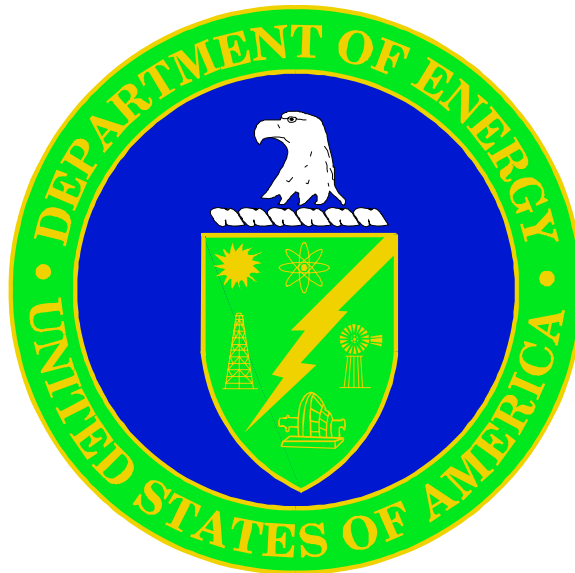

STRATEGIC PETROLEUM RESERVE PLAN

EXPANSION TO ONE BILLION BARRELS

SUBMITTED TO CONGRESS PURSUANT TO THE ENERGY POLICY AND
CONSERVATION ACT, AS AMENDED



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Office of Petroleum Reserves
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STRATEGIC PETROLEUM RESERVE PLAN EXPANSION TO 1 BILLION BARRELS

I. PURPOSE

This document sets forth the Department of Energy's (DOE's) plan for expansion of the Strategic Petroleum Reserve (SPR) from 700 million barrels to 1 billion barrels of crude oil, including expansion of SPR storage facilities beyond the current capacity of approximately 727 million barrels to 1 billion barrels. This plan is submitted pursuant to the Energy Policy and Conservation Act, as amended (Public Law 94-163) (EPCA). Section 159(j) of EPCA states: "If the Secretary determines expansion beyond 700,000,000 barrels of petroleum product inventory is appropriate, the Secretary shall submit a plan for expansion to the Congress."

II. BACKGROUND

EPCA authorized the establishment of the SPR to reduce the impact of a severe energy supply interruption, and to carry out the obligations of the United States under the International Energy Program. EPCA stated that the policy of the United States is to provide for the development of a SPR of up to 1 billion barrels of petroleum products.

The SPR currently is comprised of four storage sites along the Gulf Coast: Bryan Mound and Big Hill in Texas; and West Hackberry and Bayou Choctaw in Louisiana. Three of the sites, Bryan Mound, West Hackberry and Bayou Choctaw, were acquired in the 1970's and developed to meet the initial storage goals set forth in the EPCA. The Big Hill site was developed in the 1980s to expand the SPR to a capacity of 750 million barrels. Two other sites also created in the 1970's were subsequently decommissioned in the 1990's. Currently, the SPR storage sites have a combined storage capacity of 727 million barrels, and a drawdown capability of 4.4 million barrels per day.

On August 8, 2005, the President signed into law the Energy Policy Act of 2005 (EPAct) (Public Law 109-58). Sections 301 and 303 of EPAct require acquisition of petroleum to fill the SPR to its authorized one billion barrel capacity "as expeditiously as practical without incurring excessive costs or appreciably affecting the price of petroleum products to consumers"; promulgation of procedures for the acquisition of petroleum for the SPR, to include procedures and criteria for the review of requests for the deferrals of scheduled deliveries; and selection of sites necessary to expand the storage capacity of the SPR to one billion barrels.

III. EXPANSION POLICY AND OBJECTIVES

The SPR Expansion Plan is based on the continuation of the same major policies utilized in the implementation of the current Reserve:

- U.S. Government Ownership (storage facilities and petroleum)

- Centralized U.S. Gulf Coast Reserve
- Underground Salt Dome Storage Technology
- Crude Oil Storage only

The SPR will continue to develop and store petroleum in underground caverns in salt dome formations along the Gulf Coast. These facilities provide the highest security and safety, lowest environmental risks, and lowest development and operational costs for large petroleum stockpiles.

Expansion Objectives

The SPR currently has four storage sites with a combined capacity of 727 million barrels. The SPR expansion project will increase:

- SPR storage capacity from 727 million barrels to 1 billion barrels; and
- The maximum SPR drawdown rate from 4.4 million barrels per day to approximately 5.9 million barrels per day.

