



DOE/EA-2039

Environmental Assessment for the Brine Disposal Pipeline Replacement Project associated with the Strategic Petroleum Reserve, West Hackberry Facility, Cameron Parish, Louisiana

U.S. Department of Energy  
Strategic Petroleum Reserve  
900 Commerce Road East  
New Orleans, Louisiana 70123

February 9, 2017

Finding of No Significant Impact  
Brine Disposal Pipeline Replacement Project  
Strategic Petroleum Reserve, West Hackberry Facility,  
Cameron Parish, Louisiana

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**Agency:** US Department of Energy

**Action:** Finding of No Significant Impact

**Summary:** The US Department of Energy (DOE) Strategic Petroleum Reserve (SPR) prepared an Environmental Assessment (EA) in response to a proposal to replace an existing brine disposal pipeline at the West Hackberry (WH) facility. The EA was prepared in accordance with Title 40 of the Code of Federal Regulations (CFR) Parts 1500-1508, the US Department of Energy (DOE) National Environmental Policy Act (NEPA) Implementing Procedures at 10 CFR Part 1021, Compliance with Floodplain and Wetland Environmental Review Requirements at 10 CFR Part 1022, and the SPR Project Management Office NEPA Implementation Plan approved in 2010.

Based on the findings of the EA and through implementation of mitigation measures, the DOE has determined that the proposed action will not cause a significant effect on the human environment. Direct impacts to aquatic and other ecological resources, air and water quality, and the floodplain were determined to be short-term and minor. An Environmental Impact Statement is not deemed necessary and the DOE is issuing this Finding of No Significant Impact (FONSI).

**Public Availability:** The EA and FONSI may be reviewed at:  
<http://energy.gov/nepa/downloads/ea-2039-draft-environmental-assessment>. Copies may also be obtained from:

US Department of Energy  
Strategic Petroleum Reserve Project Office  
Reading Room/Library DOE  
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**Description of the Proposed Action:** The proposed action involves the replacement of an existing aging brine disposal pipeline which is functionally obsolete with a new pipeline that meets current industry standards for brine transport. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline, by open cut trenching and jack and bore techniques, to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed brine disposal pipeline would support the activities associated with the SPR WH facility.

**Alternatives:** The No Action Alternative would not facilitate upgrades to the existing aging brine disposal pipeline. Eventually, the use of the existing brine disposal pipeline would be discontinued and would need to be replaced. As the pipeline ages consistently along the 2.1 mile length, repair of selected areas of the existing pipeline is not an option. Without the brine disposal pipeline, oil in the salt caverns at the WH facility could not be moved or circulated as needed.

Several proposed action alternatives were considered but eliminated from further study. The first action alternative evaluated but eliminated from consideration involved the removal of the existing brine disposal pipeline and the installation of the proposed brine disposal pipeline in the same location as the existing pipeline. This alternative was eliminated from further study as the existing brine disposal pipeline needs to remain in operation during the installation of the proposed brine disposal pipeline. This alternative would create a situation in which the WH facility would have no brine disposal capabilities for an extended period of time. This situation would prevent the WH facility from moving any petroleum products, as needed, during construction of the proposed pipeline.

The second action alternative evaluated but eliminated from consideration involved the installation of the proposed brine disposal pipeline along the existing pipeline alignment for the entire length of the project. This alternative was eliminated from further study as additional ROW between two residential structures was not available to construct the proposed brine disposal pipeline as originally configured.

The third action alternative evaluated but eliminated from consideration involved open cut pipeline installation methods along the entire length of the proposed brine disposal pipeline, including road crossings. This technique would result in road closures and detours within the proposed project area. The open cut method along the entire length of the proposed pipeline was eliminated from further consideration as there is no available detour route which would allow access to residential and industrial properties east of the pipeline alignment on Maggie Hebert Road.

The fourth action alternative evaluated but eliminated from consideration involved the use of Horizontal Directional Drilling (HDD) at road crossings and environmentally sensitive areas. HDD consists of a pipeline installation method using a wet drilling method (involving the use of water and bentonite, a non-toxic, non-hazardous natural clay material). The water and bentonite are mixed to form a drilling fluid which lubricates a drill bit as a horizontal hole is drilled beneath, for example, a roadway. The pipe is pushed through the hole without impacts to the surface of the soil aside from the HDD entrance and exit holes. Drilling spoils are removed from the drilling area at the entrance hole and stockpiled for replacement when the drilling activity is completed. Excess drilling spoil would be placed atop the construction area and graded so that pre-construction grades would be maintained. The HDD method was eliminated as an option for the placement of the new brine disposal pipeline as the pipe would require an internal concrete lining which could crack during the HDD installation process. In other words, due to the internal concrete lining, the pipe lacks the flexibility to be installed using the HDD method.

**Environmental Impacts:** Twelve temporary direct impacts and two temporary indirect impacts, including right-of-way acquisition and removal of mature trees within Hackberry Recreational Area, are anticipated as a result of the implementation of the proposed project. Temporary direct impacts include impacts to land use, right-of-way acquisition, soils/farmland, floodplains, surface water, waters of the United States (including wetlands), vegetation/wildlife habitat, essential fish habitat, coastal areas, parks and managed areas, public facilities, noise, and construction activities. Temporary direct and indirect impacts resulting from pipeline construction activities as well as two permanent direct impacts would not have any anticipated cumulative impacts to environmental or socioeconomic resources within the project area. The two permanent direct impacts (land use and vegetation/wildlife habitat) reflect that the installation of the pipeline would limit the land usages of the pipeline right-of-way in the future. The project has been designed to generally follow the existing pipeline corridor, minimize the size/acreage requirement for a temporary construction easement, and minimize disturbances to wooded areas along the pipeline right-of-way. Once the pipeline has been installed, the site will be returned to the original grade and allowed to revegetate.

**Mitigation:** Appropriate Best Management Practices (BMPs), such as dust suppression, heavy equipment maintenance, and erosion control measures will be implemented during construction to avoid impacts to air and water quality. These measures will also address impacts to aquatic resources as specified in the Stormwater Pollution Prevention Plan (SWPPP) for construction activities. Project permits will stipulate the BMPs that will be implemented and how hazardous and non-hazardous wastes will be handled and disposed. A spill response plan will be required of all DOE contractors to ensure that hazardous waste is not released into the environment.

If work is planned for the nesting season, generally September through March, a survey of the project area by a qualified biologist will be conducted following procedures prescribed by the US Fish and Wildlife Service (USFWS) prior to the construction start date.

Other mitigation measures will be assessed during the permitting phase of the project (e.g., waters of the US/wetland permitting, etc.) and implemented as per the permit requirements prior to the initiation of the proposed action.

**Determination:** Based on the analysis in DOE EA-2039 (attached), the DOE has determined that the proposed action to replace the existing brine disposal pipeline at the WH facility does not constitute a major federal action that would significantly affect the quality of the human or natural environment within the meaning of NEPA. Therefore, the preparation of an EIS will not be required and the DOE is issuing this FONSI.

Issued in New Orleans, this 9<sup>TH</sup> day of FEBRUARY, 2017.



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- Exhibit 2 – Site Location Map
- Exhibit 3 – Topographic Map, 1998
- Exhibit 4 – Aerial Photograph, 2013
- Exhibit 5 – Soils Map
- Exhibit 6 – Floodplain Map
- Exhibit 7 – National Wetlands Inventory (NWI) Map
- Exhibit 8 – Project Design Layout

#### Appendix B – Site Photographs

#### Appendix C – Agency Information and Correspondence

#### Appendix D – Supporting Documentation

#### Appendix E – Regulatory Search Database Results and Historic Documents

### List of Acronyms

ACHP: Advisory Council on Historic Preservation	NMFS: National Marine Fisheries Service
ACS: American Community Survey	NOAA: National Oceanic and Atmospheric Administration
APE: Area of Potential Effect	NOI: Notice of Intent
ASTM: American Society for Testing and Materials	NO <sub>x</sub> : Nitrogen Oxide
BMP: Best Management Practices	N <sub>2</sub> O: Nitrous Oxide
CBRA: Coastal Barrier Resources Act	NRCS: Natural Resources Conservation Service
CBRS: John H. Chafee Coastal Barrier Resources System	NRHP: National Register of Historic Places
CEQ: Council on Environmental Quality	NTCHS: National Technical Committee for Hydric Soils
CFR: Code of Federal Regulations	NWI: National Wetlands Inventory
CGP: Construction General Permit	OCM: Louisiana Office of Coastal Management
CO: Carbon Monoxide	PM <sub>10</sub> : Particulate Matter less than 10 Microns
CWA: Clean Water Act	ROW: Right-of-Way
DHHS: Department of Health and Human Services	SHPO: State Historic Preservation Officer
DNR: Department of Natural Resources	SPR: Strategic Petroleum Reserve
DOE: Department of Energy	SPRPMO: Strategic Petroleum Reserve Project Management Office
EA: Environmental Assessment	SW3P: Storm Water Pollution Prevention Plan
EFH: Essential Fish Habitat	U.S.: United States
EFHA: EFH Areas Protected from Fishing	USACE: U.S. Army Corps of Engineers
EIS: Environmental Impact Statement	USFWS: U.S. Fish and Wildlife Service
EO: Executive Order	WH: West Hackberry
EPCA: Energy Policy and Conservation Act	WQI: Water Quality Inventory
ESA: Endangered Species Act	
FEMA: Federal Emergency Management Agency	
FIRM: Flood Insurance Rate Map	
FONSI: Finding of No Significant Impact	
FPPA: Farmland Protection Policy Act	
FFPO: Fluor Federal Petroleum Operations	
GIS: Geographic Information System	
HAPC: Habitat of Particular Concern	
HDD: Horizontal Directional Drilling	
HDPE: High Density Polyethylene	
LCRP: Louisiana Coastal Resources Program	
LDEQ: Louisiana Department of Environmental Quality	
LDWF: Louisiana Department of Wildlife and Fisheries	
LEP: Limited English Proficiency	
LPDES: Louisiana Pollution Discharge Elimination System	
m <sup>3</sup> : Cubic Meters	
MMB: Million Barrels	
MBTA: Migratory Bird Treaty Act	
MSAT: Mobile Source Air Toxics	
NEPA: National Environmental Policy Act	
NFIP: National Flood Insurance Program	
NHPA: National Historic Preservation Act	

**1.0.....EXE**  
**CUTIVE SUMMARY**

The National Environmental Policy Act of 1969 (NEPA) enabled Congress to recognize that technological, social, and economic forces have a profound influence on the quality of the human environment. Thus, implementation of the NEPA requires Federal agencies to consider the environmental consequences of their proposed actions before decisions are made on those actions. The Department of Energy (DOE) procedures per the Strategic Petroleum Reserve (SPR) Project Management Office (PMO) NEPA Implementation Plan (SPRPMO O 451.1B) were developed to follow the letter and spirit of NEPA and to comply fully with the Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508). All activities on SPR facilities 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 statutes into DOE project planning and overview is of paramount importance per the SPRPMO Environmental Policy Statement (SPRPMO P 451.1E).

This Environmental Assessment (EA) assesses the social, economic, and environmental impacts associated with the West Hackberry Brine Disposal Pipeline Replacement Project proposed by the DOE near Hackberry, Cameron Parish, Louisiana (see Appendix A, Exhibit 1 – Vicinity Map, Exhibit 2 – Site Location Map, Exhibit 3 – Topographic Map, 1998, and Exhibit 4 – Aerial Photograph, 2013).

The purpose of this EA is to provide agency decision-makers with sufficient information and analysis to select between the preparation of an Environmental Impact Statement (EIS) or the issuance of a Finding of No Significant Impact (FONSI) for the proposed action. The proposed action includes the replacement of approximately 2.1 miles of an existing brine disposal pipeline associated with the SPR West Hackberry (WH) facility located near Hackberry, Cameron Parish, Louisiana.

The objectives of this EA are to (1) describe the purpose and need for the proposed action; (2) describe the proposed action and the no action alternative; (3) describe baseline environmental conditions along the project area; and (4) analyze the potential direct, indirect, and cumulative impacts to the environment that would result from the implementation of the proposed action or the no action alternative. This EA also provides information regarding minimization or avoidance of adverse effects to the environment associated with the proposed action as well as mitigation actions, if necessary.



## **2.0 PURPOSE AND NEED**

### **2.1 PURPOSE AND NEED FOR AGENCY ACTION**

#### **2.1.1 Project Purpose**

The purpose of the proposed project is to replace an existing brine disposal pipeline which is functionally obsolete. The proposed project would involve the installation of approximately 2.1 miles of 24-inch pipeline, by open cut trenching and jack and bore techniques, to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed brine disposal pipeline would support the activities associated with the SPR WH facility located near Hackberry, in Cameron Parish, Louisiana.

#### **2.1.2 Project Need**

The functional lifespan of the existing 24-inch brine disposal pipeline was previously extended in 1996 when slip lining techniques were utilized to rehabilitate the original pipeline (see Section 2.5 – Description of Existing Facility). The need for the proposed project is to replace the existing, aging brine disposal pipeline with a new pipeline that meets current industry standards for brine transport. The brine disposal pipeline that would be replaced is located between the SPR WH facility and the associated brine injection wells, a distance of approximately 2.1 miles. The proposed pipeline would be installed using open cut methods except at road crossings where jack and bore techniques would be utilized as needed.

## **2.2 BACKGROUND**

The creation of the SPR was mandated by Congress through the Energy Policy and Conservation Act (EPCA) on December 22, 1975. The objective of the SPR is to provide the United States (U.S.) with crude oil should a supply disruption occur. Oil is currently stored by the SPR in salt domes/caverns along the Louisiana and Texas Gulf Coast. There are two SPR crude oil facilities in Louisiana and two SPR crude oil facilities in Texas. The current storage design capacity at the four facilities is 716 million barrels (MMB). The proposed action would occur at the WH facility in Louisiana.

The WH facility is located in Cameron Parish approximately 35 kilometers (22 miles) southwest of Lake Charles, Louisiana. The storage site covers approximately 2.29 square kilometers (565 acres) atop the WH salt dome. The WH salt dome was selected as a SPR storage site due to the location of the existing brine caverns which could be readily converted to oil storage as well as the cavern's proximity to commercial marine and pipeline crude oil distribution facilities. Development of the site was initiated in 1977 and completed in 1988. The facility utilizes 22 underground solution-mined storage caverns with a combined storage capacity of 36.09 million cubic meters (m<sup>3</sup>) or 227 MMB of oil. The facility has the capability to drawdown and deliver oil at a rate of 1.3 MMB per day.

Brine, via the brine injection wells and pipeline system, can be injected into and/or pumped out of the WH salt dome when necessary to facilitate the movement of oil. The existing brine disposal pipeline, which connects the SPR WH facility to the brine injection wells, was constructed in 1978 and is near the end of the functional lifespan of the pipeline. The existing brine disposal pipeline would remain in place but would be removed from service. Existing

pipelines would be removed from the ground upon decommissioning of the WH facility at a future date. The proposed brine disposal pipeline would allow for continued brine injection operations at the SPR WH facility.

### 2.3 SCOPE OF ENVIRONMENTAL ASSESSMENT

The scope of this EA evaluates the social, economic, and environmental impacts associated with the WH Brine Disposal Pipeline Replacement Project proposed by the DOE. This EA has been prepared in accordance with the NEPA, CEQ regulations (40 CFR §1502.13) and DOE NEPA Guidance: *Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements, Second Edition*. The public was afforded the opportunity to comment on this EA.

### 2.4 PUBLIC INVOLVEMENT

The DOE provided written notification of its intention to prepare this NEPA analysis to Federal, State and local government resource agencies, listed in Section 6.0, on August 2, 2016 (Appendix C – Agency Information and Correspondence). On December 12, 2016, the DOE provided written notification and the opportunity for resources agencies and other interested parties to comment on the draft EA. A comment/response summary was prepared for all comments received during the 30 day comment period which extended from December 12, 2016 to January 13, 2017 (Appendix C – Agency Information and Correspondence). The comment/response summary documents each received comment and provides a corresponding response for each comment.

Electronic access to the draft EA, for review and comment, was made available on December 12, 2016 on the following websites:

- ..... [www.energy.gov/node/2191870](http://www.energy.gov/node/2191870)
- ..... <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- ..... <http://www.spr.doe.gov/esh/default.html>
- ..... <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA was also available for review during a 30 day comment period (December 12, 2016 to January 13, 2017) at the following libraries:

- ..... Cameron Parish Library-Hackberry Branch, 983 Main Street, Hackberry, LA 70645
- ..... Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- ..... Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA, 70607

- ..... Sulphur  
Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- ..... Calcasieu  
eu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

Concerns or comments received by the end of the 30 day comment period were considered in preparation of the final EA. The DOE notification letter and responses to comments, received during the comment period by resource agencies and other interested parties, is presented in Appendix C – Agency Information and Correspondence.

## **2.5 DESCRIPTION OF EXISTING FACILITY**

A 36-inch brine disposal pipeline was installed in 1980 as a part of the site development activities and was used exclusively for the cavern leaching process. Once the WH facility became active, the 36-inch line was no longer needed and was deactivated. The 36-inch pipeline was removed from service in January 1996 but remained in place. The original 24-inch brine disposal pipeline was installed in 1978 and connected the WH facility with the associated brine injection wells approximately 2.1 miles south of the facility. In 1996, a similarly sized High Density Polyethylene (HDPE) pipeline was placed inside the original 24-inch brine disposal pipeline with a process called slip lining. Slip lining consists of the trenchless rehabilitation of existing pipelines in which a slightly smaller pipe is inserted into the existing pipe and the space between the two pipes is filled with grout. The process extends the lifespan of the original pipeline. For the WH brine disposal pipeline, slip lining techniques extended the lifespan of the original brine disposal pipeline an additional 20+ years. The Right-of-Way (ROW)/corridor for the existing brine disposal pipeline is 50 feet in width and is located beneath five roadways (Black Lake Road, Johnny Benoit Road, West Main Street/LA 390, Johnson Lane and Maggie Hebert Road), residential lawns, pasturelands, wetland areas and open water habitats associated with Browns Lake.

## **3.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**

### **3.1 PROPOSED ACTION AND ACTION ALTERNATIVES**

The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed. The proposed brine disposal pipeline would connect the SPR WH facility with the brine injection wells located south of the facility.

The proposed project would be constructed within the proposed 50 foot ROW immediately adjacent to the existing 50 foot ROW to provide a 100 foot perpetual pipeline ROW. Additionally, a 25 foot temporary construction ROW along the entire length of the project corridor would be necessary to implement the proposed project as designed (see Appendix A, Exhibit 8 – Project Design Layout). The proposed brine disposal pipeline would be constructed within the general corridor of the existing brine disposal pipeline (immediately east or west of

the existing pipeline) except near Johnson Lane. Moving southward from the WH facility, the existing pipeline ROW curves west between two residential structures immediately south of Johnson Lane. The proposed pipeline ROW would curve east near the end of Johnson Lane and realign with the existing pipeline corridor south of the two residential properties located south of Johnson Lane (see Appendix A, Exhibit 8 – Project Design Layout). The proposed pipeline would then follow the existing pipeline corridor to the brine injection wells. The proposed pipeline would be installed beneath four roadways (Black Lake Road, Johnny Benoit Road, West Main Street/LA 390 and Maggie Hebert Road), residential lawns, pasturelands, wetland areas and open water habitats associated with Browns Lake.

### **3.2 NO BUILD ALTERNATIVE**

The No Build alternative would not facilitate upgrades to the existing aging brine disposal pipeline. The original 24-inch brine disposal pipeline was installed in 1978; the lifespan of the pipeline was extended in 1996 by installing an HDPE pipeline within the original brine disposal pipeline via slip lining techniques. As the existing pipeline ages consistently along the 2.1 mile length, repair of selected areas of the existing pipeline is not an option. Eventually, the use of the existing brine disposal pipeline would be discontinued (i.e., due to leaks, ruptures, etc.) and would need to be replaced. Without the brine disposal pipeline, the oil in the salt caverns could not be moved or circulated as needed.

The No Build alternative describes the conditions and consequences of the proposed project on the environment (see Section 4.0 – Affected Environments and Environmental Consequences). The No Build alternative does not depict any speculative, anticipated or potential future impacts to affected environments due to inevitable leaks, ruptures, etc., of the existing brine disposal pipeline. Any such future impacts to affected environments may be less than or greater than those of the Build alternative discussed in this EA.

### **3.3 ALTERNATIVES CONSIDERED BUT ELIMINATED**

Several action alternatives were considered but later eliminated from analysis. The first action alternative evaluated but eliminated from consideration involved the removal of the existing brine disposal pipeline and the installation of the proposed brine disposal pipeline in the same location as the existing pipeline. This alternative was eliminated from further study as the existing brine disposal pipeline needs to remain in operation during the installation of the proposed brine disposal pipeline. This alternative would create a situation in which the SPR WH facility would have no brine disposal capabilities for an extended period of time. This situation would prevent the SPR WH facility from moving any petroleum products, as needed, during construction of the proposed pipeline.

The second action alternative evaluated but eliminated from consideration involved the installation of the proposed brine disposal pipeline along the existing pipeline alignment for the entire length of the project. This alternative was eliminated from further study as additional ROW between two residential structures south of Johnson Lane was not available to construct the proposed brine disposal pipeline as originally configured.



The third action alternative evaluated but eliminated from consideration involved open cut pipeline installation methods along the entire length of the proposed brine disposal pipeline, including road crossings. This technique would result in road closures and detours within the proposed project area. The open cut method along the entire length of the proposed pipeline was eliminated from further consideration as there is no available detour route which would allow access to residential properties, and the Cameron Parish Solid Waste Collection Site, east of the pipeline alignment on Maggie Hebert Road.

The fourth action alternative evaluated but eliminated from consideration involved the use of Horizontal Directional Drilling (HDD) at road crossings and environmentally sensitive areas. HDD consists of a pipeline installation method using a wet drilling method (involving the use of water and bentonite, a non-toxic, non-hazardous natural clay material). The water and bentonite are mixed to form a drilling fluid which lubricates a drill bit as a horizontal hole is drilled beneath, for example, a roadway. The pipe is pushed through the hole without impacts to the surface of the soil aside from the HDD entrance and exit holes. Drilling spoils are removed from the drilling area at the entrance hole and stockpiled for replacement when the drilling activity is completed. Excess drilling spoil would be placed atop the construction area and graded so that pre-construction grades would be maintained. The HDD method was eliminated as an option for the placement of the new brine disposal pipeline as the pipe would require an internal concrete lining which could crack during the HDD installation process. In other words, due to the internal concrete lining, the pipe lacks the flexibility to be installed using the HDD method.

