deferral of funds in the fiscal year 1986 budget resulted in an estimated 6-month delay in completing the Big Hill site and about a 15-month delay in completing the remaining SPR sites. The cancellation of these contracts the second time, following a redeferral of funds in the fiscal year 1987 budget, has delayed the Big Hill site completion even further--a minimum of 4 months if a restart were ordered in March and a minimum of 17 months if a restart were delayed until August.

DOE has proposed deferring about \$198 million in facilities funds and about \$577 million in the oil account. DOE plans to use the facilities money to fund SPR site activities in fiscal year 1987 and continue deferring the oil account money until a decision is made on future oil purchases. However, on February 25, 1986, the Comptroller General notified the cognizant members of the Congress and the Secretary of Energy that the deferral of \$156.8 million of the facilities funds is not permissible and the funds must be made available for obligation.

At the request of your offices, we did not obtain agency comments on this report. We did obtain responsible DOE officials' views during the course of our work; they have been incorporated into the report where appropriate. As arranged with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 14 days from the date of its issuance. If you have any further questions, please do not hesitate to contact me at 275-8545.

Sincerely yours,

  
James Duffus III  
Associate Director

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#### ABBREVIATIONS

BOEING	Boeing Petroleum Services, Inc.
DOE	Department of Energy
GAO	General Accounting Office
OMB	Office of Management and Budget
PEMEX	Petroleos Mexicanos
RCED	Resources, Community and Economic Development Division
SPR	Strategic Petroleum Reserve

**BRIEFING REPORT ON INFORMATION RELATING TO THE  
DEPARTMENT OF ENERGY'S DEFERRAL OF STRATEGIC PETROLEUM  
RESERVE FUNDS IN THE FISCAL YEARS 1986 AND 1987 BUDGETS**

**PREPARED AT THE REQUEST OF THE CHAIRMEN, HOUSE COMMITTEE  
ON GOVERNMENT OPERATIONS AND ITS SUBCOMMITTEE ON  
ENVIRONMENT, ENERGY AND NATURAL RESOURCES**

### **THE STRATEGIC PETROLEUM RESERVE**

- ° WAS CREATED BY ACT OF CONGRESS IN 1975 TO MITIGATE THE ADVERSE ECONOMIC EFFECTS OF ANOTHER OIL SUPPLY DISRUPTION
- ° IS COMPOSED OF 6 CRUDE OIL STORAGE SITES AS WELL AS TERMINAL FACILITIES TO RECEIVE AND DISTRIBUTE THE OIL
- ° WAS PLANNED TO STORE A MAXIMUM OF 750 MILLION BARRELS OF OIL
- ° CONTAINED ABOUT 494 MILLION BARRELS OF OIL AT THE END OF JANUARY 1986
- ° HAS COST ABOUT \$18 BILLION
- ° HAS HAD STRONG SUPPORT FROM THE CONGRESS
- ° HAD STRONG EARLY SUPPORT FROM THE CURRENT ADMINISTRATION, WHICH NOW PROPOSES TO DEFER COMPLETION PRIMARILY FOR BUDGETARY REASONS



## BACKGROUND

The 1973 Arab oil embargo caused oil prices to triple, resulting in a loss of economic growth, increased inflation and unemployment, and balance of payment problems for the United States. As a result, the Congress passed the Energy Policy and Conservation Act (Public Law 94-163, Dec. 22, 1975) which authorized the creation of a Strategic Petroleum Reserve (SPR) to store up to 1 billion barrels of oil. Subsequently, the administration and the Congress agreed that a 750-million-barrel SPR would be developed by 1991, deferring any decision on the remaining 250 million barrels. The Department of Energy (DOE) implemented a three-phase plan to store 750 million barrels of oil as follows:

- Phase I is complete and includes about 260 million barrels of oil stored at five sites: Bryan Mound, Texas, and Bayou Choctaw, Sulphur Mines, West Hackberry, and Weeks Island, Louisiana.
- Phase II was scheduled for completion in 1987 and would increase the SPR's capacity to 550 million barrels by developing an additional 290 million barrels at three of the phase I sites (Bayou Choctaw, West Hackberry, and Bryan Mound).
- Phase III, which was scheduled for completion by 1991, has two increments: (a) expanding storage at Bayou Choctaw, West Hackberry, and Bryan Mound to increase the SPR's capacity to 610 million barrels and (b) developing a new site at Big Hill, Texas, to increase the capacity to 750 million barrels.

Although the Congress and both the current and prior administrations have supported a 750-million-barrel SPR, controversy over when this goal will be met has plagued the program, with the administration now opting for an indefinite delay in the final completion date based primarily on budgetary considerations. While an average 300,000-barrel-per-day oil fill rate was anticipated, DOE has never achieved this. In fiscal year 1985, the average fill rate was 159,400 barrels per day. During the first 4 months of fiscal year 1986, the average fill rate has been about 50,000 barrels per day. As of January 31, 1986, the SPR contained 494.4 million barrels of oil. DOE has estimated that the SPR has cost about \$18 billion and maintaining the sites in standby condition during fiscal year 1987 will require over \$237 million in budget outlays.

**OBJECTIVE**

**\*TO RESPOND TO SPECIFIC QUESTIONS ON THE SPR  
RAISED BY THE CHAIRMEN, HOUSE COMMITTEE  
ON GOVERNMENT OPERATIONS AND ITS  
SUBCOMMITTEE ON ENVIRONMENT, ENERGY AND  
NATURAL RESOURCES**

## OBJECTIVE, SCOPE AND METHODOLOGY

On January 28, 1986, the Chairmen, House Committee on Government Operations and its Subcommittee on Environment, Energy and Natural Resources, asked us to provide information in response to specific questions relating to the development of the SPR. These questions related to the current status of SPR development and fill and the impact on the SPR of moratoriums and deferrals of funds proposed by the administration in its fiscal years 1986 and 1987 budgets; the cost and time needed to prepare the SPR for continued oil fill; DOE's plans for using funds appropriated for the SPR; and the administration's plans to purchase Mexican oil for the SPR. Many of our responses emphasize the Big Hill site because this is the last site scheduled for completion and therefore the site most affected by the moratoriums and deferrals.

To obtain this information, we reviewed DOE program and project documents and budget and planning documents. We interviewed Department of Energy (DOE) managers and operating personnel responsible for planning and managing activities associated with developing and operating the SPR. We also interviewed Boeing Petroleum Services, Inc. (Boeing), officials involved with managing, operating, and maintaining the SPR. We computed costs to complete certain construction activities from data in existing cost estimates or by using data provided to us by DOE because DOE has not prepared revised cost estimates to complete the SPR development if the moratorium in the fiscal year 1987 budget is rejected by the Congress. We also computed the time to complete SPR construction based on prior development schedules, construction status reports and other information relating to construction activities provided to us by DOE. We did not verify the information obtained; however, we did assess its reasonableness based on our past and current SPR work. Our work was performed at the SPR Program Office in Washington, D.C., and at the SPR Project Office in New Orleans, Louisiana. We also interviewed officials of the Department of State and the Department of the Treasury regarding purchases of Mexican oil and economic assistance packages.

