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RESOURCES, COMMUNITY,
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DIVISION

January 3, 1983

B-210236

The Honorable James A. McClure
Chairman, Committee on Energy and
Natural Resources
United States Senate

The Honorable John Warner
Chairman, Subcommittee on Energy
and Mineral Resources
Committee on Energy and Natural
Resources
United States Senate

The Honorable Henry M. Jackson
United States Senate

The Honorable Bill Bradley
United States Senate

Subject: Analyses of the Strategic Petroleum Reserve
Drawdown Plan and the Strategic Petroleum
Reserve Drawdown and Distribution Report
(GAO/RCED-83-85)

In your August 11, 1982, letter you requested that we monitor and analyze documents to be prepared by the administration under the Energy Emergency Preparedness Act of 1982 (EEPA). 1/ Specifically, you requested that we report, within 30 days, on two documents regarding drawdown of the Strategic Petroleum Reserve (SPR) that were submitted to the Congress on December 1, 1982: (1) the Strategic Petroleum Reserve Drawdown Plan (pursuant to section 4(c)) and (2) the Strategic Petroleum Reserve Drawdown and Distribution Report (pursuant to section 6(b)).

The Strategic Petroleum Reserve Drawdown Plan (referred to below as "the SPR Plan") replaces an earlier plan that had been in effect since 1979. The Plan is required to set forth the method of drawdown and distribution of the SPR, under the Energy Policy and Conservation Act of 1975 (EPCA).

1/Pursuant to this request, we have already issued one report, "Status of the Administration's Implementation of the Energy Emergency Preparedness Act of 1982," GAO/RCED-83-33, October 8, 1982. That report discussed whether the statutory requirements and deadlines would be met, and reviewed the extent of interagency coordination in developing and approving the reports required by the statute.

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The Strategic Petroleum Reserve Drawdown and Distribution Report (referred to below as "the SPR Report") was required by EEPA to contain (1) a description of the "foreseeable situations," which could necessitate distributions from the SPR and (2) descriptions of alternative strategies of distribution (with the theory and justification for each), which could be used to respond to each of these situations. The "foreseeable situations," according to EEPA, include selective and general embargoes, sabotage, war, act of God, or accident.

An important difference between the SPR Plan and the SPR Report is that the Plan is binding on the administration; the administration is required under EPCA, section 161(b), to abide by the terms of the Plan during any future SPR drawdown. No such requirement commits future administration drawdown decisions to conform to the SPR Report.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to examine how well the two reports complied with the requirements of EEPA. We reviewed the House and Senate Committee Reports, Conference Reports, and hearings to better clarify what the Congress intended to be included in the documents. We also relied on GAO's extensive past and ongoing work on the SPR and energy emergency planning issues as part of our own determination of what constitutes adequate SPR drawdown and distribution planning.

We obtained additional information for this assessment from interviews with, and materials supplied by, officials in DOE's Office of Energy Emergencies and Strategic Petroleum Reserve Office. Additional interviews were conducted with DOE contractors working on this subject and with other experts in energy emergency planning. We also interviewed experts from the National War College to gain further insights into the military contingency planning process, and how this process could relate to contingency planning for SPR use.

DOE's Assistant Secretary for Environmental Protection, Safety, and Emergency Preparedness and his staff cooperated fully and provided us with information needed for this report. Our audit work was conducted in accordance with generally accepted government auditing standards.

THE SPR PLAN AND REPORT GIVE LITTLE SPECIFIC INFORMATION ON HOW THE SPR COULD BE USED IN AN OIL SUPPLY DISRUPTION

Neither the SPR Plan nor the SPR Report provide much specific information about the conditions in which SPR oil could be used in an emergency, including the amount, rate, and timing of its use.

In the case of the SPR Plan, the administration explicitly opposed providing specific details on SPR drawdown because it could constrain the President's flexibility in dealing with an emergency. DOE's Assistant Secretary for Environmental Protection, Safety, and Emergency Preparedness, while testifying last May against EEPA's requirement to update the SPR Plan, 1/ stated that "rigid plans for drawdown and distribution make little sense and, if developed and made public, could impair the effective use of the SPR."

The Plan does contain several key provisions about SPR drawdown and distribution (notably a provision for a 10-percent "set-aside" of SPR oil and a rejection of an automatic "trigger" for SPR drawdown), which we discuss in the enclosure. However, many important details are not discussed, particularly about the circumstances that would lead to an SPR drawdown. Emphasizing the high degree of uncertainty involved, the Plan states that "drawdown decisions must be based on estimates of how long the interruption may last, the likelihood of subsequent interruptions, and whether there will be opportunities to refill the SPR between interruptions."

The Plan also contains several SPR use objectives and some "policy considerations pertaining to SPR use." However, these objectives and policy considerations are merely stated; there is no clear connection between them and decisions on when and how to use the SPR.

The lack of detail in the SPR Plan would not be as much of a problem had more information been contained in the SPR Report. Because the Report does not bind the administration to a particular course of action, as does the Plan, it was anticipated that the Report would contain more detail than the Plan. Indeed, the House Committee Report accompanying EEPA (which the Conference Committee adopted) anticipated submission of detailed information to keep the Congress informed of the administration's options for using the SPR. It states, "By requiring a Strategic Petroleum Reserve report rather than a drawdown plan, the Committee intends to assure that the Congress will have all pertinent information regarding the various options available for employing the SPR without requiring the administration to choose, at this time, among those options * * * The report should cover in depth what crises are reasonably foreseeable and include a variety of possible measures for handling them."