## **4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

### **PHYSICAL RESOURCES**

#### **4.1 LAND USE**

##### **4.1.1 Existing Conditions**

The alignment of the proposed action is located primarily within pastureland utilized for cattle and horses. The proposed brine disposal pipeline would be located beneath roadways, maintained lawns associated with private residential land, wooded areas within and adjacent to the Hackberry Recreation Area (Cameron Parish Park), Browns Lake and the SPR WH facility. Mixed residential and pastureland borders the project area generally to the east and west. The proposed project area is bordered to the north by the WH facility and is generally bordered to the south by Browns Lake. Additionally, the brine disposal pipeline replacement project is located approximately 0.6 mile north of the Sabine National Wildlife Refuge which is discussed in Section 4.15 – Parks and Managed Areas.

##### **4.1.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on the land uses (pastureland, lawns, wooded areas, wetland areas, water areas, etc.) within or adjacent to the proposed project area.

##### **4.1.3 Environmental Consequences – Build Alternative**

The proposed action would be located within pastureland, residential areas, wooded/parkland, wetlands and open water areas. The installation of the proposed brine disposal pipeline represents a short-term disturbance to the properties through which the pipeline would be placed. Physical impacts would be temporary in the form of an open trench (open cut method) and side cast soils. Following installation of the pipeline, the trench would be backfilled. Excess drilling spoil would be placed atop the construction area and graded; pre-construction grades would be maintained following completion of the pipeline installation process. Wooded areas east and southeast of Johnson Lane would be impacted in that a limited number of mature trees would be cleared along the pipeline ROW for the installation of the proposed pipeline. Trees to be cleared would be located on private properties as well as within the boundary of the Hackberry Recreation Area.

Jack and bore techniques would be used to bore beneath four roadways. Wetland areas and Browns Lake would be open cut to facilitate the installation of the proposed brine disposal pipeline to the WH injection well site. The open cut trenching and pipeline installation in these areas would be conducted in rapid succession to minimize the time in which the open trench is exposed to the elements of wind action, rainfall, erosion, wave action, tidal action, etc. Side cast soils would be placed in the trench once the pipeline has been installed.

Due to the temporary nature of the proposed pipeline installation, the Build alternative would not result in anticipated long-term environmental consequences on the land use areas within or adjacent to the proposed pipeline ROW aside from the removal of mature trees within the ROW. Short-term impacts along the proposed pipeline ROW may include temporary disturbances to the soil surface, including the potential erosion of disturbed surfaces and run-off. Erosion control measures would be implemented to eliminate or minimize sediment run-off into sensitive areas such as wetlands or Browns Lake. Best Management Practices (BMPs) may include the proper use of silt fences, straw bales, seeding or sodding of exposed soils or other similar construction site storm water runoff controls. Pipeline installation activities may temporarily increase sediment disturbances in Browns Lake. The short duration of the pipeline installation process through Browns Lake and the use of specialized construction techniques in water environments would minimize total suspended solids/sediments in the water during the trenching activities and installation of the pipeline.

## **4.2 RELOCATIONS AND RIGHT-OF-WAY ACQUISITIONS**

### **4.2.1 Existing Conditions**

The implementation of the proposed action would be located within existing and proposed pipeline ROW areas. An additional 50 feet of permanent ROW would be required along the entire length of the proposed brine disposal pipeline and would be combined with the existing 50 foot pipeline ROW for a 100 foot perpetual pipeline ROW. The permanent ROW would be required to the east of the existing pipeline alignment along the SPR WH facility, then would switch to the west of the existing alignment south of the SPR WH facility (south of Black Lake Road). The proposed ROW would remain west of the existing alignment until immediately north of Johnson Lane. At this location, the existing alignment curves southwest and travels between two residential structures prior to turning southeast to return to the original due south alignment (see Appendix A, Exhibit 8 – Project Design Layout). Insufficient ROW between the two

residential structures does not allow for the proposed alignment to follow the existing pipeline alignment immediately south of Johnson Lane.

The proposed alignment curves southeast, south, southwest, then due south to avoid the residential structures near Johnson Lane. Relocating the proposed brine disposal pipeline to avoid the residential structures places the proposed pipeline alignment within the Hackberry Recreation Area (Cameron Parish Park). South of the residential structures the proposed pipeline ROW is located immediately west of the existing alignment to the brine injection wells.

A proposed temporary construction ROW would include a 25 foot easement which follows the proposed permanent ROW along the entire length of the proposed pipeline alignment (see Appendix A, Exhibit 8 – Project Design Layout).

#### **4.2.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on the proposed pipeline relocation or acquisition of permanent ROW throughout the project area.

#### **4.2.3 Environmental Consequences – Build Alternative**

Temporary use during construction and permanent ROW acquisition would result from the implementation of the proposed project; property owners would be compensated for such land acquisitions. No residential or business relocations or displacements would result from the implementation of the proposed project and the property acquired could still be utilized as, for example, pastureland after the installation of the proposed brine disposal pipeline.

The Build alternative would not have any environmental consequences on relocations/displacements within or adjacent to the proposed project ROW as no relocations/displacements are required for the proposed action. The acquisition of land for areas of the new permanent pipeline ROW would be handled on a per property basis by the DOE's designated acquisition team; land owners would be compensated for acquired ROW.

### **4.3 SOILS/PRIME AND UNIQUE FARMLANDS**

#### **4.3.1 Existing Conditions**

According to the Natural Resources Conservation Service (NRCS) *Web Soil Survey*, land in the vicinity of the proposed project area consists of nearly level soils and somewhat poorly drained to very poorly drained soils which are all considered hydric soils by the National Technical Committee for Hydric Soils (NTCHS). The NRCS has listed the majority of the soil map units within the proposed project area as prime farmland. More specifically, the soils in the project area are mapped as Crowley-Vidrine complex (0 to 1 percent slopes), Ged mucky clay, Gentilly Muck (0 to 0.5 percent slopes) frequently flooded, Edgerly loam (0 to 1 percent slopes), and Mowata-Vidrine complex (0 to 1 percent slopes). Appendix A, Exhibit 5 – Soils Map, depicts the following soils as mapped by the NRCS *Web Soil Survey* (the letters in parenthesis below represent the soil types on the Appendix A, Exhibit 5 – Soils Map). See Appendix D – Supporting Documentation for the Custom Soil Report from the NRCS *Web Soil Survey*. Soils within the proposed brine disposal pipeline project area include the following:

- Crowley-Vidrine complex, 0 to 1 percent slopes (Cw)

Crowley-Vidrine complex soils have an average slope of 0 to 1 percent. This soil is somewhat poorly drained with very high runoff and a high water storage capacity. Included in mapping with this soil type are Crowley and similar soils (55 percent), Vidrine and similar soils (35 percent) and minor components (10 percent).

The Crowley-Vidrine complex is listed as a hydric soil by the NTCHS and a prime farmland soil by the NRCS.

- Ged mucky clay (GB)  
Ged mucky clay has an average slope of 0 to 1 percent. This soil is very poorly drained, has a high water storage capacity and is frequently flooded. Included in mapping with this soil type are Ged and similar soils (80 percent) and minor components (20 percent).

Ged mucky clay is listed as a hydric soil by the NTCHS but is not designated as a prime farmland soil by the NRCS.

- Gentilly muck, 0 to 0.5 percent slopes, very frequently flooded (GC)  
Gentilly muck has an average slope of 0 to 0.5 percent. This soil is very poorly drained, has a high water storage capacity and is very frequently flooded. Included in mapping with this soil type are Gentilly and similar soils (80 percent) and minor components (20 percent).

Gentilly muck is listed as a hydric soil by the NTCHS but is not designated as a prime farmland soil by the NRCS.

- Edgerly loam, 0 to 1 percent slopes (Mr)  
Edgerly loam has an average slope of 0.1 percent. This soil is poorly drained, has a high water storage capacity and is rarely flooded. Included in mapping with this soil type are Edgerly and similar soils (82 percent) and minor components (8 percent).

Edgerly loam is listed as a hydric soil by the NTCHS and a prime farmland soil by the NRCS.

- Mowata-Vidrine complex, 0 to 1 percent slopes (Mt)  
Mowata-Vidrine complex soils have an average slope of 0.1 percent. This soil is poorly drained, has a high water storage capacity and is rarely flooded. Included in mapping with this soil type are Mowata and similar soils (60 percent), Vidrine and similar soils (30 percent) and minor components (10 percent).

Mowata-Vidrine complex is listed as a hydric soil by the NTCHS and a prime farmland soil by the NRCS.

Table 1: Soil Descriptions in the Project Area, depicts the soil types, drainage class, average slopes, and hydric and prime farmland classifications.

Table 1: Soil Descriptions in the Project Area				
Soil Type	Drainage Class	Average Slope	Hydric	Prime Farmland



Crowley-Vidrine complex (Cw)	Somewhat Poorly Drained	0 to 1 percent	Yes	Yes
Ged mucky clay (GB)	Very Poorly Drained	0 to 1 percent	Yes	No
Gentilly muck (GC)	Very Poorly Drained	0 to 0.5 percent	Yes	No
Edgerly loam (Mr)	Poorly Drained	0 to 1 percent	Yes	Yes
Mowata-Vidrine complex (Mt)	Poorly Drained	0 to 1 percent	Yes	Yes

The purpose of the Farmland Protection Policy Act (FPPA) is to minimize the extent to which Federal programs contribute to the unnecessary conversion of farmland to non-agricultural uses. The FPPA stipulates that Federal programs be compatible with State, local and private efforts to protect farmland. Prime farmland soils have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. In general, prime farmland soils experience adequate and dependable precipitation, a favorable temperature and growing season, have acceptable acidity or alkalinity, and have few or no surface stones. Prime farmland soils are permeable to water and air. These soils are not excessively erodible or saturated with water for long periods of time. Three soil map units which are classified as prime farmland soils are located within the project area (see Table 1 and Appendix D – Supporting Documentation).

#### **4.3.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on soils, including prime farmland soils, throughout the project area.

#### **4.3.3 Environmental Consequences – Build Alternative**

Potential adverse effects to soils may include accidental spills or contamination from equipment utilized for the proposed brine disposal pipeline installation activities. Contractors would have BMPs in place to limit the potential for contamination of soils resulting from construction activities. The proposed project would involve jack and bore techniques and open trenching for the installation of the proposed pipeline; however, the area would be backfilled and returned to pre-construction grades after completion of the pipeline installation activities. The Build alternative would not have any long-term environmental consequences on the composition of the soils, including prime farmland, throughout the project area.

### **4.4 GEOLOGY**

#### **4.4.1 Existing Conditions**

The proposed project lies within the Gulf Coastal Plain geomorphic province and is immediately underlain by sediments deposited during the Holocene and late Pleistocene epochs of the Quaternary period. The WH brine disposal pipeline project area is located atop the Holocene age Chenier Plain. Cheniers are ridges of the coastal plains region of southwestern Louisiana. Cheniers were formed as a result of gulf beach ridges which were isolated inland by the changing deltaic flow processes of the Mississippi River. Near surface prairie soils were deposited in the late Pleistocene epoch atop older Pleistocene marine silts and sands. Holocene age coastal marsh deposits are present in the area of the WH site. The resultant soils at the WH site consist of silt and sandy silt, underlain by desiccated clay as well as sand and silt originating from the late Pleistocene prairie soil formation.

The Gulf Coast Geosyncline developed during the early Mesozoic period at which time Louann Salt was deposited. The Louann Salt serves as the salt layer of origin for the salt domes at the WH site. Salt dome complexes are located throughout southern Louisiana and are usually 1-3 miles in diameter. A salt dome consists of a mound or column of salt that extends upwards toward the layers near the soil surface but rarely reach the surface. Salt domes may rise hundreds or thousands of feet from the salt layer of origin; pressure causes the salt to rise. Some salt dome complexes may have a local effect on groundwater flow and/or water quality. Coastal subsidence has occurred around the WH salt domes which is reflected by the presence of Black Lake and other relatively shallow coastal lakes in southwestern Louisiana.

Oil, gas and salt are the only potentially economic mineral resources in the general project area. The proposed project would be constructed adjacent to the existing brine disposal pipeline alignment and would not impact mining or exploration activities.

#### **4.4.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on the local geology throughout the project area.

#### **4.4.3 Environmental Consequences – Build Alternative**

The Build alternative would not have any anticipated environmental consequences on the local geology throughout the project area. Surface soils would be disturbed by trenching or jack and bore activities but would be replaced following completion of the construction activity.

### **4.5 WASTE MANAGEMENT/HAZARDOUS MATERIALS**

#### **4.5.1 Existing Conditions**

A site assessment was conducted to identify potential waste management and hazardous materials sites located within the project area based on the following project activities (see Appendix B – Site Photographs and Appendix E – Regulatory Search Database Results and Historic Documents):

- Proposed open cut trenching and
- Proposed pipeline installation (using open cut trenching and jack and bore techniques).

The initial site assessment consisted of the following actions:

- Visual observations of the proposed project area and adjacent areas were conducted in the field for evidence of hazardous substances and/or contamination,
- Research of existing and previous land uses (see Appendix A, Exhibit 3 – Topographic Map, 1998; Exhibit 4 – Aerial Photograph, 2013; and Appendix E – Regulatory Search Database Results and Historic Documents) including potential hazardous material litigation, and
- Review of Federal and State regulatory databases/lists based on the American Society for Testing and Materials (ASTM) E1527-13 level or equivalent documentation (ASTM E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process).

A Regulatory Database Search commissioned to identify releases or threatened releases of petroleum products or other hazardous substances within the search radius specified in ASTM Standard E1527-13 was conducted within the proposed pipeline project area as part of this investigation (see Appendix E – Regulatory Search Database Results and Historic Documents). No evidence of contamination within the project area was identified in the Regulatory Database Search for this area; however, potential hazardous material records were identified adjacent to the project area. The proposed project is located in a mixed use rural area consisting of residential and pastureland areas as well as the SPR WH facility and similar properties generally near the northern project limits (see Appendix B – Site Photographs).

The Regulatory Database Search identified a total of 51 potential hazardous material records, including two listed as orphan sites, within the search radius specified in ASTM Standard E1527-13, for the brine disposal pipeline replacement project. Orphan records are records that are considered unmappable and/or lack sufficient data to provide location information; the orphan records were not identified in field investigations of the project area.

The records reviewed in the Regulatory Database Search did not indicate any potential hazardous waste issues/contamination at any identified facility immediately adjacent to the project area. A total of 49 locatable potential hazardous material records were identified within the standard ASTM search radius and are listed in the following table, Table 2: Regulatory Database Search Results.

<b>Database Name (Acronym)</b>	<b>Records Identified</b>	<b>Search Radius (miles)</b>
Resource Conservation & Recovery Act – Generator Facilities (RCRAGR06)	1	0.125
No Longer Reported Underground Storage Tanks (NLRUST)	1	0.250
Superfund Enterprise Management System Archived Site Inventory (SEMSARCH)	1	0.500
Approved Hurricane Debris Dump Site (ADS)	1	0.500
Recycling Facilities (RCY)	1	0.500
Waste Pits (WP)	44	0.500
<b>Total</b>	<b>49</b>	<b>---</b>

The Regulatory Database Search revealed 49 identifiable properties as potential hazardous material sites which included 44 waste pit sites, one recycling facility, one approved hurricane debris dump site and three additional potential hazardous material sites (associated with the SPR WH facility). The waste pits consist of abandoned non-hazardous waste pits and facilities that have the potential to initiate an oil spill and are primarily associated with permitted oil and/or gas wells. The entrance road to the approved hurricane debris dump site and recycling facility is located approximately 0.35 mile southeast of the southern project limits; however, the actual facilities are located approximately 0.70 mile southeast of the southern project limits. The SPR WH facility consists of a conditionally exempt small quantity generator, maintains one underground storage tank (no longer reported) and was evaluated then determined that the facility would not qualify as a Superfund site. All potential hazardous materials sites identified within the ATSM search radius are listed above in Table 2: Regulatory Database Search Results and in Appendix E – Regulatory Search Database Results and Historic Documents. No indication of contamination adjacent to the proposed pipeline corridor was revealed through the Regulatory Database Search Results or field visits to the project area.

An Oil & Gas Detailed Report, investigating oil and gas wells in the general project area, was reviewed as part of this investigation as historic oil and gas production activities were located in the vicinity of the proposed project (see Appendix E – Regulatory Search Database Results and Historic Documents). A total of 138 permitted oil and/or gas well locations were identified within a 0.5 mile search radius of the project area. The 138 locations may include active oil wells, plugged oil wells, dry holes, permitted locations, canceled locations, injection/disposal wells and storage wells. No active oil and/or gas wells are located within the proposed brine disposal pipeline ROW; however, several permitted well locations are located adjacent to or in close proximity to the project area. None of the nearby wells would be impacted by the proposed project or result in a likely impact to the proposed brine disposal pipeline project.

Overhead electrical power lines were observed within the project area along the following roadways: Black Lake Road, Johnny Benoit Road, West Main Street/LA 390 and Johnson Lane. Pole-mounted transformers were observed adjacent to the project area along Johnny Benoit Road and Johnson Lane. No evidence of leaks or stains was observed on the transformers, poles or the ground beneath the transformers. Overhead electrical power lines, located west of the proposed pipeline corridor along the south side of West Main Street/LA 390, traverse pastureland southward and continue southward through a cleared electrical easement through the Hackberry Recreation Area prior to connecting to similar electrical lines along Maggie Hebert Road, east of the proposed pipeline corridor. The proposed brine disposal pipeline alignment would pass beneath the overhead electrical power lines within the Hackberry Recreation Area.

Surface markers for subsurface pipelines were observed in the field; additional pipeline and/or utility corridors/alignments would be investigated as part of the pre-construction phase of this project.

#### **4.5.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on identified waste management or hazardous materials sites throughout the project area.

#### **4.5.3 Environmental Consequences – Build Alternative**

No standing structures are located within the project ROW; therefore, asbestos or lead-based paints are not anticipated to be impacted by the proposed project. Asbestos and lead-based paint inspections, specifications, notification, abatement and disposal would not be applicable for the proposed project. No evidence of contamination was observed on reviewed aerial photographs or topographic maps, the Regulatory Database Search, Oil and Gas Report or site investigations for the proposed project area. Additional pipeline and/or utility corridors (aerial or subsurface) would be investigated as part of the pre-construction phase of this project.

Excavation to a depth of approximately 7-12 feet would be required to install the proposed brine disposal pipeline. At this depth, there is a low risk of impact from potential waste management and/or hazardous material sites along the pipeline corridor. Due to the low risk of potential hazardous material concerns along the pipeline corridor or on adjacent properties, intrusive hazardous material investigations are not warranted for the proposed project area. The Build alternative would not have any anticipated environmental consequences on waste management or hazardous materials throughout the project area.

Construction contractors would take appropriate measures to prevent, minimize and control the spill of hazardous materials in staging areas once construction begins. The use of construction equipment within sensitive areas of the project corridor (i.e., the crossing of wetland areas and Browns Lake) would be minimized to the extent practicable. All construction materials used for this project would be removed as soon as possible upon completion of the pipeline installation work in any given area.

## **WATER RESOURCES**

### **4.6 FLOODPLAIN ASSESSMENT AND DRAINAGE**

#### **4.6.1 Existing Conditions**

According to the Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map, FIRM Panel Number 22023C0375H, dated 2012, all but six areas of the proposed brine disposal pipeline ROW are designated within the 1% Annual Chance Flood Hazard of the Gulf Intracoastal Waterway floodplain (see Appendix A, Exhibit 6 – Floodplain Map). Land within the 1% Annual Chance Flood Hazard refers to areas determined to be in special flood hazard areas inundated by the 100-year flood. Four areas are located in areas within the 0.2% Annual Chance Flood Hazard (500-year floodplain) and two areas are designated to be outside of the 500-year floodplain. Cameron Parish is a participant in the National Flood Insurance Program. Since the proposed project would occur within a floodplain, the 10 CFR 1022 requirement to prepare a Floodplain Statement of Findings is applicable (see Appendix D – Supporting Documentation).

Topography in the proposed project area is relatively flat, due to the close proximity to the Gulf of Mexico, but ranges from 5 to 15 feet above mean sea level. Generally, the northern project limits at the SPR WH facility are higher in elevation than the brine injection wells near the southern project limits. Stormwater and local runoff flow into roadside drainage ditches and a wetland area contiguous with Browns Lake; this wetland area is located immediately north of and parallel to Maggie Hebert Road. The wetland area flows generally eastward then southward into Browns Lake which is located near the southern project limits. Low areas on the landscape within and adjacent to the proposed brine disposal pipeline ROW collect and hold stormwater and local runoff; several of these areas are utilized as stock tanks for cattle in pasturelands.

#### **4.6.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on the floodplain or drainage areas throughout the project area.

#### **4.6.3 Environmental Consequences – Build Alternative**

The proposed brine disposal pipeline generally follows the alignment of the existing brine disposal pipeline. Avoidance of floodplains, with the exception of the No Build Alternative, is not possible as areas of the existing pipeline alignment are located within the 100-year floodplain of the Gulf Intracoastal Waterway. Construction in the floodplain would be limited to open trenching along the proposed alignment and jack and bore techniques beneath roadways. Side cast soils resulting from the trenching activities would be temporary. Construction areas would

be returned to the pre-construction grade after the implementation of the proposed project; therefore, no impacts to local drainage or the storage capacity within the floodplain would occur. The Build alternative would not have any permanent environmental consequences on the floodplain or drainage function throughout the project area.

## **4.7 SURFACE WATER QUALITY**

### **4.7.1 Existing Conditions**

The principal waterbody associated with the proposed project is Browns Lake which is located in the Lower Calcasieu Watershed (Hydrologic Unit Code 08080206) and more specifically the Black Lake Bayou-Alkali Ditch Subwatershed (Hydrologic Unit Code 080802060406). The Lower Calcasieu Watershed is 1,140,025.6 acres in size while the Black Lake Bayou-Alkali Ditch Subwatershed is 27,236.7 acres in size. The proposed pipeline ROW would be placed adjacent to the existing pipeline ROW within Browns Lake and wetland areas associated with Browns Lake. Coastal waterbodies, such as Browns Lake and adjacent wetlands, are influenced by rainfall, tides, tropical storms and hurricanes. Several other lakes, canals, freshwater impoundments and waterbodies exist within the region but would not be affected by the proposed project.

