



**U.S. Department of Energy**  
**Office of Inspector General**  
**Office of Audits and Inspections**

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# AUDIT REPORT

The Strategic Petroleum Reserve's Drawdown  
Readiness

DOE/IG-0916

July 2014

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**Department of Energy**  
Washington, DC 20585

July 10, 2014

MEMORANDUM FOR THE SECRETARY

FROM:   
Gregory H. Friedman  
Inspector General

SUBJECT: INFORMATION: Audit Report on "The Strategic Petroleum Reserve's Drawdown Readiness"

BACKGROUND

The Department of Energy's Strategic Petroleum Reserve (Reserve) has the largest stockpile of emergency crude oil in the world. It exists foremost as an emergency response tool the United States may use if confronted with threatening disruption in oil supply. Established by the *Energy Policy and Conservation Act of 1975* and in the aftermath of the 1973 - 1974 oil embargo, the Reserve's current inventory of approximately 691 million barrels of oil is stored in a series of underground salt caverns located across four sites in Louisiana and Texas. This inventory is a critical component of the United States' International Energy Agency obligation to maintain emergency oil stocks equal to at least 90 days of net imports.

The Reserve's primary energy security mission is to maintain drawdown readiness to mitigate the impact of a severe crude oil supply disruption. To achieve this goal, the Reserve must be prepared to promptly commence operations and schedule the flow of crude oil to refineries, even in the midst of a major disaster. According to the Department's *Strategic Petroleum Reserve Technical and Performance Criteria*, should the President order an emergency release of oil, the Reserve must conduct a sales competition, select offers, award contracts and be prepared to begin the flow of oil within 13 days. If required by sales and delivery parameters, the Reserve must achieve its maximum sustained drawdown rate within 15 days of receiving such direction. The Reserve's sustained rate is the maximum rate at which the Reserve can offset a crude oil supply disruption over a 90-day period. We initiated this audit to determine whether the Department maintained the Reserve in a manner to ensure drawdown readiness and meet mission requirements.

RESULTS OF AUDIT

We determined that the Department generally maintained the Reserve in a manner to ensure drawdown readiness. Yet, we noted that it was not fully successful in meeting all of its operational performance criteria.

In each of the Presidentially-directed drawdowns completed to date, the Reserve responded as required, providing oil in emergencies at the rate needed to satisfy buyer demand. Further, in March 2014, the Department initiated a test sale of approximately 5 million barrels of oil, generating \$500 million in revenue. According to the Department, the oil was released to allow it to assess the capabilities of a number of recent changes in the pipeline infrastructure. However, we found that due to the suspension and deferral of various maintenance and remediation activities, the Reserve was unable to achieve the maximum drawdown rate specified in its performance criteria, could not store oil at its full capacity, and had not ensured that its full inventory was available for drawdown. Specifically:

- The Reserve was unable to achieve its maximum 90-day sustained drawdown rate of 4.415 million barrels per day. Rather, the maximum sustained rate, as of March 2014, was 4.25 million barrels per day, approximately 165,000 barrels per day below the rate specified in the performance criteria. Moreover, even this drawdown rate was at risk due to the impact of required cavern remediation.
- The Reserve's authorized fill levels were compromised by the suspension of a cavern capacity maintenance program. Because the Reserve is currently under capacity, the suspension did not have an immediate impact. However, our analysis indicates that the Reserve would be unable to replace the more than 35 million barrels of oil sold since 2011, without compromising capacity maintenance activities.
- The suspension of a program designed to ensure that oil complied with state and Federal regulations prior to delivery adversely affected the amount of oil available for drawdown. Reserve officials estimated that suspension of the program could temporarily reduce the inventory of oil available for emergency drawdown by as much as 70 million barrels or approximately 10 percent of total inventory.

These conditions occurred, in part, because the Department had not performed a current, extensive assessment and therefore, were not fully cognizant of the Reserve's long-term sustainability. Budget cuts also contributed to the suspension of maintenance activities and resulted in the failure to maintain established drawdown rates and capacity. Absent specific budget authority, we believe the Reserve's decreasing budget may not accommodate vital maintenance activities. In addition, the Department had not recently assessed the Reserve's performance criteria nor redefined a long-term sustainable fill level for the Reserve.

