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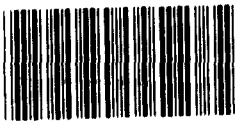

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STATEMENT OF
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RESOURCES, COMMUNITY AND ECONOMIC
DEVELOPMENT DIVISION
BEFORE THE
SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS
HOUSE COMMITTEE ON ENERGY AND COMMERCE
ON
DEPARTMENT OF ENERGY DEVELOPMENT AND
MANAGEMENT OF THE STRATEGIC PETROLEUM RESERVE

Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to be here today to discuss the Strategic Petroleum Reserve (SPR). The SPR is the cornerstone of the administration's energy emergency preparedness program and is the nation's major resource in the event of an oil supply disruption. Over the past several years, the administration, partly due to the insistence of the Congress, has made good progress in filling the SPR. Through these efforts the size and importance of the SPR have grown. By the end of this fiscal year, DOE will have acquired about 430 million barrels of oil at a cost of nearly $13 billion. This oil is being stored at the five SPR storage sites in Louisiana and Texas. If the 186,000 barrels per day fill rate contained in the fiscal year 1985 Interior appropriations bill is approved, about 500 million barrels of oil will be in storage by the end of fiscal year 1985.

Over the past few years, we have monitored developments at the SPR closely. We have had staff devoted to reviewing SPR

activities at the Department of Energy's (DOE's) New Orleans Project Office and SPR sites as well as at DOE headquarters. Based on our work, we have issued nine quarterly reports on SPR activities; issued several reports on specific aspects of the SPR program, including an April 1984 report on logistics support for the SPR;[1] and testified on DOE's management of the SPR.

Our audit work has identified a number of issues concerning SPR development and management. In addition, DOE's Inspector General and the Defense Contract Audit Agency have reported on problems in these areas. DOE also conducted an internal assessment of the SPR and issued its report[2] in October 1983.

I will focus my remarks today on three issues which continue to be of concern: first, problems in the development of SPR facilities and their implications for the readiness of the SPR to be drawn down; second, current problems with the SPR oil distribution system; and third, DOE's management of the SPR.

FACILITIES DEVELOPMENT AND READINESS OF THE SPR

Our audit work on facilities development has included three areas that affect SPR drawdown readiness: (1) the development of instrumentation and control systems, (2) the development of an integrated logistics support system, and (3) the considerable backlog of maintenance work at several SPR sites.

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[1] Additional Improvements Needed in Logistics Support for the Strategic Petroleum Reserve (GAO/RCED-84-12, Apr. 13, 1984).

[2] Baseline Assessment of the Strategic Petroleum Reserve Project Management Office (ORO-838, Oct. 24, 1983).

In May 1983, before the Subcommittee on Environment, Energy and Natural Resources of the House Government Operations Committee, we discussed DOE's problems in developing workable instrumentation and control systems at Bryan Mound and West Hackberry, the two largest SPR storage sites. The systems were installed so that field equipment could be automatically monitored and operated from a central control room at each site. The field equipment, such as valves and pumps, is used to move oil, brine, and water into and out of the salt dome caverns in which the SPR oil is stored. Our testimony pointed out that DOE had been working on these systems since 1977, but the systems at the two sites were not operable and SPR personnel had to operate and monitor the field equipment manually. While the equipment can be operated manually, it would be difficult for SPR personnel to detect potentially destructive malfunctions without automated instrumentation.

DOE has continued its efforts to complete the instrumentation and control systems at the two sites. However, in our SPR status report for the quarter ending June 30, 1984,[3] we noted that electrical control equipment malfunctions had shut down the West Hackberry site on two separate occasions in April 1984 for a total of 23 days. DOE's investigation of these malfunctions found that the most likely causes were (1) a computer software error, (2) inadequate electrical circuit design, quality assurance, and testing, and (3) inadequate routine maintenance.

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[3]Status of Strategic Petroleum Reserve Activities as of June 30, 1984 (GAO/RCED-84-182, July 13, 1984).

We are currently following up on the instrumentation and control problems. We have noted that, even though improvements have been made, some essential parts of the system still are not operational. For example, although most of the defective instrumentation on field equipment has been repaired or replaced, not all of this equipment is connected to the control rooms. The West Hackberry instrumentation and control system is expected to be finished in October 1984, but the Bryan Mound system is not expected to be completed for about 15 months.