**THE ADMINISTRATION'S FY 1986 BUDGET  
PROPOSAL FOR SPR DEVELOPMENT AND DOE ACTIONS**

**°THE ADMINISTRATION -**

- °PLACED AN INDEFINITE MORATORIUM ON ALL  
FURTHER SITE DEVELOPMENT AFTER SEPTEMBER  
1985**
- °ANTICIPATED REDUCED BUDGET OUTLAYS OF \$8  
BILLION FROM FY 1986-90**
- °DEFERRED THE EXPENDITURE OF \$1.098 BILLION  
FROM PRIOR APPROPRIATIONS UNTIL SOME  
FUTURE PERIOD**

**°DOE -**

- °STOPPED ALL NEW BIG HILL CONTRACT AWARD  
PROCEEDINGS IN DECEMBER 1984**
- °ISSUED A PLAN IN APRIL 1985 FOR PUTTING  
THE SPR SITES IN STANDBY**

## PLANS FOR THE SPR

### THE ADMINISTRATION'S FISCAL YEAR 1986 BUDGET PROPOSAL TO DEFER COMPLETION OF THE SPR AND DOE ACTIONS

The administration's fiscal year 1986 budget submission included a proposal to impose an indefinite moratorium on further SPR development after fiscal year 1985 when about 489 million barrels of oil were expected to be in storage. According to the Secretary of Energy, the original SPR goal was to store the equivalent of a 90-day supply of net crude oil imports, and a 489-million-barrel reserve satisfies that goal. The administration proposed to reassess its position on the moratorium as fiscal and world oil market conditions changed.

The budget stated that the proposed moratorium would reduce outlays by about \$8.1 billion for fiscal years 1986 through 1990. About 94 percent of the reduced outlays would be oil purchase costs; the remainder would result from construction, operating, and personnel cost reductions. In addition, the administration notified the Congress that it was deferring expenditures of about \$1.098 billion of prior year appropriations--about \$271 million in construction and site development funds and about \$827 million in oil purchase funds--until some future date.

In anticipation of the proposed moratorium and funding deferrals, DOE had begun phasing down its construction program in December 1984, particularly at the Big Hill site. Planned actions for awarding contracts for Big Hill's crude oil pipeline, raw water intake and brine disposal pipelines, and surface construction for nine caverns were suspended in December 1984 and then subsequently cancelled. A transition plan for placing all sites in a state of standby readiness was issued in April 1985. In accordance with plans to place Big Hill in standby, DOE made some modifications to the ongoing construction contracts in May 1985, such as cancelling certain equipment procurements and placing some of the raw water pumping equipment into storage rather than installing it as originally planned.

**CONGRESSIONAL RESPONSE TO THE  
ADMINISTRATION'S PROPOSED MORATORIUM AND  
FUNDING DEFERRAL**

- ° REJECTED THE PROPOSED MORATORIUM AND PART OF  
THE FUNDING DEFERRALS
- ° ADDED ADDITIONAL FACILITIES DEVELOPMENT  
FUNDING FOR FY 1986

DOE'S ACTIONS AFTER DEFERRAL  
WAS REJECTED BY THE CONGRESS

After the fiscal year 1985 Supplemental Appropriations Act restored the funds for storage development construction and oil acquisition, DOE cancelled its standby planning activities, restarted construction activities, and continued its oil purchases.

In August 1985, DOE made preparations to continue with site development as called for prior to the moratorium. At the Big Hill site, the ongoing contract that was modified in May 1985 to cancel certain equipment procurements and to place some of the raw water pumping equipment in storage was remodified to require the equipment to be purchased and installed as originally planned.

With the restoration of SPR funding in August 1985, previously cancelled contract proposals at Big Hill were updated and new invitations to bid were prepared for issuance. On October 21 and November 6, 1985, respectively, invitations for bids were reissued for constructing (1) the raw water-intake and brine pipelines and an electrical transmission line from Big Hill's substation to the off-site raw water-intake structure and (2) the crude oil pipeline. Also, the invitation for bids for surface piping construction for nine caverns was reissued November 6, 1985. (DOE planned to award contracts for all three of these procurements by mid-March 1986 but, as discussed in the following section, again suspended award of these contracts in December 1985.)

**THE ADMINISTRATION'S FY 1987 BUDGET  
PROPOSAL FOR SPR DEVELOPMENT AND OIL FILL  
AND DOE ACTIONS**

° THE ADMINISTRATION -

° IMPOSED AN INDEFINITE MORATORIUM ON  
FURTHER DEVELOPMENT OF THE SPR  
BEGINNING IN 1986

° DEFERRED EXPENDITURES OF \$198 MILLION  
FOR FACILITY DEVELOPMENT AND \$577  
MILLION FOR OIL PURCHASES

° DOE -

° STOPPED ALL NEW BIG HILL CONTRACT AWARD  
PROCEEDINGS ON DECEMBER 31, 1985

° STOPPED ALL CAVERN LEACHING ACTIVITY ON  
DECEMBER 31, 1985

° WILL DISCONTINUE OIL PURCHASES FOR THE  
SPR AFTER MAY 1986



CONGRESSIONAL RESPONSE TO THE  
ADMINISTRATION'S PROPOSED DEFERRAL

The Congress did not accept the administration's proposed deferral. In the fiscal year 1985 Supplemental Appropriations Act (Public Law 99-88, Aug. 15, 1985), the Congress restored the deferred \$271 million for SPR construction and site development and restored \$290 million of the \$827 million deferred oil purchase funds. In the act, the Congress also directed the continued development of facilities for a 750-million-barrel SPR during fiscal year 1986 and required that the SPR oil inventory be increased to 500 million barrels by the end of fiscal year 1986.

In the fiscal year 1986 continuing resolution (Public Law 190, Dec. 19, 1985), the Congress provided approximately \$112.4<sup>1</sup> million in new budget authority for the SPR in fiscal year 1986 for activities necessary to continue with development of a 750-million-barrel SPR, including full resumption of Big Hill construction activities. The continuing resolution provided no additional funds for oil acquisition, stating that DOE had adequate funds in the SPR petroleum account to fill the SPR to 500 million barrels. In addition, the continuing resolution permits the Secretary of Energy, in cooperation with the Secretary of Agriculture, to exchange surplus Commodity Credit Corporation agricultural commodities for crude oil to fill the SPR.

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<sup>1</sup>This amount was subsequently reduced by \$4.832 million pursuant to the Balanced Budget and Emergency Deficit Control Act of 1985 (Public Law 99-177, Dec. 12, 1985).

**DOE'S RESPONSE TO CONGRESSIONAL REJECTION  
OF THE PROPOSED DEFERRAL**

- ° REMODIFIED ONGOING CONTRACTS AT THE BIG HILL, TEXAS, SITE
- ° REISSUED PREVIOUSLY CANCELLED REQUESTS FOR BIDS ON BIG HILL PIPELINE AND ON-SITE CONSTRUCTION CONTRACTS
- ° CONTINUED OIL PURCHASES IN FY 1986

THE ADMINISTRATION'S FISCAL YEAR 1987  
BUDGET PROPOSAL FOR SPR DEVELOPMENT AND  
OIL FILL AND DOE'S ACTIONS

The fiscal year 1987 budget proposes an indefinite moratorium on further development of the SPR starting in January 1986. It also proposes an indefinite moratorium on the SPR oil fill at the end of April 1986 when DOE estimates the SPR inventory will reach 500 million barrels, consisting of 499 million barrels in storage plus 1 million barrels in SPR test sale deliveries made in December 1985 and January 1986. (The test sale oil is permitted to be included in the SPR inventory during this fiscal year by the Energy Policy and Conservation Amendments Act of 1985 (Public Law 99-58, July 2, 1985).) The budget states that with this fill level, the SPR provides protection commensurate with that envisioned when the plans for a 750-million-barrel SPR were set in 1979.

