

DOE-SPR-EIS-0075-SA-03

# OPERATIONAL AND ENGINEERING MODIFICATIONS AND REGULATORY REVIEW

# SUPPLEMENT ANALYSIS OF SITE-SPECIFIC AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENTS:

U.S. Department of Energy

Strategic Petroleum Reserve

900 Commerce Road East

New Orleans, Louisiana 70123

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#### SUPPLEMENT ANALYSIS DETERMINATION

The Department of Energy (DOE), Strategic Petroleum Reserve (SPR) Project Management Office, has prepared a Supplement Analysis (SA) to determine whether the site-wide and programmatic Environmental Impact Statements (EISs) and Environmental Assessments (EAs) adequately address the current project operations or if additional documentation is necessary under the National Environmental Policy Act (NEPA). The SA was prepared in accordance with Council on Environmental Quality (CEQ) regulations 40 CFR 1502.9(c) and DOE regulations at 10 CFR 1021.330(d) that require the evaluation of site-wide EISs at least every five years. The SA compares key impact assessment parameters analyzed in the original site-wide and programmatic EISs, a programmatic EA and the previous Supplement Analysis with the current site configurations and processes and the current regulatory environment for each SPR site and pipeline..

Based on the application of criteria presented in this SA and the concurrence of counsel, DOE has determined that the current configurations and processes of the SPR sites do not constitute a significant change from those evaluated in the original site-wide and programmatic EISs and EA, and thus; do not affect the existing Records of Decision (RODs). As well, the current regulatory environment does not constitute new information and represents no significant un-assessed impacts. Therefore, pursuant to 10 CFR 1021.314(c)(2), no further NEPA documentation is necessary.

Issued at New Orleans, this 27 day of 2014.

William C. Gibson, Jr. Project Manager Strategic Petroleum Reserve

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#### I. Introduction

The National Environmental Policy Act (NEPA) was enacted in 1969. In this statute, Congress recognized that technological, social, and economic forces have a profound influence on the quality of the human environment. The Department of Energy's Strategic Petroleum Reserve Project Management Office (SPRPMO) NEPA Implementation Plan (SPRPMO O 451.1D) follows the letter and spirit of NEPA and complies fully with the Council on Environmental Quality's (CEQ's) regulations (40 CFR 1500-1508). All activities on the Strategic Petroleum Reserve (SPR) must have, or have had, a NEPA review to determine NEPA applicability (10 CFR 1021). Compliance with Federal Statutes such as NEPA and incorporation of these into DOE project planning and overview is of paramount importance per the SPRPMO Environmental Policy Statement (SPRPMO P 451.1D).

# II. Strategic Petroleum Reserve Project Background

The creation of the SPR was mandated by Congress as part of the Energy Policy and Conservation Act on December 22, 1975. The objective of the SPR is to provide the United States with petroleum should a supply disruption occur. At its inception, the DOE (then the Federal Energy Administration [FEA]) evaluated the potential impacts of implementation of the SPR mission at the proposed sites as well as the potential impacts of its mission as a whole. The evaluations undertaken by the FEA resulted in a programmatic Environmental Impact Statement (EIS) (FES-76-2) that addressed the potential environmental impacts of the SPR as a federal program. This EIS identified 32 potential crude oil storage sites throughout the contiguous United States. This number was narrowed when implementation of the Early Storage Reserve (ESR) program was considered. Consideration of timely implementation of the ESR left 8 potential sites that provided for the storage of oil underground in salt caverns.

Of these, five sites were chosen based on their immediate utility for the ESR and the ease with which they could be used or developed for permanent storage. These sites were then evaluated specifically for the purpose and needs of the ESR and the SPR, the potential impacts of the initial implementation of the SPR program, and the long-

term operation of these sites relative to the SPR's mission. The initial site-specific evaluations for these sites resulted in five draft EISs (DES 76-4 through DES-76-8) that were subsequently finalized (FES 76/77-4 through FES 76/77-8) and have, since the actual implementation of the program, been amended/superseded by additional EISs. Subsequent to the development of the initial sites, major changes occurred on the SPR including the expansion of the SPR with the development of the Big Hill (BH) site and accompanying Texoma Group pipeline distribution enhancements [BH to Unocal Nederland and tie-in to the Texaco pipeline system from BH and West Hackberry (WH)], the development and subsequent leasing of an oil distribution river terminal at St. James (SJ) and accompanying pipelines to Capline Terminal and LOCAP, the construction and operation of a pipeline by Shell Pipe Line Corporation (Shell) connecting the Bayou Choctaw (BC) facility to the Placid Refinery, the construction and operation of a pipeline from the Bryan Mound (BM) facility to the Arco Terminal, the decommissioning of the Sulphur Mines (SM) and Weeks Island (WI) sites, the sale of the accompanying WI pipeline (WI to SJ) for use, the sale of the accompanying SM pipelines for salvage, the upgrade of all sites through the Life Extension (LE) project and the implementation of two oil degasification (degas) projects. These major activities have been evaluated in more recent NEPA documents. A list of EISs and Environmental Assessments (EAs) since the last SA is provided with this submittal as Attachment B, as evidence of the SPR's continuous compliance with NEPA.

The crude oil currently stored by the SPR in salt caverns along the Louisiana (LA) and Texas (TX) Gulf Coast serves to mitigate the effects of a significant oil supply interruption. Due to the location of these reserves, oil can be distributed through interstate pipelines, or transported via barge to more remote refineries. Currently, the SPR consists of four Gulf Coast underground salt dome oil storage facilities in LA and TX and a project management facility in LA. The SPR also operates a warehouse facility contained within the Stennis Space Center (Stennis). A general description of these sites is provided below.

The four active storage sites still under the control of DOE will be evaluated for NEPA compliance in the present document. The WI site was decommissioned 1995 and was

sold in 2008 and is not a part of this SA. However, SJ, which is still owned by DOE, is leased to other operators and is also not part of this SA. As well, DOE-occupied facilities which are leased from third parties such as SPR Headquarters in New Orleans and the Stennis warehouse will not be addressed in this document as these sites are not DOE-owned and are not covered by the ongoing DOE NEPA process.