The Louisiana Department of Environmental Quality (LDEQ) routinely collects data from surface water quality monitoring sites on the classified segments within each Louisiana watershed. As required under Sections 303(d) and 304(a) of the Federal Clean Water Act (CWA), this list identifies the waterbodies in or bordering Louisiana for which effluent limitations are not stringent enough to implement water quality standards, and for which the associated pollutants are suitable for measurement by maximum daily load. Pursuant to these Acts, the LDEQ has developed a Water Quality Inventory (WQI) and 303(d) List which classifies waterbody segments and whether these classified segments are impaired or threatened based on ambient water quality and how each segment compares to State water quality standards. Only classified waterbodies are subject to monitoring by the State for water quality; however, Browns Lake was not classified in the 2014 Louisiana WQI Integrated Report. Black Lake (subsegment LA030403\_00) is the nearest classified waterbody to the project area. Recent data from the 2014 Louisiana WQI Integrated Report indicates that Black Lake is not an impaired or threatened waterbody and the quality of the water fully supports swimming, boating and fishing (see Appendix D – Supporting Documentation).

Pursuant to Section 402 of the CWA, under LDEQ regulations for implementing the Louisiana Pollutant Discharge Elimination System (LPDES), this project could require a Construction General Permit (CGP), and the preparation of a Storm Water Pollution Prevention Plan (SW3P). Land-disturbing activities can produce downstream impacts to non-permitted outfalls, ditches, storm water management devices, and their eventual receiving waters as a result of the physical transport of erodible soils when exposed to rainfall. Small construction sites and activities producing potentially affected run-off have a separate regulation and permitting focus. The primary contaminant is suspended solids loading; however, other construction-related and

construction-problematic contaminants are also addressed. The Federal program is used in those states without NPDES primacy and the State programs follow the current federal General Permit in language and scope. Temporary and long-term water quality impacts are not anticipated as a result of the proposed project as the LDEQ's recommended BMPs would be implemented to prevent any degradation to water quality as a result of this proposed project. BMPs consistent with the SPR Pollution Prevention Plan (Publication ASL5400.41), Version 10.0 (08-02-16), would address erosion control, sedimentation control, and post-construction total suspended solids.

Pollution from stormwater would be minimized through adherence to requirements detailed in the project contract and scope of work. Construction activities of the proposed project would include temporary erosion control measures to minimize impacts to water quality during construction. Such erosion control measures may include the use of silt fencing, protection barriers, hay bales, seeding or sodding of bare areas, or other suitable means of erosion/sediment containment. Where appropriate, temporary erosion control structures would be built before construction begins and maintained during construction. Vegetation, including trees, would be cleared only as needed and clearing activities may be phased to maintain soil integrity and minimize exposure of an erosive surface. When construction is completed, disturbed areas would be restored to pre-construction grade and reseeded as needed.

#### **4.7.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on surface water quality throughout the project area.

#### **4.7.3 Environmental Consequences – Build Alternative**

According to the 2014 WQI Integrated Report, Browns Lake is not listed as an impaired or threatened water; therefore, no coordination with LDEQ regarding impaired waters would be necessary for the proposed project. A NOI and SW3P would be prepared prior to construction and BMPs would be in place to minimize impacts to water quality during construction. The Build alternative would not have any anticipated long-term environmental consequences on the watershed or surface water quality throughout the project area.

Potential adverse effects to surface water may include accidental spills or contamination from equipment utilized for the pipeline installation. Contractors would have BMPs in place to limit the potential for contamination of surface water resulting from construction activities.

Short-term impacts along the proposed ROW may include temporary disturbances to the soil surface, including the potential erosion of disturbed surfaces and run-off. Erosion control measures would be implemented to eliminate or minimize sediment run-off into sensitive areas such as wetlands or Browns Lake. Pipeline installation activities may temporarily increase sediment disturbances in Browns Lake. The short duration of the pipeline installation process through Browns Lake and the use of specialized construction techniques in water environments would minimize total suspended solids/sediments in the water during the trenching activities and installation of the pipeline.

### **4.8 WATERS OF THE U.S., INCLUDING WETLANDS**

#### **4.8.1 Existing Conditions**

The approximate 2.1 mile proposed pipeline ROW from the SPR WH facility to the brine injection well site was investigated for waters of the U.S., including wetlands. Browns Lake, a waters of the U.S., is located immediately north of the brine injection wells near the southern project limits. Browns Lake and immediately adjacent wetland marsh/fringe areas were observed during field investigations of the project area (see Appendix B – Photographs). Browns Lake is not currently identified by the United States Army Corps of Engineers (USACE), New Orleans District, as a navigable water.

In the pastureland immediately north of Maggie Hebert Road and in the pastureland/wooded area north and east of Johnson Lane, the proposed pipeline ROW would cross wetland areas. Also, several well-trod, low areas within the pastureland were observed throughout the project area such as areas between West Main Street and Johnson Lane. These areas exhibit wetland characteristics (i.e., hydrophytic vegetation, soils and hydrology) though are not identified on National Wetland Inventory (NWI) maps (see Appendix A, Exhibit 7 – NWI Map). No wetlands were observed within the proposed pipeline ROW from West Main Street to the northern project limits at the SPR WH facility. Since the proposed project would occur within a jurisdictional waters of the U.S., including wetlands, the 10 CFR 1022 requirement to prepare a Wetlands Statement of Findings is applicable (see Appendix D – Supporting Documentation).

The DOE received a USACE, New Orleans District, permit for the original construction of well pads, access roadways and pipelines at the SPR WH facility under Permit No. LMNOD-SW (Cameron Parish Wetlands) 152 on March 16, 1978. A 36-inch brine disposal pipeline for the cavern leaching process was constructed as well as the original 24-inch brine disposal pipeline which connected the SPR WH facility to brine injection wells. Both pipelines were later removed from service, but remained in place. The DOE applied for and received a permit modification to LMNOD-SW (Cameron Parish Wetlands) 152 on July 6, 1995 for excavating and backfilling of 9 access pits, installation of approximately 9,000 feet of polyethylene liner inside an existing pipeline, installing 1,350 feet of 24-inch diameter pipeline, installing 1,500 feet of 24-inch diameter pipeline on pilings, excavation and installation of a private roadway conduit, and removal from service of 2,800 feet of existing 12-inch, 20-inch and 24-inch pipeline (the 24-inch pipeline was reduced to a 20-inch pipeline along the north side of Browns Lake).

#### **4.8.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on waters of the U.S., including wetlands, throughout the project area.

#### **4.8.3 Environmental Consequences – Build Alternative**

Waters of the U.S., including wetlands, were observed within the proposed project ROW. Implementation of the brine disposal pipeline replacement project, as designed, would result in unavoidable impacts to waters/wetlands within the project limits. The DOE would submit a permit modification to Permit No. LMNOD-SW (Cameron Parish Wetlands) 152 to the USACE, New Orleans District, for the unavoidable permanent and temporary impacts to waters of the U.S., including wetlands. All permanent and temporary impacts would be calculated by utilizing the U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps/data. The NWI is a geospatial database which depicts wetland and open water habitats and was developed



by the USFWS to be used for management, research, policy development, education and planning activities.

The current engineering design proposes an open cut trench within Browns Lake and associated wetland areas in which the new brine disposal pipeline would be placed. Soils from waters of the U.S., including wetlands, would be temporarily placed alongside the trench (side cast soils). Construction equipment would be routed through uplands when practicable to minimize impacts to waters of the U.S., including wetlands. Side cast soils would be replaced once the installation of the proposed brine disposal pipeline is complete. All matting would be removed and the project area would be returned to pre-construction grade which would allow for unrestricted flow in open water areas and would allow for revegetation (naturally or with planted vegetation) in wetland areas resulting from temporary impacts.

The Build alternative would have anticipated environmental consequences on waters of the U.S., including wetlands, throughout the project area. The DOE would coordinate the wetland permitting process (Joint Permit Application through the Louisiana Department of Natural Resources, Office of Coastal Management) and any applicable mitigation for unavoidable impacts to waters of the U.S., including wetlands, with the USACE. In accordance with wetland permitting activities, coordination with the LDEQ for a Water Quality Certification would be completed, as appropriate. No construction activities through waters of the U.S., including wetlands, would be conducted until a wetland permit is issued to the DOE by the USACE, New Orleans District. The DOE would comply with the wetland permit requirements as issued by the USACE.

## **4.9 GROUNDWATER**

### **4.9.1 Existing Conditions**

In southwestern Louisiana, groundwater is generally obtained from one of three aquifers: the Jasper Aquifer, the Evangeline Aquifer and the Chicot-Atchafalaya Aquifer (the Chicot Aquifer and Atchafalaya Aquifer are hydraulically continuous in the eastern extent of the aquifer range in southwestern Louisiana). The project area is underlain by the Chicot Aquifer which is part of the Coastal Lowlands Aquifer System. The Chicot Aquifer consists of a complex series of unconsolidated or poorly consolidated areas of discontinuous beds of sand, silt, and clay. In southwestern Louisiana, the aquifer consists of three separate hydrologic units referred to as the 200-foot sand, the 500-foot sand, and the 700-foot sand, based on the average depths at which these units are encountered. The 200-foot sand ranges from 50 to 100 feet in thickness and has the highest water quality of the three aquifer layers and is primarily used for domestic purposes. The 500-foot sand ranges from 170 feet to 200 feet in thickness and is the most heavily used layer of the Chicot Aquifer; this layer is used primarily as the source of industrial and public water supply. The 700-foot sand ranges from 85 to 150 feet in thickness and has been impacted by salt-water intrusion.

Recharge to the Chicot Aquifer system occurs from a variety of sources including direct infiltration of rainfall on outcrops found considerably north of the project area which could be susceptible to local surface contamination. Also, groundwater is found in interconnected sandy zones occurring both above and below the aquifer in the vicinity of the WH facility in places that

have a tendency to promote vertical leakage. There are shallow waterbearing sands occurring over the WH salt dome and these shallow zones may be locally affected by surficial activities.

Seven soil borings were conducted along the proposed brine disposal pipeline alignment. Six borings were drilled to a depth of approximately 30 feet and one boring was drilled to a depth of approximately 100 feet. Groundwater, between approximately 3 to 12 feet of the soil surface, was noted on boring logs for five of the 30 foot borings; 2 boring logs did not reflect groundwater information. Based on the boring logs, the water table was estimated at 8-12 feet below grade; the groundwater level rose to 2.5-8 feet after 15 minutes of monitoring. Groundwater levels in this area of Cameron Parish fluctuates due to seasonal conditions. The installation of the proposed pipeline may or may not encounter shallow groundwater during construction activities. The construction contractor would implement BMPs as needed to protect surface water, groundwater and soils throughout the construction pipeline installation process.

#### **4.9.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on groundwater throughout the project area.

#### **4.9.3 Environmental Consequences – Build Alternative**

Potential adverse effects to groundwater, if present, may include accidental spills or contamination from equipment utilized for the pipeline installation particularly jack and bore activities. Contractors would implement BMPs and additional environmental safeguards to limit the potential for contamination of soil and groundwater resulting from construction activities. The Build alternative would not have any anticipated environmental consequences on the groundwater resources throughout the project area as open cut trenching for the placement of the proposed pipeline is anticipated to be approximately 7 to 12 feet in depth from the soil surface in most locations; however, a maximum depth of approximately 15 feet may be necessary, for example, near existing pipeline crossings within the project limits.

## **NATURAL/ECOLOGICAL RESOURCES**

### **4.10 VEGETATION AND WILDLIFE**

#### **4.10.1 Existing Conditions**

##### **Vegetation**

According to the EPA's Level III Ecoregions of Louisiana, the project area is located within the Louisiana Gulf Coast Prairies and Marshes ecoregion. The area is also depicted as the Western Gulf Coastal Plain (34) which is subdivided into prairies, terraces, marshes and plains; the designation in the project area is the Texas-Louisiana Coastal Marsh (34g). The proposed pipeline project is located within existing and proposed ROW. Adjacent to the project area, the surrounding land use consists of primarily pastureland with a mixture of rural residential properties and industrial activities (see Appendix A, Exhibit 4 – Aerial Photograph, 2013). Grasses and herbaceous species dominate the project area within the pastureland. Low lying areas in pasturelands and other areas contain wetland vegetation. Additionally, wooded areas with mature live oak trees and other trees were observed along the proposed brine disposal pipeline ROW. A list of plant species identified within or adjacent to the project area, including

scientific name, common name and wetland indicator status, is presented in Appendix D – Supporting Documentation.

### **Wildlife**

The proposed pipeline project is located primarily along an existing pipeline corridor within pastureland except for Browns Lake and associated wetland areas and a wooded area within the Hackberry Recreation Area. No barriers, displacement or fragmentation of wildlife habitat or movement would be introduced adjacent to the existing pipeline corridor within the pastureland, or Browns Lake and associated wetlands, as these areas would be returned to pre-construction grade and allowed to revegetate following installation of the proposed pipeline. Temporary effects to wildlife habitat in these areas include the decreased attractiveness of habitat adjacent to the project area in terms of temporary use or foraging.

One portion of the proposed pipeline would be located in a wooded area with numerous mature live oak trees within the Hackberry Recreation Area. The removal of such trees would be necessary to implement the proposed project as designed and the area would be permanently maintained to allow access to the proposed brine disposal pipeline. The proposed brine disposal pipeline would be installed near the western edge of an approximate 11.25 acre wooded area. This action would result in the fragmentation of habitat by creating two wooded areas ( $\pm 9.65$  acres and  $\pm 1.60$  acres) which would be separated by a maintained pipeline corridor; however, this location is currently similarly fragmented by an existing roadway/trail and a pole-mounted electrical easement. An additional similar existing pipeline ROW exists south and east of Johnson Lane. Trees were cleared in this area to accommodate the development of the roadway/trail, pipeline easement and electrical easement. Clearing of the temporary ROW would be at the discretion of the contractor; the intent is to place the pipeline while minimizing disruptions to the wooded area within the ROW limits. The proposed pipeline ROW would permanently impact this wooded area due to the loss of mature trees as well as limited understory. The installation of the proposed pipeline ROW would however increase edge habitat (wooded areas and open areas) along this area of the proposed pipeline ROW.

Edge environments include two or more different types of vegetation or habitat areas. Edge environments offer wildlife species a variety of food, cover and other essential habitat requirements in close proximity which may be beneficial to species on small tracts of land. The combination of vegetation types located within the project area, including pastureland, maintained easement, mature live oaks and limited understory, create habitat for wildlife species typically found in rural settings, edge environments or near waterways. These species may include raccoons, rabbits, opossums, squirrels, mice, snakes, frogs, and a variety of birds.

#### **4.10.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on vegetation or wildlife throughout the project area.

#### **4.10.3 Environmental Consequences – Build Alternative**

The proposed project area consists of a rural area primarily located along an existing pipeline corridor within pasturelands and small wooded areas. One area of the proposed brine disposal pipeline would increase fragmentation of an approximately 11.25 acre parcel of land; however,

this area is currently fragmented by an existing roadway/trail, pipeline easement and electrical easement. Wildlife present in this area have adapted to the existing fragmentation of habitat and the additional division of habitat associated with the installation of the proposed pipeline is unlikely to permanently impact or cause displacement to wildlife species within the project area. Similar small tracts of wooded habitat are located in close proximity to the project area. The Build alternative is not anticipated to have permanent adverse environmental consequences on wildlife or the habitat within the project limits.

Permanent removal of a small area of mature live oak trees in the permanent/maintained pipeline ROW would occur; therefore, the Build alternative would have adverse environmental consequences on vegetation within the project area.

#### 4.11 THREATENED AND ENDANGERED SPECIES

##### 4.11.1 Existing Conditions

The Endangered Species Act (ESA) of 1973 was designed to protect critically imperiled species from extinction as a “consequence of economic growth and development untempered by adequate concern and conservation.” Through Federal action and by encouraging the establishment of State programs, the ESA provided for the conservation of ecosystems upon which threatened and endangered species of wildlife depend.

Wildlife in the project area may include those species typically found in rural, pastureland and/or wetland settings. These species may include raccoons, rabbits, opossums, nutria, squirrels, snakes, frogs, alligators and a variety of birds. The clearing of trees would occur along one area of the alignment but no additional displacement or fragmentation of habitat is expected to occur as the majority of the area within the proposed pipeline ROW consists of pastureland. The project area would be returned to pre-construction grade after the completion of the proposed project and the pipeline ROW would be allowed to revegetate (naturally or with planted vegetation).

Table 3: State and Federal Threatened and Endangered Species of Cameron Parish, describes the State and Federally listed species which are known to inhabit Cameron Parish, their habitat and whether such habitat is present within the project area.

Table 3: State and Federal Threatened and Endangered Species of Cameron Parish						
Common Name	Scientific Name	State Status	Federal Status	Habitat Description	Habitat Present	Impact/ Effect
<b>BIRDS</b>						
Crested Caracara	<i>Caracara cheriway</i>	S1	DM†	Open areas such as prairies or rangeland with scattered trees	Yes	No Impact
Common Ground Dove	<i>Columbina passerine</i>	S1	---	Cultivated land including farms, orchards, old cane fields/clearings, roadsides and wood edges	Yes	No Impact
Brown Pelican (Nesting)	<i>Pelecanus occidentalis</i>	E	DM	Island near coastal areas	No	No Impact
Glossy Ibis	<i>Plegadis falcinellus</i>	S2	---	Prairies, fields and marshes	Yes	No Impact
Interior Least Tern	<i>Sterna antillarum athalassos</i>	E	E†	Nests along sand and gravel bars within streams and rivers, only listed when 50 miles inland	No	No Effect
Piping Plover (Wintering)	<i>Charadrius melodus</i>	T	T	Beach and bayside mud or salt flats	No	No Effect
Red Knot	<i>Calidris canutus rufa</i>	SOC	T†	Intertidal marine habitats, especially near coastal inlets, estuaries, and bays. Mudflats	No	No Effect
Roseate Spoonbill	<i>Platalea ajaja</i>	S3	---	Prefers freshwater but is also known to inhabit	Yes	No Impact

Table 3: State and Federal Threatened and Endangered Species of Cameron Parish						
Common Name	Scientific Name	State Status	Federal Status	Habitat Description	Habitat Present	Impact/Effect
				varieties of marine and brackish waters		
Sandhill Crane	<i>Grus canadensis</i>	S1	---	Prairies, fields and marshes	Yes	No Impact
Snowy Plover	<i>Charadrius alexandrinus</i>	S1B, S2N	T†	Migrant, dry sandy or shell beaches, above high tide mark and along the coast or barrier islands	No	No Impact
Wilson's Plover	<i>Charadrius wilsonia</i>	S1, S2, S3	*	Coastal areas that are saline and thinly vegetated including salt flats, coastal lagoons, beaches and sand dunes	No	No Impact
FISHES						
Atlantic Sturgeon	<i>Acipenser oxyrinchus desotoi</i>	---	T	Anadromous species; coastal waters and estuaries and spawn in moderate flowing, cold, clean water rivers	No	No Effect
Paddlefish	<i>Polyodon spathula</i>	S4	---	Large, free-flowing rivers but is frequently found in impoundments	No	No Impact
MAMMALS						
Louisiana Black Bear	<i>Ursus americanus luteolus</i>	---	T†	Bottomland hardwoods; large, undisturbed forested areas	No	No Effect
Eastern Spotted Skunk	<i>Spilogale putoria</i>	S1	†	Forested and well covered areas are preferred, including open or brushy areas and prairie outcrops	Yes	No Impact
Red Wolf	<i>Canis rufus</i>	E	E†	Extirpated, brushy, forested areas, coastal prairies	No	No Effect
West Indian Manatee	<i>Trichechus manatus</i>	S1N	T	Gulf and bay system	No	No Effect
REPTILES						
Diamondback Terrapin	<i>Malaclemys terrapin</i>	S2	---	Seagrass beds, marshes and estuaries	Yes	No Impact
Green Sea Turtle	<i>Chelonia mydas</i>	---	T	Gulf and bay system	No	No Effect
Hawksbill Sea Turtle	<i>Eretmochelys imbricate</i>	---	E	Gulf and bay system	No	No Effect
Kemp's Ridley Sea Turtle	<i>Lipidochelys kempii</i>	---	T	Gulf and bay system	No	No Effect
Leatherback Sea Turtle	<i>Dermochelys coriacea</i>	---	T	Gulf and bay system	No	No Effect
Loggerhead Sea Turtle	<i>Caretta caretta</i>	---	E	Gulf and bay system	No	No Effect
Ornate Box Turtle	<i>Phrynosoma cornutum</i>	T	---	Open areas dominated by grasses and brushy vegetation such as prairies, grasslands, and sandy plains	No	No Impact
PLANTS						
Small Flowered Milk-Vetch	<i>Astragalus nuttallianus</i>	S2, S3	---	Coastal dune grasslands, Gulf beaches, and open areas on cheniers	No	No Impact
Blue Water Lily	<i>Nymphaea elegans</i>	S2, S3, S4	---	Pools in freshwater marshes	No	No Impact
Brookweed	<i>Samolus ebracteatus</i>	S1	---	Wet, open, disturbed areas	No	No Impact
Correll's False Dragon-head	<i>Physostegia correllii</i>	S1	---	Roadside ditches or riverbanks	Yes	No Impact
Dune Sandbur	<i>Cenchrus tribuloides</i>	S2	---	High energy Gulf beaches	No	No Impact
Elliot's Sida	<i>Sida elliotii</i>	SH	---	Saline prairie and Gulf beach habitats	No	No Impact
Florida Bully	<i>Sideroxylon reclinatum</i>	S1	---	Marsh, hammocks and shell middens	No	No Impact
Golden Canna	<i>Canna flaccida</i>	S4	---	Fresh marsh and open swamps	No	No Impact
Grapefruit Primrose Willow	<i>Ludwigia sphaerocarpa</i>	S2	---	Fresh water floatant marshes	No	No Impact
Gregg's Amaranth	<i>Amaranthus greggii</i>	S3	---	High energy beaches on the Chenier Plain and Deltaic Plain	No	No Impact
Mexican Hat	<i>Ratibida peduncularis</i>	S2, S3	---	Coastal dune grassland, Gulf beach, and disturbed areas with loose sand	No	No Impact
Narrow-leaved Puccoon	<i>Lithospermum incisum</i>	S1	---	Beach ridges with shelly-sand substrate	No	No Impact
Powdery Thalia	<i>Thalia dealbata</i>	S2, S3	---	Roadside/irrigation ditches or disturbed areas	Yes	No Impact
Punctate Cupgrass	<i>Eriochola punctate</i>	S2	---	Drainage ditches or other disturbed areas on the	Yes	No Impact

**Table 3: State and Federal Threatened and Endangered Species of Cameron Parish**

Common Name	Scientific Name	State Status	Federal Status	Habitat Description	Habitat Present	Impact/ Effect
				coast		
Roundleaf Scurf-pea	<i>Pediomelum rhombifolium</i>	S2, S3	---	High energy Gulf beaches and coastal dune grasslands	No	No Impact
Saltflat-grass	<i>Monanthochloe littoralis</i>	S1	---	Coastal saline mud flats and salt marshes on bay shores and behind beaches	No	No Impact
Sand Dune Purge	<i>Chamaesyce bombensis</i>	S1	---	Coastal dune grasslands and high energy beaches	No	No Impact
Sand Rose-gentian	<i>Sabatia arenicola</i>	S1	---	High energy Gulf beaches of the Deltaic Plain	No	No Impact
Sea Oats	<i>Uniola paniculata</i>	S2	---	High energy beaches and sand dunes	No	No Impact
Slim Spikerush	<i>Eleocharis elongata</i>	S3	---	Fresh marsh, especially pools in fresh marsh; lake and bayou shorelines	No	No Impact
Small's Beaksedge	<i>Rhynchospora globularis</i> var. <i>pintorum</i>	S1	---	Pine savannas and flatwoods, pond margins, swales, disturbed areas and ditches	No	No Impact
Southern Beaksedge	<i>Rhynchospora microcarpa</i>	S3	---	Savanna swales, marshes and pond shores	No	No Impact
Wand Blackroot	<i>Pterocaulon virgatum</i>	S2	---	Coastal prairie remnants	No	No Impact
Wedge-leaf Prairie Clover	<i>Dalea emarginata</i>	S2	---	Dry sandy Gulf beaches and coastal dune grassland	No	No Impact
Wedge-leaf Whitflow-grass	<i>Draba cuneifolia</i>	S1	---	Sandy substrate on cheniers in open conditions	No	No Impact
Woolly Honeysweet	<i>Tidestromia lanuginose</i>	S1	---	High energy Gulf beaches between Holly Beach and Johnsons Bayou	No	No Impact

Notes:

- \* These species occur on the State listing of threatened or endangered species; however, they are not federally listed at this time by the USFWS (05/18/16).
  - † These species are listed by the USFWS, however, they are not listed to occur within this Parish by the Lafayette office of the USFWS (2016).
  - 
  - No status listed by the LPWD or USFWS for this Parish (05/18/16).
- E = endangered, T = threatened, SH = historical occurrence, I = introduced population, C = candidate species, S1 = Critically Imperiled, S2 = Imperiled, S3 = Vulnerable, S4 = Apparently Secure, S5 = Secure, DM = delisted taxon, recovered, being monitored first five years, D = delisted taxon.