The SPR Report delivered to the Congress, however, contains substantially less information than expected. In a brief two

1/Statement before the Senate Committee on Energy and Natural Resources, May 6, 1982.

and one-half page section, the Report addresses the statutory requirement for an analysis of interruption situations requiring SPR drawdown, and the strategies that could be used for them. Only two scenarios which may result in SPR drawdown are mentioned, and little information is given on what the circumstances are for each one, or on how the SPR would be used. In the first case, for example, a hypothetical "Severe" Case, we do not know how serious this obscure "Severe" case is, nor do we know important details affecting SPR use such as foreign and domestic oil inventories, production, and consumption levels. Furthermore, rather than providing "a description of the strategy or alternative strategies of distribution" which could be used in each situation, as EEPA requires, the SPR Report does not say in either scenario when or how the SPR could be used.

On the same day the SPR documents were released, however, DOE issued a staff paper entitled, "Issues and Analysis on the Use of the SPR." While this document is a compendium of analyses performed by DOE and DOE contractors on SPR-related issues, it does not go much farther than the other documents in supplying information on SPR policy options and strategies to the Congress. This document (1) merely summarizes ongoing research and draws few conclusions, (2) examines only a limited number of variables relating to SPR use, (3) does not link analytical results (e.g. oil price effects of SPR drawdown) with specific SPR use policies, and (4) does not represent DOE or administration policy.

THE ADMINISTRATION'S ARGUMENTS AGAINST
COMPREHENSIVE PLANNING ARE UNCONVINCING

The SPR Report alleges that many uncertainties preclude our ability to develop SPR drawdown and distribution strategies. Other administration arguments for avoiding advance planning include the need to preserve Presidential flexibility, and to keep sensitive information secret.

"Uncertainty," in our judgment, is not a valid reason to avoid planning alternative SPR use strategies before we are faced with a serious disruption. First, we would also likely have incomplete information at the outset of a disruption as well as before one. In such a case, advance specification of alternative options could assist decisionmakers in responding more rapidly and effectively to changing conditions. Second, we may never resolve all unknowns; we will inevitably have to develop plans in the face of some uncertainties.

Our past work has shown the administration's legitimate concerns over flexibility and secrecy can be accommodated while still allowing for effective SPR drawdown and distribution planning. Flexibility can be preserved by detailing options for SPR use rather than prescribing a single plan. If an

actual disruption occurred, such a plan would serve as a basis for preparing a specific set of action proposals, tailored to the nature of the disruption, and thus preserve flexibility.

The need to keep certain information secret can be addressed by developing effective plans but not releasing sensitive materials to the public. Military contingency plans are continually prepared with sensitive information kept secret. We see little reason why similar procedures cannot be followed for planning SPR use. Indeed, the House Committee Report accompanying EEPA addressed this issue, stating that,

"The Committee fully recognizes that sections of the report may contain sensitive information and therefore expects that both proprietary information as well as information which may be classified for national security purposes, shall be so identified and may be separately submitted at the same time."

According to DOE's Deputy Assistant Secretary for Energy Emergencies, no classified materials were submitted.

WHY EFFECTIVE SPR DRAWDOWN AND DISTRIBUTION PLANNING IS NECESSARY

Important benefits can be derived from advance SPR use planning. Planning should include both analysis of SPR use strategies and developing drawdown policy options which can effectively counter the serious damage disruptions can cause. While DOE's program and the staff paper mentioned above show that some analysis is being carried out, we see little evidence that drawdown policy options based on the analytical work are being developed.

Among the most important benefits, such advance SPR planning (1) allows informed decisions to be made quickly at the outset of an emergency and (2) provides decisionmakers more information about changing circumstances during a disruption so that adjustments can be made more quickly. Indeed, these benefits have long been recognized by military contingency planners who must continually develop alternative scenarios and response options under extreme uncertainty. Other advantages of advance SPR use planning are that it can help to

- lay the groundwork for coordinated stock drawdown policies with our allies,
- reduce "panic" buying that contributes to rising oil prices when an oil supply disruption occurs, and

--deter an oil embargo by demonstrating our resolve and ability to counteract one.

In summary, the advantages of advance SPR use planning outweigh the disadvantages. The SPR documents submitted by the administration, however, are vague and do not contain such plans or the scenarios and response options on which plans could be based as envisioned by the Congress. Development of alternative SPR use scenarios linked to response options should therefore take place as soon as possible.

There are a number of key issues concerning SPR use policy which flow from our analyses, and are discussed in the enclosure, which we suggest Congress consider when evaluating the administration's Plan and Report. These include:

- The SPR Plan asserts that it does not seem desirable or appropriate to establish an automatic "trigger" to determine when or at what rate the SPR should be used. Should such a trigger be used? If not, should a decision to use the SPR be entirely a Presidential choice, or should the Congress be involved in the decision?
- The Plan provides for a maximum 10 percent of SPR oil to be used at the discretion of the Secretary of Energy to alleviate hardship during a severe emergency. Does the Congress agree with the concept of this "set-aside"? Is 10 percent the right amount?
- Under the Plan, SPR oil (including the "set-aside" oil) would be sold at market prices. Should all SPR oil be sold at market prices, or should any distribution policies be invoked other than "to the highest bidder?"
- Recent research has determined that an early drawdown of SPR oil during a disruption can most effectively dampen steep oil price increases. Should SPR oil be used this way, or should it be retained for later in disruptions?
- The SPR Report acknowledges that the SPR could be considerably more effective if its use were coordinated with other consuming nations' oil stocks. Can and should the U.S. try to coordinate stock drawdown policies with these nations to counteract an oil supply disruption?
- Both the SPR Plan and Report note that the Reserve could be used to satisfy U.S. obligations under the International Energy Program (IEP), but give little indication on whether it would be used for this

Purpose. Under what conditions should the SPR be used to support the U.S. commitment under the IEP?