The Energy Policy Act of 2005 directed DOE to expand the SPR from its current 727 million-barrel capacity to 1 billion barrels. To fulfill the requirements of the National Environmental Policy Act (NEPA) for this expansion project, DOE prepared an environmental impact statement for the *Site Selection for the Expansion of the Strategic Petroleum Reserve* (DOE/EIS- 0385). In a Record of Decision (ROD), February 22, 2007, DOE announced its selection of Richton, Mississippi, as the location of a new SPR facility as part of the expansion project.

After selecting the Richton site, DOE engaged in further consultations with the Mississippi Department of Environmental Quality, U.S. Fish and Wildlife Service, and other governmental entities. As a result of those consultations, and to reduce project impacts, DOE proposed alternative sites from those announced in the ROD for some of the ancillary facilities associated with the Richton site: the raw water intake structure, oil terminal, and brine diffuser. DOE determined that alternative locations for those ancillary facilities would present substantial changes to the proposal as analyzed in DOE/EIS-0385 that would be relevant to environmental concerns. DOE published a Notice of Intent to prepare an SEIS to analyze the impacts of potential new locations for the ancillary facilities associated with the Richton site and conducted public scoping.

On February 1, 2010, the President submitted a budget request to Congress for Fiscal Year (FY) 2011 that included no new funding to continue SPR expansion efforts and proposed cancellation of previously appropriated expansion funds. In April 2011, Congress passed, and the President signed, the Department of Defense and Full-Year Continuing Appropriations Act, 2011. Sections 1440 and 1464 of that Act rescinded all unspent balances of prior year funds that had been appropriated for SPR expansion. The President's budgets have not included funds for SPR expansion.

With prior appropriated funds rescinded, and no new funds proposed, the SPR expansion project is effectively terminated. DOE canceled the preparation of the SEIS for the ancillary facilities of the SPR expansion project at the Richton Site (DOE/EIS–0385–S1).

# III. Site Descriptions

General site information for all current SPR sites has been derived from the Site Environmental Report and is provided in the subsections below. Facilities have been described along with the applicable NEPA documentation. Site descriptions properly include the discussions of the surrounding environment as well as site location and history.

## 1. Bayou Choctaw

The SPR BC storage facility occupies 356 acres in Iberville Parish, LA. The BC salt dome was selected as a storage site early in the SPR program due to its existing brine caverns, which could be readily converted to oil storage and its proximity to commercial marine and pipeline crude oil distribution facilities. Development of the site was initiated in 1977 and operations commenced late that year. Small canals and bayous flow through the site area and join larger bodies of water off-site. The area surrounding the site is a freshwater swamp, which includes substantial stands of bottomland hardwoods with interconnecting waterways. The site proper is normally dry and protected from spring flooding by the site's flood control levees and pumps. The surrounding forest and swamp provides habitat for a diverse wildlife population, including many kinds of birds and mammals such as raccoon and deer, and reptiles including the American alligator.

## 2. Big Hill

The SPR BH storage facility covers approximately 270 acres over the BH salt dome in Jefferson County, TX. The BH storage facility is the SPR's most recent storage facility and is located close to commercial marine and pipeline crude oil distribution facilities.

Development of the site was initiated in 1982 and operations commenced in 1987. Most of the site is upland habitat, consisting of tall grass. A few 150-year-old live oak trees are present on the site. Identified bird concentrations and rookeries are located in the area of the site. No rare, threatened, or endangered species habitat has been identified in the vicinity of the BH site. Wildlife in the area includes coyote, rabbits, raccoon, and many bird species. The nearby ponds and marsh provide excellent habitat for the American alligator and over-wintering waterfowl.

## 3. Bryan Mound

The SPR BM storage facility occupies 500 acres, which almost encompasses the entire BM salt dome, in Brazoria County, TX. The BM salt dome was selected as a storage site early in the SPR program due to its existing brine caverns, which could be readily converted to oil storage, and its proximity to commercial marine and pipeline crude oil distribution facilities. Development of the site was initiated in 1977 and operations commenced in 1979. The marsh and prairie areas surrounding BM are typical of those found throughout this region of the TX Gulf Coast. Brackish marshland dominates the low-lying portions of the site. The coastal prairie is covered with tall grass forming a cover for wildlife. Water bodies surrounding the site provide a diverse ecosystem. Marshes and tidal pools are ideal habitats for a variety of birds, aquatic life, and mammals. Migratory waterfowl as well as nutria, raccoon, skunks, rattlesnakes, turtles, and frogs can be found on and in the area surrounding BM.

# 4. West Hackberry

The SPR WH storage facility covers approximately 565 acres on top of the WH salt dome in Cameron Parish, LA. The WH salt dome was also selected as a storage site early in the SPR program due to its existing brine caverns, which could be readily converted to oil storage and its proximity to commercial marine and pipeline crude oil distribution facilities. Development of the site was initiated in 1977 and operations commenced in 1979. Numerous canals and natural waterways bisect the area. The surrounding area consists of marshland with natural ridges. These ridges, called cheniers, typically support grass and trees and affect water flow through the marshes.

In many areas, lakes, bayous, and canals are interconnected so that the marsh may not seem to be a landmass, but rather a large region of small islands.

The marshlands surrounding the WH site provide excellent habitat for a variety of wetland species. Many bird species frequent the area, including southern bald eagle, Arctic peregrine falcon, brown pelicans, and waterfowl. Other inhabitants include red fox, raccoon, nutria, opossum, wolf, bobcat, rabbits, and white-tailed deer. The American alligator is extremely common, breeding and nesting in this area. The marsh also supports a variety of other reptiles, fish, shellfish, and mammals.

# 5. SPR Headquarters (New Orleans)

The project management office for SPR operations is housed in two adjacent office buildings and a nearby warehouse in Harahan, Louisiana. This facility is the main Project Management Office through which the DOE, with support of Fluor Federal Petroleum Operations, LLC (FFPO), the current Management and Operations Contractor (MOC) for the SPR, manages, operates, and maintains the crude oil reserve sites. Activities conducted at the New Orleans office complex are predominantly administrative with nearby warehouse capacity to augment project-wide equipment storage. Office space is leased, and DOE SPRPMO has an occupancy agreement with GSA for warehouse space.