The SPR gives first consideration to expansion of existing sites which capitalize on existing site infrastructure and operations, and thereby minimize development time and construction and operations costs. However, the amount of new capacity that is reasonable to develop at an existing site is limited by the physical size of the salt dome, the site's infrastructure for cavern development, and the availability of the commercial petroleum distribution infrastructure to support the increased rate of oil withdrawal from the site. As a maximum, the total storage capacity of any existing or new sites will be limited to approximately 250 million barrels due to security issues and limitations on the commercial distribution network.

Distribution Objectives

A major consideration in the selection of a new storage site is SPR distribution capabilities. The Capline (lower Mississippi River) region has become a highly critical area for crude oil importation and distribution with the growth in its regional refining industry, oil production from the Gulf of Mexico, and the importation operations of the Louisiana Offshore Oil Port (LOOP). The SPR's oil storage and drawdown capabilities in the Capline region will be enhanced by expansion.

The Capline region is one of the largest crude importing regions within the Gulf Coast. It serves a total of 27 refineries, 12 located on the lower Mississippi River and 15 located in the Midwest, which import more than 1.5 million barrels per day. The SPR currently has one storage site in the Capline region with only 76 million barrels, approximately 10 percent of the SPR's total inventory, and a maximum drawdown rate of 515,000 barrels per day, which is approximately one-third of the region's refinery crude importation rate. Additional SPR stocks are needed to address this region's refinery demands in the event of a petroleum supply disruption.

IV. ENVIRONMENTAL REVIEW AND SITE SELECTION

EPAct required the Secretary of Energy to complete an environmental review and site selection process for the expansion of the SPR to 1 billion barrels. Section 303 of EPAct states:

Not later than 1 year after enactment, the Secretary of Energy shall complete a proceeding to select, from sites that the Secretary has previously studied, sites necessary to enable acquisition by the Secretary of the full authorized volume of the Strategic Petroleum Reserve. In such proceeding, the Secretary of Energy shall first consider and give preference to the five (5) sites assessed in the Draft Environmental Impact Statement (DOE/EIS-0165-D). However, the Secretary, in his discretion, may select other sites as proposed by a State where a site has been previously studied by the Secretary to meet the full authorized volume of the Strategic Petroleum Reserve.

Alternatives Considered

In developing the range of reasonable alternatives, DOE first considered expansions to its existing storage sites, which would capitalize on existing site infrastructure and operations. Three of the SPR's four sites were identified as having the potential for expansion; these sites were West Hackberry and Bayou Choctaw in Louisiana, and Big Hill in Texas. However, the expansion capability of the three existing sites is insufficient to achieve the required 1 billion barrels of capacity, and a new site of approximately 160 million barrels is required.

As required by EPAct, Section 303, DOE limited its review of potential new sites for expansion of the SPR to: (1) sites that DOE addressed in the 1992 Draft Environmental Impact Statement (EIS); and (2) sites proposed by a state in which DOE has previously studied a site. The following five sites met those conditions and were considered in the draft EIS:

- Richton, MS, and Stratton Ridge, TX, which were addressed in the 1992 draft EIS;
- Chacahoula and Clovelly, LA, which the Governor of Louisiana requested that the Secretary of Energy consider; and
- Bruinsburg, MS, which the Governor of Mississippi requested that the Secretary of Energy consider.

Environmental Review Process

On September 1, 2005, DOE issued a Notice of Intent to prepare an EIS. In the Notice of Intent, DOE proposed to expand storage capacity at three of the four existing SPR storage sites and develop one new storage site in the Gulf Coast region. DOE completed its Public Scoping process on December 19, 2005.

On May 19, 2006, DOE completed and issued a Draft EIS addressing potential expansions of three existing SPR sites and five new site candidates. The main

environmental risks to the project are related to facility development in wetland areas, brine disposal from solution mining operations, air quality impacts, and potential oil spills.

On December 7, 2006, DOE completed and issued a Final EIS identifying the expansion of three existing SPR sites, Bayou Choctaw, Big Hill, and West Hackberry, and the development of the Richton site as its “Preferred Alternative.”

Site Selection Criteria

In the evaluation and selection of sites for expansion, DOE used four primary criteria:

- SPR Distribution Capabilities;
- Project Technical Risks – geotechnical, construction, and hurricane;
- Environmental Impacts; and
- Projected Life Cycle costs

In addition, DOE decision-making took into consideration the potential operational impacts associated with existing commercial operations.