The current value of the Reserve's petroleum inventory is approximately \$70 billion. Given this fact and the importance of the Reserve to national security, it is essential that the Department properly maintain the Reserve in a manner that ensures that it operates as intended and is sustainable well into the future. Well-developed plans and strategies could help ensure that the Department's decisions take into account the current effect of deferring required remediation efforts, as well as associated financial impacts. We believe that the Department can improve its long-range planning and have made several recommendations that, if implemented, should help ensure that the Reserve fully meets its mission requirements and maintains operational readiness in the most efficient manner.

## MANAGEMENT REACTION

Management concurred with the report's recommendations and agreed that a long-range strategic review was needed to ensure that the Reserve could meet current and future energy and economic security goals. We considered management's planned actions responsive to our recommendations.

Management's comments are included in Appendix 3.

Attachment

cc: Deputy Secretary  
Chief of Staff  
Assistant Secretary, Office of Fossil Energy  
Chief Financial Officer  
Principal Deputy Assistant Secretary, Office of Fossil Energy  
Deputy Assistant Secretary, Office of Petroleum Reserves  
Director, Office of Management

# AUDIT REPORT ON THE STRATEGIC PETROLEUM RESERVE'S DRAWDOWN READINESS

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# THE STRATEGIC PETROLEUM RESERVE'S DRAWDOWN READINESS

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## OPERATION OF THE STRATEGIC PETROLEUM RESERVE

We determined that the Strategic Petroleum Reserve (Reserve) was generally maintained in a manner to ensure operational readiness; however, it was not fully successful in meeting all of its operational performance criteria. For example, due to the suspension and deferral of certain maintenance and remediation activities, the Reserve was unable to achieve its maximum drawdown rate. In addition, maintenance issues decreased storage capacity and the amount of oil available for drawdown.

### Drawdown Rate

Because of deferred maintenance of a storage tank, the Reserve was unable to achieve its maximum 90-day sustained drawdown rate, as stipulated by performance criteria. The maximum sustained rate represents the maximum average drawdown rate at which the Reserve can offset a significant, long-term crude oil supply disruption over a 90-day period. The performance criteria require the Reserve to be capable of drawing down and delivering oil at a maximum sustained rate of 4.415 million barrels per day until 90 percent of its inventory is depleted. However, according to the Department of Energy's (Department) March 2014 evaluation of the Reserve's drawdown capability, the Reserve was not capable of achieving that rate. Rather, the maximum sustained rate achievable was 4.25 million barrels per day, approximately 165,000 barrels per day below the rate specified in the performance criteria. According to Reserve officials, needed repairs on a tank used to push oil to the pipelines had been deferred because of budget cuts. Without this tank, taken out of service in 2010, the Reserve's maximum sustained rate had not and will not be achievable until the repairs are made. At the time of our audit, the estimated \$7.4 million repair remained uncorrected; however, funding to complete the project had been included in the Fiscal Year (FY) 2015 budget request.

### Storage Capacity

The suspension of the Reserve's capacity maintenance operation compromised the ability to maintain its current authorized fill levels. The Reserve, in its current configuration, was designed to store 727 million barrels of crude oil in its 62 caverns. Over time, however, naturally occurring geological forces continuously reduce cavern storage capacity, a phenomenon known as "creep." Each cavern was originally structured with a certain amount of excess capacity to accommodate this creep without compromising the authorized fill levels, but that excess has since been exhausted. Alternatively, the Department can counteract the cavern creep by injecting water into the caverns, a process known as leaching, to restore the lost capacity. While the Department had been monitoring the capacity-reducing creep for years, it did not commence its capacity maintenance operation program, which relied on leaching, until sometime after the Reserve reached full capacity in 2009. Department officials stated that a leaching program was not initiated earlier because, although the *Energy Policy Act of 2005* had authorized the Reserve to expand to 1 billion barrels, in 2011, before expansion materialized, Congress rescinded all funds previously appropriated for expansion activities. At full capacity for the first time in its history and with no plans of expanding, reductions in the Reserve's excess

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space became a critical issue. In its 2010 and 2011 reports to Congress, the Department estimated that the Reserve's excess storage capacity would be depleted sometime between 2012 and 2013.