Based on reconnaissance visits to the project area and a review of available data sources, such as the USFWS and Louisiana Department of Wildlife and Fisheries (LDWF) lists of threatened and endangered species, a determination was made that the proposed brine disposal pipeline replacement project would have “no effect” on Federally listed species and/or designated critical habitat. The proposed project would have “no impact” to State threatened and/or endangered species. No documented sightings of threatened and endangered species or critical habitat were identified during field visits to the project area (see Appendix D – Supporting Documentation; LDWF Rare Species for Cameron Parish; USFWS Endangered Species List for Cameron Parish).

One species (Roseate Spoonbill) listed as rare by the LDWF was observed during two field visit to the project area. This species was observed near low areas holding water within pastureland adjacent to the project area. Habitat for several additional species listed as rare by the LDWF were observed in the project area; however, such habitat is extremely common within and adjacent to the project area. Such habitat consists of roadside and irrigation ditches, prairies, fields or marshes, and brushy areas or rangeland; therefore, no critical habitat exists within or adjacent to the project area that is unique and which could not be found in other areas surrounding the proposed pipeline corridor.

The Bald and Golden Eagle Act of 1940 prohibits the taking of Bald or Golden Eagles, the destruction of their nests, or the taking of their eggs. This Act is intended to protect eagles from commercial exploitation and promote their survival. The Act prohibits anyone from taking or disturbing Bald or Golden Eagles, their nests, or eggs.

The Migratory Bird Treaty Act (MBTA) established a Federal prohibition, unless permitted by regulations, to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird.” A cursory nest survey was conducted during the environmental investigations to this site. The environmental staff found no evidence of migratory bird nests. To avoid effects on migratory birds and their habitat, construction should be avoided during the peak-nesting season (March 1<sup>st</sup> through August 1<sup>st</sup>).

#### **4.11.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on State or Federally listed rare, threatened and/or endangered species or their habitats throughout the project area.

#### **4.11.3 Environmental Consequences – Build Alternative**

The proposed project would not disturb or endanger either Bald or Golden Eagles. There is currently no suitable habitat in the immediate area of the proposed brine disposal pipeline for nesting Bald or Golden Eagles. Aside from an area of mature trees located on and adjacent to the Hackberry Recreation Area, no habitat for migratory birds was observed within the proposed project area. To comply with the MBTA, the USFWS recommends that vegetation disturbances potentially associated with construction activities be conducted so as to avoid the general nesting period from March 1<sup>st</sup> through August 31<sup>st</sup>, or that those areas proposed for disturbance be surveyed first for nesting birds, in order to avoid impacts to any migratory species. The SPR/DOE would comply with the USFWS recommendations and would take measures to avoid the take of migratory birds, their occupied nests, eggs, or young.

No suitable habitat for any State or Federally listed species and no critical habitat for species listed as rare by LDFW was observed; however, measures to avoid harm to any threatened and/or endangered species would be taken should such species be observed during construction of the proposed project. Coordination with the USFWS and LDFW to determine if any additional measures are need to be taken during the implementation of the proposed project would be conducted.

The Build alternative would not have any anticipated environmental consequences on State or Federally listed rare, threatened and/or endangered species or their habitats throughout the project area.

### **4.12 ESSENTIAL FISH HABITAT**

#### **4.12.1 Existing Conditions**

The Magnuson-Stevens Fishery Conservation and Management Act, as amended on October 11, 1996, directs that all federal agencies, whose actions would impact Essential Fish Habitat (EFH), must consult with the National Marine Fisheries Service (NMFS) regarding potential adverse impacts to EFH. EFH is defined as, “those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.” The EFH requirements apply to all estuarine habitats and inland of all waters, to the extent of salt-water influence.

The northern terminus of the proposed pipeline project is located approximately 0.6 mile south of Black Lake and approximately 4.2 miles south of the Gulf Intracoastal Waterway. The southern terminus of the proposed pipeline project is located in Browns Lake which is approximately 3.2 miles west of Calcasieu Lake. Browns Lake consists of a shallow lake which is connected to waterbodies (i.e., Black Lake, Calcasieu Lake) with designated EFH. EFH species which are present in EFH designated waterbodies may inhabit the proposed project area, specifically near the southern project limits.

The National Oceanic and Atmospheric Administration (NOAA), NMFS EFH Mapper was utilized to review potential EFH within or near the project area. The EFH Mapper (version 3.0) consists of an on-line tool in which a designated project area may be mapped relative to known EFH areas based on Geographic Information System (GIS) data. No designated EFH, Habitat Areas of Particular Concern (HAPC), or EFH Areas Protected from Fishing (EFHA) were identified within the proposed project area using the EFH Mapper (Source: NOAA EFH Mapper, <http://www.habitat.noaa.gov/protection/efh/efhmapper/>). The EFH on-line data notice states that EFH is defined by textual descriptions contained in the fishery management plans developed by the regional Fishery Management Councils. In most cases, mapping data cannot fully represent the complexity of the habitats that makeup EFH. The [EFH Mapper] report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH [at a particular location]. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert (e.g., NMFS). Browns Lake is contiguous with Calcasieu Lake and the Gulf Intracoastal Waterway in which the EFH Mapper identified EFH for red drum, four shrimp species, three pelagic species and 43 reef fish in all life stages.

In correspondence dated January 20, 2017, the NMFS stated that wetlands potentially impacted by construction of the proposed project consist of saline to brackish marsh vegetated with saltgrass, smooth cordgrass and marshhay cordgrass. Tidally influenced wetlands connected to Black Lake and Browns Lake are designate as EFH for post-larval and/or juvenile life stages of white shrimp, brown shrimp, gray snapper, lane snapper and red drum. Specifically, the tidal creek connected to Black Lake between Johnson Lane and Maggie Hebert Road and the waterbody south of Maggie Hebert Road connected to Browns Lake (southern project terminus) are EFH, as well as all wetlands tidally connected to these areas. Primary categories of EFH which may be located in the project area include estuarine emergent wetlands, estuarine water column, and estuarine mud bottoms.

The proposed project would be constructed through waters of the US, including wetland areas, which could support EFH in two potential areas: 1) the creek between Johnson Lane and Maggie Hebert Road and 2) in Browns Lake at the southern project terminus. Field observations indicated that the creek between Johnson Lane and Maggie Hebert Road is dominated by Bulrush in the area of the proposed pipeline. This area is used by cattle as pasture land, is well trod and dries in summer months. This creek area is higher in elevation at the proposed pipeline



corridor than areas on both sides of the corridor. NWI maps of the project area reflect estuarine areas (E1UBL5) to the east and west of the proposed pipeline corridor though the area in which the pipeline is proposed is designated as PEM1T, PSS1S, and PFO1A (see Appendix A, Exhibit 7 – National Wetlands Inventory Map and the NWI codes below). EFH species that rely on estuarine habitats for all or part of their life cycle are not expected to occur within the proposed pipeline corridor in the creek area.

NWI Code	System	Subsystem	Class	Subclass	Modifier 1	Modifier 2
PEM1T	P - Palustrine	---	EM - Emergent	1 - Persistent	T - Semipermanent-Tidal (freshwater tides)	---
PSS1S	P - Palustrine	---	SS - Scrub-shrub	1 - Broad-Leaved Deciduous	S - Temporary-Tidal (freshwater tides)	---
PFO1A	P - Palustrine	---	F - Forested	1 - Broad-Leaved Deciduous	A - Temporarily Flooded	---
PEM1R	P - Palustrine	---	EM - Emergent	1 - Persistent	R - Seasonal-Tidal (freshwater tides)	---
E2EM1P5	E - Estuarine	2 - Intertidal (extreme low to high water)	EM - Emergent	1 - Persistent	P - Irregularly Flooded (tidal water floods change daily)	5 – Mesohaline (5.0-18 ppt)
E1UBL5	E - Estuarine	1 - Subtidal	UB - Unconsolidated Bottom	---	L - Subtidal	5 – Mesohaline (5.0-18 ppt)

The NWI map at the southern project terminus indicates areas designated as PEM1R, E2EM1P5 and E1UBL5. Such designations support the estuarine character of Browns Lake.

#### 4.12.2 Environmental Consequences – No Build Alternative

The No Build alternative would not have any environmental consequences on EFH or HAPC throughout the project area.

#### 4.12.3 Environmental Consequences – Build Alternative

The proposed project would be constructed through waters of the US, including wetland areas, which could support EFH in two potential areas: 1) the creek between Johnson Lane and Maggie Hebert Road and 2) in Browns Lake at the southern project terminus. The proposed pipeline would be installed using open-cut methods with the temporary side-cast of excavated soils. Waters of the US, including wetland areas, disturbed temporarily by the installation of the pipeline would be returned to pre-existing conditions in terms of the physical grade of the pipeline installation area and the plants species within the pipeline corridor.

Direct impacts to the creek between Johnson Lane and Maggie Hebert Road as well as Browns Lake would result from the implementation of the proposed project. As the impacts are temporary in nature, and will be detailed in the USACE wetland permitting process, a cumulative impacts analysis is not required at this time.

A mitigation plan, submitted as part of the wetland permit application, would outline the proposed project alternatives reviewed for this project. The project alternatives included avoidance alternatives (i.e., horizontal directional drilling, etc.), alternatives which were evaluated and not advanced for further consideration, the alternative selected, and the No Build Alternative. The description of the alternative selected would include the rationale for the alignment chosen as well as construction methodologies. The alternatives analysis would

describe avoidance and/or minimization of impacts as well as any designated mitigation for unavoidable impacts resulting from the proposed project.

Mitigation is designed to offset unavoidable impacts to EFH as well as tidal and non-tidal wetlands. Mitigation efforts would include allowing plant species to reestablish on their own but may also include planting local species to accelerate the re-vegetation process in areas disturbed by the installation phase of the project. Additionally, a monitoring plan would be developed to evaluate the degree to which areas impacted by the implementation of the proposed project recover from the construction activities. Actions would be taken to mitigate for wetland areas which do not recover from construction activities in a specified period of time. The DOE would comply with the wetland permit requirements, including mitigation and monitoring, as issued by the USACE.

The DOE would coordinate the wetland permitting process and any applicable mitigation for unavoidable impacts to waters of the U.S., including wetlands, with the USACE. Additional coordination with resource agencies, such as NMFS, USFWS, LDWF, etc., during the wetland permitting process would occur as a collaborative effort to review the permit application for wetland resources, EFH resources and other coastal resources as appropriate.

The Build alternative would not have any anticipated long-term impacts to designated EFH or HAPC throughout the project area.

#### **4.13 COASTAL MANAGEMENT PROGRAM**

##### **4.13.1 Existing Conditions**

The proposed project is located within a coastal Parish and within the Louisiana Coastal Resources Program (LCRP) boundary; therefore, LCRP applies to the proposed project and all actions would be coordinated with the Louisiana Office of Coastal Management (OCM). The purpose of the LCRP and Louisiana OCM is to maintain, protect, develop and restore or enhance the invaluable coastal region of the State of Louisiana. Such coastal features which occur within the proposed project area include coastal wetlands and open water habitat associated with Browns Lake. Since the proposed project is located within the LCRP boundary and because the project is a Federal action, the OCM shall review the project and issue a Federal Consistency Determination before any activity within waters of the U.S., including wetlands, can be authorized by the USACE, New Orleans District.

##### **4.13.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on coastal resources along the Louisiana coast throughout the project area.

##### **4.13.3 Environmental Consequences – Build Alternative**

Temporary impacts, such as soil disturbance or vegetation removal, to coastal wetlands and open water areas associated with Browns Lake, would occur within the project area as a result of the open trench installation of the proposed brine disposal pipeline. Following installation of the pipeline, the area would be returned to pre-construction grade and revegetated (naturally or with planted vegetation). The DOE would comply with the wetland permit requirements as issued by the USACE.

The Build alternative would not have any anticipated long-term environmental consequences on coastal resources along the Louisiana coast surrounding the project area.

#### **4.14 COASTAL BARRIER RESOURCES ACT**

##### **4.14.1 Existing Conditions**

The Coastal Barrier Resources Act (CBRA) of 1982 designated relatively undeveloped coastal barriers along the Atlantic and Gulf Coast, which are biologically rich coastal barriers and are prone to impacts from hurricanes, as part of the John H. Chafee Coastal Barrier Resources System (CBRS). The CBRA discourages development in these areas restricting Federal expenditures and financial assistance; however, development is allowed as long as non-federal developers accept the entire cost. While areas of Cameron Parish are located within the CBRS; the project area is not located within a CBRS unit.

##### **4.14.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on any CBRS units throughout the project area.

##### **4.14.3 Environmental Consequences – Build Alternative**

No areas within a listed CBRS unit are located within the project area; therefore, the Build alternative would not have any environmental consequences on any CBRS units throughout the project area.

#### **4.15 PARKS AND MANAGED AREAS**

##### **4.15.1 Existing Conditions**

The existing brine disposal pipeline is located adjacent to the western boundary of the Hackberry Recreation Area, a Cameron Parish Park. Due to insufficient ROW between two residential properties along Johnson Lane, a limited section of the brine disposal pipeline alignment is proposed to be located within the Hackberry Recreation Area. The proposed alignment would include a 100 foot perpetual ROW and a 25 foot temporary construction easement along approximately 800 feet of the Hackberry Recreation Area, all of which consists of a wooded area containing mature trees.

The proposed pipeline ROW exits the western edge of the Hackberry Recreational Area property and continues southward through a wetland area and pastureland west of the Hackberry Recreation Area until reaching Maggie Hebert Road, a distance of approximately 650 feet. No impacts to the Hackberry Recreation Area would occur within the 650 feet immediately north of Maggie Hebert Road.

The Sabine National Wildlife Refuge is located approximately 0.6 mile south and southwest of the southern project limits of the proposed brine disposal pipeline project. The Sabine National

Wildlife Refuge is the largest coastal marsh refuge along the Gulf Coast of the U.S. totaling 124,511 acres in size, including 39,844 acres of water and 84,667 acres of marsh.

**4.15.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on parks or managed areas, including the Sabine National Wildlife Refuge, throughout the project area.

**4.15.3 Environmental Consequences – Build Alternative**

Permanent ROW would be acquired from the Hackberry Recreation Area and a wooded area would be cleared on the Hackberry Recreation Area property as a result of the installation of the proposed brine disposal pipeline. Such acquisition and clearing activities would have no impacts to the existing function and services provided to the public by the Hackberry Recreation Area; however, impacts (e.g., the removal of mature trees and limited understory) would occur within the park property.

The Build alternative would have limited environmental consequences on the Hackberry Recreation Area as clearing activities would be minimized to the extent practicable. No environmental consequences are anticipated as a result of the implementation of the proposed brine disposal pipeline project on the nearby Sabine National Wildlife Refuge.

**4.16 PERMITS/COMPLIANCE WITH OTHER REGULATIONS**

**4.16.1 Existing Conditions**

The proposed project would consist of the installation of approximately 2.1 miles of pipeline which would connect the SPR WH facility to the brine injection wells. No additional permits would be required for the SPR WH facility; however, the permits listed in Table 4 would be required prior to installation of the proposed pipeline. In addition to the permits listed below, the DOE would coordinate with the USFWS and LDWF on threatened and endangered species and the NMFS on EFH, as applicable. Also, consultation would occur with the OCM, Louisiana State Historic Preservation Office and Native American Tribes prior to the construction of the proposed project (see Section 6).

<b>Table 4: Major Permits for the WH Proposed Brine Disposal Pipeline Replacement Project</b>	
<b>Responsible Agency</b>	<b>Permit/Notification</b>
<b>Federal</b>	
U.S. Corps of Engineers Regulatory Division	CWA Section 404 Permit Modification
<b>State</b>	
Louisiana Department of Environmental Quality Water Quality Division	Water Quality Certification (WQC)
	Hydrostatic Test Water Discharge General Permit (LAG670000)
	Louisiana Pollutant Discharge Elimination System (LPDES) Notice of Intent (LAR100000)
Louisiana Department of Natural Resources Office of Coastal Management	Federal Consistency Determination
Louisiana Department of Transportation	Road and Utility Crossing Permit
<b>Local – Parish</b>	
Cameron Parish Policy Jury	Road Crossing Permit

#### **4.16.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on permitting throughout the project area as no permitting would be necessary.

#### **4.16.3 Environmental Consequences – Build Alternative**

Coordination with applicable agencies and required permits would be obtained prior to the onset of construction for the proposed project. Since all permits would be obtained prior to construction activities, the Build alternative would not have any environmental consequences on permitting throughout the project area.

### **CULTURAL RESOURCES**

Cultural resources studies include the investigation of historical structures, buildings, archeological sites, districts (a collection of related structures, buildings, or archeological sites), cemeteries and objects. Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires Federal agencies to take into account the effects of their undertakings on historic properties, and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The State Historic Preservation Officer (SHPO) is a designated representative of the Louisiana Office of Cultural Development which oversees the Division of Historic Preservation and Division of Archeology; these divisions are designated and responsible for conducting Section 106 reviews. As part of the proposed project, consultation with the SHPO would be completed by the DOE to determine the project's effect on cultural resources (see Appendix C – Agency Information and Correspondence). The review and coordination of this project would follow approved procedures for compliance with Federal laws under Section 106 of the NHPA.

### **4.17 HISTORIC RESOURCES**

#### **4.17.1 Existing Conditions**

A review of the National Register of Historic Places (NRHP) indicated that no historically significant properties have been previously documented within the project's Area of Potential Effect (APE). The APE for this proposed brine disposal pipeline project is the temporary and permanent ROW. The level of effort necessary to satisfy Section 106 obligations for the proposed action includes reconnaissance-level survey of the APE to identify historic-age properties, evaluate them for eligibility for listing in the NRHP, and determine effects to historic properties. No standing structures were observed within the APE; therefore, no historic age structures exist within the APE or would be impacted by the proposed project.

#### **4.17.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on historic resources throughout the project area.

#### **4.17.3 Environmental Consequences – Build Alternative**

No historic age structures exist within the APE; therefore, the Build alternative would not have any environmental consequences on historic resources throughout the project area.

## 4.18 ARCHEOLOGICAL RESOURCES

### 4.18.1 Existing Conditions

The pipeline project is located within proposed ROW adjacent to the existing ROW that has been previously disturbed. Historic uses and current uses for the project area include grazing of cattle and/or horses and development of areas associated with oil and gas production. Numerous oil and gas wells, well pads and pipelines have disturbed the project ROW and adjacent areas. No archeological deposits are anticipated to occur within the proposed project area. In the unlikely event that construction activities should contact archeological deposits in the project area, all work in the vicinity should cease and the SHPO would be notified for further guidance.

### 4.18.2 Environmental Consequences – No Build Alternative

The No Build alternative would not have any environmental consequences on archeological resources throughout the project area.

### 4.18.3 Environmental Consequences – Build Alternative

The Build alternative would not have any anticipated environmental consequences on archeological resources throughout the project area.

## POPULATION/COMMUNITY RESOURCES

### 4.19 DEMOGRAPHICS AND POPULATION GROWTH

#### 4.19.1 Existing Conditions

##### Population Trends

The proposed project lies entirely within Census Tract 9702.01, Block Group 1 in Cameron Parish, Louisiana (see Appendix C – Supporting Documentation). The population of Cameron Parish has decreased 31.55 percent (3,152 individuals) between 2000 and 2010 while Census Tract 9702.01, Block Group 1 has decreased by 25.72 percent (437 individuals) between 2000 and 2010. The State of Louisiana has increased by 1.44 percent (64,396 individuals) over the same time period. Table 5: Population Trends (2000-2010) for Census Tract 9702.01, Block Group 1; Cameron Parish and the State of Louisiana, depicts the population growth/change between 2000 and 2010.

<b>Geographic Type</b>	<b>Total Population 2000</b>	<b>Total Population 2010</b>	<b>Percent Growth 2000-2010</b>	<b>Average Annual Percent Growth 2000-2010</b>
Louisiana	4,468,976	4,533,372	1.44%	0.13%
Cameron Parish	9,991	6,839	-31.55%	-2.87%
Census Tract 9702.01, Block Group 1	1,699*	1,262	-25.72%	-2.34%

Source: 2000 and 2010 Census Summary File 1—Texas [machine-readable data files]/prepared by the US Census Bureau, Table P001 and P1, respectively. \*In 2000, Census Tract 9702.01, Block Group 1 was represented by Census Tract 9702, Block Group 2.