# 6. Stennis Warehouse Facility

The Stennis Warehouse facility is located in Hancock County, Mississippi. The warehouse, and adjacent concrete aprons and parking lot occupy approximately 3.4 acres within the John C. Stennis Space Center. The warehouse had been leased from the U.S. Army since 2004, but has now been leased from the National Aeronautical Space Administration (NASA) since 2011. It is used to maintain and store heavy pieces of equipment and piping in support of the four storage sites. It also has office space permanently used by its tenants and, if needed, temporarily used by headquarters personnel.

# IV. National Environmental Policy Act Program Overview

DOE/SPR applies it's NEPA review process early in the planning stages for DOE/SPR proposals. Pursuant to this, DOE/SPR adopted Title 10 CFR 1021, NEPA Implementing Procedures, which requires through local DOE/SPR order, SPRPMO O 451.1D, and MOC procedure (ASI5400.15), a review of all SPR projects in the early stages to ensure that environmental impacts and requirements are adequately evaluated. This includes the review of conceptual design reports, definitive engineering scopes, statements of work, design reviews, purchase requisitions, work or service orders, and engineering change proposals (ECPs). Most SPR projects are either addressed in an existing NEPA document or they fall into the Categorical Exclusion (CX) category, which suggests that the NEPA document be a Record of NEPA Review (RONR). A RONR is required if the project's value is greater than \$150,000 (for information systems, construction contracts, and service contracts) or for any project or task that might cause significant environmental impact. For a few projects, if not addressed by a RONR, a higher level of NEPA review may be required, which will impact the planning process by triggering an EA and/or an EIS.

# V. Requirements for Supplement Analysis

In order to maintain compliance, DOE is required not only to address NEPA as part of project planning, but also to re-evaluate previously prepared EISs for validity. Section 1021.330 (d) of 10 CFR states that DOE shall, every five years, evaluate site-wide NEPA documents prepared under Sec. 1021.330 (a), (b), and (c) through the preparation of an SA. This section regulates EISs prepared for large, multiple facility DOE sites, of which the SPR has four. Title 10 further stipulates that DOE shall evaluate these site-wide NEPA documents by means of a Supplement Analysis (SA), which serves to determine whether the existing EIS and ROD rendered remains adequate, or whether DOE needs to prepare a new site-wide EIS or a supplement to the existing EIS, as appropriate. No time constraints are given for document preparation and the final determination shall be made available in appropriate DOE public reading rooms or in other appropriate location(s) for a reasonable time. Site-wide EISs and EAs must be evaluated every five years. Although the SPR does not

have any site-wide EAs for active sites, one programmatic EA was evaluated for completeness of the analysis. Due to increased reliance on inter-and intrastate pipelines to distribute oil receipts, programmatic EISs prepared for the SPR will also be evaluated in this document. Site-wide and programmatic documents are both broad in scope and cover both individual and cumulative impacts of DOE sites. Therefore, this document evaluates both site-wide and programmatic EISs and one programmatic EA.

All of the SPR sites are utilized for the same purpose, oil storage and/or distribution; accordingly, two criteria have been identified to properly assess their current state relative to NEPA compliance with the existing EISs and EAs. The criteria were selected based on interpretation of DOE's NEPA policies, SPR history and the best professional judgment of the M&O Contractor's environmental staff. These are:

- Operational and engineering (O&E) modifications including process changes and capacity; and
- Regulatory amendments and enactments including but not limited to state and Federal Statutes and Regulations, Federal Executive Orders (EOs), agency guidance, amendments to 10 or 40 CFR, etc.

According to the US Supreme Court in their decision, Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 109 S.Ct. 1851 (1989) (companion case to Robertson v. Methow Valley Citizens Council), O&E modifications must be reviewed as an agency has a duty to continue reviewing environmental effects of a proposed action even after its initial approval. Although modifications may have triggered previous NEPA reviews throughout the life of the project, periodic re-evaluation is required for a definitive conclusion concerning NEPA compliance. Periodic evaluation such as is provided by this SA is especially important to document NEPA compliance relative to potential cumulative impacts of multiple minor changes at each site and within the SPR project.

Likewise, as NEPA directly and indirectly interacts with various state and Federal environmental statutes and regulations, these need to be considered when performing

an environmental analysis. CEQ regulations at Sec.1502.25(b) direct Federal agencies to integrate NEPA analysis with any other applicable environmental analyses, related surveys, and studies.

Finally, CEQ regulations section 1508.14 calling for the implementation of NEPA states that the "human environment" is to be interpreted comprehensively to include the natural and physical environment and the relationship of people with the environment. Effects to be interpreted include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, and health, whether direct, indirect, or cumulative.

# VI. SPR 2004 & 2009 Supplement Analyses (SA)

In 2004, the SPR completed its first SA of Site-Specific and Programmatic Environmental Impact Statements: O&E Modifications, Regulatory Review and Socioeconomic Variations for the entire SPR. The SPR completed the second SA in 2009. Both the 2004 SPR SA (DOE/SPR/EIS-0075-SA01) and the 2009 SPR SA (DOE/SPR/EIS-0075-SA02) will be used as the starting point for data collection, verification, evaluation, and analysis in the 2014 SPR SA.

# 1. Operational and Engineering Modifications

As part of the 2004 and 2009 SPR SAs, a detailed checklist and question and answer forms were created as a part of the O&E modifications data collection. These forms and checklists were sent out to various M&O contractor staff asking them to mark up any changes since 2004 and 2009. The responses revealed no changes since the last SA that had not already undergone a NEPA review.

## 2. Regulatory Review

A list of Federal statutes, regulations, and EOs applicable to the SPR with potential NEPA relevance is provided as Attachment E of this document. It also contains

reference to laws and regulations from the two states with SPR sites located within their borders, Louisiana and Texas.

