



Strategic Petroleum Reserve



EXISTING FACILITIES

- Four Gulf Coast Oil Storage Sites
- Storage Capacity: 727 Million Barrels
- Current Inventory: 701.0 Million Barrels
- Drawdown Capability: 4.4 Million Barrels/Day



Richton Site

TEXAS FACILITIES

LOUISIANA FACILITIES



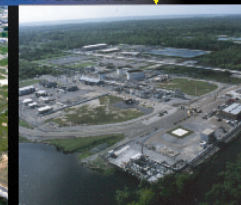
Bryan Mound



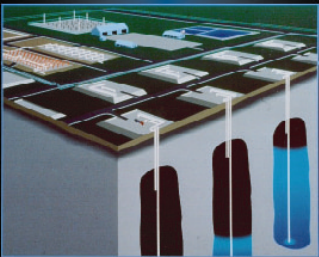
Big Hill



West Hackberry



Bayou Choctaw



Salt Dome Storage

- Proven Storage Technology
- Underground Storage (hidden from sight)
- Oil Does Not Dissolve Salt
- Easy to Get In and Out
- No Evaporation or Air Emissions
- Most Economical Method of Storage
- Utmost Safety and Security for Oil

Strategic Petroleum Reserve

- Established by Congress in 1975
- U.S. Emergency Stockpile of Petroleum
- Mission of Providing Economy & Energy Security
- America Insurance Against Oil Disruption

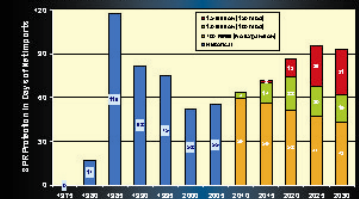
Mission of U.S. Energy Security

- To Protect the U.S. from Future Disruptions in Critical Oil Supplies
- To Meet U.S. Stockholding Requirement under the International Energy Program (IEP) - 90 Days

SPR Expansion Program

- Required by Energy Policy Act of 2005
- Address U.S. Needs of Additional Energy Security
- DOE Goal to Restore 90 Days of Import Protection

SPR Days of Imports Protection



Richton Salt Dome Selected for SPR Expansion

- Located in Perry County, MS
- 160 Million Barrels of Crude Oil
- Underground Storage in 16 Caverns
- Pipeline Connections to Pascagoula and Major Interstate Pipeline for Emergency Oil Distribution
- Pipeline to Gulf for Offshore Brine Disposal
- New Marine Facility in Pascagoula, MS
- New Pipeline Injection Facility at Liberty, MS





Strategic Petroleum Reserve



2006 ENVIRONMENTAL IMPACT STATEMENT

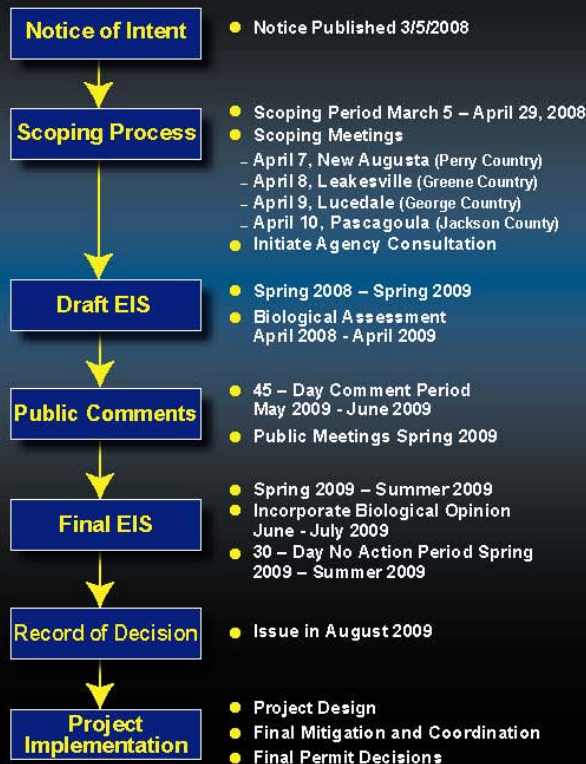
Purpose and Need
Energy Policy Act (2005) Required DOE to Expand to 1 Billion Barrels of Capacity

Record of Decision
DOE Secretary Signed
February 14, 2007

EIS Proposed Richton Site

- Large, undeveloped salt dome
- Inland location reducing potential hurricane impacts
- Enhancement of current oil distribution capabilities:
 - Provides oil distribution to the Capline pipeline system
 - Provides oil distribution to Pascagoula refining center.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS



SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

- **Water Intake Structure**
 - Move to location with greater water availability
 - Pascagoula River near Merrill
- **Terminal**
 - Relocate to Bayou Casotte Harbor
- **Brine Disposal**
 - Use existing underwater right-of-way from Bayou Casotte
 - Diffuser approximately 1.2 miles west of proposed location





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WATER SUPPLY NEEDS AND IMPACTS

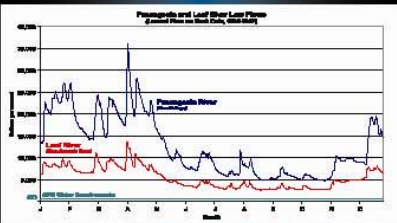
WATER SUPPLY NEEDS

Significant Water is needed for 5 YEARS to develop oil storage caverns.

Original EIS proposed use of Leaf River.

Supplemental EIS proposes use of Pascagoula River:

- ▶ Greater water availability
- ▶ Lessen potential impacts to Endangered Species
- ▶ Reduces water curtailment concerns
- ▶ Possibility of supplemental water from Okatibbee Reservoir to offset water withdrawal



IMPACTS ON PASCAGOULA RIVER

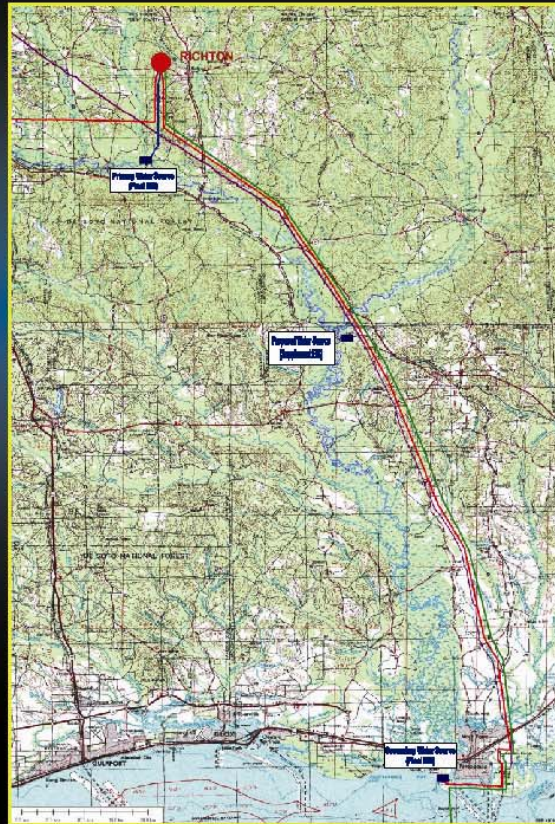
- ▶ River levels range from ABOUT 14-feet to 2-feet at Merrill
- ▶ SPR water withdrawal impact - ABOUT 1-inch
- ▶ SPR water withdrawal supplemented and/or curtailed in low flow conditions based on permit

IMPACT ON PASCAGOULA RIVER

	River Flow (Gal/Sec)	SPR Intake (Gal/Sec)	Percent
Peak Flow	712,145	583	0.08%
Mean Daily Flow	66,816	583	0.88%
State Regulatory Limit	6,869	583	8.51%

* Data Source USGS

WATER SUPPLY SOURCES AND LOCATIONS



WATER INTAKE DESIGN AND PROTECTION

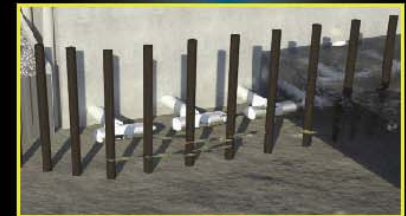
WATER INTAKE DESIGN

- ▶ Water Intake is simple and non-intrusive
- ▶ Water intake does not interfere with flow or fishing
- ▶ Water withdrawal would be regulated by USFWS and MDEQ permits



PROTECTION OF ENDANGERED SPECIES

- ▶ Endangered species: Gulf Sturgeon, Pearl Darter and Yellow-Blotched Map Turtle
- ▶ Comprehensive Biological Assessment will be conducted during Supplemental EIS
- ▶ Intake would utilize submerged T-screens designed to protect the endangered species