The Reserve's critical capacity issue was temporarily alleviated by a Presidentially-directed drawdown in 2011, and the commencement of the leaching program. In response to Libyan unrest, the President directed a sale of oil, which freed approximately 30 million barrels of storage capacity and returned \$3.3 billion to the Treasury. This excess space allowed the Department to begin its leaching program, and between November 2011 and July 2013, the program restored 11 million barrels of excess space at a cost of approximately \$6 million. However, while these actions provided near-term relief, they were not a long-term solution. Citing budget cuts, the Department suspended the leaching program in FY 2013, after less than 2 years of operation.

The Department submitted a budget request of \$1.5 million to allow a limited leaching program to resume in FY 2015, but the program remained suspended in FY 2013 and FY 2014. At its current under-capacity inventory of 691 million barrels, the program's suspension did not have an immediate impact. However, our analysis indicates that the Reserve would be unable to replace the oil sold since 2011, without compromising capacity maintenance activities. That is, replacing the oil would eliminate most of the excess capacity that is required for leaching activities. While the FY 2015 budget request will help slow the loss of cavern storage capacity, it is short of what is needed to fully offset the effects of cavern creep. Reserve officials estimated that without intervention, cavern creep could reduce volume by as much as 2 million barrels per year.

### **Oil Available for Drawdown**

Citing a funding rescission, the Department also suspended its de-gasification operation, a process required to reduce oil vapor pressure, an action that reduced the amount of oil the Reserve had available for drawdown. Vapor pressures of the crude oils tend to increase with time due to the combined effects of geothermal heating and gas intrusion from the salt surrounding the storage caverns. While not a problem when the crude oil is stored underground, dangerous gases are released when the oil is brought to the surface unless the oil vapor pressure and temperature are reduced. To ensure that the Reserve's oil is maintained in a delivery-ready state, the Department began de-gassing the sites on a rotational basis in 2004.

By 2011, the Department had successfully de-gassed two sites and budgeted \$11.9 million to move the de-gasification plant to a third site. However, according to Department officials, a \$15 million funding rescission in FY 2011 resulted in a suspension of the de-gassing program prior to its move to the third site. Consequently, that site's crude oil inventory, an estimated 216 million barrels or nearly one-third of the Reserve's inventory, currently exceeds vapor pressure delivery guidelines for anything other than a Presidentially-directed drawdown. The Department could employ costly alternative means to lower vapor pressure in the event of an emergency situation. For instance, Reserve officials report that the cost of using alternative means of vapor pressure mitigation could exceed \$64 million at one site alone in the event of a 90-day maximum-rate drawdown. Further, those means are less effective during the hot summer

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months when cooling water is not available to bring the oil down to a safe temperature. In that case, Reserve officials estimated that the inventory of oil available for an emergency drawdown could be reduced by as much as 70 million barrels during the months of July and August. The Reserve currently plans to resume de-gasification at that site in July 2014; however, completing that operation will require more than 4 years.

## **Management of the Strategic Petroleum Reserve**

These conditions occurred, in part, because the Department had not performed a current, comprehensive assessment of the Reserve's long-term sustainability. In addition, the Department had not recently assessed the Reserve's performance criteria nor defined a long-term fill level the Reserve could maintain.

### **Planning for Long-Term Sustainability**

We determined that the Department had not performed a current, detailed assessment of the Reserve's long-term sustainability. The last major assessment of the Reserve's mission readiness was the Life Extension Program initiated in 1995. The objective of that \$300 million program was to ensure that aging, above-ground equipment would be properly maintained and available to support drawdown readiness through 2025. While this reflected a forward-thinking strategy at the time, it was limited in that it did not evaluate the below-ground storage structures and equipment, such as the caverns, pipes and wells. As geological issues compromising cavern integrity and capacity have emerged in recent years, the need for long-term planning and budgeting strategies has become even more vital.

Long-term strategies are especially important to allow the Department to prioritize its activities when faced with funding reductions. In the last 5 years, the Reserve's operations and maintenance budget decreased from \$170 million to \$138 million. Yet during that same time requirements increased. For instance, both the cavern diagnostics and remediation program and the leaching program were initiated within the last 5 years. With the new programs now competing for an already decreasing operations and maintenance budget, the Department was obliged to prioritize maintenance activities, resulting in required maintenance activities being unfunded and deferred.