As a part of the compliance and regulatory review process of the M&O Environmental Compliance Specialist with the assistance of the M&O Environmental Department, a review of all changes to applicable Federal, state, and local laws, rules, and regulations is conducted monthly. This review utilizes a web based service that provides a list of changes published in the Federal Register and the State Registers of Louisiana and Texas that may be applicable to the SPR via e-mail. The results of these reviews are published quarterly in the ES&H Standards List and maintained electronically in the SPR document control system. Therefore, to conserve space in this SA, the entire list is not included, but may be provided upon any request.

### VII. Socioeconomic Variations

A review of the basic changes of the socioeconomic conditions in the locations of the SPR sites in Louisiana and Texas was performed using the 2010 Decennial Census data. The occurrence of several hurricanes during the years under review by this SA had significant impacts in the areas of the SPR sites. The presence of the SPR had minimal impacts on the area when compared to these weather events. Also, due to the slow dynamics of socioeconomic variations, this Supplement Analysis is considering the conclusions reported in the first SPR Site-Wide and Programmatic SA in 2004 to remain valid and true. Therefore, no further analysis is deemed necessary.

# VIII. Data Verification

All data collected was reviewed by SPR staff prior to publication. Subject matter experts were consulted to verify the data for accuracy and completeness.

# IX. Data Evaluation and Analysis for Significance

Each SPR site is unique relative to its surrounding environment, its particular environmental challenges and regulations, its storage capacity, historical uses, current operations and future potential in support of the SPR's mission. Thus, it is clear that each unique site requires site-specific determination of the potential need

for preparation of a new EIS or SEIS. As well, the cumulative impacts of program-wide trends must also be evaluated for conclusion regarding the validity of the RODs issued for existing EISs and FONSIs for existing EAs.

#### 1. Data Evaluation

An evaluation of data establishing a deviation from that assessed in the 2004 and 2009 SPR SAs was conducted for each site to determine NEPA significance. This was accomplished utilizing a multifunctional checklist format that was developed and utilized for the recordation of all necessary data as well as evaluation of each site and the SPR program as a whole. The use of checklists for the analysis of data and, especially, for the evaluation of potential cumulative effects is recommended in CEQ guidance (CEQ, 1997). All analysis was documented by site and for the SPR program as a whole in these checklists. Each checklist provides the reviewer with:

- A record of previously evaluated data, data regarding modifications, regulatory information and socioeconomic data;
- A side-by-side comparison of previously evaluated data and data regarding modifications;
- Assessment of each line item of data regarding its effects at the site and programmatic levels
- Substantiation of the thorough evaluation of each line item of data including rationale and documentation of sources of data and RONR, where appropriate;
- The basis for further assessment or lack thereof; and
- The final determination of significance relative to NEPA and the need to prepare a new EIS or SEIS, if necessary. These checklists have been provided as Attachment F. Evaluation was based on analysis in accordance with the criteria for significance set forth by the CEQ and best professional judgment.

Evaluation proceeded against the baseline set forth in the 2004 SPR SA and subsequent 2009 SPR SA. Current site data that indicated a change from the 2004 and 2009 site data was documented in the checklist and further inquiry into each site's circumstance was conducted for a RONR such as a CX or a finding that the change did not meet the criteria to trigger NEPA review. Any item that was not

associated with documentation of a NEPA review was considered as having the potential for significance relative to the need for preparation of a new EIS or SEIS.

## 2. Analysis for Significance

To accommodate this last level of review, specifications that would designate the change represented by the data applicable to either the site or to the SPR program as significant relative to NEPA and potentially providing a potential basis for the need to prepare a new EIS or SEIS were identified. Determination of significance under the CEQ guidelines is a function of both the context and intensity (40 CFR 1508.27) of the effects of the modifications and is dependent on best professional judgment. In support of this SA, the determination of significance was focused on eight of the ten criteria identified in the CEQ guidelines as indicative of the potential intensity of the modification relative to significance. These specifications are:

- The degree to which the proposed action affects public health or safety;
- The degree to which the effects on the quality of the human environment are likely to be highly controversial;
- The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks;
- The degree to which the action may establish a precedent for future actions
  with significant effects or represents a decision in principle about a future
  consideration;
- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts;
- The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources;

- The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973; and
- Whether the action threatens a violation of Federal, state, or local law or requirements imposed for the protection of the environment. [40 CFR §1508.27(b)]

The following two additional criteria under the CEQ guidelines were addressed in the initial evaluation for each area of analysis and are not applicable for the purpose of this SA:

- The potential for significant impacts to be beneficial
- The potential for significant effects to result from the unique geographic areas in which the sites are located.

Throughout the initial evaluation, effects of modifications were assessed for potential adverse and beneficial effects as well, in the regulatory review, the potential for effects due to unique geographic areas was specifically assessed relative to the applicable state and Federal regulations and statutes and Federal EOs. Thus, following the initial evaluations, a final determination of significance was based on context [40 CFR 1508.27(a)], the above indicated eight intensity specifications suggested in the available CEQ guidance at 40 CFR 1508.27(b) and best professional judgment.

Here, the determination of significance ultimately bears on the validity of the current NEPA documents and their associated RODs. CEQ guidance states that terming an action temporary or by proceeding in phases cannot defeat the significance of the overall action (CEQ NEPAnet). Thus, the significance of data relative to compelling the need to prepare a new EIS or SEIS hinges on the context in which the magnitude and potential effects of deviations/modifications from previously evaluated operations, activities, and effects are addressed, i.e., in the original EISs, any subsequent applicable EISs, any subsequent EAs, CXs, etc. Moreover, the potential cumulative effects and impacts of the various modifications at each site were considered during the evaluation process as required by NEPA. The programmatic checklist specifically

addresses program-wide trends/modifications and any potential cumulative effects. Cumulative effects were also considered in analysis of modifications of each site.

# X. Operational and Engineering Modification Characterization

Changes evaluated and considered in the preparation of this Supplement Analysis (SA) are from the time period following the preparation of the Supplement Analysis of Site-Specific and Programmatic Environmental Impact Statements: Operational and Engineering Modifications, Regulatory Review, and Socioeconomic Variation (DOE/SPR/EIS-0075-SA02). The SA02 time period covers calendar years 2009 through 2013. As in the previous SA, checklists were sent to the sites asking for their input on changes at each active site. With no changes reported that differ from the two previous SAs, no checklists are attached to this SA.