##### Age

The median age for Census Tract 9702.01, Block Group 1, adjacent to the proposed project area, is 42.9 years of age which is greater than the median age of State of Louisiana (36.0 years) and Cameron Parish (40.7 years). Table 6: Median Age in the Year 2013 for Census Tract 9702.01, Block Group 1; Cameron Parish and the State of Louisiana, denotes the median age of the

population within the proposed project area compared to Cameron Parish and the State of Louisiana.

<b>Geographic Type</b>	<b>Age in Years</b>
Louisiana	36.0
Cameron Parish	40.7
Census Tract 9702.01, Block Group 1	42.9
Source: US Census Bureau, 2009-2013 American Community Survey, Table B01002.	

#### **4.19.2 Environmental Consequences – No-Build Alternative**

The No Build alternative would not have any environmental consequences on demographics or the population growth throughout the project area.

#### **4.19.3 Environmental Consequences – Build Alternative**

Major hurricanes and other natural disasters have impacted the project area and Cameron Parish between 2000 and 2010. The frequency and severity of the natural disasters may have potentially led to the population decrease over that time period as some individuals may have chosen not to rebuild. The Build alternative would not have any anticipated environmental consequences on demographics or the population growth throughout the project area.

### **4.20 SOCIO-ECONOMIC (REGIONAL ECONOMY AND EMPLOYMENT)**

#### **4.20.1 Existing Conditions**

##### **Regional Economy**

Education, health care and social assistance was the largest employment sector in the State of Louisiana and Cameron Parish and within the top three largest employment sectors for Census Tract 9702.01, Block Group 1, at 10.78 percent. The largest employment sector for Census Tract 9702.01, Block Group 1, is construction at 16.67 percent. Lake Charles and Sulphur are approximately 20 miles from the proposed project area; therefore, all employment sectors are located within a commutable distance of the project area. Table 7: Employment Status for Civilian Labor Force Population 16 Years and Older in Year 2014 for Census Tract 9702.01, Block Group 1; Cameron Parish and the State of Louisiana depicts the total population, percentages of the civilian population in various employment sectors and the unemployment rate.

<b>Employment Sector</b>	<b>Louisiana</b>		<b>Cameron Parish</b>		<b>Census Tract 9702.01, Block Group 1</b>	
	<b>Total</b>	<b>%</b>	<b>Total</b>	<b>%</b>	<b>Total</b>	<b>%</b>
Agriculture, forestry, fishing, hunting and mining	95,270	4.35	422	12.68	88	14.38
Construction	161,201	7.35	451	13.55	102	16.67*
Manufacturing	160,428	7.32	192	5.77	35	5.72
Wholesale trade	52,342	2.39	81	2.43	62	10.13
Retail trade	233,981	10.67	333	10.01	50	8.17
Transportation, warehousing and utilities	105,263	4.80	281	8.44	46	7.52
Information	31,077	1.42	48	1.44	6	0.98
Finance, insurance and real estate	103,808	4.74	70	2.10	4	0.65
Professional, scientific, management and administrative	172,182	7.85	219	6.58	55	8.99

Employment Sector	Louisiana		Cameron Parish		Census Tract 9702.01, Block Group 1	
	Total	%	Total	%	Total	%
Education, health care and social assistance	467,620	21.34*	617	18.55*	66	10.78
Arts, entertainment, recreation, accommodation and food services	203,255	9.27	120	3.61	23	3.76
Other services	103,477	4.72	111	3.34	25	4.08
Public administration	112,506	5.13	182	5.47	38	6.21
<b>Employed</b>	<b>2,002,410</b>	<b>91.35</b>	<b>3,127</b>	<b>93.96</b>	<b>600</b>	<b>98.04</b>
<b>Unemployed</b>	<b>189,644</b>	<b>8.65</b>	<b>201</b>	<b>6.04</b>	<b>12</b>	<b>1.96</b>
<b>Total in Labor Force</b>	<b>2,192,054</b>	<b>100</b>	<b>3,328</b>	<b>100</b>	<b>612</b>	<b>100</b>

Source: US Census Bureau, 2010-2014 American Community Survey Table C24030 and Table B23025. \*Denotes the top employment sector per geographic region.

### Employment

A total of 612 individuals 16 years of age or older in the labor force live within Census Tract 9702.01, Block Group 1, and the US Census Bureau, 2010-2014 American Community Survey (ACS) states that 600 of those individuals are employed. Census Tract 9702.01, Block Group 1, has an unemployment rate of 1.96 percent which is lower than both the State of Louisiana and Cameron Parish at 8.65 percent and 6.04 percent, respectively (see Table 7).

#### 4.20.2 Environmental Consequences – No-Build Alternative

The No Build alternative would not have any environmental consequences on business, employment or other socio-economics throughout the project area.

#### 4.20.3 Environmental Consequences – Build Alternative

Currently, the construction employment sector within Census Tract 9702.01, Block Group 1, may be inflated due to the expansion of the Cameron LNG Plant approximately 5 miles northwest of the project area. The proposed brine disposal pipeline project may have a positive impact on the local and/or regional economies in the short-term as pipeline construction crews would need temporary housing and provisions. Neither positive nor negative long-term economic impacts are anticipated as a result of the implementation of the proposed brine disposal pipeline project.

The Build alternative would not have any environmental consequences on business, employment or other socio-economics throughout the project area.

### 4.21 ENVIRONMENTAL JUSTICE

#### 4.21.1 Existing Conditions

Executive Order (EO) 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” requires each Federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations.” The DOE defines environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group



of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of Federal, State, local, and tribal programs and policies.

### Race and Ethnicity

The 2010-2014 ACS data for Census Tract 9702.01, Block Group 1, was analyzed to provide a comparative representation of the demographic composition of the project area. The 2010-2014 ACS data includes ethnicity composition data. Origin can be viewed as the heritage, nationality group, lineage or country of birth of the person or the person’s parents or ancestors before their arrival in the United States. People who identify their origin as Hispanic, Latino or Spanish may be any race. Table 8: Population Composition in the Year 2014 for Census Tract 9702.01, Block Group 1; Cameron Parish and the State of Louisiana provides population and ethnicity totals within the proposed project area. The following populations are US Census Bureau estimates and may not reflect the actual census data.

<b>Table 8: Population Composition in the Year 2014 for Census Tract 9702.01, Block Group 1; Cameron Parish and the State of Louisiana</b>									
<b>Total Population</b>	<b>White</b>	<b>Minority Percent</b>	<b>Black*</b>	<b>Indian*</b>	<b>Asian*</b>	<b>Islander*</b>	<b>Other*</b>	<b>Two*</b>	<b>Hispanic**</b>
<b>Louisiana</b>									
4,601,049	2,748,538	40.3%	1,468,208	25,498	74,878	1,604	7,158	64,641	210,524
<b>Cameron Parish</b>									
6,713	6,341	5.5%	207	0	0	0	0	25	140
<b>Census Tract 9702.01, Block Group 1</b>									
1,284	1,228	4.4%	0	0	0	0	0	15	41

Source: US Census Bureau, 2010-2014 American Community Survey Table B03002. Note: \*The complete Census race descriptions are as follows: White alone; Black or African American alone; American Indian and Alaska Native alone; Asian alone; Native Hawaiian and Other Pacific Islander alone; Some Other Race alone; and Two or More Races. \*\*Hispanic refers to a person of Cuban, Mexican, Puerto Rican, South or Central American or other Spanish culture or origin regardless of race.

As defined by the CEQ report, *Environmental Justice Guidance Under the National Environmental Policy Act*, a minority population should be identified where either:

- The minority population of the affected area exceeds 50 percent; or
- The minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

The DOE defines a minority person as individuals who are members of the following population groups:

- American Indian and Alaskan Native: a person having origins in any of the original people of North America, South America (including Central America), and who maintains cultural identification through tribal affiliation or community recognition;
- Asian or Pacific Islander: a person having origins in any of the original peoples of the Far East, Southeast Asia, Indian subcontinent or people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands;
- Black, not of Hispanic origin: a person having origins in any of the black racial groups of Africa; or
- Hispanic: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race.

Throughout the project area, as shown in Table 8, Census Tract 9702.01, Block Group 1 has a 4.4 percent minority population. According to the definition of a minority population listed above, no minority population is present within the proposed project area.

### Income and Poverty

The 2010-2014 ACS developed estimates of median household income and poverty levels in each Block Group. These estimates for the proposed project area are shown in Table 9: Income in Year 2014 for Census Tract 9702.01, Block Group 1; Cameron Parish and the State of Louisiana. The following populations are US Census Bureau estimates and may not reflect the actual census data.

Geographic Type	Total Population	Population Below Poverty Line		Median Household Income
		Individuals	Percentage	
Louisiana	4,470,780	874,638	19.6%	\$ 44,991
Cameron Parish	6,661	555	8.3%	\$ 64,129
Census Tract 9702.01, Block Group 1	1,284	62	4.8%	\$ 61,974

Source: US Census Bureau, 2010-2014 American Community Survey, B19013 and B17021. ACS data are estimates; they are not actual counts. Income data is provided in 2013 inflation adjusted dollars.

The US Department of Health and Human Services (DHHS) poverty guidelines define a low-income population as a population whose median household income is at or below the poverty level. The DHHS determined the 2016 poverty level in the 48 contiguous states and the District of Columbia is \$24,300 for a family of four (see Appendix D – Supporting Documentation). No low income Block Groups exist within or adjacent to the proposed project area (see Table 9).

#### 4.21.2 Environmental Consequences – No-Build Alternative

The No Build alternative would not have any environmental consequences on environmental justice throughout the project area.

#### 4.21.3 Environmental Consequences – Build Alternative

As depicted in Table 8, the minority population within the project area consists of a Hispanic majority with two or more races comprising the remaining minority population. As defined by the CEQ report, *Environmental Justice Guidance Under the National Environmental Policy Act*, no minority populations exist within the project area.

As depicted in Table 9, the median household income for Census Tract 9702.01, Block Group 1 is over twice that of the Federal poverty level of \$24,300 for a family of four. The Block Group 1, which encompasses the proposed brine disposal pipeline project area, has no low income population.

The proposed project would not cause adverse human health or environmental effects, including social and economic effects on a minority population as defined by EO 12898. The implementation of the proposed project would have no permanent adverse impacts to the persons classified as minority populations or low income populations as such classifications do not exist within the project area.

The Build alternative would not have any anticipated environmental consequences on environmental justice throughout the project area.

## 4.22 LIMITED ENGLISH PROFICIENCY

### 4.22.1 Existing Conditions

EO 13166, “Improving Access to Services for Persons with Limited English Proficiency,” requires agencies to examine the agency services, identify any need for services to those with Limited English Proficiency (LEP), and develop and implement a system to provide those services so that LEP persons can have meaningful access to agency services.

Results of a windshield survey indicate that no non-English signs, advertisements, or other posted information were present in close proximity to the proposed project area. According to the 2010-2014 ACS data, the percent of the population five years and over who speak English “Less than Very Well” in Census Tract 9702.01, Block Group 1, is 3.5 percent. Table 10: Limited English Proficiency Populations in Year 2014 for Census Tract 9702.01, Block Group 1; Cameron Parish and the State of Louisiana lists the ACS data for the population 5 years and over who speak English “Less than Very Well.”

Geographic Type	Population 5 Years & Over	Spanish Speakers	Other Indo-European Speakers	Asian & Pacific Islander Speakers	Other Speakers	Total Speakers of English Less Than Very Well	Percent of LEP Population
Louisiana	4,289,725	69,262	24,721	26,696	3,437	124,116	2.9%
Cameron Parish	6,340	41	43	0	0	84	1.3%
Census Tract 9702.01, Block Group 1	1,165	41	0	0	0	41	3.5%

Source: US Census Bureau, 2010-2014 American Community Survey Table B16004.

The Department of Justice Safe Harbor guidance recommends that if a language group in a Block Group adjacent to the project area exceeds the threshold of 5 percent or 1,000 persons, then an LEP population would exist and any Public Notices and/or any other correspondence would need to be published in English and the other language. Census Tract 9702.01, Block Group 1, has an LEP population of 3.5 percent (41 individuals); therefore, no LEP population exists within or adjacent to the project area.

### 4.22.2 Environmental Consequences – No-Build Alternative

The No Build alternative would not have any environmental consequences on LEP populations throughout the project area.

### 4.22.3 Environmental Consequences – Build Alternative

According to the census data, no LEP population is present within the general area of the proposed project; therefore, any Public Notices and/or any other correspondence would need to be published in English only. The Build alternative would not have any anticipated environmental consequences on the LEP population throughout the project area.

## 4.23 PUBLIC FACILITIES AND SERVICES

### 4.23.1 Existing Conditions

The proposed project area is located west of the town of Hackberry and in an area dominated by pastureland utilized for cattle and horses. The proposed alignment would be located beneath roadways, maintained lawns associated with private residential land, wooded areas within and adjacent to the Hackberry Recreation Area (Cameron Parish Park), Browns Lake and the SPR WH facility. Several public facilities and services are located within one mile of the project area including a park, wildlife refuge, recycling center, recreation center and cemetery (see Table 11).

Facility Name	Facility Type	Distance to ROW feet/miles	Direction	Impact
Hackberry Recreation Area	Park	Within/Adjacent to ROW	East	Impact – Removal of mature trees along the proposed pipeline ROW.
Cameron Parish Solid Waste Collection Site	Recycling Center	1,998.11 feet/0.38 miles	Southeast	No impact
Sabine National Wildlife Refuge	Wildlife Refuge	3,188.1 feet/0.60 miles	South/Southwest	No impact
Hackberry Recreation Center	Recreation Center	4,108.1 feet/0.78 miles	East	No impact
Hackberry Cemetery	Cemetery	5,118.32 feet/0.97 miles	East	No impact

Additional public facilities and services are located in Hackberry (over one mile east of the project area) and include a high school, community center, fire department, church, cemetery, library, etc.

### 4.23.2 Environmental Consequences – No Build Alternative

The No Build alternative would not have any environmental consequences on public facilities or services throughout the project area.

### 4.23.3 Environmental Consequences – Build Alternative

The pipeline alignment is proposed along approximately 800 feet of the western edge of the Hackberry Recreation Area resulting in the clearing of park land for the proposed pipeline installation. Numerous mature trees and understory vegetation would be removed in this area. The removal of such trees would have no adverse effect to the activities, features or attributes qualifying the area as a park. No other public facility or service would be impacted as a result of the proposed brine disposal pipeline project. The Build alternative would not contribute to any additional anticipated environmental consequences on public facilities or services throughout the project area.

## 4.24 PUBLIC HEALTH AND SAFETY

### 4.24.1 Existing Conditions

The existing brine disposal pipeline poses no impacts to the public health or safety of the residential properties in close proximity to the pipeline. The proposed brine disposal pipeline would transport the same brine concentration as the existing pipeline and would be manufactured and installed using current pipeline industry standards.

### 4.24.2 Environmental Consequences – No Build Alternative

The No Build alternative would not have any environmental consequences on public health and safety issues throughout the project area.

#### **4.24.3 Environmental Consequences – Build Alternative**

The Build alternative would not have any anticipated environmental consequences on public health and safety issues throughout the project area.

### **4.25 TRANSPORTATION AND DETOURS**

#### **4.25.1 Existing Conditions**

The proposed project is located in a rural area in which the roadways are utilized for local traffic including limited truck traffic. The proposed brine disposal pipeline would be constructed beneath four roadways within the general project area including Black Lake Road, Johnny Benoit Road, West Main Street/LA 390 and Maggie Hebert Road. Jack and bore techniques are planned to be used beneath all four roadways. The jack and bore technique consists of utilizing an entry pit, exit pit, boring machine and auger to install relatively short segments of pipe beneath the roadways to avoid closure of the roadway during installation of the pipeline.

#### **4.25.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on transportation and detours throughout the project area.

#### **4.25.3 Environmental Consequences – Build Alternative**

Additional traffic may be present within the project area due to mobilization of workers, equipment and materials. Jack and bore techniques would be utilized to install the proposed brine disposal pipeline beneath roadways within the project area; therefore, no road closures or detours are anticipated as part of this project. A traffic control plan would be completed and in place prior to construction activities to minimize traffic disruptions. A traffic control plan would allow roads to remain open during the jack and bore activities. Other than a temporary increase in traffic volumes due to mobilization and equipment, the Build alternative would not have any anticipated environmental consequences along the local roadways within the project area. Detours could be utilized, as needed, to avoid the work areas at the brine disposal pipeline and Black Lake Road as well as West Main Street/LA 390. Detours for the traveling public along Johnny Benoit Road and Maggie Hebert Road would not be available; these roads would remain open during the jack and bore process.

### **4.26 VISUAL AND AESTHETIC QUALITIES**

#### **4.26.1 Existing Conditions**

As described in Land Use (Section 4.1) the alignment of the proposed action is located primarily within pastureland utilized for cattle and horses. The proposed brine disposal pipeline is located beneath roadways, maintained lawns associated with private residential land, wooded areas within and adjacent to the Hackberry Recreation Area (Cameron Parish Park), and wetlands associated with Browns Lake. The proposed pipeline ROW would be incrementally cleared of

vegetation, soil would be excavated for the open cut trench, the pipeline would be installed and then the trench would be backfilled prior to returning the project area to pre-construction grade. Existing vegetation within pastureland, maintained lawns and Browns Lake, including associated wetlands, would be disturbed; however, similar vegetation should re-grow after installation of the brine disposal pipeline. The proposed project would require the removal of mature live oak trees and other trees/vegetation within the 100 foot perpetual pipeline ROW within the Hackberry Recreation Area. The ROW would need to be permanently maintained to allow access to the proposed brine disposal pipeline.

#### **4.26.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on visual and aesthetic qualities throughout the project area.

#### **4.26.3 Environmental Consequences – Build Alternative**

The clearing of pastureland, maintained lawns and wetlands, associated with Browns Lake, would consist of temporary impacts along the proposed pipeline project ROW; similar visual and aesthetic qualities would return to the area once the disturbed areas revegetate. The removal of the mature live oak trees would result in a permanent impact to the visual and aesthetic qualities of the area. The removal of the mature trees would result in a maintained pipeline ROW with similar vegetation as pastureland. The Build alternative would have short-term and long-term environmental consequences on the visual and aesthetic qualities of the wooded areas through which the proposed pipeline would be installed.

### **4.27 AIR QUALITY**

#### **4.27.1 Existing Conditions**

Heavy equipment and vehicles would be utilized to complete the proposed project which may result in temporary increases in air pollutant emissions from construction activities, equipment, and related vehicles during the construction phase of the project. The primary construction related emissions are particulate matter (fugitive dust) from site preparation and construction as well as non-road Mobile Source Air Toxics (MSAT) from construction equipment and vehicles.

These emissions are temporary in nature (only occurring during actual construction activities) and it is not possible to reasonably estimate impacts from these emissions due to limitations of existing emission models. The potential impacts of particulate matter emissions would be minimized by dust control measures such as covering or treating disturbed areas with dust suppression techniques, sprinkling, covering loaded trucks, and other dust abatement controls, as appropriate. The MSAT emissions would be minimized by construction contractors by measures to encourage the use of EPA required cleaner diesel fuels, increasing use of cleaner burning diesel engines, limits on idling time of vehicles, and other emission limitation techniques, as appropriate.

#### **4.27.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on air quality throughout the project area.

#### **4.27.3 Environmental Consequences – Build Alternative**

Considering the temporary and transient nature of construction related emissions as well as the mitigation actions to be utilized on equipment and vehicles, the Build alternative would not have any anticipated environmental consequences on the air quality within the project area.

#### **4.28 GREENHOUSE GAS EMISSIONS/EFFECTS OF CLIMATE CHANGE**

The Federal government has taken a number of steps to reduce Greenhouse Gas (GHG) emissions, conserve energy, reduce demand, and promote development of renewable energy sources and technologies. Executive Order (EO) 13693, Planning for Federal Sustainability in the Next Decade (EPA 2015), requires Federal agencies to set goals in the areas of energy efficiency, acquisition, renewable energy, toxics reductions, recycling, renewable energy, sustainable buildings, electronics stewardships, fleets, and water conservation. The goal of EO 13693 is (in part) to reduce agency GHG emissions by 40% over the next decade. This EO requires that DOE address agency GHG reduction targets, reductions in petroleum, potable water use, solid waste generation, recycling, and other targets. By implementing these EOs, the Federal government as a whole has reduced GHG emissions.

On August 1, 2016, the CEQ published final guidance on the inclusion of a GHG evaluation for NEPA projects. Federal agencies are advised to identify opportunities to reduce GHG emissions and evaluate the effects of climate change caused by proposed Federal actions and adapt their actions to reduce potential climate change impacts.

Identifying important interactions between a changing climate and the environmental impacts from a proposed action can help Federal agencies and other decision makers identify practicable opportunities to reduce GHG emissions, improve environmental outcomes, and contribute to safeguarding communities and their infrastructure against the effects of extreme weather events and other climate-related impacts.

GHG traps heat in the atmosphere. Common gases which contribute to the effects of GHG include Carbon monoxide (CO), Methane (CH<sub>4</sub>), Nitrous oxide (N<sub>2</sub>O) and Fluorinated gases. Concentration is the amount of a particular gas in the air. Larger emissions of GHG lead to higher GHG concentrations in the atmosphere.

##### **4.28.1 Existing Conditions**

The existing pipeline would have no impact to the climate in the region; the Gulf breezes would aid in dispersing air pollutants, if any, in the general vicinity of the project area. The impact on air quality as a result of the proposed action would be minimal in this region of Louisiana. The only air quality impacts associated with this project would include temporary increases in air pollutants caused by the heavy equipment, other equipment (mobile or stationary), and related vehicles during the construction phase of the project. The operation and maintenance of equipment, primarily diesel engines, would result in emissions of Nitrogen oxide (NO<sub>x</sub>), CO, Particulate Matter greater than 10 microns (PM<sub>10</sub>) and some trace amounts of volatile organic compounds. On a regional air quality basis, none of these pollutants are anticipated to be emitted by construction equipment (i.e., bulldozers, backhoes, etc.) in quantities more significant than vehicles which travel within the project area on a daily basis. Such emissions would be

temporary for repair or maintenance activities. Diesel equipment must comply with EPA non-road engine standards for exhaust emissions.

#### **4.28.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on GHG emissions or climate change throughout the project area. The existing pipeline would have no immediate impact on the ambient air quality. The No Build alternative anticipates no short-term construction activity though temporary air quality impacts due to heavy equipment used during repair activities could be considered in the future as the existing pipeline continues to age.

