



# United States Department of the Interior

OFFICE OF THE SECRETARY  
Office of Environmental Policy and Compliance  
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Albuquerque, New Mexico 87125-6567



IN REPLY REFER TO:

July 10, 2006

File 9043.1  
ER 06/499

Mr. Donald Silaswsky  
Office of Petroleum Reserves (FE-47)  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, D.C. 20585-0301

Dear Mr. Silaswsky:

The U.S. Department of the Interior (DOI) has reviewed the Department of Energy (DOE) Draft Environmental Impact Statement (DEIS) for the Expansion of the Strategic Petroleum Reserve (SPR) at sites in Mississippi, Louisiana, and Texas. In this regard, we are submitting additional comments from the National Park Service that were not received in time to include in our letter dated July 7, 2006. In addition, comments were also submitted from Natchez Trace Parkway on June 2, 2006, independent of the DOI process. However, an examination of those comments does not indicate that they conflict with the content of either this letter or the July 7, 2006, letter.

## General Comments

A review of the alternatives revealed that effects on Gulf Islands National Seashore (GUIS) would result from the Richton expansion site only and would be associated with the construction of the outfall pipeline and brine disposal in the Gulf of Mexico. The brine is a result of solution mining in the salt dome to create Strategic Petroleum Reserve (SPR) storage caverns. Since the other alternative sites are far removed from GUIS, they appear to pose no park resource protection concerns.

The GUIS was authorized by Congress in 1971 (P.L. 91-660, 84 Stat. 1967, 16 U.S.C. 459h) "to preserve for public use and enjoyment certain areas possessing outstanding natural, historic, and recreational values." As part of the coastal barrier island system, the gulf islands are among the last surviving portions of a natural ecological continuum that once extended from Cape Cod to Mexico.

The natural resources of GUIS are, in and of themselves, highly significant. The water areas are exceptional and, in conjunction with the salt marshes, bayous, and submerged grassbeds, play a

crucial role in the economy and ecology of the entire area. The GUIs' estuarine areas serve as an important nursery for a majority of the fin and shell fish species of the greater Gulf.

Of particular significance, the Mississippi islands are among the most pristine examples of intact coastal barrier ecosystems remaining. The significance of these resources is only amplified by the loss of similar habitats in the adjacent areas through development. Open space along the coasts, accessible to the public, is at a premium.

In the Richton alternative, the DOE is considering diffused brine disposal approximately 13 miles offshore. In pursuing this disposal alternative, it appears that DOE would seek to locate the outfall pipeline across GUIs to reach waters of the Gulf of Mexico. While the Secretary of the Interior has clear authority under GUIs' enabling statute to consider allowing new rights-of-way or easements for the transport of oil and gas pipelines to cross the park, this authority may not extend to a brine/waste disposal pipeline. The pertinent GUIs enabling provision is as follows:

Any acquisition of lands, waters, or interests therein shall not diminish any existing rights-of-way or easements which are necessary for the transportation of oil and gas minerals through the seashore which oil and gas minerals are removed from outside the boundaries thereof; and, the Secretary, subject to appropriate regulations for the protection of the natural and recreational values for which the seashore is established, shall permit such additional rights-of-way or easements as he deems necessary and proper (16 U.S.C. §459h-3; P.L. 91-660 §4).

Further, an examination of 16 U.S.C. §79 regarding rights-of-way for public utilities leads us to conclude that the brine pipeline does not fit under this public utility provision.

If a right-of-way could be issued for the disposal pipeline to cross GUIs, National Park Service (NPS) permitting and consent would be necessary. This permitting would be in addition to full analysis under the National Environmental Policy Act and other statutes. Regulations found in 36 CFR Parts 9 and 14 provide standards which must be used in the determination of necessary and proper. Specifically, in order for the Secretary to grant a permit, sufficient justification must be provided to make a reasonable determination that it is necessary for this operation to pass through the boundaries of the Seashore and that the procedures utilized in construction and operation are proper, in that they provide adequate protection to the resources of the area. Most, if not all, of the natural resources and visitor use values for which GUIs was established have the potential to be adversely affected by construction of an outfall line and brine disposal in the vicinity of the seashore.