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Because our evaluation was requested within 30 days, we did not request agency comments. However, we provided DOE energy emergency preparedness officials with a draft and discussed their reactions with the Deputy Assistant Secretary for Energy Emergencies. The reactions of DOE emergency preparedness officials and our comments thereon are summarized below.

The officials' main concern was that our report did not mention the DOE staff paper which was published at the same time the President submitted the SPR Plan and Report to the Congress. The DOE officials maintained that the staff paper makes up at least partially for the deficiencies we noted in the Plan and Report by providing results of several disruption scenarios. In addition, they stated that our report implied that DOE was doing no SPR use planning.

We are aware that DOE supports analysis on SPR issues and have made changes to reflect this in our report. Indeed, we know of a number of in-house projects and DOE-funded outside research which are noted in the staff paper. However, we disagree with DOE's assertion that the staff paper supplies the kind of information not included in the SPR Plan or Report requested by the Congress.

First, the staff paper's status is ambiguous. It is not a Presidential submission as are the SPR Plan and Report and so does not carry the same weight. Indeed, the paper does not even represent DOE's position. As is noted in the paper's first paragraph:

"It is strongly emphasized that no statements contained in the reports, studies and analytical works described herein are to be construed to represent DOE's current position on SPR-use or related issues concerning Administration policy."

Thus, it is difficult to see what value should be placed on the paper aside from the information contained on DOE and contractor projects.

Second, we believe that the staff paper does not go significantly further than the other documents in supplying the information and analysis of policy options and strategies requested by the Congress. As noted previously, EEPA calls for the SPR Report to include:

- foreseeable disruptions,
- descriptions of alternative strategies to respond to each disruption, and
- the theory and justification underlying each strategy.

The staff paper merely summarizes ongoing research but draws few conclusions; it examines only a limited number of variables relating to SPR use; and it does not link analytical results to specific SPR use policies. It describes only one disruption which takes place under three different demand and supply elasticity conditions, in three different years, and with three different probabilities of occurrence. The paper does not describe alternative response strategies; it simply varies the drawdown from case to case. In addition, because alternative strategies are not discussed, neither are theories or justifications underlying them. The SPR Report explicitly acknowledges that alternative SPR use options have not been developed yet, stating at one point, " * * * [such] questions inevitably lead to several issues which need to be resolved in order to develop the components of an SPR use strategy."

In summary, although the staff paper provides some useful information on DOE's program of analysis, it does not make up for the deficiencies we noted in the SPR Report and SPR Plan.

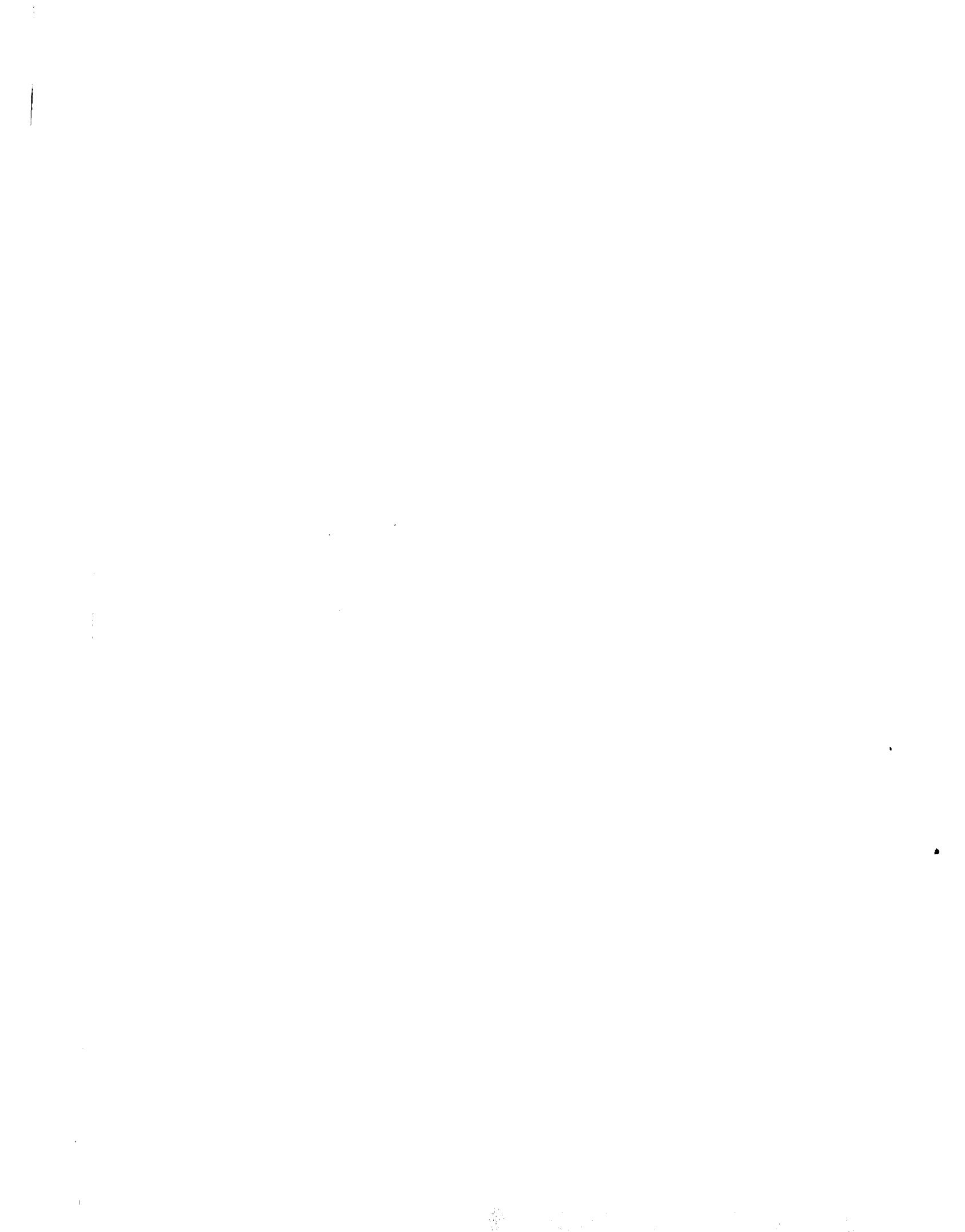
Other DOE comments were less significant and have been incorporated in this report as appropriate.