#### **4.28.3 Environmental Consequences – Build Alternative**

Once installed, the proposed pipeline would not result in an increase of any airborne pollutants within or near the project area. Since the proposed pipeline conveys brine, in the event of a breach or rupture, no release of emissions to the air would occur.

The Build alternative may have short-term/temporary and/or minimal impacts related to GHG emissions from construction equipment but would not have any long-term environmental consequences from localized exhaust emissions or other emissions within or beyond the project area. No contributions to GHG in quantities beyond those currently existing in the area of the proposed project, and no impacts to the local climate, are anticipated to result from construction impacts.

### **4.29 NOISE**

#### **4.29.1 Existing Conditions**

Heavy equipment and vehicles would be utilized to complete the proposed project which would result in increases in noise from construction activities, equipment, and related vehicles during the construction phase of the project. The largest contributors of noise would be excavators utilized to dig the open trenches and the jack and bore machinery utilized to install pipe beneath the four roadways within the project area. Noise associated with the construction of the project is difficult to predict. Heavy machinery, the major source of noise in construction, is constantly moving in unpredictable patterns. Construction normally occurs during daylight hours when occasional loud noises are more tolerable. None of the nearby residences are expected to be exposed to construction noise for a long duration; therefore, any extended disruption of normal residential activities is not expected.

#### **4.29.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on noise throughout the project area.

#### **4.29.3 Environmental Consequences – Build Alternative**

Provisions would be included in the construction phase of the project that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper maintenance of muffler systems. The Build alternative may have short-term/temporary noise impacts but would not have any anticipated long-term environmental consequences from noise impacts within the project area.



#### **4.30 CONSTRUCTION RELATED ACTIVITIES (LONG-TERM AND SHORT-TERM IMPACTS)**

##### **4.30.1 Existing Conditions**

No construction activities are currently located along the existing brine disposal pipeline corridor within the project area; however, the existing corridor is routinely inspected and maintained as needed. During construction activities for the proposed brine disposal pipeline, machinery would increase dust, air pollutants, ambient noise levels, vibrations due to equipment, and may cause occasional traffic delays. Construction may result in activities which include, but are not limited to, removal of existing vegetation, trenching, installation of the proposed brine disposal pipeline (including jack and bore techniques at roadways) and re-grading and/or re-seeding the soil surface along the project corridor.

Once the proposed brine disposal pipeline is installed, activities along the pipeline corridor would primarily consist of maintenance activities such as routine inspection of the corridor and mowing as needed.

##### **4.30.2 Environmental Consequences – No Build Alternative**

The No Build alternative would not have any environmental consequences on construction related activities throughout the project area.

##### **4.30.3 Environmental Consequences – Build Alternative**

The proposed project would have short-term adverse impacts during construction activities. Contractors would be required to follow Federal, State and local regulations to minimize adverse impacts during construction related to water resources and erosion control, transportation safety, air quality and noise.

Water resources and erosion control would be monitored by construction oversight; BMPs would be implemented to prevent or limit stormwater/surface water runoff, erosion and sedimentation in the project area. BMPs may include hay bales or sediment control fencing in areas which may have the potential for erosion or sediment transfer into nearby waterways.

A traffic control plan would be developed to minimize traffic disruptions. Construction signs would be placed in advance to inform travelers of upcoming construction which may minimize travel delays and provide travelers with options for alternative routes. The proposed project would allow access to residential and commercial properties throughout the construction process.

Air quality measures would be required to comply with LDEQ standards on air pollution control. Fugitive dust would be created during construction activities. Watering areas where vegetation was removed may occur to reduce fugitive dust emissions in construction areas.

Noise associated with the construction of the project is difficult to predict. Heavy machinery, the major source of noise during construction, is constantly moving in unpredictable patterns and may vary from day to day. The jack and bore construction activities would likely generate the most noise and vibration throughout the duration of the project. Noise and vibration impacts would be limited to a few residential properties located at the proposed brine disposal pipeline

crossing at Johnny Benoit Road and Maggie Hebert Road. No residential properties are located at the pipeline crossing at West Main Street/LA 390. No jack and bore construction activities would be associated with Johnson Lane as open cut trenching for the pipeline installation would occur to the east of Johnson Lane.

Construction normally occurs during daylight hours when occasional loud noises are more tolerable. None of the nearby residents are expected to be exposed to construction noise for a long duration; therefore, no extended disruption of normal daily activities at the residential properties is expected. Construction provisions would be included in the project for contractors to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and the proper maintenance of muffler systems.

The Build alternative would have short-term environmental consequences due to construction impacts within the project area though no long-term environmental consequences resulting from construction impacts are anticipated.

#### 4.31 SUMMARY AND COMPARISON OF POTENTIAL EFFECTS

Table 12 summarizes the potential environmental consequences of the proposed brine disposal replacement project. The No Build and Build alternatives are compared with respect to potential environmental consequences and/or impacts. Additionally, temporary and permanent consequences and/or impacts are identified relative to the Build alternative.

<b>Table 12: Summary of Potential Environmental Consequences of the Proposed Brine Replacement Project</b>			
<b>Name of Potential Consequence</b>	<b>No-Build Alternative</b>	<b>Environmental Consequences</b>	
		<b>Build Alternative</b>	
		<b>Temporary</b>	<b>Permanent</b>
<b>PHYSICAL RESOURCES</b>			
Land Use	No	Yes – Soil and Vegetation Disturbance (Open Cut Trenching)	Yes – Removal of Mature Trees
Relocations and Right-of-Way Acquisitions	No	Yes – Construction Easement (no Relocations)	Yes – Permanent ROW (no Relocations)
Soils/Prime and Unique Farmland	No	Yes – Soil Disturbance (Open Cut Trenching)	No
Geology	No	No	No
Waste Management/Hazardous Materials	No	No	No
<b>WATER RESOURCES</b>			
Floodplain Assessment and Drainage	No	Yes – Soil Disturbance (Open Cut Trenching)	No
Surface Water Quality	No	Yes – Potential Erosion from Soil Disturbance	No
Waters of the US, including Wetlands	No	Yes – Soil and Vegetation Disturbance (Open Cut Trenching)	Yes – Fill within water of the U.S. (USACE Permit Modification)
Groundwater	No	No	No
<b>NATURAL/ECOLOGICAL RESOURCES</b>			
Vegetation and Wildlife	No	Yes – Vegetation Disturbance (Open Cut Trenching)	Yes – Removal of Mature Trees
Threatened and Endangered Species	No	No	No
Essential Fish Habitat	No	Yes – Vegetation Disturbance (Open Cut Trenching)	No
Coastal Management Program	No	Yes – Soil and Vegetation Disturbance (Open Cut Trenching)	No
Coastal Barrier Resources Act	No	No	No

<b>Table 12: Summary of Potential Environmental Consequences of the Proposed Brine Replacement Project</b>			
<b>Name of Potential Consequence</b>	<b>No-Build Alternative</b>	<b>Environmental Consequences</b>	
		<b>Build Alternative</b>	
		<b>Temporary</b>	<b>Permanent</b>
Parks and Managed Areas	No	Yes – Soil and Vegetation Disturbance (Open Cut Trenching)	Yes – Removal of Mature Trees
Permits/Compliance with other Regulations	No	No	No
<b>CULTURAL RESOURCES</b>			
Historic Resources	No	No	No
Archeological Resources	No	No	No
<b>POPULATION/COMMUNITY RESOURCES</b>			
Demographics and Population	No	No	No
Socio-Economic (Employment and Income)	No	No	No
Environmental Justice	No	No	No
Limited English Proficiency	No	No	No
Public Facilities and Services	No	Yes – Hackberry Recreation Area	Yes – Hackberry Recreation Area
Public Health and Safety	No	No	No
Transportation and Detours	No	Yes – Temporary Increase in Traffic/Equipment	No
Visual and Aesthetic Qualities	No	Yes – Construction Equipment	Yes – Removal of Mature Trees
Air Quality	No	No	No
Greenhouse Gas Emissions & Effects of Climate Change	No	No	No
Noise	No	Yes – Construction Equipment	No
Construction Related Activities (Long-term and Short-term Impacts)	No	Yes – Traffic Volume Increase, Noise, Soil/Vegetation Disturbance	No

## 5.0 DIRECT, INDIRECT/SECONDARY AND CUMULATIVE IMPACTS ANALYSIS AND FINDINGS

Indirect and cumulative impacts are evaluated for Federal projects in order to comply with the environmental process outlined in NEPA. Section 102(c) of NEPA (codified in 42 USC 4332), requires that proposals for actions that significantly affect the quality of the human and natural environment shall include a statement concerning the environmental impact of the proposed action and any adverse environmental impacts. The CEQ clarified this requirement further by defining three types of impacts that must be analyzed during the NEPA process: direct, indirect, and cumulative impacts (40 CFR 1508.25). NEPA requires each proposed project be assessed for the three types of impacts:

- Direct Impacts – The action causes impacts that occur at the same time and place as the action (detailed in Section 4.1 – 4.30 and 5.1).
- Indirect Impacts – The action causes impacts that occur later in time or farther removed in distance from the action, but are still reasonably foreseeable. Indirect impacts may include growth inducing impacts and other impacts that induce changes in the pattern of land use, population density or growth rate, and related impacts on air, water, and other natural systems including ecosystems (detailed in Section 5.1).
- Cumulative Impacts – Cumulative impacts build upon the information derived from the direct and indirect impact evaluations. These impacts result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions,

regardless of the agency (Federal or Non-federal) that undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (detailed in Section 5.2).

## **5.1 DIRECT AND INDIRECT/SECONDARY IMPACTS ANALYSIS**

### **Direct Impacts**

As discussed in Sections 4.1 – 4.30, the Build alternative would result in both short-term and long-term direct impacts. By definition, short-term impacts would not cause permanent adverse effects to a resource. Short-term impacts which would be returned to normal conditions after the completion of the proposed project include soil/vegetation disturbance, disturbance within a floodplain, waters of the U.S., including wetlands, erosion from soil disturbance (water quality), increased traffic volumes, and increased noise from construction equipment. Long-term direct impacts which would result in adverse effects to a resource after completion of the proposed project include impacts to land use and the removal of mature trees within Hackberry Recreation Area.

### **Indirect/Secondary Impacts**

Indirect impacts are defined as those caused by an action and are later in time or farther removed in distance, but still reasonably foreseeable. Indirect impacts would not be directly associated with the construction and operation of the pipeline. The indirect impacts analysis is organized by two different types of impacts; induced growth impacts and encroachment-alteration impacts.

- Induced growth impacts – The proposed project is not anticipated to contribute to a change in the demographics, population growth, regional economy or employment within the general project area. Construction staff may be hired locally or, if from another area, may contribute positively to the local economy by purchasing materials, meals or lodging while working on the pipeline construction/installation project.
- Encroachment-alteration impacts – Potential encroachment alteration impacts to vegetation, wildlife habitats and water resources were determined to be minimal ecological indirect impacts with respect to the proposed project. The proposed project would be constructed on proposed ROW adjacent to the existing ROW within aquatic, wetland, pastureland and woodland habitat areas including a wooded area within the Hackberry Recreation Area. The resulting encroachment impact would eliminate mature trees within the proposed pipeline ROW but would create an open grassy area and edge habitat area within a wooded area. The removal of such trees would be necessary to implement the proposed project as designed and the area would be permanently maintained to allow access to the proposed brine disposal pipeline.

The proposed brine disposal pipeline would be installed near the western edge of an approximate 11.25 acre wooded area. This action would result in the fragmentation of habitat by creating two wooded areas ( $\pm 9.65$  acres and  $\pm 1.60$  acres) which would be separated by a maintained pipeline corridor; this location is currently similarly fragmented by an existing roadway/trail, pipeline easement and a pole-mounted electrical easement in which trees were cleared. Clearing of the temporary ROW would be at the discretion of the contractor; however, the intent is to minimize the overall disruption to the wooded area, particularly east

of the permanent ROW. The proposed pipeline ROW would permanently impact this wooded area due to the loss of mature trees as well as limited understory. The installation of the proposed pipeline ROW would increase edge habitat (wooded areas and open/grassy areas) along this area of the proposed pipeline ROW.

No industrial, commercial or residential structures would be impacted by the proposed project. No relocations, displacements or detours are required for the construction of the proposed pipeline project.

## 5.2 CUMULATIVE IMPACTS ANALYSIS

Twelve temporary direct impacts and two temporary indirect impacts, including ROW acquisition and removal of mature trees within Hackberry Recreational Area, are anticipated as a result of the implementation of the proposed project (see Table 13). Temporary direct and indirect impacts resulting from pipeline construction activities as well as two permanent direct impacts would not have any anticipated cumulative impacts to environmental or socioeconomic resources within the project area. The two permanent direct impacts (Land Use and Vegetation/Wildlife Habitat) reflect that the installation of the pipeline would limit the land use of the pipeline ROW in the future. Table 13 summarizes the direct, indirect and cumulative environmental/socioeconomic resources within the proposed project area.

<b>EA Section</b>	<b>Environmental/Socioeconomic Resources</b>	<b>Permanent Direct Impact</b>	<b>Temporary Direct Impact</b>	<b>Temporary Indirect Impact</b>	<b>Cumulative Impacts Analysis Necessary</b>
4.1	Land Use	Yes	Yes	No	No
4.2	Relocations and ROW Acquisitions	No	Yes	No	No
4.3	Soils/Prime and Unique Farmlands	No	Yes	No	No
4.4	Geology	No	No	No	No
4.5	Waste Management/Hazardous Materials	No	No	No	No
4.6	Floodplain Assessment and Drainage	No	Yes	No	No
4.7	Surface Water Quality	No	Yes	No	No
4.8	Waters of the US, Including Wetlands	No	Yes	No	No
4.9	Groundwater	No	No	No	No
4.10	Vegetation and Wildlife Habitat	Yes	Yes	No	No
4.11	Threatened/Endangered Species	No	No	No	No
4.12	Essential Fish Habitat	No	Yes	No	No
4.13	Coastal Management Program	No	Yes	No	No
4.14	Coastal Barrier Resources Act	No	No	No	No
4.15	Parks and Managed Areas	No	Yes	No	No
4.16	Permits/Compliance with Other Regulations	No	No	No	No
4.17	Historic Resources	No	No	No	No
4.18	Archeological Resources	No	No	No	No
4.19	Demographics and Population Growth	No	No	No	No
4.20	Socio-Economic (Regional Economy and Employment)	No	No	No	No
4.21	Environmental Justice	No	No	No	No
4.22	Limited English Proficiency	No	No	No	No
4.23	Public Facilities and Services	No	Yes	No	No
4.24	Public Health and Safety	No	No	No	No
4.25	Transportation and Detours	No	No	Yes	No

<b>EA Section</b>	<b>Environmental/Socioeconomic Resources</b>	<b>Permanent Direct Impact</b>	<b>Temporary Direct Impact</b>	<b>Temporary Indirect Impact</b>	<b>Cumulative Impacts Analysis Necessary</b>
4.26	Visual and Aesthetic Qualities	No	No	Yes	No
4.27	Air Quality	No	No	No	No
4.28	Greenhouse Gas	No	No	No	No
4.29	Noise	No	Yes	No	No
4.30	Construction Related Activities (Long-term and Short-term Impacts)	No	Yes	No	No

The cumulative effect is the summation of direct and indirect effects of past actions, present actions, reasonable project alternatives, and other future actions. Other than those impacts requiring agency permitting (e.g., waters of the U.S./wetland permitting), no mitigation measures are offered for the temporary/short-term impacts or permanent direct impacts associated with this project. The project has been designed to generally follow the existing pipeline corridor, minimize the size/acreage requirement for a temporary construction easement, and minimize disturbances to wooded areas along the pipeline ROW. Once the pipeline has been installed, the site will be returned to the original grade and allowed to revegetate.

### 5.3 FINDINGS

This draft EA finds that implementing the Build alternative would not be considered a major Federal action significantly affecting the quality of the human or natural environment and thus a Finding of No Significant Impact (FONSI) is recommended for this Brine Disposal Pipeline Replacement Project.

## 6.0 ENVIRONMENTAL AND REGULATORY REVIEWS

### 6.1 LIST OF AGENCIES CONTACTED AND CORRESPONDENCE

The following Federal, State and local agencies were contacted as part of the NEPA coordination activities for this project on August 2, 2016. For a complete list of resource agencies and contacts, see Appendix C – Agency Information and Correspondence. Additionally, the FFPO/DOE will prepare the requisite tribal coordination for this project.

<b>Resource Agency/Office</b>	<b>Division or Department</b>	<b>Address</b>
<b>Federal Resource Agencies</b>		
US Army Corps of Engineers	Regulatory Branch, New Orleans District	P.O. Box 60267, New Orleans, LA 70160
US Army Corps of Engineers	Western Evaluation Section	P.O. Box 60267, New Orleans, LA 70160
US Army Corps of Engineers	Southwest Waterways	P.O. Box 60267, New Orleans, LA 70160
US Fish and Wildlife Service	Louisiana Ecological Services Field Office	646 Cajundome Boulevard, Suite 400, Lafayette, LA 70506
US Fish and Wildlife Service	Sabine National Wildlife Refuge	3000 Holly Beach Highway, Hackberry, LA 70645
US Environmental Protection Agency	Office of Planning & Coordination	1445 Ross Avenue, Dallas, TX 75202
US Department of Homeland Security	US Coast Guard, Eighth District	Hale Boggs Federal Building, 500 Poydras Street New Orleans, LA 70130
US Department of Transportation	US Maritime Administration	1200 New Jersey Avenue, SE, Washington, D.C. 20590
National Oceanic and Atmospheric Administration	National Marine Fisheries Service	263 13 <sup>th</sup> Avenue South, Saint Petersburg, FL 33701
National Oceanic and Atmospheric Administration	National Marine Fisheries Service, Habitat Conservation Division	c/o LSU, Military Science Building, Room 266, South Stadium Drive, Baton Rouge, LA 70803

**Table 14: Agencies Contacted for NEPA Coordination**

<b>Resource Agency/Office</b>	<b>Division or Department</b>	<b>Address</b>
US Department of Agriculture	Natural Resources Conservation Service	3737 Government Street, Alexandria, LA 71303
<b>State Resource Agencies</b>		
Louisiana Department of Culture, Recreation & Tourism	State Historic Preservation Officer	P.O. Box 44247, Baton Rouge, LA 70804
Louisiana Department of Natural Resources (LDNR)	Office of the Secretary	P.O. Box 94396, Baton Rouge, LA 70804
LDNR Office of Coastal Management	Interagency Affairs & Field Services	P.O. Box 44487, Baton Rouge, LA 70821-4487
LDNR Office of Coastal Management	Permits/Mitigation Division	P.O. Box 44487, Baton Rouge, LA 70821-4487
LDNR Office of Conservation	Environmental Division	P.O. Box 94275, Baton Rouge, LA 70804
LDNR Office of Conservation	Pipeline Division	P.O. Box 94275, Baton Rouge, LA 70804
Louisiana Department of Wildlife and Fisheries	Office of the Secretary	P.O. Box 98000, Baton Rouge, LA 70898
Louisiana Department of Wildlife and Fisheries	Louisiana Natural Heritage Program	P.O. Box 98000, Baton Rouge, LA 70898
Louisiana Department of Environmental Quality	Office of the Secretary	P.O. Box 4301, Baton Rouge, LA 70821-4301
Louisiana Office of State Lands	Administration Section	P.O. Box 44124, Baton Rouge, LA 70704
Louisiana Department of Transportation and Development	Floodplain Management Office	1201 Capital Access Road, Baton Rouge, LA 70802
<b>Local Resource Agencies</b>		
Cameron Parish	Permitting	P.O. Box 1280, Cameron, LA 70631
Cameron Parish	Parks and Recreation (Hackberry Recreation District)	1095 Poncho Sanner Lane, Hackberry, LA 70645

Comments were received regarding the notification letter from both Federal and State resource agencies. No comments were received from local resource agencies. The Louisiana Office of State Lands requested and received detailed plats/exhibits regarding the proposed project. The Natural Resources Conservation Service (NRCS) requested spatial information for the project area to determine impacts to soils and Prime and Unique Farmland. Coordination with the NRCS regarding the Farmland Protection Policy Act including completion of the NRCS-CPA-106 Form (Farmland Conversion Impact Rating for Corridor Type Projects) has occurred. Coordination with LDNR OCM regarding work within the coastal zone and with LDOT-Floodplain Management Program regarding work within floodplains has occurred. Additionally, official Solicitation of Views were received from the US Coast Guard, USACE, NMFS and LDEQ recommending that appropriate permitting measures for the proposed project be in place prior to construction activities. Concerns or comments received by the resource agencies were considered in the preparation of the final EA. The DOE notification letter with attachments and the responses to comments from resource agencies is presented in Appendix C – Agency Information and Correspondence.

## **6.2 PUBLIC INVOLVEMENT/OUTREACH ACTIVITIES**

The DOE provided a written Notice of Intent to Prepare an Environmental Assessment to the Federal, State and local government resource agencies, listed in Section 6.0, on August 2, 2016 (Appendix C – Agency Information and Correspondence).

The DOE provided a written Notice of Availability of an Environmental Assessment and the opportunity for resources agencies or interested parties to comment on the draft EA when the EA was made available for public review and comment on December 12, 2016. The public comment period ended on January 13, 2017. The resource agencies that received the Notice of Availability of an Environmental Assessment are presented in Appendix C – Agency Information and Correspondence.

The Public Notice of Availability of an Environmental Assessment was published in two newspapers which circulate within the general area of the proposed project. The Public Notice of Availability was published in the *American Press* and *Cameron Pilot*, on December 12, 2016 and December 15, 2016, respectively. The *American Press* is published daily while the *Cameron Pilot* is published each Thursday. The Public Notice stated the following:

**Public Notice of Availability**

**Environmental Assessment for the Strategic Petroleum Reserve Brine Disposal Pipeline Replacement Project, West Hackberry Facility, Cameron Parish, Louisiana**

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility in Cameron Parish, Louisiana.

The draft EA document has been posted at the following websites: [energy.gov/node/2191870](http://energy.gov/node/2191870), <http://www.spr.doe.gov/esh/default.html> and <http://www.spr.doe.gov/NEPA/default.htm>. The review period will be from Monday, December 12, 2016 through Friday, January 13, 2017.

The draft EA document is additionally available at the following libraries during the review period:

- ..... C  
Cameron Parish Library-Hackberry Branch, 983 Main Street, Hackberry, LA 70645
- ..... C  
Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- ..... C  
Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- ..... S  
Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- ..... C  
Iberia Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

**PUBLIC COMMENT OPPORTUNITIES:** Comments on the document should be sent by January 13, 2017, to Mr. Will Woods at the following email address: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by USPS to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Copies of the Public Notices and affidavits of publication for each newspaper are located in Appendix C – Agency Information and Coordination. Three comments were received regarding the proposed project and a comment/response summary was prepared for all received comments (Appendix C – Agency Information and Correspondence).