In 1978, Congress designated Horn and Petit Bois Islands as wilderness through the establishment of the Gulf Islands Wilderness Area (P.L. 95-625). The islands are managed to maintain their primeval character in accordance with the Wilderness Act of 1964 (P.L. 88-577) whose purpose is to establish an enduring and unimpaired wilderness resource, where nature predominates, for public use and enjoyment. Wilderness status places significant restraints on possible developments on or near the two islands and requires substantial measures be taken to guarantee an undisturbed, wilderness experience for visitors.

## **Specific Comments**

Specific GUIs resources that are put at risk by the proposed pipeline and brine disposal include:

### Land Use

The GUIs is not listed as a potentially affected property in the DEIS, thus no impacts were evaluated. In addition, GUIs is not listed as a Special Status Area. The DEIS Summary stated that the "proposed action will not affect the [Gulf Islands National] Seashore." Congressionally-designated areas of the NPS must be given a much higher degree of consideration and protection when considering potential impacts to park natural and cultural resources. This consideration is lacking in the DEIS.

Since a portion of the proposed disposal pipeline route passes through waters managed by GUIs, if a right-of-way could be issued for the pipeline, NPS permitting and consent would be necessary. This consent would include evaluation of the location, construction, and operation of the pipeline. The regulatory and permitting authorities of the NPS should be included in the DEIS and that the potential issuance of a right-of-way permit for the pipeline must consider the full environmental effects.

The brine disposal pipeline is proposed to traverse the pass between Horn and Petit Bois Islands. These islands were designated wilderness by Congress in 1978 and are managed to maintain their primeval character in accordance with the Wilderness Act of 1964 whose purpose is to establish an enduring and unimpaired wilderness resource, where nature predominates, for public use and enjoyment. Wilderness status places significant restraints on possible developments on or near the two islands and requires substantial measures be taken to guarantee an undisturbed, wilderness experience for visitors.

Any significant construction near these islands must consider intangible wilderness values such as visibility, night sky conditions, acoustic conditions, and solitude, which have consistently been recognized as critical components of wilderness. Potential impacts include but are not limited to: pipeline construction activities and scheduling, pipeline inspections, and aircraft use.

### Biological Resources

#### **Submerged Aquatic Vegetation/Seagrass**

The potential impacts of pipeline construction on seagrass communities have not been fully addressed. In order to assess both short- and long-term impacts, additional analysis is necessary. Up-to-date information on seagrass distribution is necessary. Recent reports show that approximately two-thirds of the seagrass beds in Mississippi Sound have disappeared since the 1970s with the remaining majority existing within GUIs. Seagrass resources are known to exist both east and west of the proposed pipeline route.

Historic trends, distribution, and composition of seagrass communities in the Mississippi Sound should be examined to determine the significance of impacts on these remaining seagrasses. The

seagrass beds near the north shore of Petit Bois Island reportedly contain the last occurrence in the Mississippi Sound of turtle grass (*Thalassia testudinum*), formally the second most abundant seagrass, and Manatee grass (*Syringodium filiforme*), once the third most abundant.

The seagrass meadows within park waters are vital nursery areas for the Gulf of Mexico. Seventy percent of recreational fisheries in the Gulf are estuarine-dependent; for commercial fisheries, this percentage is even greater. Seagrass communities are one of the most biologically diverse communities in the southeastern United States and are currently in severe decline. Certain seagrass communities have declined to approximately 20 percent of their historical coverage. Damage to the seagrass communities, therefore, could result in significant biological and economic impacts. Any impact to the seagrass communities is unacceptable.

The proposed pipeline route should be sited to avoid all seagrass. Any seagrass located within the proposed route would be directly destroyed through pipeline burial. In addition, entire seagrass communities can be adversely affected when fragmented by pipeline burial. Scars through grassbeds can take up to 10 years to recover if at all. If erosional pathways are created by dredging or vessel use, the entire grassbed could be scoured away.