J. Dexter Peach,
Director

Enclosure

ANALYSIS OF THE STRATEGIC PETROLEUM RESERVEDRAWDOWN PLAN AND THE STRATEGIC PETROLEUM
RESERVE DRAWDOWN AND DISTRIBUTION REPORTC o n t e n t s

	<u>Page</u>
CONGRESS HAS EXPRESSED STRONG INTEREST IN EFFECTIVE SPR DRAWDOWN PLANNING	1
Congress expected more detailed analysis in the SPR Report than in the SPR Plan	1
THE SPR PLAN	2
When and how the SPR would be used	3
Contracting and sales: buyer selection and pricing	4
Operational capabilities of the SPR drawdown and distribution system	5
THE SPR REPORT	7
Congress expected detailed analysis in the SPR Report	7
The SPR Report contains far less information than expected	8
Alternative interruption situations and response strategies are inadequate	8
"Uncertainty" is improperly used as an excuse for inadequate SPR drawdown planning	10
OTHER ADMINISTRATION CONCERNS ABOUT SPR USE PLANNING CAN BE ACCOMMODATED	11
The need to preserve Presidential flexibility can be accommodated	11
The need to protect sensitive information can also be accommodated	12
WHY EFFECTIVE SPR DRAWDOWN AND DISTRIBUTION PLANNING IS USEFUL	13
SPR use planning allows informed decisions to be made quickly under uncertain conditions	13
Other advantages of advance SPR use planning	14



ANALYSES OF THE STRATEGIC PETROLEUM RESERVE DRAWDOWN PLAN AND THE
STRATEGIC PETROLEUM RESERVE DRAWDOWN AND DISTRIBUTION REPORT

CONGRESS HAS EXPRESSED STRONG INTEREST
IN EFFECTIVE SPR DRAWDOWN PLANNING

The Energy Emergency Preparedness Act of 1982 (EEPA) and the Energy Policy and Conservation Act of 1975 (EPCA), as well as congressional reports prepared while considering them, all underscore Congress' strong interest in advance SPR use planning.

Section 154(e) of the Energy Policy and Conservation Act of 1975 (EPCA) first required an SPR Plan to be submitted to the Congress, containing "a Distribution Plan setting forth the method of drawdown and distribution of the Reserve" (section 154 (e)(12)). An SPR Plan, transmitted to the Congress in early 1977, made clear that a decision to use the SPR must be an integral part of a comprehensive plan to respond to energy emergencies.

Neither this SPR Plan nor an October 1979 amendment to the Plan, ^{1/} however, specified how or under what conditions it would be used (i.e., amount, drawdown rate, and timing of use), or how it would be distributed and priced. The October 1979 amendment maintained that it is infeasible and undesirable to specify in advance the precise conditions in which the Reserve would be drawn down.

Congressional reaction to this approach and statements made in shaping EEPA provide clear signals about Congress' expectations for the latest SPR Drawdown Plan and the SPR Report. The House Committee Report accompanying EPCA, for instance, called the 1979 amendment, "extremely general in its approach to SPR distribution," although "Congress accepted this Plan, despite its shortcomings." The Committee further observed that "to date, little information is available to Congress to allow sufficient oversight of potential SPR distribution or to assure Congress that planning and analysis are adequate." It further asserted Congress' role in SPR drawdown planning by stating that the purpose of the SPR report is "to improve the quality of analysis and information available to Congress and the public."

While the Senate version of EEPA did not originally require the same SPR report, the accompanying Senate Committee Report noted that SPR drawdown planning should

^{1/}U.S. Department of Energy, "Distribution Plan for the Strategic Petroleum Reserve," Washington, D.C., Oct. 29, 1979.

"address in advance when the President proposes to use the Strategic Petroleum Reserve, and how he would distribute the oil in a drawdown. The response procedure must also address under what circumstances the President proposes to use the Reserve and define effective distribution methods and drawdown rates."^{1/}

Congress expected more detailed analysis in the SPR Report than in the SPR Plan

EEPA provides that the SPR Report contain more detailed information on SPR use than the SPR Plan. The main reason is that legislation commits the Administration to draw down the Reserve in accordance with the SPR Plan. Therefore, an excessively detailed SPR Plan could reduce the Administration's flexibility in using the SPR during an emergency. EPCA, section 161(b), states that " * * * no drawdown and distribution of the Reserve may be made except in accordance with the provisions of the Distribution Plan contained in the Strategic Petroleum Reserve Plan * * *."

No such legislative requirement binds the administration's drawdown actions to the SPR report. Instead, the focus of the SPR Report was to demonstrate that effective SPR use planning was taking place, without requiring a specific course of action during a drawdown. The House Committee Report emphasized this point, stating that:

"By requiring a Strategic Petroleum Reserve report rather than a drawdown plan, the Committee intends to assure that the Congress will have all pertinent information regarding the various options available for employing the SPR without requiring the Administration to choose, at this time, among those options."