# 1. Site Specific Modifications

#### i. Bayou Choctaw

Based on the response from the site and a review of the Categorical Exclusions (CX) performed for the site during the time period and the expansion EIS/ROD, the following changes occurred at BC.

#### a. Operational and Engineering Modifications

From the review of the CXs and the expansion EIS/ROD that have been approved and may or may not have been completed:

- Install Subcontractor Building
- Install Blast Resistant Building
- Install Power Metering for Site Buildings
- Acquire Cavern 102 and bring up to SPR specifications to replace Cavern 20
- Decommission Cavern 20

#### b. Capacity

No changes in capacity were considered during the last five years.

#### ii. Big Hill

Based on the response from the site and a review of the Categorical Exclusions (CX) performed for the site during the time period, the following changes occurred at BH.

#### a. Operational and Engineering Modifications

From the review of the CXs that have been approved and may or may not have been completed:

- Install Refrigerated Oil Sample Storage Facility
- Fence Extension Modifications
- Install Power Metering for Site Buildings

#### b. Capacity

No changes in capacity were considered during the last five years.

#### iii. Bryan Mound

Based on the response from the site and a review of the Categorical Exclusions (CX) performed for the site during the time period, the following changes occurred at BM.

#### a. Operational and Engineering Modifications

From the review of the CXs that have been approved and may or may not have been completed:

Install Power Metering for Site Buildings

#### b. Capacity

No changes in capacity were considered during the last five years.

### iv. West Hackberry

Based on the response from the site and a review of the Categorical Exclusions (CX) performed for the site during the time period, the following changes occurred at WH.

#### a. Operational and Engineering Modifications

From the review of the CXs that have been approved and may or may not have been completed:

• Install Power Metering for Site Buildings

#### b. Capacity

No changes in capacity were considered during the last five years.

# 2. Programmatic Modifications

During the time period for this SA, there were no programmatic changes conducted at any of the sites of the SPR. Therefore, this section is not being included in this SA.

#### 3. Conclusion

Assessment of the current O&E characteristics of the SPR sites and the SPR as a program indicated that the configuration remains within the scope of impacts evaluated under the original site-wide and programmatic and supplemental EISs or site-specific EAs, or subsequent RONR such as a CX.

Assessment of the current capacity of the SPR sites and the SPR as a program indicated that the current inventory is below the NEPA-final capacity addressed in the original site-wide and programmatic and supplemental EISs and site-specific EAs, except for BM which is at capacity.

# XI. Regulatory Review and Characterization

The M&O environmental compliance specialist (now pollution prevention specialist) with the assistance of the staff of the M&O Environmental and Sustainability Department reviewed the regulatory review section of the 2009 SA for the SPR and noted any changes in regulations on all levels of government for consideration. Attachment D contains a list of the major environmental laws and other requirements applicable to the SPR including 2 new Executive Orders dealing with sustainability.

# 4. State and Federal Statues and Regulations

In Attachment E, changes in state and federal statutes and regulations are mentioned. They were analyzed for their potential impact on the SPR. Only major changes will be discussed in this section.

# i. Site Specific Applicability

No major changes occurred on the site specific level. Therefore, no additional review was performed.

# ii. Programmatic Applicability

During the time period for this review, a second sustainability-related executive order, EO 13514 (Federal Leadership in Environmental, Energy, and Economic Performance) was enacted and complements the earlier sustainability requirements of Executive Order (EO) 13423 (Strengthening Federal Environmental, Energy, and Transportation

Management). The requirements of both EO's are interrelated, and the SPR was tasked with implementing them across the project. Similar to EO 13423, the MOC under the supervision of the SPRPMO, prepared an implementation/execution plan for EO 13514, and the elements of both plans have been combined and cover sustainability-related activities from 2008 to FY 2020.

The following are the nine major sustainability areas with goals:

- Greenhouse gas (Scope 1, 2, and 3) reduction and comprehensive greenhouse gas inventory
- High-performance sustainable buildings and regional and local planning
- Fleet management
- Water use efficiency and management
- Pollution prevention and waste reduction
- Sustainable acquisition
- Electronic stewardship and data centers
- Renewable energy
- Climate change adaptation

The SPR has developed management programs, where applicable and to the extent practicable, to fulfill the goals.

# XII. Summary, Conclusions, and Recommendations

A complete review of the SPR site configurations, O&E modifications and capacities, the state and Federal regulatory environment, and socioeconomic impacts initiated further evaluation of each site for particular issues as discussed above. It was ultimately determined that O&E modifications and site capacities, while different, were not significant under the CEQ criteria. As well, it was ultimately determined that the SPR sites not only operated within the state and Federal regulations and statutes, but, despite having been developed some thirty years ago, had achieved environmental excellence. Relative to potential socioeconomic impacts, due to the slow dynamics of socioeconomic variations, this Supplement Analysis is considering the conclusions

reported in the first SPR Site-Wide and Programmatic SA in 2004 to remain valid and true. Therefore, no further analysis is deemed necessary.

The review as conducted resulted in a determination that the SPR currently operates within the scope of potential impacts evaluated in the original and supplemental EISs and EAs and that the RODs resulting from these are still valid and applicable to SPR operations. No further assessment is necessary and preparation of a new EIS or SEIS is not recommended. However, based on the EIS and ROD (DOE/EIS-0385 Site Selection for the Expansion of the Strategic Petroleum Reserve Final Environmental Impact Statement February 2008) and subsequent cancelation, the oil storage capacities were updated and a revised NEPA-Final Capacity Chart has been prepared and is provided in Attachment E.