The cavern diagnostics and remediation program, in particular, recently caused the Department to change its strategies for managing the Reserve, and significantly contributed to the Reserve's budgetary constraints. This program, implemented in 2009 following a change in state regulations, is an extensive and costly program and was described by Federal officials as the highest priority maintenance project at the site. Reserve officials stated that failure to repair defects in a timely manner could result in structural compromise of the caverns and potential oil leaks from fractured wells. By July 2013, the Department had expended approximately \$32 million on cavern diagnostics and remediations, and by our estimates it will spend an additional \$38 million through FY 2016. Reserve officials expect these expenses to continue well into the future as the equipment continues to age.

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## Performance Criteria

Despite changing requirements and circumstances, the Department had not reassessed parts of its performance criteria in 18 years, nor had it estimated the impacts of not meeting performance requirements. For example, the criteria for the Reserve's current maximum sustained rate were established in 1996 in conjunction with the Life Extension Program. However, in 2013, average net imports were approximately 2.3 million barrels per day lower than they were in 1996, and the Reserve's inventory was more than 130 million barrels higher. Despite these changes, the Department had not reevaluated the effectiveness of its drawdown rate, reassessed its expectations for the Reserve or determined what an acceptable range of performance would be. According to Reserve officials, the established rate was not based on constantly varying import needs and had not been adjusted due to changing net imports. A reassessment of performance criteria would help ensure that the Reserve's mission is relevant to the needs of the United States and consistent with the Department's goals, as well as aid in the planning and prioritizing of activities in light of budgetary constraints and changing geological conditions.

## Defined Fill Level

Similarly, the Department had not defined a maximum fill level the Reserve can maintain under current circumstances. As noted, the Reserve had not replaced the oil sold since 2011, leaving the Reserve 36 million barrels under its authorized storage level. While this under-capacity status provides the excess storage volume needed to perform leaching activities, it is unclear if, and how, the Department could accommodate the oil if it were to be replaced. If the Department replaces the oil, then leaching activities, currently suspended until at least 2015, would be in jeopardy of being postponed even further into the future due to inadequate cavern space to perform the activity. However, cavern creep would continue to reduce the storage volume. Defining a fill level the Reserve can maintain at current budget levels would ensure that the Department maintains an appropriate inventory at all times.

## Operational Efficiency

As of June 2014, the Reserve had an inventory of oil with a market value of more than \$70 billion. It is essential that the Department properly maintain the Reserve in a manner that ensures it can operate as intended and is sustainable well into the future. Without fully developed long-term plans and strategies, as well as appropriate metrics, the Department cannot ensure that it is prioritizing activities and responding to budget constraints in the most efficient manner. Further, an assessment of the Reserve's goals and capabilities will allow the Department to define performance criteria which is more meaningful given changing conditions and needs of the United States.

According to the Department, it had recently taken steps to assess changes in its distribution capabilities. In March 2014, the Department initiated a test sale of approximately 5 million barrels of oil, generating approximately \$500 million in revenue. According to the Department, the oil was released over a 40-day period in April and May, and the release allowed them to assess the capabilities of a number of recent changes in the pipeline infrastructure. Evaluating changes in infrastructure is a positive step, but without additional strategies that reflect current

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and changing conditions, the Department cannot ensure that the Reserve fully meets its mission requirements and maintains operational readiness in the most efficient manner. We believe that additional analysis of the Reserve's long-term readiness is needed to ensure that the Reserve retains its status as a vital tool for the security of the United States' economy and energy needs.

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## RECOMMENDATIONS

To its credit, during our audit Department officials sought to address the challenges the Reserve faces. In particular, Reserve officials chartered a working group to investigate issues associated with storage caverns and wells, and to identify options to mitigate the loss of storage capacity. In addition, the Department's Office of Petroleum Reserves recently chartered a second working group to identify long-term critical major maintenance requirements and to develop a path for the next phase of the Reserve's life extension plan. The Department acknowledged that the issues addressed by the two working groups need to be considered in conjunction with a broader, long-range review of the Reserve.