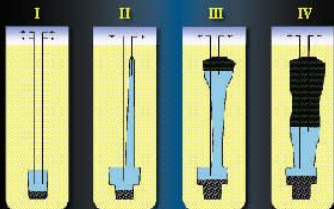
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BRINE DISPOSAL NEEDS AND IMPACTS

BRINE DISPOSAL NEEDS

- ▶ Solution mining of caverns in salt produces large volumes of salt water (or brine) – 7:1 ratio
- ▶ Volumes generated are too great for desalination or deep well injection
- ▶ Offshore Brine Disposal has been safely and effectively used for over 30 years



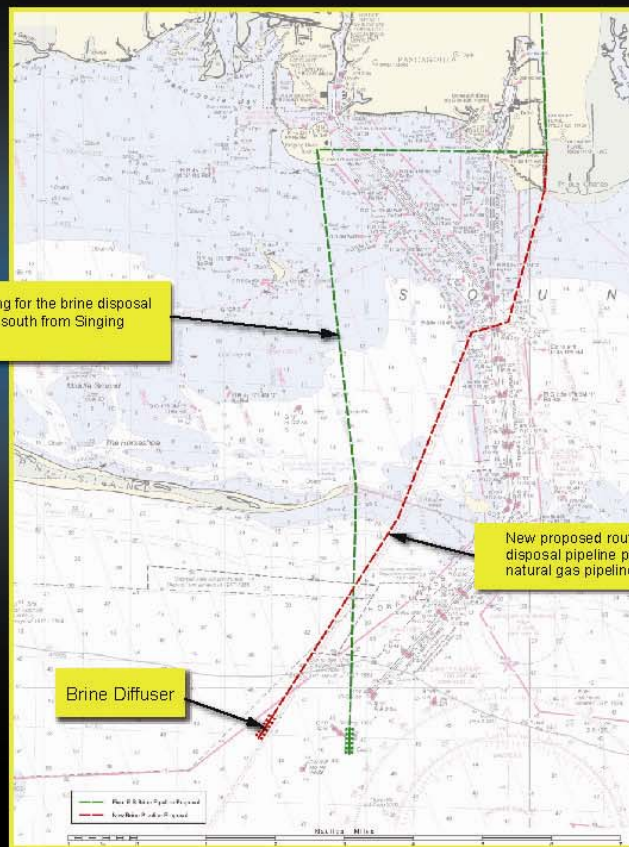
IMPACTS OF OFFSHORE DISPOSAL

- ▶ SPR brine is common salt water with a higher purity and concentration than in the Gulf
- ▶ SPR brine discharge diffuses very rapidly to the Gulf salinity levels (25-31 ppt)
- ▶ Brine disposal would not impact Gulf Island National Seashore

PROVEN TO BE ENVIRONMENTALLY SAFE

- ▶ Prior Studies conducted by Texas A&M and McNeese State University have shown there are no adverse impacts from Offshore Brine Disposal
- ▶ Fish are highly mobile and easily swim away when running into areas of increased salinity
- ▶ Marine species tolerate salinity variations

PROPOSED BRINE (SALT WATER) OFFSHORE DISPOSAL LOCATIONS



Original routing for the brine disposal pipeline went south from Singing River Island

New proposed routing for the brine disposal pipeline parallels 2 existing natural gas pipelines

Brine Diffuser

BRINE PIPELINE DESIGN AND PROTECTION

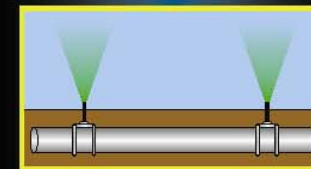
BRINE DISPOSAL PIPELINE

- ▶ Onshore pipeline – 48-inch, 80 miles
- ▶ Offshore pipeline – 48-inch, 13 miles
- ▶ Pipelines constructed on seamless steel pipe with 0.5 in wall thickness
- ▶ Pipelines coated for EXTRA corrosion protection
- ▶ Scheduled Brine Line Integrity Testing



OFFSHORE BRINE DIFFUSER

- ▶ Brine is spread by a "Diffuser" to accelerate dilution or mixing
- ▶ Diffuser is 13 miles offshore, 6 miles beyond Gulf Islands National Seashore in 45-ft of water
- ▶ Diffuser is 4500 feet long with 75 exit ports, 60-ft apart
- ▶ Diffuser nozzles are flexible rubber hoses





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ORIGINAL EIS PROPOSED LOCATION

Pascagoula Naval Station Base on Singing River Island – BRAC Closure in June 2007



WHY PROPOSING RELOCATION?