# **List of Preparers**

Gabriel Adams, REM, Fluor Federal Petroleum Operations, LLC, under the direction of Louis Wesley, Fluor Federal Petroleum Operations, LLC, Environmental Programs Lead, James E. Leemann, Ph.D., Fluor Federal Petroleum Operations, LLC, Environmental Director, and Rudy Moraga, Fluor Federal Petroleum Operations, LLC, Assistant Project Manager, Environmental, Safety and Health

#### ATTACHMENT A: LIST OF ACRONYMS

APD - Air Permits Division

Bbls - Barrels

BC - Bayou Choctaw

BH - Big Hill

BM - Bryan Mound

CEQ- Council for Environmental Quality

CFR - Code of Federal Regulations

CUP - Coastal Use Permit

CX - Categorical Exclusion

CZMA – Coastal Zone Management Act

CZMP - Coastal Zone Management Plan

Degas - oil degasification

DES - Draft Environmental Statement

DOE – Department of Energy

E&C - Engineering and Construction

EA – Environmental Assessment

ECPs - Engineering Change Proposals

EEZ - Exclusive Economic Zone

EFH - Essential Fish Habitat

EIS - Environmental Impact Statement

EMS - Environmental Management System

EO - Executive Order

EPA – Environmental Protection Agency

ES&H - Environmental Safety and Health

ESA - Endangered Species Act

ESR - Early Storage Reserve

F&WS - Fish and Wildlife Service

FEA – Federal Energy Administration

FES - Final Environmental Statement

FMP - Fisheries Management Plan

FONSI - Finding of No Significant Impact

GOM - Gulf of Mexico

ICF – ICF Consulting

ISO - International Organization for Standardization

LA – Louisiana

LAC - Louisiana Administrative Code

LAELP - Louisiana Environmental Leadership program

LCRP - Louisiana Coastal Resources Program

LE - Life Extension

μg - Micrograms

M<sup>3</sup> – Cubic Meters

M&O - Management and Operations

MMB - Million Barrels

MOC - Management and Operations Contractor

MS - Mississippi

NEPA - National Environmental Policy Act

nmi – nautical mile(s)

NOAA - National Oceanic and Atmospheric Administration

O&E - Operations and Engineering

OPA – Oil Pollution Act

OSHA - Occupational Safety and Health Administration

P-Track – Performance Track Program

P2 – Pollution Prevention

PTSA - Port and Tanker Safety Act

RCRA - Resource Conservation and Recovery Act

RCT - Railroad Commission of Texas

ROD - Record of Decision

RONR - Record of NEPA Review

RWIS - Raw Water Intake Structure

SA – Supplement Analysis

SDWA - Safe Drinking Water Act

SEIS - Supplemental EIS

Shell - Shell Pipeline Company

SIA - Socioeconomic Impact Assessment

SM - Sulphur Mines

SME – Subject Matter Expert

SPR - Strategic Petroleum Reserve

SPRPMO - Strategic Petroleum Reserve Project Management Office

SJ - Oil Distribution River Terminal at St. James, LA

SWAP - Source Water Assessment Program

TAC - Texas Administrative Code

TCEQ – Texas Commission on Environmental Quality, formerly TNRCC – Texas Natural Resources Conservation Commission

TX - Texas

UIC - Underground Injection Control

URL - Uniform Resource Locator

USACE - U.S. Army Corps of Engineers

USCG - U.S. Coast Guard

VPP - Voluntary Participation Program

VTSS - Vessel Traffic Service/Separation

WH - West Hackberry

WI - Weeks Island

ATTACHMENT B: EIS/EA SUMMARY

	Strategic Petroleum Reserve EIS/EA Summary (CY 2009 through CY 2013)										
		Public		Sites			Associat Docu	Outsin al			
Type of Document	Document Title	Record Number	Date Of Completion	Addressed/ Affected	Scope of Document	Document Summary	Document Number	Document Type	Original in Library		
	Supplement Analysis of Site- Specific and Programmatic Environmental Impact Statements: Operational and Engineering Modifications, Regulatory Review, and Socioeconomic	EIS-0075-	September-	Entire Strategic Petroleum Reserve	Direct and indirect environmental, socioeconomic and ecological impacts, resource commitment, alternatives, and						

Notes:

SA

Variation

EA = Environmental Assessment SA = Supplement Analysis NA = Not Applicable EIS = Environmental Impact Statement SEIS = Supplemental Environmental Impact Statement

Complex

09

SA02

secondary impacts

EIS-0075

EIS

Yes

Page **27** of **36** DOE/SPR/EIS-0075-SA03

ATTACHMENT C: REFERENCES

#### References

# Applicable Department of Energy and Strategic Petroleum Reserve NEPA documentation

Records of NEPA Review can be found in the Strategic Petroleum Reserve Electronic Library and/or Project Files.

- FEA FES 76/77-6 Final Supplement to Final Environmental Impact Statement, Strategic Petroleum Reserve, Bryan Mound Salt Dome, Brazoria County, Texas
- FEA-DES-77-6 Final Statement to Final Environmental Impact Statement Strategic Petroleum Reserve, Sulphur Mines
- FEA-DES-77-10 and FEA-FES-76/77-6 Final Environmental Impact Statement Strategic Petroleum Reserve, Seaway Group Salt Domes (Bryan Mound expansion, Allen, Nash, Damon Mound, and West Columbia) Brazoria County, Texas, Volumes I-III
- FEA-DES-77-9 Final Environmental Impact Statement Strategic Petroleum Reserve, Capline Group Salt Domes (Iberia, Napoleonville, Weeks Island Expansion, Bayou Choctaw Expansion, Chacahoula) Iberia, Iberville, and Lafourche parishes, Louisiana Volumes I-IV
- FEA-DES-77-8 Final Environmental Impact Statement Strategic Petroleum Reserve, Texoma Group Salt Domes (West Hackberry Expansion, Black Bayou, Vinton, Big Hill) Cameron and Calcasieu parishes, Louisiana and Jefferson County, Texas Volumes I-V
- FEA-FES-76-2 Final Supplement to Final Environmental Impact Statement, Strategic Petroleum Reserve, Expansion of Reserve
- DOE/EIS-0021, 0029 Draft Supplement to Final Environmental Impact Statements, Strategic Petroleum Reserve, Phase III Development Texoma and Seaway Group Salt Domes (West Hackberry and Bryan Mound Expansion, Big Hill Development) Cameron Parish, Louisiana and Brazoria and Jefferson Counties, Texas
- DOE/EIS-0021, 0029 Final Supplement to Final Environmental Impact Statements, Strategic Petroleum Reserve, Phase III Development Texoma and Seaway Group Salt Domes (West Hackberry and Bryan Mound Expansion, Big Hill Development) Cameron Parish, Louisiana and Brazoria and Jefferson Counties, Texas
- PB 261 799, PB 261 700, DOE/EIS-0034, FEA/S-76/502, FEA/S-76/503 Draft Environmental Impact Statement on the Expansion of the Strategic Petroleum Reserve, Alabama, Louisiana, Mississippi, and Texas