THE SPR PLAN

The SPR Plan contains a very general discussion on how the SPR would be drawn down during an oil supply interruption. It does, however, specify several key policy decisions on SPR use, notably a rejection of an automatic "trigger" to determine when to use the SPR, and a provision for a 10-percent "set-aside" of SPR oil to be used at the discretion of the Secretary

^{1/}The Senate Committee Report stated that these elements should be contained in the Comprehensive Energy Emergency Response Procedures, which are scheduled to be submitted to the Congress on December 31, 1982.

of Energy. These and other features of the Plan are discussed below as follows:

- When and how the SPR would be used.
- Contracting and sales: buyer selection and pricing.
- Operational capabilities to move SPR oil.

When and how the SPR would be used

The Plan contains little guidance on what circumstances might result in a drawdown of the SPR, and what the drawdown rate would be.

Emphasizing uncertainties involved, the Plan states that "drawdown decisions must be based on estimates of how long the interruption may last, the likelihood of subsequent interruptions, and whether there will be opportunities to refill the SPR between interruptions."

A brief section on drawdown rate indicates that "as a general rule, the presumption will be made that the most efficient allocation of oil over time will be made by the market." However, it also indicates that, depending on "U.S. foreign policy objectives" and other characteristics of the disruption, the Government may make the decision to draw down the SPR at a high or low rate, and to adjust the rate during the disruption.

The objectives given for SPR use are extremely broad, as are the "policy considerations pertaining to SPR use." These objectives and policy considerations are merely stated; they are not tied to decisions on when and how to use the SPR. For example, one of these considerations is "the degree, if any, to which the SPR is to be used to support the U.S. commitment under the International Energy Program." ^{1/} However, noting that there is no requirement that the SPR be drawn down and used to satisfy IEP obligations, the SPR plan does not give any indication of if or how this "consideration" would influence SPR drawdown decisions.

^{1/}The Congress has expressed interest in this key issue. The Conference Report on S. 1503, "Standby Petroleum Allocation Act of 1982" (vetoed by the President), stated, "Another issue raised by the conferees is what, if any, is the relationship between the SPR and the potential obligations of the United States under the International Energy Agency Agreements."

An automatic "trigger" for
SPR drawdown is undesirable

One substantive issue addressed in the SPR Plan is whether a "trigger" should be used as a basis for determining when the SPR should be drawn down and at what rate. The Plan states:

"It does not seem feasible or appropriate at this time to establish a specific 'trigger' or formula which will automatically determine if the SPR is to be used and at what interval and rate because of the wide range of unpredictable conditions which might characterize an energy supply interruption."

It states that the President will decide when to use the SPR and at what rate.

GAO agrees that the President should have the flexibility to determine if and how to use a vital resource like the SPR in responding to a crisis. In our judgment, it makes little sense to leave the Nation's security in the hands of a pre-determined formula which could not account for the unique circumstances of a particular disruption. However, we are also concerned about a course at the other extreme: that is, leaving the President abundant flexibility but with little information available to him or the Congress on alternative strategies available and their consequences. Clearly, the constructive strategy is to allow the President broad flexibility, coupled with the detailed planning of alternative strategies that allows quick but informed decisions to be made during a crisis.

Contracting and sales:
buyer selection and pricing

According to the Plan, the basic method for distributing SPR oil would be price-competitive sale with awards going to the highest bidders. The sale would be open to all interested buyers. The Plan states that "under the most extreme of circumstances," 10 percent of the SPR oil sold in any calendar month may be distributed in a manner at the discretion of the Secretary of Energy. The Plan does not identify, however, what these "extreme circumstances" are. The price of this "set-aside" oil would still be indirectly determined by competitive sale.

This strong endorsement for price-competitive sale is a significant departure from that of the 1979 Plan, which authorized the use of crude oil allocation and price controls for SPR oil, if "required to avoid serious inequities." The current Plan's response to these past regulatory programs is stated at the beginning of Chapter IV:

"Experience has demonstrated that Government intervention in the marketplace, in the form of allocation and price controls, has a negative impact on our Nation's ability to cope with severe energy supply interruptions. The failure of allocation and price controls * * * has led this Administration to conclude that market mechanisms must be relied upon to respond to severe energy shortages most efficiently and effectively."

Our September 1981 report agreed that there were many problems with past allocation and price control programs. These programs encountered a host of administrative problems and were complex and burdensome to industry. Our audit of these programs, following the Iranian oil shortfall of 1979, characterized the gasoline allocation program as "chaotic" in responding to the crisis.

A pure free-market approach, however, could also have serious drawbacks, as our September 1981 report noted, particularly the hardships caused by high prices. A market-based approach necessarily allocates both SPR and all other oil to users who are willing and able to pay the going price; it cannot guarantee that vital services or exceptional hardship cases would be able to obtain supplies.

The 10-percent set-aside
would be of limited use

The Plan addresses the vital services and hardship problems somewhat by providing for a 10 percent "set-aside" of SPR oil to be used at the discretion of the Secretary of Energy.

In our judgment, this modest set-aside would be useful in providing flexibility without causing large inefficiencies in the market. However, its potential to alleviate hardship during a severe emergency is also limited.

First, until the SPR's maximum drawdown capability increases well above its current 1.7 million barrels per day (MMBD) capacity, the maximum allowable size of the 10-percent set-aside (170 thousand barrels per day (MBD)) would be quite small relative to the total oil use. Furthermore, the 170 MBD set-aside would decline to 90 MBD during the second quarter of a disruption and nearly zero during the third quarter as the SPR is exhausted.

Operational capabilities of the SPR
drawdown and distribution system

In addition to these policy issues, another question addressed by the Plan is purely logistical--how well can the system respond to an actual disruption? The SPR Plan addresses

this issue by describing the physical distribution system's ability to move oil and the procedures that would be followed during drawdown and distribution.