According to the budget, the moratorium will be periodically reevaluated in light of changes in world oil markets and the federal government's fiscal situation. The administration also deferred prior year appropriations of \$197.9 million for storage facilities construction and \$577.5 million for oil acquisitions for use after fiscal year 1986.

DOE began taking actions to stop SPR development in December 1985 in line with the anticipated fiscal year 1987 budget proposal. On December 27, 1985, DOE's Assistant Secretary for Management and Administration formally notified cognizant congressional committees that DOE was planning to submit a deferral of funds for SPR storage facilities development. According to the Assistant Secretary's notification, this deferral was specifically related to delaying procurement activities for the Big Hill site construction and to capacity development at other sites. The Assistant Secretary stated that such a delay was appropriate to afford the administration an opportunity to consider options for future SPR funding, particularly in light of the deficit reduction targets in the Balanced Budget and Emergency Deficit Control Act of 1985 and DOE's fiscal constraints.

On December 30, 1985, the SPR Program Office issued financial and technical guidance implementing this deferral policy to the Oak Ridge Operations Office. The guidance suspended all further action on the new construction contracts at the Big Hill and Bayou Choctaw storage sites.

The Program Office also stopped all leaching activities on December 31, 1985, and suspended actions associated with oil purchases beyond January 31, 1986, pending further guidance. DOE subsequently decided to purchase sufficient oil to fill the SPR to 500 million barrels by the end of May 1986. The last 1 million barrels purchased would replace the oil sold in DOE's test sale deliveries. The Operations Office was also requested to develop a new transition plan by January 31, 1986, describing all actions required to put SPR facilities in a standby status.

**WHAT FY 1987 BUDGET DID DOE  
SUBMIT TO OMB?**

**THE BUDGET**

- ° WAS SUBMITTED IN MID-SEPTEMBER 1985
- ° ASSUMED THAT DEVELOPMENT AND OIL FILL WOULD BE STOPPED AT THE END OF FISCAL YEAR 1985
- ° ASSUMED THAT THE SPR WOULD BE IN A STANDBY MODE BEGINNING IN FISCAL YEAR 1986
- ° ESTIMATED OBLIGATING \$149.2 MILLION IN FISCAL YEAR 1987

DOE's FISCAL YEAR 1987  
BUDGET SUBMISSION TO OMB

The fiscal year 1987 budget submitted to the Office of Management and Budget (OMB) was based on the assumption that development of storage facilities and oil fill would be brought to a conclusion at the end of fiscal year 1985 and that the SPR would be in a standby readiness mode beginning in fiscal year 1986. According to DOE, this budget was developed in May 1985 in line with the moratorium in the administration's fiscal year 1986 budget since there had been no guidance from OMB to deviate from this approach. The budget was submitted to OMB in mid-September 1985 shortly after the Fiscal Year 1985 Supplemental Appropriations Act was signed on August 15, 1985. This act required, among other things, that the development of facilities for a 750-million-barrel SPR be continued during fiscal year 1986 and that the SPR oil inventory be increased to 500 million barrels by the end of the fiscal year. The budget stated that additional funds would be needed to carry out the requirements of the supplemental act and that the budget was being adjusted to account for both the overturn of the deferral and anticipated congressional action on the fiscal year 1986 budget.

DOE's planned obligations for fiscal year 1987 were \$149.2 million in the budget submitted to OMB. This amount was subsequently reduced to \$136.5 million in the administration's budget. This difference is primarily due to a decrease in distribution enhancement costs at the Sun terminal of about \$24.4 million which DOE engineering and refinery demand studies concluded were no longer necessary and to an increase in operations and maintenance cost of about \$11.7 million.

**HAS DOE CHANGED ITS PREVIOUS POLICY  
WITH REGARD TO THE OPTIMAL SIZE FOR  
THE SPR? FILL LEVELS? DRAWDOWN RATES?**

°DOE MAINTAINS THAT ITS GOAL IS STILL A  
750-MILLION-BARREL SPR

°DOE'S POLICY FOR ACHIEVING THIS GOAL HAS  
CHANGED AS SHOWN BELOW:

	<u>Pre- moratorium</u>	<u>Under present moratorium</u>
Size	750 million barrels	500 million barrels
Fill rate	Sufficient to fill to 750 million barrels by 1991	No fill after reaching 500 million barrels in May 1986
Drawdown rate	4.5 million barrels per day by 1991	3.1 million barrels per day by 1987

°SIZE, FILL, AND DRAWDOWN RATE WOULD BE  
PERIODICALLY REEVALUATED BY DOE

DOE'S POLICY CHANGE ON SPR SIZE,  
OIL FILL, AND DRAWDOWN RATE

While DOE maintains that its long-range goal is still the development of a 750-million-barrel SPR, the moratorium proposed in the administration's fiscal years 1986 and 1987 budgets reflects changes in DOE's policy on developing, filling, and drawing down the SPR. Prior to the proposed moratoriums, DOE's plans for developing the SPR, as contained in the fiscal year 1985 budget justifications, were to complete the development of 750 million barrels of storage capacity by 1990 and to fill to that capacity by early fiscal year 1991. A 750-million-barrel SPR was expected to provide a drawdown rate of up to 4.5 million barrels per day.

The moratoriums have changed the policy for developing the SPR. All leaching activities for additional storage capacity were stopped on December 31, 1985, with about 511 million barrels of storage available. However, surface construction required to prepare an existing 10-million-barrel cavern at Bayou Choctaw for oil fill will continue so that the SPR will have a total available storage capacity of about 519 million barrels by early 1987. DOE plans to continue oil fill only through May 1986 when the SPR inventory will reach 500 million barrels. Work will continue in both fiscal years 1986 and 1987 on oil distribution enhancements that are necessary to permit the drawdown and distribution of the SPR oil at a rate of approximately 3.1 million barrels per day.

The administration's justification for this change states that, due to the falling levels of net U.S. oil imports, an SPR inventory of about 500 million barrels now provides a level of protection commensurate with that envisioned when the plans for a 750-million-barrel SPR were set in 1979, i.e., a 90-day supply of estimated net U.S. oil imports. The moratorium would be periodically reevaluated in light of changes in world oil markets and the federal government's fiscal situation.

**WHAT AMOUNTS OF MONEY HAVE BEEN OBLIGATED  
AND SPENT AT BIG HILL?**

°\$168 MILLION HAS BEEN OBLIGATED THROUGH  
DECEMBER 31, 1985

°\$155 MILLION HAS BEEN EXPENDED THROUGH  
DECEMBER 31, 1985

**WHAT WORK HAS BEEN COMPLETED AT BIG HILL  
THROUGH JANUARY 1986?**

- °DRILLING 28 WELLS FOR ALL 14 CAVERNS
- °SITE PREPARATION FOR ALL 14 CAVERNS
- °PROCUREMENT OF ALL LONG-LEAD-TIME EQUIPMENT  
ITEMS REQUIRED TO CONSTRUCT SURFACE  
FACILITIES AT ALL 14 CAVERNS
- °ALL DESIGN WORK TO CONSTRUCT BRINE, RAW  
WATER, AND OIL PIPELINES AND SURFACE  
FACILITIES FOR ALL 14 CAVERNS



CURRENT STATUS OF BIG HILL SITE

COST AND COMPLETED WORK AT BIG HILL

As of December 31, 1985, about \$168 million has been obligated to Big Hill development for land acquisition, drilling wells, construction activities, engineering, and operations planning/support; about \$155 million has been expended. A breakdown by fiscal year of these figures is shown below.