Another issue related to SPR readiness that we have reviewed is the development of an integrated logistics support system to identify, among other things, maintenance and spare parts requirements. In an April 1984 report, we noted that DOE had not incorporated the development of a logistics support system into the initial design of the SPR as would generally be expected. Subsequent efforts to develop the logistic system had stretched over a 5-year period but it still needed improvements before it could be fully operational. The lack of a logistics system resulted in questions about the adequacy of the SPR's inventory of spare parts. DOE has started to compile data on equipment operating performance, but such information needs to be collected over a period of a year or more to establish usage and failure rate patterns and accurately predict spare parts requirements.

We have also noted that, because of DOE's past inattention to preventive maintenance at the storage sites, a considerable amount of corrective maintenance has been necessary to repair or

replace equipment such as valves, pipes, and pump parts. These maintenance problems were addressed in the DOE Oak Ridge Operations Office's Baseline Assessment of the SPR. In taking actions to correct the problems identified in the Baseline Assessment, DOE's contractor has found additional items that require corrective maintenance. Even though DOE has increased maintenance activities, there is still a substantial amount of work to be done. Different types of maintenance are done by the same personnel in specific craft groups at each site. As of August 31, 1984, the amount of maintenance work for the various craft groups varied at each site and ranged from several weeks to 6.5 months.

Individually, the instrumentation, logistics support, and maintenance problems may be manageable. However, the accumulation of these problems and their timely resolution could affect DOE's ability to sustain a major drawdown of the SPR. For this reason, we have undertaken a comprehensive review of the drawdown capability of the SPR. That review is still in progress, but we expect to issue a report on this area early next year.

One way of increasing confidence in the drawdown capability of the SPR is to test its components, both individually and as a total system. Last week, the House approved H.R. 3880 which would require the Secretary of Energy to conduct an SPR drawdown and distribution test within 6 months after enactment and authorizes periodic tests thereafter. We concur in the merits of testing DOE's ability to physically draw down the SPR. We believe that, if possible and if it can be achieved at a

resonable cost, such a test should be of sufficient size and duration to clearly demonstrate the SPR system's ability to sustain its designed drawdown rate.

DISTRIBUTION OF SPR OIL

One of the main considerations in selecting the locations for the SPR storage sites was access to existing pipelines and marine terminals used by the oil industry.

The drawdown and distribution capability of the completed 750 million-barrel Reserve was planned to be about 4.5 million barrels per day. However, the sale of two of the three pipelines that DOE planned to use to distribute SPR oil to the Midwest has affected this capability.

Both Seaway Pipeline, Inc., and Texoma Pipeline Company sold their pipelines that carried crude oil imports from the Texas Gulf Coast to the Midwest. The new owners plan to convert the pipelines for natural gas transmission. In addition, Seaway Pipeline sold its terminal and tank farm at Freeport, Texas, to Phillips Petroleum Company earlier this month.

DOE conducted an internal study of the SPR oil distribution system earlier this year and concluded that, if no distribution system changes are made to compensate for the sales of the pipelines, the SPR will be limited to a distribution rate of 2.4 million barrels per day instead of the originally proposed rate of 4.5 million barrels per day.

To increase the SPR distribution rate to 4 million barrels per day, DOE has proposed to construct pipelines to connect SPR facilities to two Gulf Coast refining centers and four more

marine terminals. DOE estimates that these pipeline projects will cost about $84 million.

We have not analyzed DOE's proposed SPR distribution projects in detail--particularly whether the projects will sufficiently address the Midwest's need for crude oil and/or petroleum products. However, unless some type of action is taken to correct the SPR distribution restrictions caused by the Seaway and Texoma pipeline sales, the government may not have the capability to distribute the oil during a supply disruption. This is especially true for the Bryan Mound site, which is scheduled to store 225 million barrels of oil but currently only has the capability to distribute about 400,000 barrels per day instead of the originally planned rate of 1,054,000 barrels per day.

As you know Mr. Chairman, the National Petroleum Council is currently assessing the SPR drawdown and distribution systems and plans to issue a final report in December 1984. This report should provide DOE an industry perspective on the adequacy of the distribution system changes to meet the needs of the oil industry.

In addition to the current problems with the physical distribution system, questions have been raised about DOE's administrative procedures for selling the SPR oil. The Subcommittee on Fossil and Synthetic Fuels of the House Committee on Energy and Commerce has requested us to examine DOE's sales plan. Our analysis will focus on how the competitive bidding process will affect oil prices, who the recipients of the oil are likely to

be, and what alternative methods are available to sell the oil. We expect to provide a report to the Subcommittee next year.