The Plan states that the SPR storage system is designed to make maximum use of private distribution facilities, with the Government supporting industry as appropriate. According to the Plan, the storage configuration provides the capability to distribute the SPR oil through pipelines to refineries or to marine or other terminals for shipment, and the distribution system has sufficient flexibility and redundancy to meet a variety of demands.

Beyond the physical capabilities of the system to distribute the SPR oil, the Plan makes little reference to administrative or managerial capabilities to respond to a shortfall. DOE's Deputy Assistant Secretary for Energy Emergencies, however, told us that more insight into the managerial aspects of the SPR's operational capabilities will be provided in future documents. The first will be the Administration's Comprehensive Energy Emergency Response Procedures Report, scheduled to be delivered to the Congress on December 31, 1982.

The second document is the SPR Distribution Management Manual (DMM). The revised manual will be completed by March 1983, according to the Deputy Assistant Secretary for Energy Emergencies. The manual details an operational methodology for using the SPR in response to an energy emergency. According to the manual,

"it is a systems integrating tool which bridges the gap between the general policy guidance found in the EPCA and the SPR Plan, and detailed operating procedures contained in office instructions and operating manuals. The manual describes the functions and activities associated with the management of SPR drawdown and distribution. It is intended to provide a comprehensive picture of a generalized response process."

The latest version of the Manual includes a very detailed statement of activities to be undertaken by specific agency officials and the responsibilities of participating offices and individuals, but it does not give guidance on how or when these responsibilities shall be carried out. However, as the introduction to the manual states, "It is not intended to describe the detailed procedures used to deal with the multitude of variables associated with an actual energy emergency. The manual describes what must be done, but not how to do it." One of DOE's planned operational tests of SPR drawdown and distribution will provide a better indication of how well the procedures actually work in practice. The test is scheduled for the first half of

1983. This will be a managerial and administrative functions test to determine the administrative responsiveness to a need for SPR drawdown. While no crude oil will actually be withdrawn in this exercise, DOE will run through the procedures as specified in the revised Distribution Management Manual, with the actual agency officials functioning in the positions and carrying out the responsibilities stipulated in the Manual. The results of the test will be addressed in one of GAO's quarterly SPR reports.

THE SPR REPORT

The SPR Report was required by EEPA to contain (1) a description of the foreseeable situations which could necessitate distributions from the SPR, and (2) descriptions of alternative strategies of distribution (with the theory and justification for each) which could be used to respond to each of these situations.

As we noted earlier, EEPA does not require that the SPR Report commit the administration to any methods or procedures in drawing down the Reserve. Because no such requirement exists, the Report could have contained more detailed analysis of SPR use options than the SPR Plan without constraining the administration's flexibility to use the SPR. However, as we discuss below, the Report contains little useful information.

Congress expected detailed analysis in the SPR Report

The Conference Committee Report provides an indication that the Congress expected detailed analysis of SPR use options, stating that the Report "should cover in depth what crises are reasonably foreseeable and include a variety of possible measures for handling them." It further emphasized the desire to have multiple scenarios and response strategies analyzed, stating that the Report "is also expected to address the alternative strategies for the use of the SPR to handle an interruption of a magnitude substantially greater than the Iranian shortfall, as well as smaller interruptions." Among the other specific items that were asked to be included are:

- A "thorough discussion" of regional impacts to ensure that the SPR can respond to localized emergencies.
- Whether the SPR should be drawn down early or late.
- Whether the oil industry's infrastructure can respond effectively to a long-term drawdown given its present administrative and operational characteristics.

The SPR Report contains far less information than expected

The SPR Report delivered to the Congress contains substantially less information than expected. In fact, it appears to be little more than a bare-bones attempt to comply with the letter of the statute.

The subjects of the Report are addressed in the broadest terms, particularly the "situations" and alternative strategies required by EEPA. Some of these discussions are repeated verbatim in the SPR Plan. The second chapter of the 24 page, two-chapter report is largely a discussion of why comprehensive SPR drawdown planning is infeasible. The result is a report that supplies very little information on how, or whether, we can effectively use the SPR.

Alternative interruption situations and response strategies are inadequate

In a two and one-half page section of chapter I, called "SPR Use Scenarios," the SPR Report addresses the statutory requirement for an analysis of interruption situations requiring SPR drawdown, and the strategies that could be used for them. Rather than the detailed analyses requested by the Congress, the Report presents "some simple scenarios" for "illustrative purposes."

Interruption scenarios are vague

Only two scenarios which may result in an SPR drawdown are mentioned: a hypothetical "Severe" case and a hypothetical "Moderately Severe" case. A third "Mild" case briefly mentioned does not result in a drawdown.

The descriptions of the "foreseeable situations" necessitating an SPR drawdown (required by EEPA, section 6(b)(1)) are extremely vague. Therefore, they give little insight into what types of situations the administration would consider using the Reserve. While the first scenario provides "some of the major features of this 'Severe' case," many important details are omitted. We do not know, for example, how severe this obscure "Severe" case is, nor do we know important details such as foreign and domestic oil inventories, production, and consumption levels.

The "Moderately Severe" case is also vague. Two key variables mentioned, inventory levels and surge production capacity, are described in the broadest terms ("high" or "low"). Although "the time period of the disruption can be closely estimated," according to the scenario, no estimate is given. Little else is provided, including the size of a "Moderately Severe" disruption.

SPR distribution strategies
are inadequately described

Section 6(b)(2) of EEPA requires, for each scenario described, a description of the strategy or alternative strategies of SPR distribution which could reasonably be used to respond to each situation. Specifically, this section requires to be included

- the theory and justification underlying each strategy,
- an explanation of the methods which would likely be used to determine the price and distribution of petroleum products from the Reserve in any such distribution, and
- an explanation of the disposition of revenues arising from sales of any such petroleum products under the strategy.