<u>Fiscal year</u>	<u>Obligations</u>	<u>Outlays</u>
	-----(millions)-----	
1982	\$ 42.565	\$ 7.228
1983	31.401	41.423
1984	71.898	35.215
1985	21.892	61.145
1986 1st qtr.	<u>.319</u>	<u>10.135</u>
Total	<u>\$168.075</u>	<u>\$155.146</u>

Completed work at Big Hill through January 1986 includes land acquisition; rights-of-way permits for constructing the water, brine, and oil pipelines; drilling 28 wells for all 14 future caverns; site preparation for all 14 future caverns; and all design work and procurements of all long-lead-time equipment required to construct surface facilities for all 14 future caverns. In addition, DOE has completed all design work to construct the brine, raw water, and oil pipelines.

**WHAT WORK IS ONGOING AT BIG HILL?**

- ° CONSTRUCTION OF ALL SURFACE FACILITIES AT 5 CAVERNS AND RELATED SITE FACILITIES
- ° CONSTRUCTION OF RAW WATER-INTAKE STRUCTURE ON THE INTERCOASTAL WATERWAY
- ° ARCHITECT/ENGINEER DESIGN, CONTRACT MONITORING, GUARD SERVICES, AND INSTRUMENTATION DEVELOPMENT

**WHEN ARE CURRENT CONTRACTS AT BIG HILL EXPECTED TO BE COMPLETED?**

- ° FRUIN-COLNON CONTRACT 1A FOR ON-SITE CONSTRUCTION (5 CAVERNS) - APRIL 1, 1986
- ° FRUIN-COLNON CONTRACT 1B FOR RAW WATER-INTAKE STRUCTURE - MARCH 7, 1986
- ° WALK, HAYDEL, AND ASSOCIATES ARCHITECT/ENGINEER CONTRACT - JULY 31, 1986
- ° COGGINS SYSTEMS CONTRACT FOR INSTRUMENTATION PACKAGE - JANUARY 19, 1987

ONGOING WORK AT BIG HILL

Ongoing work at the Big Hill site includes on-site construction of all surface facilities necessary to support leaching the first five caverns, i.e., construction of the warehouse, administrative office, electric substation, firewater system, all inter-connected piping, brine pond area, roads, and electrical systems. This work, called the 1A contract, was about 94 percent complete as of January 18, 1986.

Other ongoing work is being done under contract 1B, including off-site construction of the raw water-intake structure and related electrical and mechanical components and a communications system. The raw water-intake structure, located about 5 miles from the site on the Intercoastal Waterway, will provide fresh water to the site for leaching storage cavern space.

Other ongoing work includes architect-engineer design services, contract monitoring services, guard services, and development of a distributive control system (instrumentation).

The contract completion dates, along with the latest expected completion dates for the major ongoing work at Big Hill, are shown below.

<u>Contract</u>	<u>Contract completion date</u>	<u>Expected completion date</u>
Fruin-Colnon 1A (on-site construction)	2/14/86	4/01/86
Fruin-Colnon 1B (raw water-intake structure)	2/10/86	3/07/86
Walk-Haydel (architect-engineer services)	7/31/86	7/31/86
Coggins Systems (instrumentation)	1/19/87	1/19/87

**HOW MUCH MONEY WOULD BE REQUIRED TO COMPLETE  
BIG HILL TO WHERE OIL FILL COULD BEGIN?**

- ° APPROXIMATELY \$86 MILLION TO COMPLETE THE  
WATER AND BRINE PIPELINES AND LEACH THE  
FIRST 5 CAVERNS
- ° APPROXIMATELY \$202 MILLION TO COMPLETE ALL  
FACILITIES AND LEACH ALL 14 CAVERNS

**HOW MUCH TIME WOULD BE REQUIRED  
TO COMPLETE CONSTRUCTION AND LEACH  
THE CAVERNS AT BIG HILL?**

- ° ABOUT 34 MONTHS AFTER CONTRACTS ARE AWARDED  
TO CONSTRUCT PIPELINES, TEST, AND LEACH 50  
MILLION BARRELS OF OIL STORAGE SPACE
- ° AN ADDITIONAL 23 MONTHS WOULD BE REQUIRED TO  
COMPLETE ALL REMAINING CONSTRUCTION AND  
LEACH ALL 14 CAVERNS TO THEIR FULL 140-  
MILLION-BARREL STORAGE CAPACITY

COST AND TIME TO PREPARE BIG HILL FOR  
OIL FILL VARY WITH METHOD USED

DOE initially planned to develop the Big Hill site in two stages. Stage 1 included drilling 10 wells at 5 cavern locations; constructing all necessary on-site surface installations; constructing off-site water, brine disposal, and oil supply pipelines; and leaching 50 million barrels of oil storage capacity. Stage 2 included drilling 18 additional wells at the remaining 9 cavern locations; constructing all surface facilities to connect the 9 caverns with the water, brine, and oil systems; and leaching 90 million barrels of oil storage capacity.

The fiscal year 1985 funding deferrals resulted in a different sequence of events and DOE can continue Big Hill development under varying methodologies. As a result of the construction funding deferrals, all 28 wells for the 14 caverns are now completed and all surface construction for the initial 5 caverns is nearly completed. The water, brine, and oil pipelines that were to be completed concurrently with the surface construction, however, are not yet started. DOE now has several options on proceeding with the site development to the point where oil fill could begin. Our estimates of cost and time to complete based on currently available DOE data are shown below.

Option 1

	<u>Cost (millions)</u>	<u>Time (months)</u>
Construct water and brine pipelines, test and prepare for leaching	\$35.8	16
Leach 50 million barrels of storage	<u>50.0</u>	<u>18</u>
Total	<u>\$85.8</u>	<u>34</u>

Some oil will be needed during the leaching period to prevent cavern erosion. According to DOE, this could be supplied by trucks, or the oil pipeline could be constructed during this phase at an added cost of about \$24 million. DOE views this option as having the lowest initial cost but as being the most inefficient in terms of operational costs.



Option 2

	<u>Cost</u> <u>(millions)</u>	<u>Time</u> <u>(months)</u>
Water and brine pipeline construction	\$ 35.8	18 <sup>a</sup>
Surface construction for 9 caverns	35.0	
Leaching 140 million barrels of storage	<u>107.0</u>	<u>39</u>
Total	<u>\$177.8</u>	<u>57</u>

<sup>a</sup>This applies to both pipeline and surface construction.

As in option 1, some oil would be needed during leaching. This could be trucked in, or the oil pipeline could be installed for about \$24 million. DOE views option 2, including trucking the oil in, as the most efficient way to develop Big Hill although it would require an additional 23 months.