While these actions are a positive step in mapping out the future direction of the Reserve, we believe that further action is necessary. To that end, we have made the following recommendations that, if implemented, should help maintain the Reserve's mission performance. To improve the efficiency of the Reserve's operations, we recommend that the Assistant Secretary for Fossil Energy:

1. Perform a long-range strategic review of the Reserve to ensure that it is best configured to respond to the needs of the United States now and into the future, to include:
  - a. Assessing the current objectives of the Reserve, taking into consideration the likelihood and severity of potential supply disruptions as well as the systems impacted by geological challenges, and determining how best to meet those objectives;
  - b. Performing a review of the Reserve's distribution capability and drawdown criteria to ensure that it remains relevant to the needs of the United States and consistent with the Department's objectives; and
  - c. Defining a crude oil fill level the Reserve can reliably maintain, considering budgetary constraints, ongoing and future maintenance requirements, and historic utilization.
2. Quantify and communicate, in its budget requests and annual reports to Congress, the Reserve's funding needs to ensure its long-term sustainability.

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## **MANAGEMENT RESPONSE**

Management concurred with our recommendations and identified corrective actions to address the recommendations. Regarding Recommendation 1, management agreed that a broad, long-range strategic review of the Reserve was needed, but given the potentially significant ramifications of the results, it was unclear at this time whether the Department's Office of Fossil Energy should lead this review, whether it should be led by a different office within the Department, or by an outside agency with Departmental support. Management stated that it would initiate discussions with Department and Administration leadership to determine the appropriate course of action, and estimated that a decision would be reached by August 1, 2014.

Regarding Recommendation 2, management stated that it would continue to evaluate funding levels necessary to ensure the Reserve's mission objectives and long-term sustainability could be accomplished, and would continue to communicate these needs through the appropriations process, annual reports to Congress, and subject matter briefings.

## **AUDITOR COMMENTS**

The Department's planned corrective actions are responsive to our recommendations.

We believe that management's initiative to solicit other Department and Administration officials to determine an appropriate path for a strategic study is prudent given the national security implications of the Reserve. Further, we agree that programmatic challenges and funding requirements should be clearly expressed in budget requests and other communications with interested parties. Management's comments are included in Appendix 3.

## **OBJECTIVE, SCOPE AND METHODOLOGY**

### **Objective**

The objective of the audit was to determine whether the Strategic Petroleum Reserve (Reserve) was maintained in a manner to ensure drawdown readiness and meet mission requirements.

### **Scope**

The audit was performed from December 2012 through July 2014. We conducted work at the Reserve in New Orleans, Louisiana; the Bayou Choctaw Storage Site in Iberville Parish, Louisiana; and obtained information from the Department of Energy's Office of Petroleum Reserves in Washington, DC. The audit was conducted under Office of Inspector General Project Number A13OR013.

### **Methodology**

To accomplish the audit objective, we:

- Reviewed laws, regulations, and policies and procedures relevant to drawdown readiness;
- Held discussions with the Reserve Project Management Office and contractor officials;
- Interviewed key personnel at the Office of Petroleum Reserves; and
- Evaluated and analyzed Reserve reports related to prior drawdowns, drawdown capability, drawdown rates, storage capacity and vapor pressure.

We conducted this performance audit in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. Accordingly, we assessed significant internal controls and compliance with laws and regulations to the extent necessary to satisfy the audit objective. In particular, we assessed the Department's implementation of the *GPRA Modernization Act of 2010*. While we identified concerns with certain metrics, we determined the Department had established performance measures related to the Strategic Petroleum Reserve. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our audit. We relied on a limited amount of computerized data to perform fieldwork; however, it did not materially support the findings, conclusions or recommendations of the audit objective. Since computer-processed data was determined not to be integral in supporting the findings, conclusions, or recommendations of the audit objective, a reliability assessment was not performed.

Management waived an exit conference.