- Port's Economic Development Plans for Singing River Island
- Not Collocated with Pascagoula Oil Infrastructure Facilities
- Pascagoula Channel Depth Limitation
- Island Stabilization and Hurricane Vulnerabilities Issues

PORT OF PASCAGOULA SPR MARINE TERMINAL LOCATIONS



SUPPLEMENTAL EIS PROPOSED ALTERNATIVES

- Alt "A" – South Greenwood Island
- Alt "B" – East Bank Bayou Casotte





Strategic Petroleum Reserve

Our Mission is to provide America with Energy Security in an **Environmentally Safe and Sound Manner**

ENVIRONMENTAL ADVISORY COMMITTEE

- Provides independent assessments, evaluations and advice to the SPR
- 9 - member committee:
 - 3 environmental experts
 - 3 community representatives
 - 3 technical experts
- Will add representation from Mississippi

REGULATORY AGENCIES

Federal

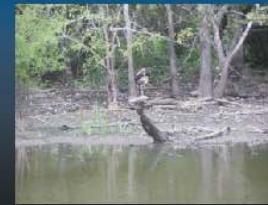
- U. S. Coast Guard
- Environmental Protection Agency
- U. S. Department of Transportation
- U. S. Army Corps of Engineers
- U. S. Fish and Wildlife Service

Mississippi

- Mississippi Department of Marine Resources
- Mississippi Department of Environmental Quality
- Mississippi Department of Wildlife, Fisheries and Parks
- Mississippi Oil and Gas Board
- Mississippi Department of Archives and History



Protection and Preservation of Wetlands and Wildlife while providing U.S. Energy Security



ENVIRONMENTAL CULTURE

"Going Beyond Regulatory Requirements"



Charter Member

EPA National Environmental Achievement Track
(Only Open to Organizations With Strong Compliance Record)



International Organization of Standards (ISO) Certification

ISO 14001 Certified

Environmental Management System

1st U.S. Bulk Petroleum Storage Entity Certified

Major Environmental Quality Awards:

- LA Environmental Management Award of Excellence
- TX Clean Texas-Cleaner World National Leader
- National Association of Environmental Professionals-Excellence Award for Best Available Technology
- National Pollution Prevention Roundtable-Most Valuable Pollution Prevention Award



Strategic Petroleum Reserve



Salary Information

Perry County Salary

Average Salary	\$42,857
Average Construction Salary	\$43,266
SPR Average Construction Salary	\$58,828
Average Oil Services Operations Salary	\$52,529
SPR Average Salary for Permanent Employees	\$81,134

Jackson County Salary

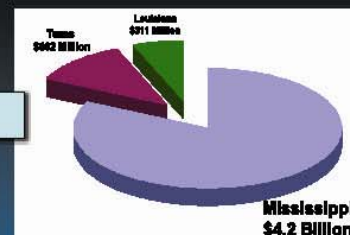
Average Salary	\$51,714
Average Construction Salary	\$48,443
SPR Average Construction Salary	\$58,828
Average Oil Services Operations Salary	\$52,529
SPR Average Salary for Permanent Employees	\$81,134

George County Salary

Average Salary	\$51,714
Average Construction Salary	\$48,443
SPR Average Construction Salary	\$58,828

SPR EXPANSION TOTAL PROJECT COST

- **Mississippi = \$4.2 Billion**
- Permanent Jobs Created in Mississippi = 224
- Annual Payment for these Permanent Jobs (in 2006 dollars) = \$18,174,016



Jobs Created



Construction Phase: 2012 - 2014
Permanent Employment Phase: from 2014 on

Types of Construction Jobs

- Pipefitters
- Welders
- Equipment Operators
 - Bulldozers, Cranes, Backhoes
- Electricians
- Concrete Finishers
- Masons
- Oil Rig Workers
- Carpenters
- Bricklayers

Types of Permanent Jobs

- Site Management
- Engineers (Mechanical & Electrical)
- Field Operators
- Maintenance Personnel
- Instrumentation & Electrical Technicians
- Security Personnel
- Environment, Safety & Health Specialists

Community Benefits Outreach From Current SPR Sites

- Assistance in School Programs
- Donations to Community Groups
- Volunteers for Community Activities
- Providing Training Opportunities for Local Emergency Response Units

Yellow - Bureau of Labor Statistics (2006)
Green - SPR Estimate (2006)