Option 3

This option is the same as option 2, but DOE could install the oil pipeline concurrently with other construction efforts. This option would increase the initial outlay to about \$202 million but would provide DOE additional flexibility for filling the caverns with oil.

**HOW MUCH MONEY WILL BE REQUIRED TO COMPLETE  
THE OTHER SPR SITES TO WHERE OIL  
FILL COULD BEGIN?**

° ABOUT \$36 MILLION TO COMPLETE THE REQUIRED  
SURFACE CONSTRUCTION AND CAVERN LEACHING  
AT THE 3 UNCOMPLETED SITES

**HOW MUCH TIME WOULD BE REQUIRED TO COMPLETE  
ALL FACILITIES DEVELOPMENT AND LEACHING AT THE  
OTHER SPR SITES?**

° ABOUT 47 MONTHS TO REACH THE FULL  
610-MILLION-BARREL CAPACITY

° APPROXIMATELY 18 MONTHS TO COMPLETE 600  
MILLION BARRELS OF STORAGE CAPACITY



CURRENT STATUS OF OTHER SITES

COST AND TIME TO PREPARE  
OTHER SPR SITES FOR OIL FILL

Based on DOE data, we estimate that it will cost approximately \$36 million to complete the surface construction and cavern leaching at the three uncompleted SPR sites. The five SPR storage sites apart from the Big Hill site have a planned capacity of 610 million barrels. All leaching activities at the sites were stopped as of December 31, 1985. The status of the sites at that time and the estimated cost to complete the leaching program are shown below.

<u>Site</u>	<u>Planned oil capacity</u>	<u>Oil capacity as of 12/31/85</u>	<u>Estimated cost to complete</u>
	(millions of barrels)		(millions)
Weeks Island	73.0	73.0	\$ 0
Sulphur Mines	26.0	26.4	0
Bayou Choctaw	66.0	46.0	20.509 <sup>a</sup>
Bryan Mound	226.0	199.7	5.175
West Hackberry	<u>219.0</u>	<u>166.0</u>	<u>10.325</u>
Total	<u>610.0</u>	<u>511.1</u>	<u>\$36.009</u>

<sup>a</sup>Approximately \$7.7 million of this amount is for surface construction costs for the two remaining caverns.

We estimate, based on DOE data, that it will take approximately 47 months to complete the 610 million barrels of capacity planned for the sites other than Big Hill. This is due primarily to the length of time required to complete surface construction and leach the 10-million-barrel phase III cavern at the Bayou Choctaw site. However, 600 million barrels of storage capacity could be made available within 18 months by completing (1) leaching activities at Bryan Mound and West Hackberry and (2) surface construction at the already leached cavern at Bayou Choctaw. This could be accomplished at an estimated cost of about \$20 million.

ACTUAL/EXPECTED OIL  
INVENTORY LEVELS BY SITE

**WHAT WERE THE OIL INVENTORY LEVELS  
AT EACH SPR SITE AS OF JANUARY 31, 1986?  
UNDER THE PROPOSED MORATORIUM?**

<u>SPR site</u>	<u>Inventory levels</u>	
	<u>Jan. 31, 1986</u>	<u>Under proposed moratorium</u>
	(millions of barrels)	
--Weeks Island	72.5	72.5
--Sulphur Mines	26.1	26.1
--Bayou Choctaw	45.5	45.5
--Bryan Mound	191.3	196.9
--West Hackberry	156.5	156.5
--Tanks and Pipelines	<u>2.5</u>	<u>2.5</u>
TOTAL	<u>494.4</u>	<u>500.0</u>

REASSESSMENT OF PRIOR GAO REPORT  
ON SPR DEVELOPMENT OPTIONS

HAS GAO REASSESSED ITS 1985 STUDY OF THE  
SPR ENTITLED OPTIONAL DEVELOPMENT STRATEGIES  
FOR THE STRATEGIC PETROLEUM RESERVE  
(GAO/RCED-85-113 and GAO/RCED-85-117,  
April 22, 1985)?

° GAO HAS MADE NO REASSESSMENT

**WHAT IS DOE'S PLAN FOR THE BIG HILL  
SITE UNDER ITS PROPOSED MORATORIUM?**

- ° TRANSITION SITE TO A STANDBY STATUS
- ° MAINTAIN INSTALLED EQUIPMENT IN PLACE
- ° STORE EQUIPMENT NOT INSTALLED IN ON-SITE  
WAREHOUSE
- ° CONSIDER REMOVING AND WAREHOUSING CRITICAL  
ITEMS IF MORATORIUM EXTENDS BEYOND  
FISCAL YEAR 1987
- ° IMPLEMENT PROJECTS TO PROTECT PROPERTY AND  
THE ENVIRONMENT

## THE SPR UNDER A MORATORIUM

### DOE's PLANS FOR MAINTAINING BIG HILL IN STANDBY

The Big Hill storage site will not be developed further under a moratorium. Existing construction contracts will be completed and the site will transition to a standby status. According to DOE's February 1986 Transition Plan FY 1986 and 1987, the installed equipment will be left in place and protected; equipment not installed will be stored in the on-site warehouse. The option of removing and warehousing pumps, motors, and other major components will be considered if the moratorium extends beyond fiscal year 1987.

The current contracts for on-site surface construction (1A) and the raw water-intake structure (1B) will be completed. In addition DOE has identified five construction projects necessary to protect property and the environment during the proposed moratorium. The five construction activities include (1) installing a perimeter fence system, (2) seeding groundwork to prevent erosion, (3) sealing all open conduit connections and unterminated wiring, (4) providing cathodic protection for wellheads and systems not presently covered, and (5) creating an adequate environmentally controlled storage space for on-site equipment. The current architect-engineer will be responsible for developing the bid packages for these projects.

According to the SPR Assistant Project Manager, Engineering and Construction, the equipment remaining in place should not incur any adverse effects with proper maintenance; however, long-term exposure to the elements increases the potential for some degree of damage to the installed equipment. While environmentally controlled storage provides improved protection, equipment maintenance will still be necessary. The costs of implementing plans for either storing the equipment or leaving it in place have not been developed.

**TO WHAT EXTENT HAVE THE DEFERRALS  
AFFECTED THE SPR'S COMPLETION?**

- °BIG HILL COMPLETION SLIPPED ABOUT 6 MONTHS AS A RESULT OF THE FISCAL YEAR 1986 BUDGET DEFERRAL
- °AS A RESULT OF THE FISCAL YEAR 1987 BUDGET DEFERRAL, BIG HILL COMPLETION HAS ALREADY SLIPPED ANOTHER 4 MONTHS, IS EXPECTED TO SLIP AT LEAST 1 MONTH FOR EVERY MONTH THAT WORK IS NOT RESUMED, AND COULD SLIP EVEN FURTHER
- °BAYOU CHOCTAW SITE COMPLETION HAS BEEN DELAYED 15 MONTHS PLUS CONTRACT REACTIVATION TIME OF UNKNOWN DURATION
- °DELAYS AT OTHER 2 INCOMPLETE SITES WILL BE COMMENSURATE WITH START-UP TIME REQUIREMENTS
- °OIL FILL COMPLETION TO 750 MILLION BARRELS IS DEPENDENT ON AVAILABILITY OF STORAGE CAPACITY AND FILL RATE

EXTENT OF SPR COMPLETION  
DELAYS CAUSED BY  
FUNDING DEFERRALS

The deferral of SPR funds in the fiscal year 1986 budget affected both the construction program and cavern development at the sites. DOE estimates that this deferral presented to the Congress in February 1985 has delayed the completion date of a 750-million-barrel reserve by about 6 months--from a pre-moratorium (October 1984) estimate of April 1990 to a post-moratorium (October 1985) estimate of October 1990. The deferral primarily affected the work at Big Hill, which would be the final site to be completed. Initially, DOE estimated that the deferral would result in a delay of about 17 months at Big Hill. Although the start of cavern leaching could reflect this delay, DOE believes that changes proposed for the actual leaching process will improve operational efficiency to the point where about 11 months of the 17-month delay can be made up.