## **PRIOR REPORTS**

- Inspection Report on [\*Alleged Storage Capacity Concerns at the Strategic Petroleum Reserve\*](#) (INS-L-12-06, September 2012). The Office of Inspector General received a complaint alleging that the Department of Energy (Department) and DM Petroleum Operations Company intentionally overfilled the Strategic Petroleum Reserve (Reserve) and were awarded big bonuses to fill the Reserve to its authorized storage capacity. The complaint further alleged that filling the Reserve to its authorized storage capacity played a role in a July 2010 fatality at one of the Reserve's sites. The inspectors did not substantiate the allegations. Although the inspectors had not found that the Reserve had been overfilled, they noted that the Department was in the process of addressing technical concerns that could affect the ability to sustain authorized storage levels. Based on the results of the review, no recommendations were made.
- Audit Report on [\*Department of Energy's Receipt of Royalty Oil\*](#) (DOE/IG-0786, January 2008). The auditors concluded that the Department had not implemented an effective internal control system over the receipt of royalty oil at the market centers. Specifically, the Department had not: (1) Resolved discrepancies between scheduled oil deliveries and contractor claimed receipts at the market centers; (2) Ensured that documentation adequately supported royalty oil receipts; and (3) Addressed the vulnerabilities associated with contractors acting as both the shipping agent for the Department of Interior's Mineral Management Service and receiving contractor for the Department.
- Special Report on [\*Expansion of the Strategic Petroleum Reserve\*](#) (DOE/IG-0767, June 2007). The review found that the Department and its contractor analyzed all available well and seismic data related to the Bruinsburg site and augmented this information with additional seismic tests. The auditors found, as well, that there were inherent uncertainties involved in the process of estimating the size of the salt domes. Therefore, the exact size and shape of the Bruinsburg salt dome was not fully known. Professional geologists have interpreted the available data differently and the auditors were not able to resolve these differences of opinion.
- Audit Report on [\*The Department of Energy's Use of the Strategic Petroleum Reserve in Response to Hurricanes Katrina and Rita\*](#) (DOE/IG-0747, December 2006). The auditors found that the Department used the Reserve and its assets with great effectiveness to address emergency energy needs in the crisis surrounding Hurricanes Katrina and Rita. Despite being in the path of the hurricanes' destruction, the Reserve promptly fulfilled requests for oil from refineries suffering from storm-induced supply shortages. Within 4 days of Hurricane Katrina's landfall, oil was sent to requesting refineries. Overall, the Reserve provided almost 21 million barrels of crude oil to refiners through loans and sales. To their credit, the Reserve's management and staff reacted magnificently under extremely difficult circumstances.

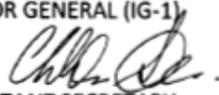
## MANAGEMENT COMMENTS

**Department of Energy**

Washington, DC 20585

June 20, 2014

MEMORANDUM FOR: GREGORY H. FRIEDMAN  
INSPECTOR GENERAL  
OFFICE OF THE INSPECTOR GENERAL (IG-1)

FROM: CHRISTOPHER A. SMITH   
PRINCIPAL DEPUTY ASSISTANT SECRETARY  
OFFICE OF FOSSIL ENERGY

SUBJECT: The Office of Fossil Energy's Comments on the  
Draft Audit Report on "The Strategic Petroleum Reserve's  
Drawdown Readiness"

Thank you for your work on the draft audit report for the audit performed from December 2012 through May 2014 at the Strategic Petroleum Reserve's Program Management Office in New Orleans, Louisiana; the Bayou Choctaw Storage Site in Iberville Parish, Louisiana; and the Office of Petroleum Reserves in Washington, DC, to determine whether the Strategic Petroleum Reserve (Reserve) was maintained in a manner to ensure drawdown readiness and meet mission requirements. The draft audit report concluded that the Department generally maintained the Reserve in a manner to ensure drawdown readiness, but noted that it was not fully successful in meeting all of its operational performance criteria. It also noted with an inventory of oil valued at approximately \$70 billion (current market value), it is essential that the Department properly maintain the Reserve in a manner that ensures that it operates as intended and is sustainable well into the future.

The Strategic Petroleum Reserve was established by the *Energy Policy and Conservation Act of 1975* in the aftermath of the 1973-1974 oil embargo. Its mission is to provide energy security to the United States by reducing the impact of disruptions in supplies of petroleum products, and to carry out the obligations of the United States under the International Energy Program. The Reserve currently contains approximately 691 million barrels of crude oil with an inventory valued at approximately \$70 billion stored in 62 underground salt caverns at four storage sites. Aging Reserve infrastructure, to include below-ground storage caverns and associated wells, as well as above-ground crude oil, raw water, brine, and electrical systems' equipment, represent significant challenges for meeting the Reserve's operational performance criteria and long-term sustainability. The Office of Petroleum Reserves (OPR) chartered a working group in the Summer of 2013, to investigate issues associated with storage caverns and wells and identify options to mitigate the loss of storage capacity. A final report is currently under development.