The DEIS states that impacts from construction of the pipeline would include the loss of benthic communities, increased sedimentation in the surrounding area, and increased turbidity in the water column. Previous assessments have shown that suspended sediments can be transported distances greater than 1 mile and partially bury seagrasses. The current status of seagrass communities along the proposed route and within 1 mile of the route should be determined due to their potential to be affected by downstream turbidity and sedimentation.

Surface and bottom water current data should be included to define seasonal velocities and direction as well as an analysis of seasonal variations in the potential extent of turbidity plumes and sedimentation. This will assist in assessing the potential impacts as a result of the turbidity plume created by pipeline burial. It will also help determine the potential of creating a new tidal pass which could serve as a source of excess suspended matter for a protracted time.

To evaluate properly the extent of downstream turbidity and sedimentation, the effectiveness of proposed turbidity control devices needs to be determined. This information is critical in assessing the expected environmental impacts. In addition, a turbidity monitoring program should be conducted during and for a period of time following construction. The program design and time period should be determined by subject-matter experts.

### **Special Status Species**

Federally threatened/endangered sea turtle species could be adversely affected if seagrass beds, a primary feeding habitat, are directly disturbed or indirectly subjected to sedimentation and turbidity. Both the green sea turtle (*Chelonia mydas*) and the loggerhead turtle (*Caretta caretta*) are known to feed in and around grassbeds.

Adverse impacts to nesting birds on the islands, which include endangered species, could be substantial if pipeline construction and subsequent inspections took place during periods of nest site

selection, incubation, or chick rearing. Any visual or noise intrusion which causes parent birds to flush provide the possibility of nest abandonment, egg/nest overheating, or nest predation. Construction and inspection activities should be limited to non-nesting times of the year.

Gulf sturgeon (*Acipenser oxyrinchus desotoi*), a federally threatened species, have been documented as utilizing the shallow passes between the Mississippi islands for large portions of the year. Pipeline construction and inspection activities would need to be limited to times of the year that sturgeon are upriver and not utilizing the island passes.

### **Brine Disposal**

Brine disposal from the Richton, Mississippi site is estimated to be 1,280,000,000 barrels (53,760,000,000 gallons) of hypersaline water. Brine disposal will be at an average rate of 1.2 million barrels per day over a 3-to-4 year period. The brine plume is expected to cover an area of 19.5 square nautical miles. The disposal site is proposed to be located approximately 1.5 miles south of the park boundary in the Gulf of Mexico. The brine will have a salt content of 263 parts per thousand (ppt) and be disposed of in seawater with a salt content of 35 ppt resulting in an increase of ambient salinity. In addition, the introduction of metals and other inorganic contaminants is highly possible.

Localized impacts from the brine disposal could be significant with a disproportionate impact on benthic communities. According to the DEIS, studies have shown significant reductions in benthic biomass almost 7,000 feet from the brine diffusers. Depending on currents and tidal movement, the brine plume could easily be transported into GUIIS waters and to GUIIS seagrass resources with resultant adverse impacts. A significant loss of benthic organisms represents a significant loss of prey food for the Gulf fisheries.

Although the DEIS states this impact will be negligible given the overall area of the Gulf, that may not be the case. The brine plume will most likely affect the shallow water areas of the Gulf and not be carried into deeper waters. It is the shallow water areas that are most productive and serve as the vital nursery areas. Assessing the level of impact to these important and productive nursery areas by using the entire area of the Gulf, much of which is extremely under-productive, is misleading. Given the location of the brine disposal site, localized impacts to GUIIS benthic and seagrass resources could be significant.

### **Wetlands, Water Quality, etc.**

The DEIS states in numerous places that analysis of impacts to certain biological resources would not be covered in the DEIS because additional assessments are required under Sections 401 and 404 of the Clean Water Act and several Executive Orders. A statement from DOE that it plans to obtain the necessary permits is not adequate to stipulate that sufficient analysis has been conducted. In order to evaluate this proposal fully, detailed information pertaining to these resources must be made available. Until these additional assessments are completed, a full evaluation of the DEIS is not possible.

We appreciate the opportunity to comment on the DEIS. We trust these comments will be useful as you prepare the final documentation.

Sincerely,

Stephen R. Spencer, Ph.D.  
Regional Environmental Officer