The deferral also caused some delay in completing storage caverns at the Bayou Choctaw site, primarily in terms of delaying the construction and leaching activities associated with the phase III cavern at this site. This delay is expected to be about 15 months; the estimated completion date is March 1990.

On the basis of DOE information, it appears that future delays in completing the four SPR sites due to the fiscal year 1987 budget deferral would be on a 1-to-1 basis (for each month that restart is delayed beyond January 1, 1986, the completion date would be extended by 1 month), plus the time required at Big Hill and Bayou Choctaw to reissue new invitations for bids for the construction contracts (about 2 months). DOE also informed us that if restart is delayed at Big Hill beyond July 31, 1986, when the current architect/engineer contract expires, construction could be delayed up to 9 additional months while DOE goes through the process of awarding a new architect/engineer contract.

Another impact of the deferral is on the final completion date for oil fill. Completely filling the caverns is dependent on the rate of oil fill. If the SPR were filled at its available capacity rate of about 159,000 barrels per day, a 750-million-barrel reserve would be completed in fiscal year 1991, assuming that all leaching was completed. Filling at less than this rate would extend the completion date. For example, a fill rate of 50,000 barrels per day would extend fill completion to fiscal year 2000.

**HOW WILL DELAYS AFFECT SPR SITES IN TERMS OF:**

**°EQUIPMENT RELIABILITY?**

--NO ADVERSE EFFECTS WITH PROPER  
MAINTENANCE

--SOME EQUIPMENT AT THE BIG HILL SITE MAY  
EXPERIENCE PROBLEMS IF STORED TOO  
LONG

**°EQUIPMENT MAINTENANCE?**

--DELAY HAS OFFERED THE OPPORTUNITY FOR  
ADDITIONAL SITE MAINTENANCE

**°AVAILABILITY OF QUALIFIED  
ARCHITECT/ENGINEERING PERSONNEL?**

--NO EFFECT TO DATE

--SOME FUTURE ARCHITECT/ENGINEERING WORK  
WILL HAVE TO BE PERFORMED BY DOE



THE EFFECTS OF DELAYS ON EQUIPMENT  
RELIABILITY, EQUIPMENT MAINTENANCE,  
AND AVAILABILITY OF QUALIFIED PERSONNEL

According to DOE officials, the proposed moratorium on SPR development and oil fill will have no adverse effects on equipment reliability. Their assessment, however, is based on the provision that appropriate maintenance and periodic exercising of the equipment are carried out in a systematic way. An SPR Program Office official said that placing the sites in standby at this time is not much different from putting the sites in standby at completion of development and oil fill. In both instances, the raw water, brine disposal, and oil supply systems need to be maintained in a restart/drawdown-ready mode since all three systems are used both in leaching the cavern storage space and in drawing down and refilling the caverns.

The Program Office official said that the maintenance and operations contractor has been provided with sufficient funds and personnel to adequately protect the SPR sites and equipment from deterioration and loss of reliability during the standby period and that DOE expects the contractor to meet performance expectations. The official said that while the site equipment will remain in place at this time, a continued moratorium would require that DOE assess the benefits of removing some of the equipment and storing it under better environmental conditions as part of the site maintenance program. This would be particularly true at the Big Hill site where some of the equipment would not be needed for a period of 18-24 months after the order to restart was received.

DOE and contractor officials view as somewhat beneficial the moratorium on site development and oil fill and the delays in some construction activities as a result of funding deferrals. The backlog of preventive and corrective maintenance tasks has been a continuing problem at SPR sites, and responsible officials see the current delays as offering the opportunity to reduce the maintenance backlog. With this effort in mind, DOE has proposed only minor reductions in the contractor's site operations and maintenance staffing levels during fiscal years 1986 and 1987.

The delays and the proposed moratorium have not yet affected the SPR sites in terms of the availability of qualified architect and engineering personnel, according to an SPR Assistant Project Manager. He stated that the SPR architect/engineering contractor for construction, Walk, Haydel and Associates, Inc., has maintained a qualified staff at the sites proportionate to the construction activities and that they will continue to perform design work for transition projects through July 31, 1986.

DOE's February 1986 transition plan notes that after the current architect/engineering contract expires on July 31, 1986, these services will be performed in-house by government personnel because of the lessened need for architect/engineering services.

**HOW LONG CAN SPR SITES REMAIN IN A  
STANDBY MODE WITHOUT JEOPARDIZING  
RESTART AND/OR DRAWDOWN?**

°DOE BELIEVES THAT WITH PROPER MAINTENANCE  
AND TESTING, THE SITES CAN BE HELD READY  
FOR RESTART/DRAWDOWN FOR THE DESIGN LIFE  
OF THE EQUIPMENT

°DOE WILL CONSIDER REMOVING INSTALLED  
CRITICAL EQUIPMENT AT BIG HILL IF THE  
MORATORIUM EXTENDS BEYOND FISCAL YEAR  
1987

THE EFFECTS OF STANDBY  
ON RESTART AND/OR DRAWDOWN

The SPR was designed for a useful life of 20 years and multiple drawdown/refill cycles. DOE officials believe that with (1) proper maintenance, (2) protection from deterioration resulting from adverse environmental conditions, and (3) periodic movements of water, brine, and oil through the system to exercise the equipment, the sites can be maintained in a restart/drawdown-readiness state over the design time period. These officials have pointed out that there is nothing technically difficult about performing appropriate maintenance and protective procedures and that corrosion actions can be controlled by the use of available chemical inhibitors.

While this assessment may apply to the more fully developed storage sites that have the capability to operate the full system on a routine basis, DOE faces a different type of problem at the Big Hill site. With no water, brine, or oil pipeline systems in place, routinely exercising the equipment that is currently installed becomes more difficult. While hardware items such as pumps, motors, valves, and piping probably can be protected over their 20-year life, engineers have told us that some of the electronic and electrical switching components could begin to lose reliability after about 5 years and may require replacement after 8 to 10 years of storage.

DOE officials are aware of these problems and said that they will be assessing the need to take appropriate action with the equipment at Big Hill. This could include dismantling and storing some of the installed equipment if that is determined to be necessary to protect the items over an extended period of time.