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The OPR chartered a second working group in March 2014, to identify long-term critical major maintenance requirements for the Reserve and develop a path forward in order to commence life extension phase II for the Reserve. This working group is still in progress. The salient issues identified by these two working groups, as well as possible options to address these issues, need to be considered in conjunction with a broader, long-range strategic review of the Reserve.

The draft report contains two recommendations. The Office of Fossil Energy concurs in principal with one recommendation and fully concurs with the other recommendation.

### **Office of Fossil Energy Response to the Report's Recommendations**

**Recommendation 1:** Perform a long-range strategic review of the Reserve to ensure that it is best configured to respond to the needs of the United States now and into the future, to include:

- a. Assessing the current objectives of the Reserve taking into consideration the likelihood and severity of potential supply disruptions as well as the systems impacted by geological challenges and determining how best to meet these objectives;
- b. Performing a review of the Reserve's distribution capability and drawdown criteria to ensure that it remains relevant to the needs of the United States and consistent with the Department's objectives; and
- c. Defining a crude oil fill level the Reserve can reliably maintain, considering budgetary constraints, ongoing and future maintenance requirements, and historic utilization.

**Management Decision: DOE/FE concurs in principal with this recommendation.**

The Office of Petroleum Reserves (OPR) agrees that a broad, long-range strategic review of the Reserve needs to be accomplished. This review should take into consideration what the near-term and long-term role of the Reserve should be relative to U.S. energy and economic security goals and objectives and International Energy Program requirements; what the optimal configuration and capabilities (e.g. composition/volume/location of petroleum products, infrastructure requirements, distribution capability, and performance criteria) of the Reserve should be; the resources required to attain and maintain the Reserve's long-term sustainability (to ensure alignment with optimal configuration and capabilities); and whether existing legal authorities that govern the policies, configuration, and capabilities of the Reserve are adequate to ensure the Reserve can meet both current and future U.S. energy and economic security goals and objectives.

Given the potentially significant ramifications of the results of this review on a high profile national security asset, it is unclear at this time whether the Office of Fossil Energy should lead this review, or whether it should be led by a different Office within the Department or by an agency outside of the Department, with the Office of Fossil Energy (FE) working in a support role.

**Action Plan:** FE leadership will initiate discussions with Department and Administration leadership to determine the appropriate course of action for moving forward on this recommendation. Once a decision has been made on the path forward regarding this recommendation, an action plan will be developed to address the scope and methodology of the review, key goals and objectives, and significant milestones.

**Estimated Completion Date:** August 1, 2014 to reach a decision on the path forward regarding this recommendation. Estimated completion dates for follow-on activities will be developed once a decision has been made regarding how to proceed and what is contained in the action plan.

**Recommendation 2:** Quantify and communicate, in its budget requests and annual reports to Congress, the Reserve's funding needs to ensure its long-term sustainability.

**Management Decision: DOE/FE concurs with this recommendation.** The Office of Petroleum Reserves (OPR) will continue to evaluate funding levels necessary to ensure the Reserve's mission objectives and long-term sustainability can be accomplished, and will continue to communicate these needs through the annual appropriations process (consistent with Department and Administration policies and guidelines), through its annual report to Congress, and through Departmental, Administration, and Congressional subject matter briefings.

**Action Plan:** OPR has briefed the CFO's office on its preliminary FY 2016 budget request. The briefing identified specific programmatic challenges that need to be addressed through the appropriations process, and the funding levels identified by the OPR in this request are consistent with funding requirements necessary to ensure the Reserve's mission objectives and long-term sustainability can be accomplished. The OPR will brief its FY 2016 budget request to OMB in August.

**Estimated Completion Date:** Ongoing throughout each fiscal year.

## **FEEDBACK**

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Department of Energy  
Washington, DC 20585

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