- FES 76-2 Final Environmental Impact Statement Volumes I III
- PB 257 506/ FES 76-5 Final Environmental Impact Statement for Bayou Choctaw Salt Dome
- FES 76/77-6 Final Environmental Statement on the Bryan Mound Salt Dome
- FES 76/77-8 Final Environmental Impact Statement for Weeks Island Mine
- FEA 76/77-4 Supplement Final Environmental Impact Statement West Hackberry Salt Dome
- FES 76-5 Supplement to Final Environmental Impact Statement for Bayou Choctaw Salt Dome
- FES 76/77-10 Final Environmental Impact Statement for Ironton Mine
- FES 76/77-9 Final Environmental Impact Statement for Central Rock Mine
- FEA 76/77-7 and FES 76/77-8 Supplement to Final Environmental Impact Statements for Weeks Island/Cote Blanche Mines
- FES 77-2 Final Environmental Impact Statement for Kleer Mine
- FES 76-5 Strategic Petroleum Reserve. Final Environmental Impact Statement. West Hackberry Salt Dome
- PB 263 051 Strategic Petroleum Reserve. Statement for Cote Blanche Mine
- Preliminary Draft- September 1991 Draft Environmental Impact Statement on the Expansion of the Strategic Petroleum Reserve
- DOE/EA-0151 Environmental Assessment for Decommissioning the Strategic Petroleum Reserve Weeks Island Facility, Iberia Parish, Louisiana
- DOE/REA-0252 Environmental Assessment, Strategic Petroleum Reserve, Seaway Complex Distribution Enhancements, Brazoria, Galveston, and Brazoria Counties, Texas
- DOE/EA-0252 Revised Environmental Assessment Strategic Petroleum Reserve Seaway Complex Distribution Enhancements, Brazoria, Galveston, and Harris Counties, Texas
- DOE/EA-0272 Environmental Assessment, Strategic Petroleum Reserve, Texoma Complex Distribution Enhancements, Orange and Jefferson Counties, Texas and Calcasieu and Cameron Parishes, Louisiana
- DOE/EA-0299 Revised Environmental Assessment, Strategic Petroleum Reserve, Seaway Complex Distribution Enhancements, Brazoria, Galveston, and Harris Counties, Texas

- DOE/EA-0401 Environmental Assessment Strategic Petroleum Reserve Sulphur Mines Decommissioning and Big Hill Expansion, Calcasieu Parish, Louisiana and Jefferson County, Texas
- DOE/EA-0804 Environmental Assessment of the Brine Pipeline Replacement for the Strategic Petroleum Reserve Bryan Mound Facility in Brazoria County, Texas
- DOE/EA-0954 Environmental Assessment of Oil Degasification at Four Strategic Petroleum Reserve Facilities in Texas and Louisiana
- DOE/EA-1003 Environmental Assessment on the Leasing of the Strategic Petroleum Reserve St. James Terminal, St. James Parish, Louisiana
- DOE/EA-1251 Environmental Assessment of Bayou Choctaw Pipeline Extension to Placid Refinery, Iberville and West Baton Rouge Parishes, Louisiana
- DOE/EA-1254 Environmental Assessment of Bayou Choctaw Pipeline Extension to Placid Refinery, Iberville and West Baton Rouge Parishes, Louisiana
- DOE/EA-1289 Environmental Assessment for the Strategic Petroleum Reserve, Big Hill Facility, Storage of Commercial Crude Oil Project, Jefferson County, Texas
- FE-0221P Report to the Congress on Candidate Sites for Expansion of the Strategic Petroleum Reserve to One Billion Barrels
- DOE/EA-1497 Environmental Assessment for the Strategic Petroleum Reserve: West Hackberry Facility Raw Water Intake Pipeline Replacement

#### Literature

2005 U.S. Department of Energy, Environment, Safety and Health, Office of NEPA Policy and Compliance. *Recommendations for the Supplement Analysis Process.* 

#### **Internet Resources**

Unites States Code and Code of Federal Regulations at www.cyberregs.com

The U.S. Census Bureau Website, http://www.census.gov/

U.S. Department of Energy NEPA Website, <a href="http://www.gc.energy.gov/NEPA//">http://www.gc.energy.gov/NEPA//</a>

CEQ NEPAnet, http://ceq.hss.doe.gov/nepa/nepanet.htm

Major Cases Interpreting the National Environmental Policy Act, Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 109 S.Ct. 1851 (1989) (companion case to Robertson v. Methow Valley Citizens Council), National Indian Youth Council v. Watt, 664 F.2d 220 (10th Cir. 1981), citing Concerned Citizens v. Secretary of Transportation, 641 F.2d 1, 6 (1st Cir. 1981)

ATTACHMENT D: REGULATORY REVIEW

# Laws and Associated Regulations, and Executive Orders with Potential NEPA Relevance

EAs and EISs completed under NEPA provide an umbrella for considering a wide range of potential impacts to the human and natural environment. Federal laws and the associated regulations and EOs, in general, focus on protecting a particular resource (e.g., endangered species) or a particular environmental media (e.g., air, water, drinking water). The combination of NEPA and relevant laws, regulations, and orders, ensures that Federal agencies consider the potential effects of the proposed action on environmental resources and media. As specified in DOE regulations, 10 CFR Part 1021, Sec. 1021.341, DOE is required to integrate the NEPA process and coordinate NEPA compliance with other environmental review requirements to the fullest extent possible in accordance with the CEQ regulations for implementing NEPA, 40 CFR 1500.4(k) and (o), 1502.25, and 1506.4.