Site Selection Decision

On February 14, 2007, the Secretary of Energy signed a Record of Decision, selecting sites for the expansion of the SPR to 1 billion barrels. The sites selected were Richton, MS for a new 160 million barrel storage facility, Big Hill, TX for an expansion of 80 million barrels and Bayou Choctaw, LA for an expansion of 33 million barrels. The Richton site was selected based on its salt dome which is large and undeveloped, its enhanced distribution capabilities, its inland location which reduces potential hurricane impacts, and its minimal impacts to wetland environments. The Record of Decision is provided in Appendix A.

V. STORAGE FACILITIES

Under the SPR Expansion Plan, the SPR’s storage capacity will be increased from 727 million barrels to 1 billion barrels, an increase of 273 million barrels. In accordance with the Record of Decision, the SPR will develop a new 160 million barrel storage site at Richton, Mississippi and expand two of the SPR’s existing sites, Big Hill in Texas and Bayou Choctaw in Louisiana, by 80 million barrels and 33 million barrels respectively.

Richton, MS

The Richton salt dome is located in Perry County, MS, 18 miles east of Hattiesburg, MS and 3 miles northwest of Richton, MS. The SPR will require approximately 235 acres of the undeveloped salt dome to construct a new storage site consisting of 16 10-million-barrel solution-mined caverns (160 million barrels). The site will also require the construction of several pipelines: a 10-mile water pipeline to the Leaf River, a 108-mile brine disposal pipeline to the Gulf of Mexico, a 118-mile crude oil pipeline to the Capline Pipeline System at Liberty, MS, and an 88-mile crude oil pipeline to refining and marine

facilities in Pascagoula, MS. The site will have a drawdown rate of 1 million barrels per day.

Big Hill, TX

The Big Hill site is the newest SPR site and was developed during the 1980s to a storage capacity of 170 million barrels. The site has excellent expansion capabilities with undeveloped salt dome property to the north. The SPR will acquire approximately 133 acres of salt dome property and expand the site’s capacity to 250 million barrels through the development of 8 new 10-million-barrel caverns (80 million barrels). The SPR will also increase the site’s drawdown rate from 1.1 to 1.5 million barrels per day, and construct a new 26-mile crude oil pipeline to existing terminals in the Beaumont/Port Arthur area for oil distribution.

Bayou Choctaw, LA

The Bayou Choctaw site is the smallest SPR site with only six existing caverns and a storage capacity of 76 million barrels. The site is limited in its expansion capability due to the small size of the salt dome and other commercial storage operations on the dome. The SPR will expand the site’s capacity to 109 million barrels through the development of two new 11.5-million-barrel caverns (23 million barrels) on existing SPR property and the acquisition of one existing 10-million-barrel cavern, for an increase of 33 million barrels. The SPR will increase the site’s drawdown rate from 515,000 to 600,000 barrels per day. Additional brine disposal wells will be constructed to accommodate the cavern solution-mining and increase the site’s oil fill rate to 225,000 barrels per day.

The following table summarizes the planned increase in the SPR’s site storage capacities and drawdown capabilities.

SPR EXPANSION PLAN

| Distribution System | Storage Facility | CURRENT | | EXPANDED | |
|----------------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|
| | | Storage (MMB)* | Drawdown (MB/D)* | Storage (MMB)* | Drawdown (MB/D)* |
| Seaway | Bryan Mound | 254 | 1,500 | 254 | 1,500 |
| Texoma | West Hackberry | 227 | 1,300 | 227 | 1,300 |
| | Big Hill | 170 | 1,100 | 250 | 1,500 |
| Capline | Bayou Choctaw | 76 | 515 | 109 | 600 |
| | Richton (New) | -- | -- | 160 | 1,000 |
| Total Program | | 727 | 4,415 | 1,000 | 5,900 |

* MMB = million barrels; MB/D = thousand barrels per day

VI. DISTRIBUTION PLAN

The enhancement of drawdown and distribution capabilities of the Reserve has been a primary objective of the SPR's expansion to 1 billion barrels. The SPR Distribution Plan for the 1-billion-barrel program and the connections to pipelines, terminals and refining centers is illustrated in Appendix B.

The SPR expansion provides for an increase in the SPR's maximum drawdown rate from the current 4.4 million barrels per day to 5.9 million barrels per day. This rate is required to maintain a drawdown capability of at least 50 percent of the projected U.S. crude import rate in 2020, and will provide the capability to replace lost imports even under severe embargo interruptions. All storage sites will have the capability to drawdown and distribute their entire inventory stocks within 180 days.