**HOW DOES THE 1986 TRANSITION PLAN FOR  
PLACING THE SPR IN STANDBY COMPARE  
WITH DOE'S 1985 TRANSITION PLAN?**

°THE 1986 TRANSITION PLAN DIFFERS BY PROVIDING  
FOR

- COMPLETING EXISTING CONSTRUCTION AT BIG HILL
- MAINTAINING INSTALLED EQUIPMENT IN PLACE AT BIG HILL
- CLOSING OUT THE EXISTING ARCHITECT/ENGINEERING CONTRACT AT BIG HILL
- EVALUATING OPTIONS FOR REPAIRING THE WEST HACKBERRY BRINE PIPELINE LEAK
- NOT PERFORMING ENHANCEMENTS TO THE SUN TERMINAL AT NEDERLAND, TEXAS
- DESIGN OF THE ST. JAMES TERMINAL ADDITIONS AND AWARD OF LONG-LEAD EQUIPMENT AND CONSTRUCTION CONTRACTS FOR FISCAL YEAR 1987

COMPARISON OF 1985 AND 1986  
SPR TRANSITION PLANS

The administration proposed an indefinite moratorium on further SPR development and fill in its fiscal years 1986 and 1987 budget submissions. Both proposed moratoriums resulted in DOE developing transition plans, issued in April 1985 and February 1986, respectively, that describe the actions required to place SPR facilities in a standby status, ready for a drawdown or restart of development. Both plans provided for maintaining drawdown readiness, conducting equipment testing and annual drawdown tests, being prepared to restart leaching at West Hackberry and Bryan Mound, and maintaining a capital improvements program.

Although there were some similarities in the plans, there were also differences because the status of the oil fill, site development, and construction activities in 1986 was different from 1985. For example, the 1986 transition plan calls for existing construction activities to be completed and for all equipment to be maintained in place by Boeing, the SPR management, operations, and maintenance contractor, to allow for restart of construction activities. The 1985 plan called for storing certain equipment, such as the raw water-intake structure pumps at the Big Hill site, which are currently installed. The 1986 plan indicates that the option of removing and warehousing pumps, motors, and other major components will be considered if the moratorium extends beyond fiscal year 1987. The desirability of constructing a power line to the raw water-intake structure will also be considered.

The 1986 plan also notes that the architect/engineer services needed at Big Hill beyond the current contract completion date of July 31, 1986, will be performed in-house by government personnel rather than by extending the contract.

The 1986 plan notes that the brine disposal line at West Hackberry is currently out of service due to an erosion/corrosion problem in December 1985 and that DOE is evaluating options to repair or replace the line. The plan also notes that a series of inspections are scheduled for the Bryan Mound brine disposal line due to the West Hackberry failure and that any required repairs will be made.

The 1985 transition plan called for enhancements to the Sun terminal in Nederland, Texas, which would increase distribution capability from the West Hackberry and Sulphur Mines sites. The 1986 transition plan excludes these enhancements to the Sun terminal and reallocates this funding to the Seaway complex enhancements.



The 1986 transition plan provides for design of the St. James terminal additions and the award of long-lead equipment and construction contracts for fiscal year 1987. These enhancements are not provided for in the 1985 transition plan since this plan does not cover fiscal year 1987 activities.

The 1986 plan requires that system engineering functions be transitioned to Boeing from the current contractor by fiscal year 1987, and that Boeing subcontract for guard services at the beginning of fiscal year 1987, rather than have DOE continue providing guard service under a prime contract.

**HOW MUCH MONEY WILL DOE HAVE AVAILABLE  
FROM PRIOR YEAR APPROPRIATIONS UNDER  
A 1986 MORATORIUM?**

- °ABOUT \$415 MILLION IN THE FACILITIES ACCOUNT
- °ABOUT \$725 MILLION IN THE OIL ACCOUNT

**WHAT ARE DOE'S PLANS FOR USING  
THESE FUNDS?**

- °ABOUT \$217 MILLION FROM THE FACILITIES ACCOUNT WILL BE USED TO FUND THE COSTS OF MAINTAINING THE SPR FROM JANUARY 1, 1986, TO SEPTEMBER 30, 1986
- °THE BALANCE OF THE FACILITIES ACCOUNT HAS BEEN DEFERRED
- °ABOUT \$108 MILLION FROM THE OIL ACCOUNT WILL FILL THE SPR TO 500 MILLION BARRELS; ABOUT \$577.5 MILLION HAS BEEN DEFERRED; THE STATUS OF THE \$39.5 MILLION IS UNCERTAIN



AVAILABILITY AND PLANNED  
USE OF DEFERRED SPR FUNDS

DOE's fiscal year 1987 budget justification reported having about \$414.6 million of unobligated funds in its facilities account from fiscal year 1986 and prior appropriations. It also reported having about \$725 million of unobligated funds in its oil account, consisting of funds available as of October 1, 1985, and about \$27.9 million from the proceeds of the SPR test sale in December 1985 and January 1986.

DOE expects to obligate about \$216.6 million of its facilities funds in fiscal year 1986 for activities associated with placing the SPR sites in standby and for routine operations and maintenance of the sites. The remaining \$197.9 million has been deferred for use after fiscal year 1986.<sup>1</sup>

The administration's fiscal year 1987 budget, based on then-existing oil prices, expected to obligate about \$147.5 million for oil purchases. The balance of about \$577.5 million, consisting of about \$537 million deferred in 1985, \$27.9 million in SPR test sale receipts, and about \$12.6 million in other funds, has been deferred until such time as fiscal and oil market conditions warrant their release. The recent drop in oil prices, however, has changed the administration's plans. As of February 21, 1986, DOE expects to obligate only about \$108 million for oil purchases to bring the SPR inventory up to 500 million barrels. Thus, about \$39.5 million will remain available for obligation or be deferred by DOE.

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<sup>1</sup>On February 25, 1986, the Comptroller General notified cognizant members of the Congress and the Secretary of Energy that the deferral of \$156.8 million of this amount is not permissible under the Impoundment Control Act of 1974 (Public Law 93-344, 88 Stat. 332, 2 U.S.C. 681, 684(a)) and the funds must be made available for obligation.

**WHEN WAS THE BOEING MANAGEMENT, OPERATIONS,  
AND MAINTENANCE CONTRACT SIGNED?  
FOR WHAT AMOUNT?**

- ° CONTRACT WAS SIGNED MARCH 28, 1985, WITH A 5-YEAR PERFORMANCE PERIOD AND OPTION BY DOE TO EXTEND AN ADDITIONAL 5 YEARS
- ° THE CONTRACT INCLUDED \$56.5 MILLION FOR ESTIMATED COSTS AND FIXED FEE FROM APRIL 1, 1985, TO SEPTEMBER 30, 1985

**WAS DOE AWARE OF PLANS TO IMPLEMENT A  
MORATORIUM WHEN THE CONTRACT WAS SIGNED?**

- ° YES, DOE OFFICIALS WERE AWARE OF THE PLANNED MORATORIUM
- ° SCOPE OF WORK AND CONTRACT COST CAN BE UNILATERALLY MODIFIED TO REFLECT CURRENT CONDITIONS

## SPR CONTRACTS

### DOE's CURRENT CONTRACT FOR MANAGING THE SPR

The management, operations, and maintenance (MOM) contract with Boeing Petroleum Services, Inc., was signed on March 28, 1985. The performance period was from April 1, 1985, through March 31, 1990, with a unilateral DOE option to extend the contract up to 5 years. The contract is funded incrementally through contract modifications based on annual budgets submitted by Boeing. Amounts obligated by DOE can also be increased or decreased through unilateral contract modifications. At the time the contract was signed, an amount of \$56.5 million for estimated costs and a fixed fee was established to cover the period April 1, 1985, to September 30, 1985. This amount was subsequently revised to \$46.9 million in December 1985 to reflect actual costs.