MANAGEMENT OF THE SPR

Mr. Chairman, I would now like to turn to another area that the Subcommittee expressed a specific interest in--management of the SPR.

Reviews of SPR activities by GAO and others have shown that DOE's management of the SPR has resulted in

--ineffective controls over contractors,

--inadequate financial controls at the SPR Project Office, and

--extensive use of cost-reimbursable contracts for the large dollar value activities.

Ineffective contractor controls

DOE has made extensive use of contractors in designing and developing the SPR facilities. Standard control techniques were available to assure compliance with contract terms, including oversight of contractor activities by designated DOE officials, quality assurance programs, accounting systems, and periodic audits. However, DOE did not fully implement these control procedures. As a result, audits by GAO, DOE's Inspector General, and the Defense Contract Audit Agency have found, among other things, that ineffective project management has caused several problems: (1) the cost of construction work at the SPR has increased, (2) expenditures could not be audited in some areas because of poor contractor accounting systems, (3) incomplete work tasks were accepted and paid for, (4) the scope of work to

be performed was poorly defined, and (5) award fee payments were questionable.

DOE's Baseline Assessment of the SPR confirmed many of the audit findings and, in addition to reporting on maintenance and operational problems, criticized the management of the program. The Baseline Assessment contained 170 recommendations to improve SPR operations. This was followed up by an implementation plan that listed each recommendation, assigned responsibility, and established milestones for completion. However, progress in carrying out the plan has been slower than anticipated. For example, we reviewed the 46 recommendations directly related to management controls. As of June 20, 1984, the New Orleans Project Office was behind schedule in carrying out 38 of the recommendations. On an overall basis, 64 of the 170 recommendations were reported completed as of September 10, 1984, with another 31 under final review by Oak Ridge. DOE originally hoped to complete 152 of the recommendations by September 30, 1984.

Although implementation of the Baseline Assessment recommendations has been slower than DOE hoped, some improvements are being made in the management of the SPR. A quality assurance program is being instituted, and the criteria for paying award fees have been strengthened.

DOE hopes to resolve other past and current problems by consolidating most of the activities conducted by a number of SPR contractors under a single integrated management, operations, and maintenance contractor (MOM). DOE is currently

evaluating responses to its request for proposals for this contract and expects to select a contractor in December 1984. The contractor would assume full responsibility on April 1, 1985.

We have examined some facets of the proposed contractual arrangement, but a complete analysis of the effectiveness of this approach will not be possible until the contract is awarded and implemented. Under the MOM concept, the contractor is expected to assume day-to-day operating responsibility for most SPR activities. DOE expects the new contracting arrangement to reduce its management burden. Oak Ridge officials have stated that they will verify that the new contractor has adequate accounting, scheduling, quality assurance, and other control systems. Since DOE will rely on the same control techniques to manage the MOM contract as it had available for previous contracts, it is important for DOE to fully utilize these controls so that past problems can be avoided. Also, we would caution DOE not to view the MOM as a cure-all for the problems that have been experienced at the SPR. We believe, and Oak Ridge officials generally agree, that DOE should closely supervise the contractor during the first year of operation.

Inadequate financial controls

As you know, a strong system of internal controls is important to provide management with assurance that resources are efficiently and effectively managed and safeguarded from unauthorized use and disposition. Our audit work in the financial controls area has disclosed a number of internal control weaknesses that need correcting. These include (1) disbursements

made without a detailed examination verifying the propriety, accuracy, and legality of amounts claimed, (2) inconsistencies in recording accounts receivables, (3) accounts remaining delinquent for long periods of time, (4) late deposits of receipts, and (5) lack of audit coverage.

In November 1983 and February 1984, we provided the Oak Ridge Operations Office Manager with our preliminary observations in the disbursement and receipts areas. In general, Oak Ridge agreed with our findings and said that corrective actions would be taken. However, the New Orleans Project Office staff subsequently told us that staffing limitations have precluded them from implementing all of the corrective actions needed. We plan to issue a report later this year that will discuss these subjects in more detail.

DOE's use of cost-reimbursable contracts

Although the preferred method of government contracting is on a fixed price basis, DOE has used cost-reimbursable contracts for the large dollar value SPR activities. Under this type of contract, DOE pays all allowable costs incurred by the contractor plus either a fixed or award fee and accepts most of the risk for successful completion of the work.