The SPR expansion to 1 billion barrels will significantly enhance the current oil distribution capabilities of the SPR. The expansion provides additional oil storage and drawdown capabilities within the Capline region to enhance coverage of this region. The planned expansion of the Bayou Choctaw storage site will increase both its storage and drawdown capabilities to supply the lower Mississippi River refineries in the Capline region with additional emergency stocks. The Richton site will provide storage and drawdown capabilities to supply the Midwest refineries via a connection to the Capline Interstate Pipeline System at Liberty, MS. In addition, the Richton site will be pipeline connected to new refining and marine facilities at Pascagoula, MS. The SPR plan also provides for the construction a new marine terminal in the Port of Pascagoula to support the Richton site's needs for oil fill and distribution.

The planned expansion of the Big Hill storage site will increase both its storage and drawdown capabilities to the Beaumont/Port Arthur, TX refining center. This area has adequate refinery demands and marine facilities to support the increased drawdown capabilities.

VII. OIL FILL PLAN

DOE will use the *Procedures for the Acquisition of Petroleum for the Strategic Petroleum Reserve* (10 CFR Part 626), published November 8, 2006, which establishes the rules and procedures for acquiring SPR crude oil.

DOE's preference would be for the continuation of the DOE/Department of the Interior (DOI) Program to transfer Federal Royalty oil from the Outer Continental Shelf to fill the SPR. This program has been successful for DOE and DOI.

Little to no significant oil market price impacts are anticipated from SPR fill. Current world oil production is approximately 85 million barrels per day and projected to increase. This volume will be sufficient to meet the world demand for petroleum as well as to accommodate planned SPR fill rates and requirements. More specifically, the SPR fill requirements would be spread over at least 10 years and the annual average fill rate would likely not exceed 100,000 barrels per day before 2014, and 150,000 barrels per day after 2014.

VIII. SPR EXPANSION COST

The current estimated costs for the expansion of the SPR are based on conceptual designs which were completed during 2006. The total estimated capital cost of facilities for SPR expansion to 1 billion barrels starting in 2008 and completing in 2018 is approximately \$3.67 billion. The cost of operating and maintaining expansion facilities following construction is estimated to be \$35 to \$40 million per year. The estimated costs of the three site expansion projects are as follows:

ESTIMATED EXPANSION COST (Millions of Dollars)

| | |
|--|------------------|
| Bayou Choctaw, LA (33 MMB) | \$220.0 |
| Big Hill, TX (80 MMB) | \$493.4 |
| Richton, MS (160 MMB) (including Distribution Facilities Cost of \$250 million) | \$2,951.7 |
| TOTAL FACILITIES | \$3,665.1 |

The projected cost of crude oil to fill the SPR from 700 million barrels to 1 billion barrels is \$18.125 billion based on the current SPR expansion development plan and forecasted crude oil prices of \$56.20 to \$65.10 per barrel. However, the cost of the oil stored in the Reserve is not an unrecoverable expenditure to the Nation, but the acquisition of an asset which will maintain substantial economic value. The Government's oil within the Reserve can someday be sold and the proceeds returned to the U.S. Treasury.

IX. IMPLEMENTATION STRATEGY

Project Management

The DOE's SPR Project Management Office (SPRPMO) in New Orleans, LA will be responsible for implementing the expansion project, including developing business and contracting strategies; acquiring property and pipeline rights-of-way; conducting design and construction; and operating the facilities. The SPRPMO manages and operates the existing sites, and the expansion facilities will be integrated into the existing system when completed.

Expansion facilities will be designed and constructed in accordance with applicable federal and state requirements and regulations. For example, DOE capital asset procurement and management requirements such as DOE Order O 413.3, Program and Project Management for the Acquisition of Capital Assets, along with its associated manuals and guides, provide direction for managing and controlling the expansion project in terms of maintaining budget and schedule; meeting environmental, safety and health standards; and meeting mission requirements.

Proposed Development Schedule

The expansion project estimated schedule, showing when expansion capacity would become available, is provided as Appendix C. Development of all the expansion sites would commence in fiscal year 2008, and completion of the last site would occur in the latter part of 2018. All project activities, and the timeline for their completion, are subject to necessary funds being made available.

The development schedule in Appendix C also provides an estimate of when new storage capacity will become available for oil fill as each site completes its cavern development (or cavern acquisition) activities.