DOE was aware of its proposed moratorium at the time Boeing was selected as the MOM contractor (December 24, 1984) and when the 5-year contract was signed on March 28, 1985. On December 11, 1984, the Secretary of Energy announced that DOE was considering a moratorium on SPR development and oil fill at the end of fiscal year 1985. The proposed moratorium and deferral messages for SPR construction and oil purchase funds were included in the administration's fiscal year 1986 budget proposal on February 3, 1985.

As of January 29, 1986, formal changes have not been made in the status or scope of the Boeing contract because of the deferral of funds. However, Boeing is currently reviewing its work plans for manpower and funding under standby conditions and will present the results to DOE for approval. Because the contract is funded incrementally, its scope and costs can be changed by contract modifications.

**HOW DOES BOEING'S MANAGEMENT, OPERATIONS, AND  
MAINTENANCE CONTRACT DIFFER FROM THE PREVIOUS  
OPERATIONS AND MAINTENANCE CONTRACT (POSSI) IN  
BOTH SCOPE AND COST?**

- °WORK DESCRIPTION IS BROADER, LESS DEFINED
- °BOEING ASSUMED ADDITIONAL WORK PREVIOUSLY  
DONE BY DOE OR OTHER PRIME CONTRACTORS
- °BOEING IS REQUIRED TO INTEGRATE ITS  
ACCOUNTING SYSTEM WITH DOE'S SYSTEM
- °BOEING PREPARES PLANS AND BUDGETS FOR DOE'S  
APPROVAL
- °BOEING'S ESTIMATED AVERAGE MONTHLY COST OVER  
60 MONTHS WAS \$8.6 MILLION; POSSI'S  
ESTIMATED AVERAGE MONTHLY COST WAS \$6.4  
MILLION OVER 39 MONTHS

SCOPE AND COST COMPARISONS BETWEEN  
CURRENT AND PRIOR SPR CONTRACTORS

The description of work and services in the Boeing contract is broader and less defined than the POSSI work scope. The Boeing contract uses a brief, two-page, generally worded set of functions to be performed by the contractor. The functions, as worded, provide a blanket statement of the activities necessary to manage, operate, and maintain the SPR. The POSSI contract's Statement of Work has approximately 65 pages of specified tasks to be performed by the contractor. Required activities not specifically covered under a task resulted in a contract modification with associated increases in contract cost.

Boeing's responsibilities include essentially all of the tasks performed by POSSI plus additional tasks previously performed by DOE/SPR staff or other DOE prime contractors. These tasks, and their previous method of management, are

- maintenance and operation of automatic data processing systems and equipment (contract);
- management of the Capital Improvements Program, including construction management and procurement (DOE);
- management and operation of Technical Data Control Service (the data and drawing libraries) (contract);
- safety and risk analysis, including systems engineering as it relates to the task (contract);
- ship inspection (contract);
- medical services procurement for DOE (contract);
- small purchases for DOE and other contractors (DOE);
- surge oil storage contracts (DOE); and
- certain internal accounting, budgeting, and reporting tasks (contract and DOE).

The total estimated cost of the Boeing contract in the DOE request for proposal for a 5-year period was \$514 million. This amounts to an average estimated monthly cost of \$8.6 million. The total estimated cost of the POSSI contract, as of December 10, 1985, which covered the 39-month period from December 30, 1981, through March 31, 1985, was \$247.7 million. This amounts to an average estimated monthly cost of \$6.4 million.

ESTIMATED/ACTUAL COSTS FOR THE  
CURRENT MANAGEMENT CONTRACT

**WHAT ARE THE ESTIMATED AND ACTUAL  
COSTS FOR THE BOEING CONTRACT?**

° INITIAL ESTIMATED COST FOR 5 YEARS WAS \$514  
MILLION

° ACTUAL COST FOR 6-MONTH PERIOD FROM APRIL 1,  
1985, TO SEPTEMBER 30, 1985, WAS ABOUT \$47  
MILLION

° ESTIMATED COST FOR FY 1986 IS ABOUT \$114  
MILLION

**WHAT AMOUNT OF MONEY IS TARGETED FOR  
BOEING FROM CURRENTLY AVAILABLE FUNDING?**

° DOE ESTIMATES THAT OF THE \$198 MILLION  
REMAINING AT SEPTEMBER 30, 1986, A MINIMUM  
OF \$87.5 MILLION WILL BE NEEDED FOR THE  
BOEING CONTRACT IN FY 1987

CURRENT/EXPECTED STATUS  
OF THE MANAGEMENT CONTRACT

**WHAT IS THE CURRENT STATUS OF THE BOEING CONTRACT AND HAS DOE MADE PLANS TO ALTER THE CONTRACT AS A RESULT OF THE MORATORIUM?**

- ° NO FORMAL CHANGE IN SCOPE OF WORK IN THE CONTRACT AMENDMENT SIGNED DECEMBER 4, 1985, WHICH FUNDED THE FY 1986 CONTRACT YEAR
- ° DOE HAS ASKED BOEING TO SUBMIT REVISED MANPOWER AND FUNDING NEEDS FOR PUTTING THE SPR IN STANDBY AND MAINTAINING IT IN A RESTART/DRAWDOWN READINESS STATE

MEXICAN OIL PURCHASES

CURRENT STATUS OF DOE'S OIL  
SUPPLY CONTRACT WITH MEXICO

**WHAT IS THE CURRENT STATUS OF THE PETROLEOS  
MEXICANOS (PEMEX) CONTRACT, AND U.S.  
OBLIGATIONS AND PLANS TO PURCHASE PEMEX OIL?**

- ° THE CONTRACT TERMINATION DATE IS AUGUST 14,  
1986
- ° PEMEX IS OBLIGATED TO MAKE AVAILABLE UP TO  
50,000 BARRELS OF OIL DAILY
- ° DOE HAS NO OBLIGATION TO TAKE ALL OR ANY OF  
THE 50,000 BARRELS IF SATISFACTORY PRICE  
AND DELIVERY TERMS CANNOT BE WORKED OUT
- ° DOE PLANS TO CONTINUE BUYING SPR OIL FROM  
PEMEX CONTINGENT UPON FAVORABLE PRICES  
UNTIL THE 500-MILLION-BARREL LEVEL IS  
REACHED IN MAY 1986
- ° THE CONTRACT PROVISIONS REQUIRE NO PENALTY TO  
DOE IF THE OIL IS NOT PURCHASED



CURRENT STATUS OF ADMINISTRATION'S  
PROPOSAL TO LINK OIL PURCHASES WITH  
ECONOMIC ASSISTANCE TO MEXICO

**ARE ANY PURCHASES OF MEXICAN OIL  
BEING CONSIDERED AS PART OF AN  
ECONOMIC ASSISTANCE PLAN?**

° ACCORDING TO OFFICIALS OF THE DEPARTMENT OF  
STATE AND THE DEPARTMENT OF THE TREASURY,  
THERE ARE NO IMMEDIATE PLANS TO LINK OIL  
PURCHASES WITH ECONOMIC ASSISTANCE TO  
MEXICO

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