This information is not adequately provided in either of the scenarios where SPR drawdown is considered. The first scenario merely alludes to uncertainties involved in making SPR decisions, and concludes only that "this first scenario represents a case of the most severe circumstances under which use of the SPR would be considered." According to the Report, the second scenario "illustrates how dependent the decision to use the SPR is on the circumstances prevailing at the time of the disruption." It does not specify when or how the SPR could be used (including the specific requirements of section 6(b)(2), mentioned above), concluding only that "The SPR would be one of a number of ways to respond to the shortfall."

How the scenarios could have
provided more useful information

A more detailed analysis could have provided the Congress with much more useful information on how the SPR can be used.

This would have required more scenarios to be evaluated than the three extremely general ones in the Report. Each scenario could have simulated, in far greater detail, the circumstances of an interruption where the SPR could be used. Thus, rather than using only a "severe," "moderately severe," and "mild" case, these could have been categories of more specific scenarios.

This type of approach could have demonstrated how the "uncertainties" discussed in the Report influence decisions about SPR drawdown. For example, two similar "moderately severe" scenarios could have been analyzed, each simulating different oil consumption levels. A comparison of the results could have shown how this variable would influence decisions on SPR use. Different SPR use

objectives (e.g., safeguard military preparedness, or dampen world oil price increases), could also have been analyzed in the same manner to isolate their effects on an SPR response to an interruption.

In addition to expanding the number and types of scenarios, EEPA specifically allows alternative response strategies for each scenario, rather than a single strategy. Thus, given a particular scenario calling for an SPR drawdown, a strategy using a high initial SPR drawdown rate could be compared with one using a low initial drawdown rate--with the "theory and justification underlying each such strategy," as required by section 6(b)(2).

Such analyses would have provided better insight on how the SPR could be used to deal with specific situations. Furthermore, since the SPR Report is not binding on the administration, as is the SPR Plan, it would not have compromised the administration's flexibility.

The rest of Chapter I contains
little new information

Beyond the three scenarios, little other new information is described in Chapter I about SPR drawdown policy. The chapter largely elaborates on the administration's free market philosophy, which is stated in the SPR Plan; reiterates its positions supporting competitive sale of SPR oil and opposing a "trigger" for SPR drawdown; restates some of the administration's statutory obligations under EPCA and EEPA; and repeats other information from the SPR Plan.

Chapter I also lists a number of considerations which should influence SPR drawdown decisions. As with the scenarios, however, they lack the necessary detail to be useful, and are not "operationalized" to show how they would influence SPR drawdown decisions. Many are repeated verbatim from the SPR Plan.

"Uncertainty" is improperly used as
an excuse for inadequate SPR drawdown
planning

The second and final chapter of the SPR Report entitled, "Decisionmaking Under Uncertainty" essentially argues that uncertainty precludes effective SPR drawdown planning. The Report states that "the strategy development process is beset by a variety of uncertainties which are explored in greater detail in this chapter." It then elaborates on several of these uncertainties, explaining why they complicate SPR drawdown planning.

We do not believe that "uncertainty" is a valid reason to avoid planning alternative SPR use strategies before we are faced with a serious disruption. As we detail below, military

planning continually takes place under major uncertainties. Furthermore, as past oil disruptions have demonstrated, uncertainty often exists during emergencies, not just before them. The more information there is on alternative SPR options during the event, the easier it will be for decisionmakers to react to rapidly changing circumstances. The absence of any options will more likely leave judgments about SPR use to ad hoc decisionmaking.

Equally important, we cannot afford to wait until every unknown is resolved before we begin to plan strategies for SPR drawdown. Indeed, we may never resolve all the uncertainties surrounding this complex issue. Having never used the SPR in an emergency, the information is unavoidably limited because there is no previous experience upon which to base future actions. This does not mean, however, that we should not plan ahead for SPR use. Rather, we should do the best we can with what we have; alternative options can be further refined as better information becomes available, as is done in military contingency planning.

OTHER ADMINISTRATION CONCERNS
ABOUT SPR USE PLANNING CAN BE
ACCOMMODATED

Beyond the concerns over planning under uncertainty, other administration concerns about detailed advance planning are that it could (1) restrict Presidential flexibility in responding to an emergency and (2) expose sensitive information if details of a plan were made public. We believe, however, that the legitimate concerns over flexibility and confidentiality of sensitive information can be adequately accommodated while still allowing for effective SPR drawdown and distribution planning.

The need to preserve Presidential
flexibility can be accommodated

Administration officials have stated that a detailed SPR drawdown and distribution plan is unwarranted because the circumstances surrounding a supply interruption are hard to predict, and such a plan would unnecessarily constrain the President's flexibility in dealing with it.

This point was also made by the previous administration in explaining the lack of detail of the October 1979 Amendment to the SPR Plan. Testifying before the House Subcommittee on Energy and Power on November 9, 1979, DOE's former Deputy Assistant Secretary for the Strategic Petroleum Reserve stated,

"I would like to stress the point that the manner in which we can most productively draw down the Reserve may differ from situation to situation, making the retention of Presidential flexibility and discretion indispensable in order to manage the crisis."

Our September 1981 report addressed this issue, stating that the legitimate need for Presidential flexibility could be preserved by detailing options for SPR use rather than prescribing a single plan. In the event of a disruption, these options could serve as a basis for preparing a specific set of action proposals, tailored to the nature of the disruption, and thus preserve flexibility.