The use of cost-reimbursable contracts is appropriate when a high degree of uncertainty exists due to the scope of work and/or cost of performance. This has been DOE's justification for using cost contracts. However, the Federal Acquisition Regulations point out that with cost-type contracts, it is essential that the contractor's cost accounting system be adequate to

determine applicable contract costs and that appropriate surveillance by government personnel be provided to ensure efficient performance. Also, an accepted contract practice is to move away from cost-type contracts to a type that will place more risk on the contractor as the project becomes more defined.

DOE generally has not complied with the regulatory requirements. DOE did not ensure that three of its four largest dollar value cost-type contractors had acceptable accounting systems. As discussed previously, DOE also did not provide adequate oversight and control over its contractors. In addition, DOE did not take steps or has not developed plans or other information that would allow it to shift the risk to contractors. Although Oak Ridge officials said they favor the use of fixed-price contracts, the new 5-year MOM contract is expected to be on a cost-reimbursable basis because of continued perceived uncertainties.

In summary, Mr. Chairman, DOE has made substantial progress in developing and filling the SPR and in moving forward in adding storage capacity. DOE has also taken steps to resolve a number of serious management problems that have been identified by numerous audits and internal evaluations. We find, however, that the implementation of corrective actions has been slower than anticipated. Consequently, the SPR is still experiencing problems in areas such as facility maintenance, instrumentation and control, and contractor and financial controls that could affect a sustained drawdown and limit DOE's ability to operate the SPR in an efficient and economical manner. DOE is taking

what appears to be a reasonable first step to assure that the oil withdrawn from the SPR can be distributed to refiners for processing, and we believe this effort should continue to be among DOE's priority efforts.

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This concludes my statement, Mr. Chairman. I would be happy to answer any questions.

REPORTS ON THE STRATEGIC PETROLEUM RESERVE ISSUED BY GAO SINCE JANUARY 1982

1. Leasing Storage Capacity for the Strategic Petroleum Reserve (EMD-82-62, Mar. 12, 1983).

2. Feasibility and Cost of Interim Storage for the Strategic Petroleum Reserve (GAO/EMD-82-95, May 21, 1982).

3. Progress in Filling the Strategic Petroleum Reserve Continues, but Capacity Concerns Remain (GAO/EMD-82-112, July 15, 1982).

4. Major Financial Management Improvements Needed at Department of Energy (GAO/OCG-82-1, Sept. 15, 1982).

5. Status of Strategic Petroleum Reserve Activities as of September 30, 1982 (GAO/RCED-83-29, Oct. 15, 1982).

6. Analyses of the Strategic Petroleum Reserve Drawdown Plan and the Strategic Petroleum Reserve Drawdown and Distribution Report (GAO/RCED-83-85, Jan. 3, 1983).

7. Status of Strategic Petroleum Reserve Activities as of December 31, 1982 (GAO/RCED-83-93, Jan. 14, 1983).

8. Status of Strategic Petroleum Reserve Activities as of March 31, 1983 (GAO/RCED-83-136, April 15, 1983).

9. Report of Deferral of Budget Authority for the Strategic Petroleum Reserve (GAO/OGC-83-11, May 5, 1983).

10. Status of Strategic Petroleum Reserve Activities as of June 30, 1983 (GAO/RCED-83-203, July 13, 1983).

11. Comparison of Strategic Petroleum Reserve Oil Prices and Commercial Oil Prices (GAO/RCED-83-156, Sept. 30, 1983).

12. Status of Strategic Petroleum Reserve Activities as of September 30, 1983 (GAO/RCED-84-11, Oct. 14, 1983).

13. Status of Strategic Petroleum Reserve Activities as of December 31, 1983 (GAO/RCED-84-92, Jan. 13, 1984).

14. Additional Improvements Needed In Logistics Support for the Strategic Petroleum Reserve (GAO/RCED-84-12, April 13, 1984).

15. Status of Strategic Petroleum Reserve Activities as of March 31, 1984 (GAO/RCED-84-148, April 13, 1984).

16. Status of Strategic Petroleum Reserve Activities as of June 30, 1984 (GAO/RCED-84-182, July 13, 1984).

17. Defense Fuel Supply Procedures for Purchasing Strategic Petroleum Reserve Oil (GAO/RCED-84-61, Sept. 21, 1984).

Testimony by GAO on
the Strategic Petroleum Reserve

1. Statement of F. Kevin Boland before the Subcommittee on Environment, Energy and Natural Resources, House Committee on Government Operations on Department of Energy Management of the Strategic Petroleum Reserve (May 24, 1983).

2. Statement of F. Kevin Boland before the Senate Committee on Energy and Natural Resources on Energy Emergency Preparedness (Oct. 19, 1983).