The SPR operates four crude oil storage sites in TX and LA. This SA is being conducted to evaluate the SPR as called for in 10 CFR Section 1021.330 (d), that DOE shall, every five years, evaluate site-wide NEPA documents prepared under 10 CFR Section 1021.330. An SA was prepared in 2004 which covered activities through 2003. The 2004 SA evaluated all previous NEPA work on the SPR along with all laws applicable to the project. This regulatory review picks up where the previous SA stopped (2004 through 2008). Our analysis of both NEPA regulations and judicial precedents indicates that changes in laws, regulations, and executive orders will not be sufficient reason to require a Supplemental EIS.

The major laws that may have an impact on SPR operations are listed in the following pages. A primary criterion for the selection was whether the Act or EO provided a way to identify a potentially affected segment of the human population or natural environment.

For all Acts, Executive Orders, and State Laws and Regulations listed below, there have been no changes affecting the SPR since the last SA and no further actions or activities would be required by the SPR for compliance.

#### Acts

- Safe Drinking Water Act of 1974
- Port and Tanker Safety Act of 1978
- o Clean Air Act of 1963, as amended 1970 and 1990.
- o Coastal Zone Management Act of 1972
- National Marine Sanctuaries Act of 1972
- Magnuson Act of 1976, as amended Magnuson-Stevens Act of 1996
- Endangered Species Act of 1973
- o Resource Conservation and Recovery Act of 1976
- o Oil Pollution Act of 1990
- Pipeline Safety Improvement Act of 2002

#### • Executive Orders

- Executive Order 13112, Invasive Species, signed on February 3, 1999
- o Executive Order 13186, Migratory Birds, signed January 10, 2001
- Executive Order 11988, Floodplain Management, signed May 24, 1977
- Executive Order 11990, Protection Of Wetlands, signed May 24, 1977
- Executive Order 12898, Federal Actions To Address Environmental Justice In Minority Populations And Low-Income Populations, signed on February 11, 1994; and amended by Executive Order 12948, signed on January 30, 1995

# • Texas and Louisiana State Laws and Regulations

- o Texas- Clean Air Act and Coastal Zone Management
- o Louisiana- Clean Air Act and Coastal Zone Management

#### **New Executive Order**

During the time period for this review, a second sustainability-related executive order, EO 13514 (Federal Leadership in Environmental, Energy, and Economic Performance) was enacted and complements the earlier sustainability requirements of Executive Order (EO) 13423 (Strengthening Federal Environmental, Energy, and Transportation Management). The requirements of both EO's are interrelated, and the SPR was tasked with implementing them across the project. Similar to EO 13423, the MOC under the supervision of the SPRPMO, prepared an implementation/execution plan for EO 13514, and the elements of both plans have been combined and cover sustainability-related activities from 2008 to FY 2020.

# ATTACHMENT E: NEPA-FINAL STORAGE CAPACITIES

SITE	SPECIFIC NEPA DOCUMENT			TITLE/ FOOTNOTE		STORAGE ADDRESSED UNDER NEPA(MMB)		CUMULATIVE TOTAL STORAGE ADDRESSED UNDER NEPA(MMB)			
Brya	n Mound	DOE/EIS-76/77-6		1			63			63	
		DOE/EIS-0021		2			100			163	
		DOE/EIS-0075		3			60			223	
		DOE/SPR/EIS-0075-S	SA01	4			9			232	
		DOE/EA-1505		5			22			254	
_						Total	254				
Bayo	u Choctaw	FES-76-5		6			99			99	
		DOE/EIS-0024		7			51			150	
		DOE/EIS-0385		12		T-4-1	33			183	
Mod	t Hackberry	DOE/DD 262 509		0		Total	183 60			60	
VVES	Паскрепу	DOE/PB 262 508  DOE/EIS-0029		8			150	<u> </u>		210	
		DOE/EIS-0029		3			30			240	
		DOL/LI3-00/3		3		Total	240			240	
Big F	lill DOE/EIS-0029			9		Total	100			100	
Dig i	DOE/EIS-0029  DOE/EIS-0075			3			40			140	
		DOE/EA-0401		10			22			162	
		DOE/SPR/EIS-0075-S	SA01	4			8			170	
		DOE/EIS-0385		12	+		80			250	
						Total	250				
Richton*		DOE/EIS-0385		12			160			160	
SPR	CAPACITY(a)									1087	
	PROGRAMMATIC NEPA DOCUMENT			TITLE/ FOOTNOTE		STORAGE ADDRESS UNDER NEPA(MMB)	CUMULATIVE TOTAL STORAGE ADDRESSED UNDER NEPA(MMB)				
Asso	ciated Pipelines/	DOE/EIS-0075		3			2	7.221.2002		2	
31016	age ranks	DOE/EIS-0385		12			5			7	
						Total	7				
Seav	vay	DOE/EIS-0034		11			200	2			
		DOE/SPR/EIS-0075-SA01		4			32				
_		DOE/EIG 0004	DOE/FIG 0024			Total	232				
Texo	ma	DOE/EIS-0034 DOE/EIS-0385		11			350 80				
		DOE/EIS-0385		12		Total	430			430	
Capl	ine	DOE/EIS-0034		11		Total	500			500	
Сарі	iiie	DOE/EIS-0385		12			193			693	
		DOL/LIO-0303		12		Total	693			033	
SPR	CAPACITY(b)					Total	000			1362	
Note									I	1002	
NOLE		ironmental Statement	MMR =	Million Barrels	FA =	Environmental Assessme	ent	FIS = Environ	l mental Impact	I t Statement	
	DES = Draft En	vironmental Statement DEIS =				E = Department of Energy		EIS = Environmental Impact Stateme SPR = Strategic Petroleum Reserve			
	FEA = Federal E	nergy Administration				FEIS = Draft Supplement t	o a Fina	al EIS			
		nt, EIS-0165-D [Expansion									
2		ntal Statement on the Br ntal Impact Statement (F				77 of DS-FEIS, FEA-FES-76/	77-6) S	trategic Petrole	ım Reserve, S	Seaway Group	
	Salt Domes (Bry	an Mound Expansion, Al									
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