The SPR Report could have been used for detailing such SPR use options. The fact that the Report is nonbinding on future drawdown actions would have further preserved Presidential flexibility.

The need to protect sensitive information can also be accommodated

Our September 1981 report also cited DOE's arguments that making detailed SPR drawdown plans public would reduce their deterrence value, and it could allow adversaries to design methods to overcome SPR "defenses." More recently, DOE's Assistant Secretary for Environmental Protection, Safety, and Emergency Preparedness stated on May 6, 1982, before the Senate Committee on Energy and Natural Resources that "rigid plans * * * if developed and made public, could impair the effective use of the SPR."

We believe, however, that legitimate national security concerns over protection of sensitive information can be better addressed by developing effective plans but not releasing sensitive information to the public. Indeed, alternative military contingency plans are continually prepared with broad outlines of these plans often made public while specific operational plans remain secret. Classified information is also continually shared with appropriate Congressional Committees.

Therefore, the need for secrecy can be accommodated while still allowing for effective SPR drawdown and distribution planning. Indeed, in recommending that EEPA include provisions for the SPR Drawdown and Distribution Report, the House Committee on Energy and Commerce stated,

"The Committee fully recognizes that sections of the report may contain sensitive information and, therefore, expects that both proprietary information as well as information which may be classified for national security purposes, shall be so identified and may be separately submitted at the same time." 1/

1/Report of the House Committee on Energy and Commerce, #97-585, Part 1, "National Energy Emergency Preparedness Act of 1982," May 24, 1982, p. 12.

According to the Deputy Assistant Secretary for Energy Emergencies, no classified documents were submitted with the SPR Plan and Report.

WHY EFFECTIVE SPR DRAWDOWN AND
DISTRIBUTION PLANNING IS USEFUL

In our judgment, important benefits would result from a more comprehensive effort by the administration to plan ahead for SPR use. Among the most important benefits of advance SPR drawdown planning, some of which have been reported in recent GAO work are: (1) it allows informed decisions to be made quickly at the outset of an emergency and in the presence of major uncertainties, and (2) it provides decisionmakers more information to make adjustments during a disruption to accommodate changing circumstances. The existence of these plans, even if the details are not made public, can also assist in coordinating stock drawdown policies with our allies, alleviating panic buying, and deterring oil embargoes.

SPR use planning allows informed
decisions to be made quickly
under uncertain conditions

As the SPR report notes, many uncertainties exist at the outset of a disruption. It is these uncertainties, however, that are the reason why advance planning is needed.

Many variables must be taken into account during a disruption in order to make informed SPR use decisions. Examples are:

- The severity of the disruption.
- The size of the SPR.
- Size of oil price increases.
- U.S. and foreign oil stocks.
- Actions required by the International Energy Program.
- Political/military actions of other countries.
- Actions of the oil industry.

These and other variables make it difficult to begin analyzing options for action when the disruption occurs, and still arrive at educated and timely decisions. Rather, by analyzing alternative scenarios and response options before a disruption, important information can be developed in advance--lessening the need to rely on ad hoc decisionmaking. This is even more important when considering how quickly circumstances can change during a

disruption. Under these conditions, advance planning can provide decisionmakers with useful information rather than forcing them to make decisions with little information about the implications of alternative response options.

Military experiences with advance
planning have demonstrated its
usefulness

The benefits of advance planning have long been recognized by military contingency planners who continually develop alternative scenarios and response options under extreme uncertainty. The value of this process for the military has important implications for SPR use. Among these benefits, advance planning for military contingencies

- provides an opportunity to identify, organize, and obtain needed resources in advance of an emergency to respond more quickly and effectively,
- helps in establishing and clarifying alternative options to meet objectives, and
- provides a means of training the people who will actually be responding in an emergency so they can respond more quickly and effectively.

Importantly, military planners do not wait for certainty or complete information to begin planning for different contingencies. Since the information will never be complete, they work with the information at hand, knowing that adjustments to plans can be made as more information becomes available. Similarly, SPR use planners can update existing plans as the quality of information improves.

Other advantages of
advance SPR use planning

In addition to its usefulness in reducing decisionmakers' uncertainty, advance SPR use planning can have other benefits. Such a planning process could, for example, lay the groundwork for coordinated stock drawdown policies with our allies. The SPR report indirectly alludes to the advantage of coordinated stock drawdown, stating that

"If the SPR were unilaterally drawn down, the reductions in world (oil) price may be considerably less at the outset of a disruption than if SPR releases were accompanied by immediate releases of foreign stocks."

Research by the Harvard Energy Security Program further supports this, demonstrating that the SPR could exert much greater leverage

over rising oil prices during a disruption if its use was coordinated with other consuming nations' stockpiles.

Other advantages of advance SPR use planning are that it can help to:

- Reduce "panic" buying that contributes to rising oil prices when an oil supply disruption occurs. Past disruptions have shown that a major cause of oil price increases is panic buying by oil distributors and consumers in an effort to assure they will have adequate supplies. Knowledge of when the SPR would be used, or at least that effective plans for SPR use exist, could help reduce price increases attributed to panic buying.
- Deter an oil embargo. While detailed operational plans should not be made public for security reasons, public knowledge that contingency plans exist (including broad outlines of these plans) may serve as a deterrent to embargoes. The existence of plans demonstrates our resolve and ability to counteract embargoes and thus may prevent them. Military contingency plans serve a similar purpose, particularly when they are demonstrated through simulations such as war games.

In summary, the advantages of advance SPR use planning, particularly in reducing uncertainty before and during a disruption, outweigh the disadvantages. The SPR documents submitted to the Congress by the administration, however, do not demonstrate that such planning has taken place. In our view, development of alternative SPR use scenarios and response options should therefore take place as soon as possible.