Comments received by the end of the 30 day comment period were considered in preparation of the final EA.



## 7.0 LIST OF PREPARERS

The following preparers contributed to the completion of the Environmental Assessment for the West Hackberry Brine Disposal Pipeline Replacement Project.

<b>Table 15: List of Preparers</b>	
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Katherine Batiste	Environmental Specialist
Will Woods	Environmental Specialist
<b>S&amp;B Infrastructure, Ltd.</b>	
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Ed Rojas, PE	Pipeline Lead Engineer
David Wilkins, PE	Project Manager
Barbara Castille	Senior Environmental Scientist
Josh Geyer	Environmental Scientist
Samantha Hardin	Environmental Scientist
<b>Vali-Cooper International, LLC</b>	
William Fogle	Project Manager
Lorna Madison, REP	Project Engineering Lead
Laren Tushim, PE	Senior Project Engineer
<b>Fluor Federal Petroleum Operations, LLC</b>	
Gabriel Adams, REM	Pollution Prevention Specialist
Bob Sevcik	Director – Environmental & Sustainability
Louis Wesley	Manager – Environmental

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## **APPENDIX A**

### **EXHIBITS**

**Exhibit 1 – Vicinity Map**

**Exhibit 2 – Site Location Map**

**Exhibit 3 – Topographic Map, 1998**

**Exhibit 4 – Aerial Photograph, 2013**

**Exhibit 5 – Soils Map**

**Exhibit 6 – Floodplain Map**

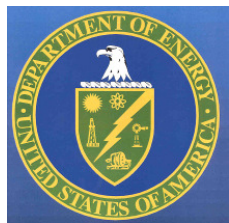
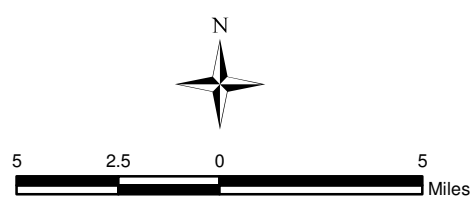
**Exhibit 7 – National Wetlands Inventory (NWI) Map**

**Exhibit 8 – Project Design Layout**



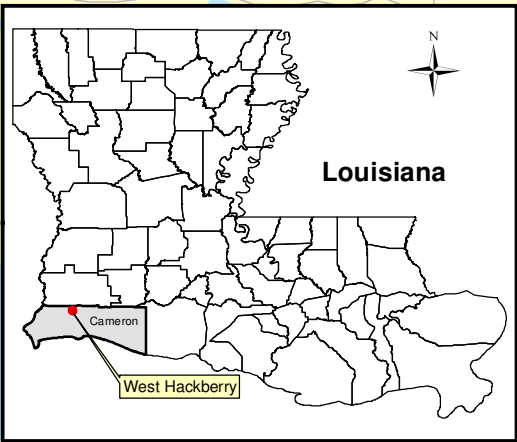
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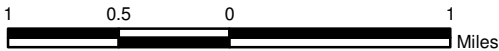
## EXHIBIT 1 VICINITY MAP

Brine Disposal Pipeline Replacement Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana



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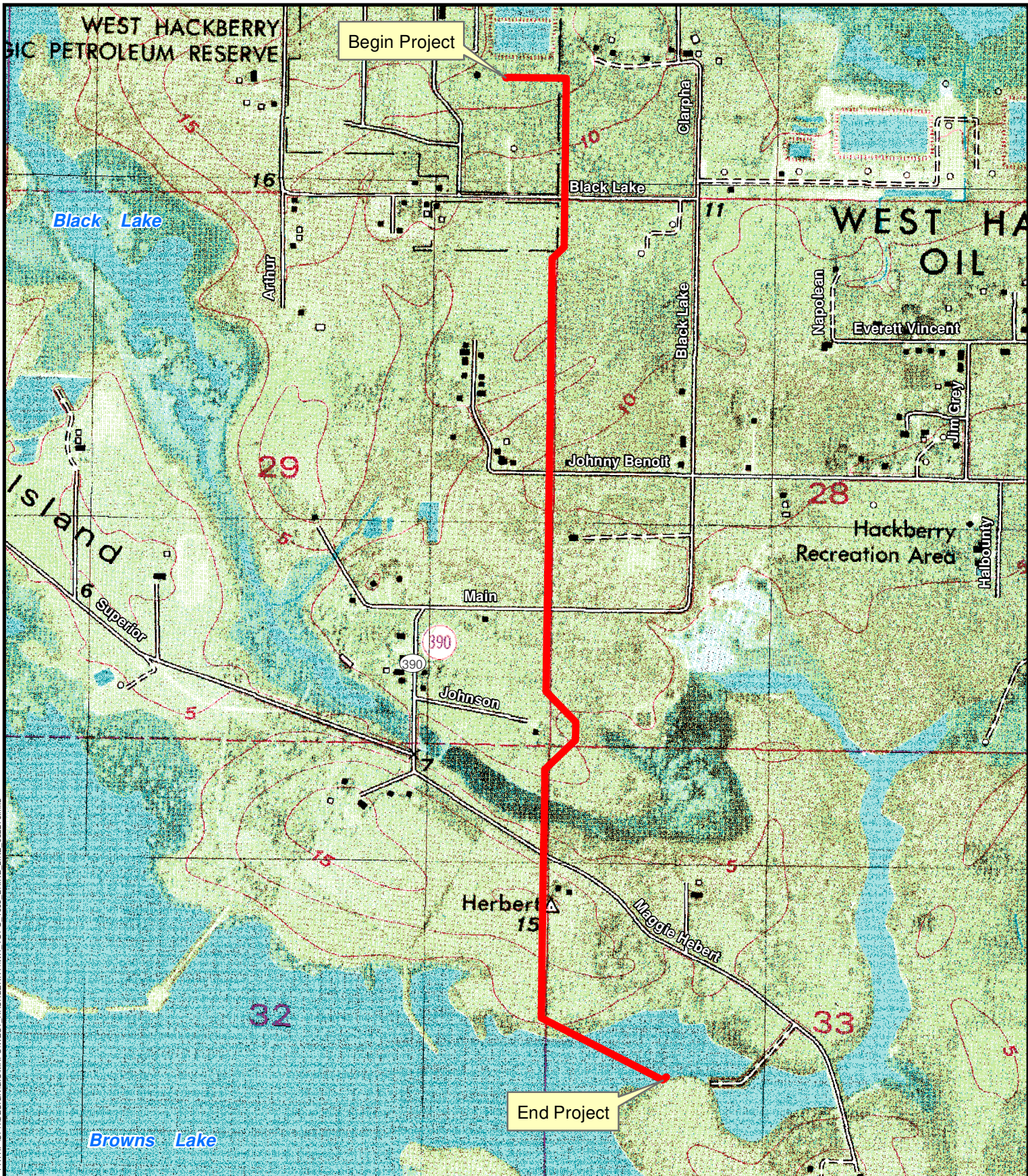
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## EXHIBIT 2 SITE LOCATION MAP

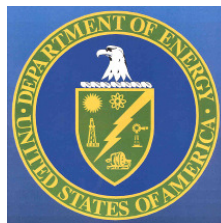
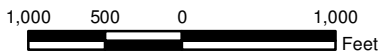
Brine Disposal Pipeline Replacement Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana





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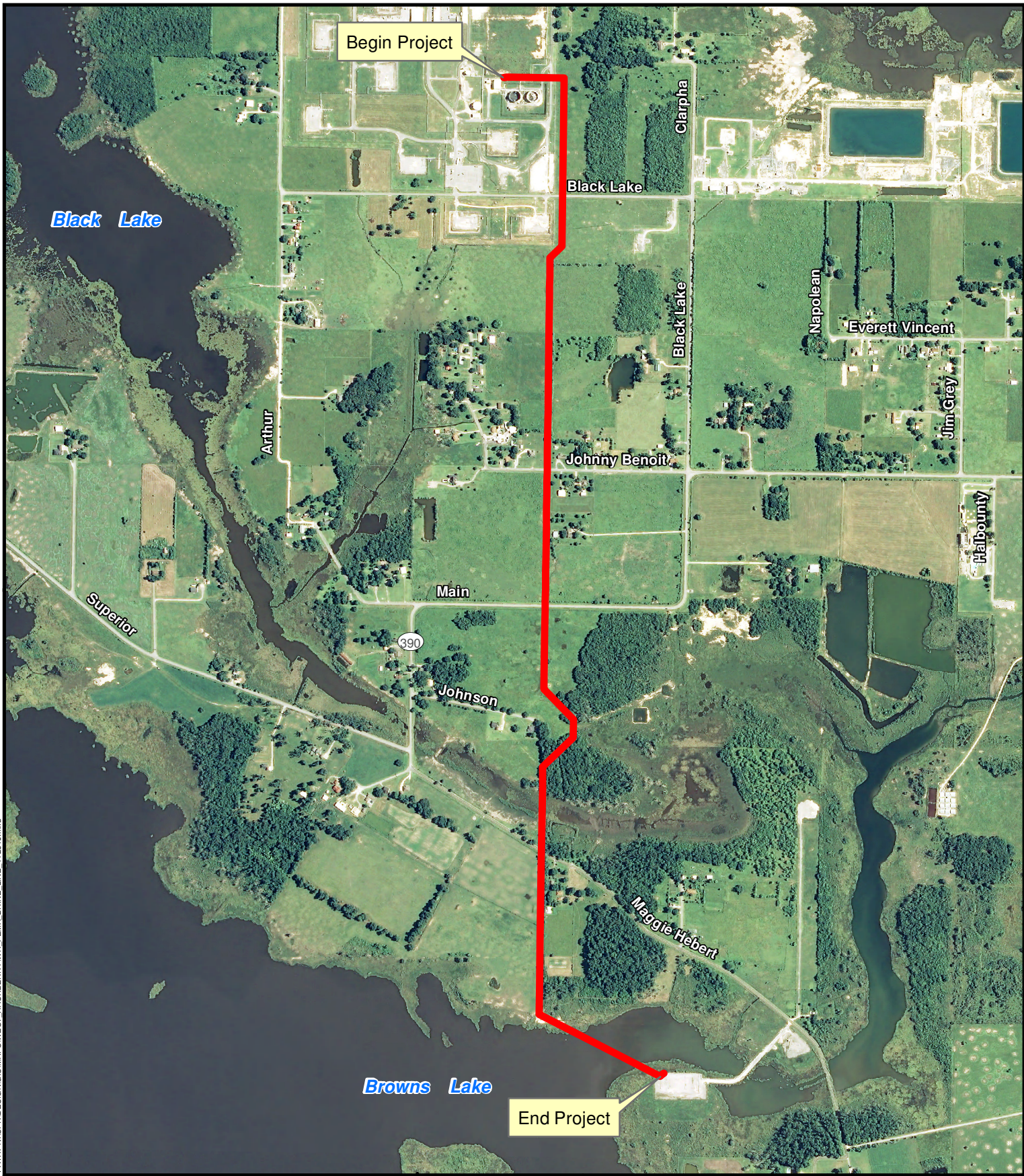
SOURCE: USGS, Browns Lake, 7.5 Minute Topographic Quadrangle, 1998



### EXHIBIT 3 TOPOGRAPHIC MAP, 1998

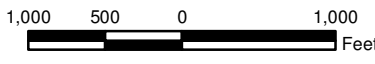
Brine Disposal Pipeline Replacement Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana





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SOURCE: USDA-NAIP, 2013



## EXHIBIT 4 AERIAL PHOTOGRAPH, 2013

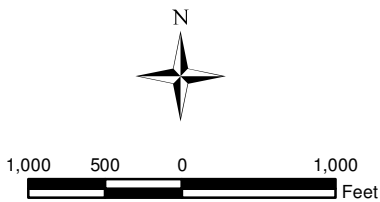
Brine Disposal Pipeline Replacement Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana





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SOURCE: USDA (SSURGO), 2015  
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## EXHIBIT 5 SOILS MAP

Brine Disposal Pipeline Replacement Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana



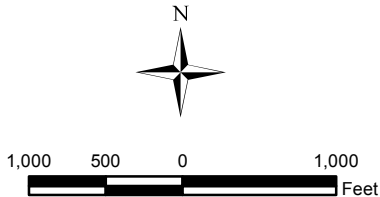


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**LEGEND**

- Proposed Project
- Flood Hazard Zones**
- 1% Annual Chance Flood Hazard
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard

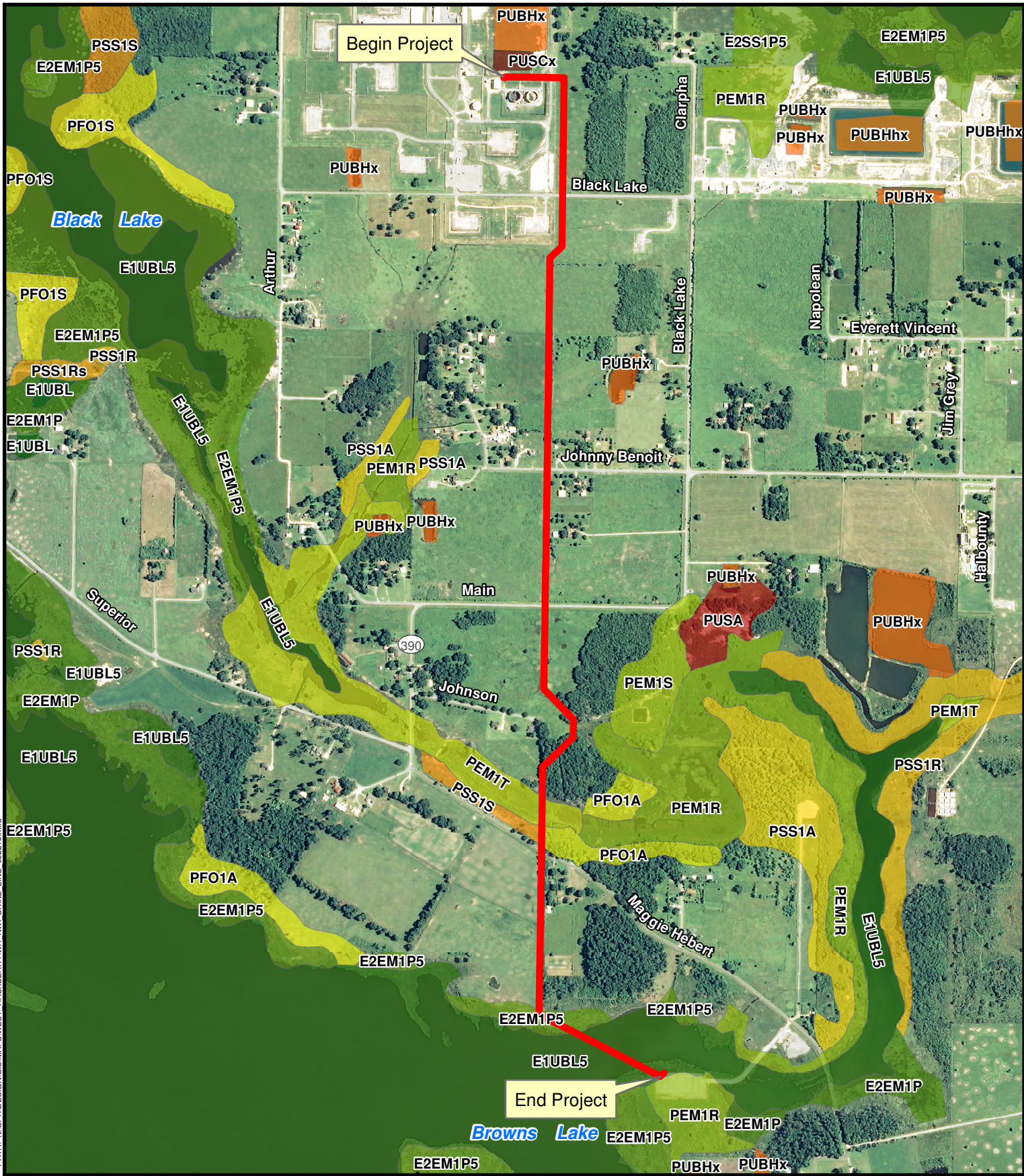
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## EXHIBIT 6 FLOODPLAIN MAP

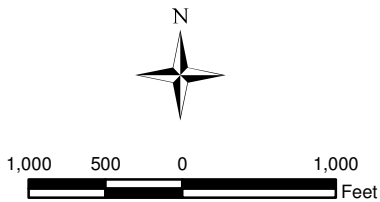
Brine Disposal Pipeline Replacement Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana





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SOURCE: National Wetlands Inventory (NWI), 11-1988  
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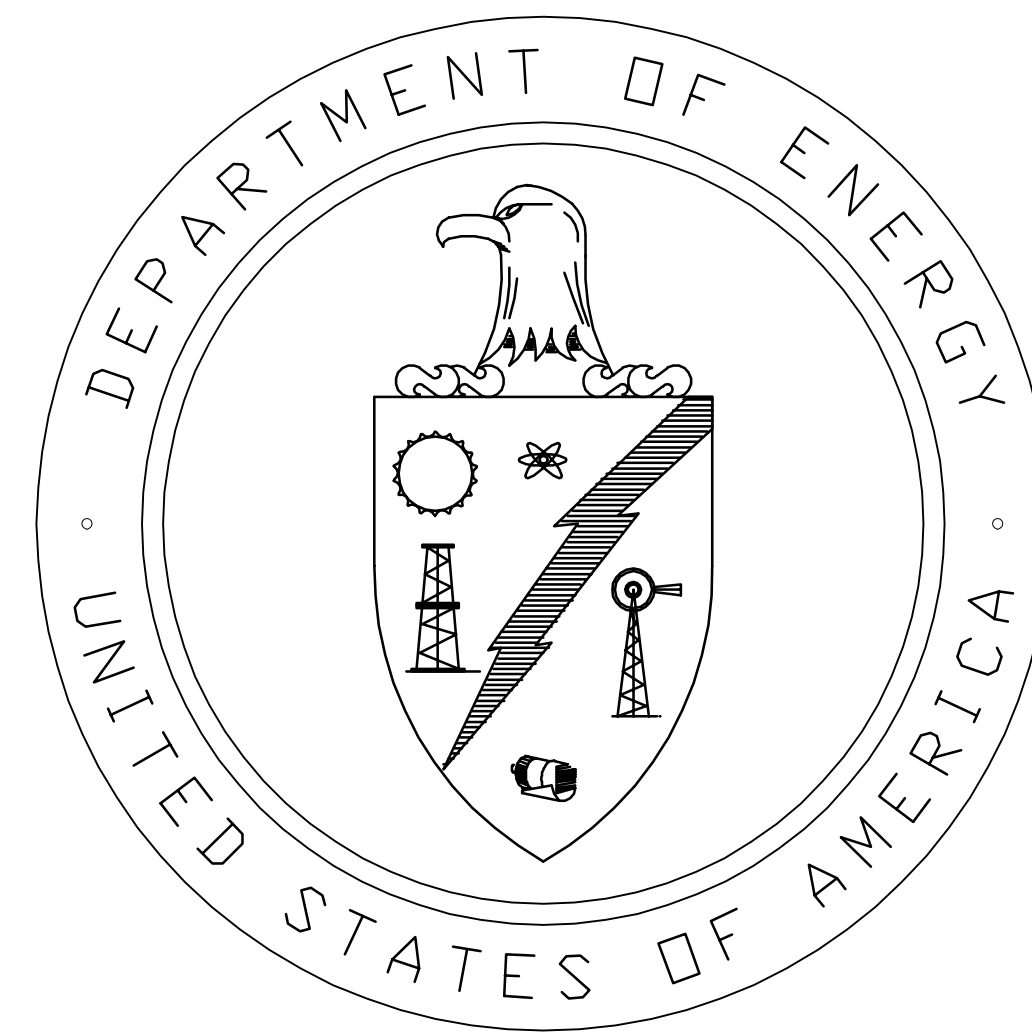


## EXHIBIT 7 NATIONAL WETLANDS INVENTORY

Brine Disposal Pipeline Replacement Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana



# U. S. DEPARTMENT OF ENERGY STRATEGIC PETROLEUM RESERVE

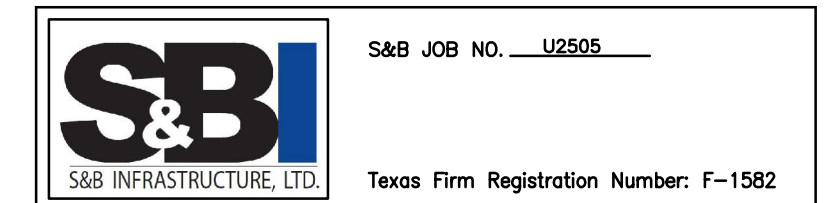


## REPLACE 24" BRINE DISPOSAL PIPELINE INSTALL TASK NO. WH-MM-826

### WEST HACKBERRY CAMERON PARISH, LOUISIANA



ISSUED FOR REFERENCE  
IN TASK NO. WH-MM-826



REPLACE 24" BRINE DISPOSAL PIPELINE INSTALL

TITLE SHEET

WEST HACKBERRY  
CAMERON PARISH, LOUISIANA

OFFICE OF SYSTEMS  
AND PROJECTS



STRATEGIC  
PETROLEUM  
RESERVE

APPROVED FOR CONSTRUCTION  
DATE

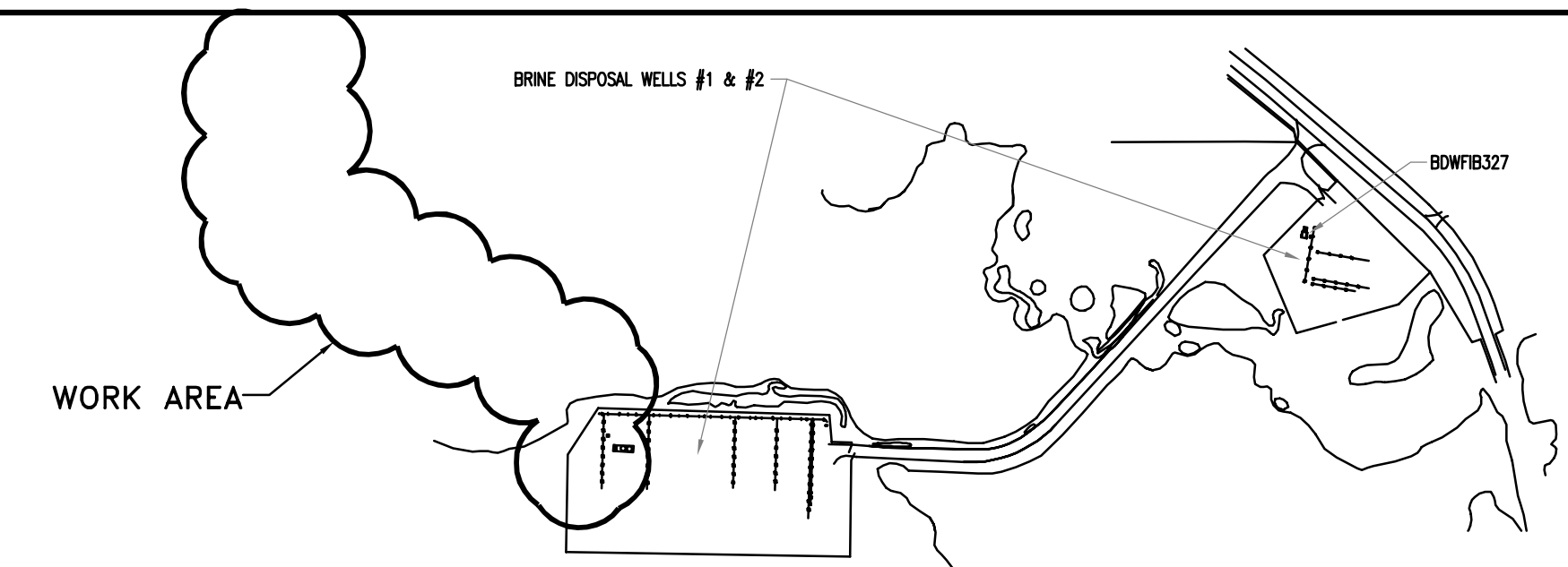
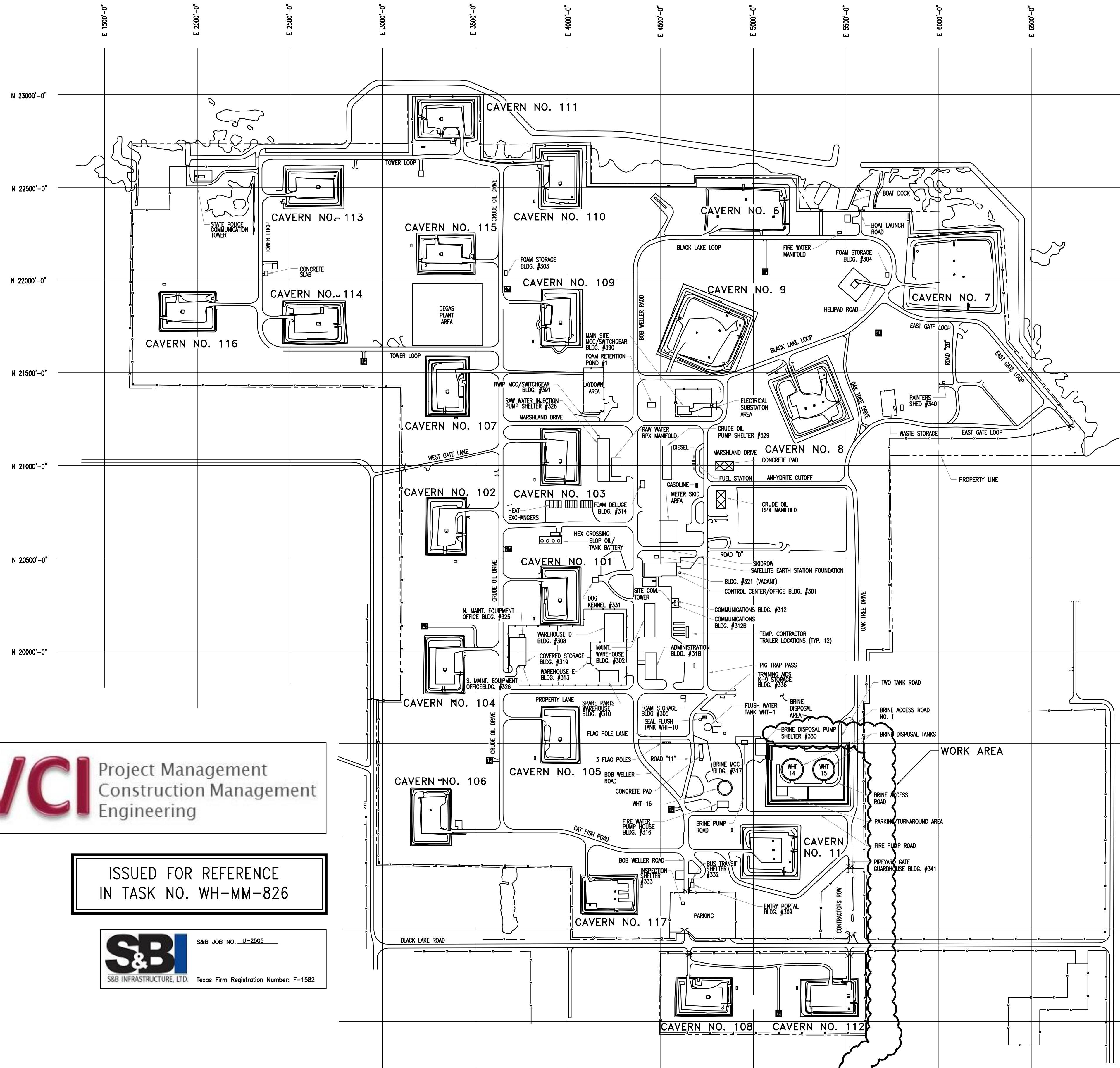
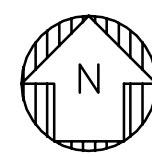
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SK-U-WH826-001  
SHEET 1 OF 1  
REV. 0

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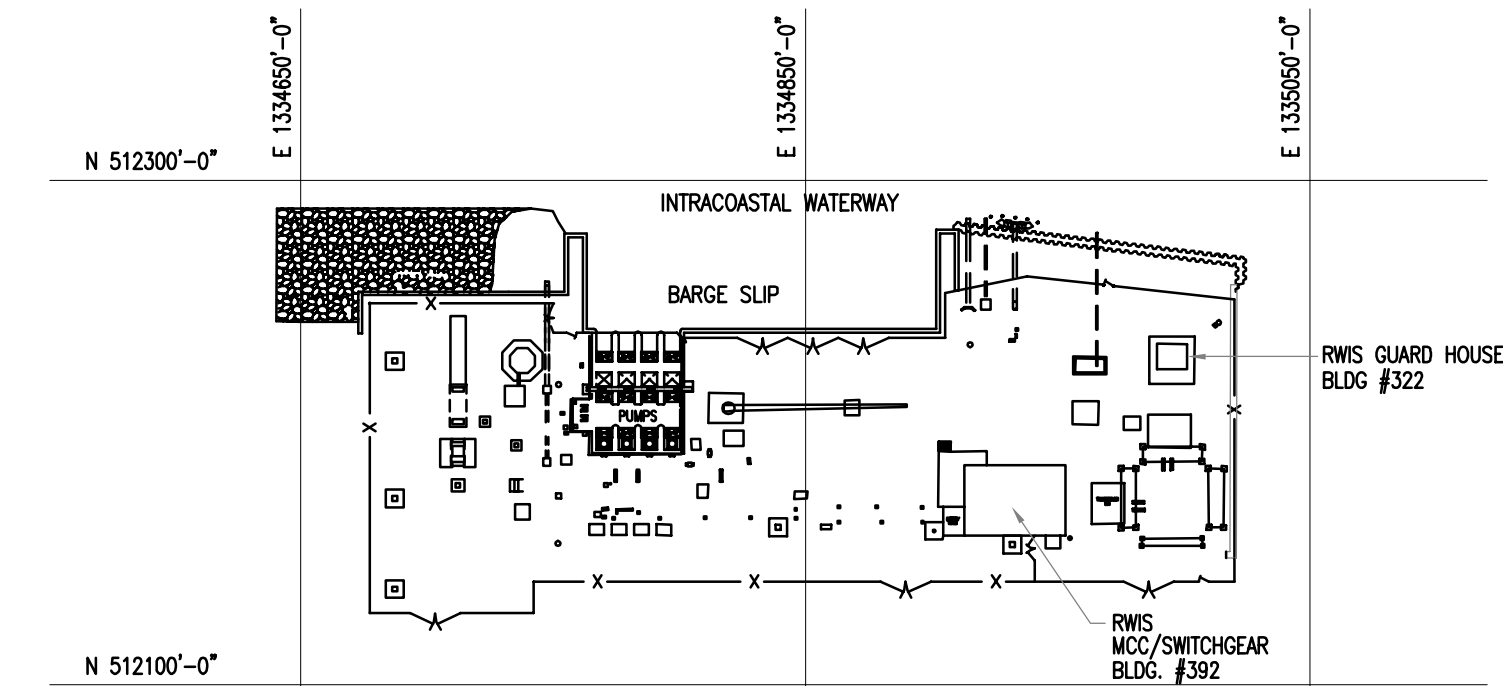
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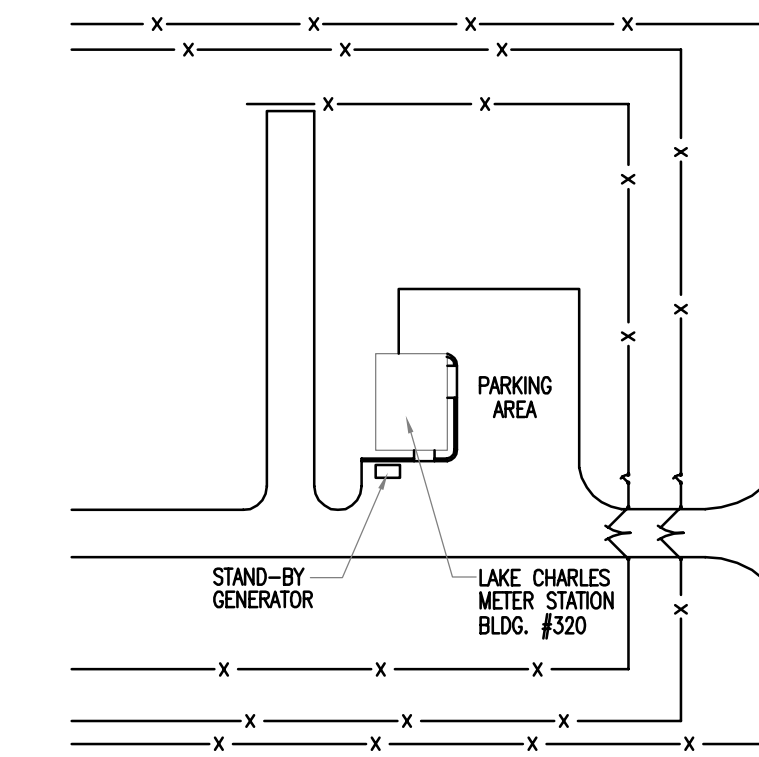




BRINE DISPOSAL WELL PAD No.1 & No.2



RAW WATER INTAKE STRUCTURE  
N.T.S.



LAKE CHARLES METER STATION  
N.T.S.

**VCI** Project Management  
Construction Management  
Engineering

ISSUED FOR REFERENCE  
IN TASK NO. WH-MM-826



WEST HACKBERRY MECHANICAL DRAWING INDEX LINKS (SEE NOTE 1)	
CRUDE OIL SYSTEM HEADER	CAVERN NO. 106 (SOUR)
RAW WATER SYSTEM HEADER	CAVERN NO. 107 (SWEET)
CRUDE OIL MANIFOLD (RPX)	CAVERN NO. 108 (SWEET)
RAW WATER MANIFOLD (RPX)	CAVERN NO. 109 (SOUR)
CRUDE OIL HEAT EXCHANGERS	CAVERN NO. 110 (SWEET)
RAW WATER INJECTION PUMP	CAVERN NO. 111 (SOUR)
CRUDE OIL INJECTION PUMP	CAVERN NO. 112 (SOUR)
RAW WATER INTAKE STRUCTURE	CAVERN NO. 113 (SWEET)
CRUDE OIL LAUNCHER/RECEIVERS	CAVERN NO. 114 (SOUR)
CRUDE OIL METERS	CAVERN NO. 115 (SOUR)
CAVERN NO. 6 (SOUR)	CAVERN NO. 116 (SWEET)
CAVERN NO. 7 (SWEET)	CAVERN NO. 117 (SOUR)
CAVERN NO. 8 (SOUR)	EMERGENCY GENERATOR
CAVERN NO. 9 (SOUR)	FLUSH WATER PUMPS
CAVERN NO. 11 (SOUR)	BRINE DISPOSAL PUMPS
CAVERN NO. 101 (SWEET)	FIRE PROTECTION
CAVERN NO. 102 (SWEET)	OIL/WATER SEPARATION
CAVERN NO. 103 (SWEET)	POTABLE WATER
CAVERN NO. 104 (SWEET)	SEAL FLUSH
CAVERN NO. 105 (SWEET)	SLOP OIL SYSTEM

1" = 300'-0"

REGISTRATION STAMP	DESIGNED BY:	NOTES:	NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	MANAGER	D.O.E. APPROVAL	DATE	NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	MANAGER	D.O.E. APPROVAL	DATE
		1. TO ACCESS THE MECHANICAL DRAWING INDEX FOR EACH AREA SHOWN, DOUBLE-CLICK ON THE TEXT WITHIN THE CHART AND THE MECHANICAL DRAWING INDEX WILL BE VIEWED IN MYRIAD. THE MECHANICAL DRAWING INDEX CAN ALSO BE ACCESSED BY DOUBLE-CLICKING ON THE BOLD TEXT WITHIN THE SITE PLAN ITSELF.	28	AB PER 999-DOC, CN 144	CBB	JTF				4/26/12								
		2. HEAT FLUX EXCLUSION ZONES ARE ON HIDDEN LAYERS CALLED "HF-BRINE POND", "HF-C.O. PIPELINE", "HF-C.O. PIPELINE 300 FT", "HF-C.O. PIPELINE 75 FT", "HF-DEGAS 425 FT", "HF-DIKE 300 FT", "HF-DIKE 75 FT", "HF-DYNERGY AND K9", "HF-NG PIPELINE" & "HF-SAFE ZONE". TO VIEW THIS INFO, TURN THE LAYERS ON IN VIEWER OR AUTOCAD.	27	AB PER 999-DOC, CN 143	CBB	JTF				6/28/11								
			26	AB PER WH-10-067, 03042093, CN 139 & 999-DOC, CN, 142	EMB	BD				2/21/11								
			25	AB PER 999-DOC, CN 141	TLM	JTF				12/9/10								
			24	AB PER 999-DOC, CN 140	JTF	BD				10/21/10								
			23	AB PER 999-DOC, CN 137 & CN 138	TLM	JTF				8/2/10								
			22	AB PER 999-DOC, CN 136	TLM	JTF				4/8/10								
			21	AB PER 999-DOC, CN 133	TLM	JTF				5/14/09								
			30	AB PER 999-DOC, CN 146	JMM	JTF				12/11/14								
			29	AB PER 999-DOC, CN 145	CBB	JTF				5/16/12								

PLAN

OVERALL SITE

WEST HACKBERRY  
CAMERON PARISH, LOUISIANA

OFFICE OF SYSTEMS AND PROJECTS

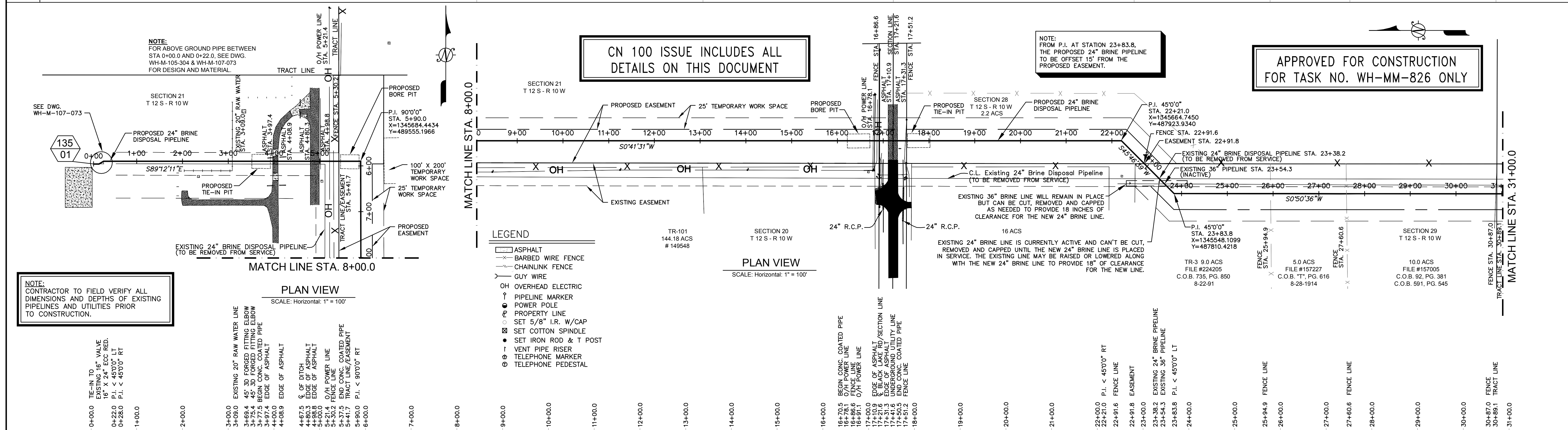
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APPROVED FOR CONSTRUCTION

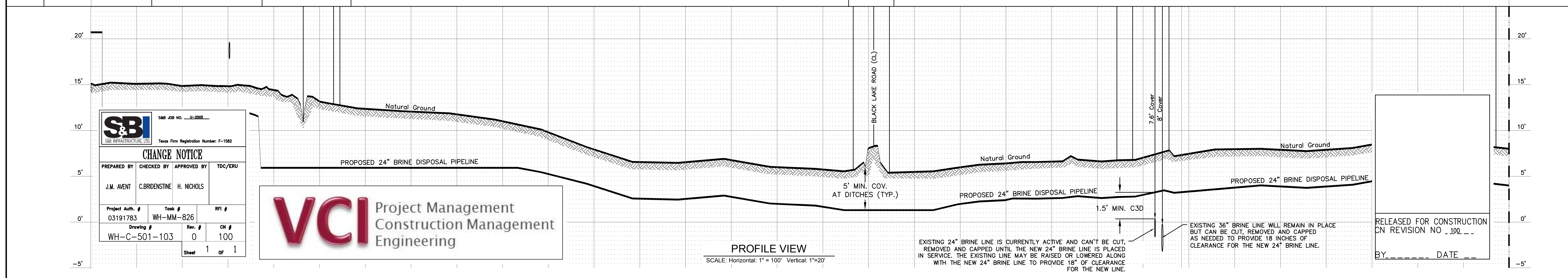
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SHEET <u>CL</u> OF <u>15</u>	



TERRAIN	INSIDE FACILITY FENCE	FLAT PASTURE	FLAT PASTURE	FLAT PASTURE	FLAT PASTURE	FLAT PASTURE	FLAT PASTURE
VEGETATION	GRASSY AREA	OPEN GRASSY AREA	OPEN GRASSY AREA	OPEN GRASSY AREA	OPEN GRASSY AREA	OPEN GRASSY AREA	OPEN GRASSY AREA
OWNER	UNITED STATES OF AMERICA	UNKNOWN	UNKNOWN	UNKNOWN	TRIDENT ENERGY GROUP	U.R. GASSEN ET AL	DONALD B. DEROUEN ESTATE DOROTHY MAE DEROUEN LYONS
RODS							
PARISH-STATE	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LA	CAMERON PARISH, LOUISIANA



REF. DWG	WH-M-105-304	WH-M-107-073 WH-M-107-231	WH-C-509-033	WH-C-509-034
MOP				1296 PSIG
MATERIAL	30'	347'	160'	1,133'



REGISTRATION STAMP	DESIGNED BY: 9	24" 45 DEG, 3D ELBOW, W/ 0.375" THICK CEMENT LINER, BARE PIPE FOR ABOVE GROUND	3																	
	DRAWN BY: 8	AERIAL MILE POST MARKERS	0																	
	CHECKED BY: 7	PIPELINE MARKERS - WARNING SIGNS	6																	
	SURVEYOR OF RECORD: 6	CP TEST STATIONS	1																	
	SIGNATURE: 5	24" O.D., 0.500" W.T., API 5L X-60-PSL2 PIPE W/ 0.375" THICK INTERNAL CEMENT LINER, BARE PIPE (FOR ABOVE GROUND)	30'																	
	DATE: 4	24" 45 DEG, 3D FORGED FITTING ELBOW, 0.500" W.T. TAPERED ENDS TO MATCH PIPE, MSS-SP-75 WPHY 60 W/0.375" THICK INTERNAL CEMENT LINER, 14-16 MILS FBE, 25-30 MILS ARO	5																	
		24" 90 DEG, 3D FORGED FITTING ELBOW, 0.500" W.T. TAPERED ENDS TO MATCH PIPE, MSS-SP-75 WPHY 60 W/0.375" THICK INTERNAL CEMENT LINER, 14-16 MILS FBE, 25-30 MILS ARO	1																	
		24" O.D., 0.500" W.T., API 5L X-60-PSL2 PIPE W/0.375" THICK INTERNAL CEMENT LINER, AND 14-16 MILS FBE, + 1" THICK CONC. OUTER COATING	240'																	
		24" O.D., 0.500" W.T., API 5L X-60-PSL2 PIPE W/0.375" THICK INTERNAL CEMENT LINER, AND 14-16 MILS FBE, 25-30 MILS ARO	2830'																	

RELEASED FOR CONSTRUCTION  
CN REVISION NO. 100

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

OFFICE OF SYSTEMS AND PROJECTS  
STRATEGIC PETROLEUM RESERVE

PIPELINE ALIGNMENT SHEET  
24" BRINE PIPELINE  
WEST HACKBERRY SPR FACILITY  
TO BRINE DISPOSAL WELL SITE  
STA. 0+00 TO STA. 31+00

WEST HACKBERRY  
CAMERON PARISH, LOUISIANA

TASK NUMBER: WH-MM-826  
DISCIPLINE: MAPPING  
SCALE: HORIZONTAL: 1" = 100'  
PROFILE BY: 1" = 20'  
DRAWING NUMBER: WH-C-501-103  
SHEET C2 OF 15



TERRAIN	FLAT FARM LAND	FLAT RESIDENTIAL (YARD)	FLAT PASTURE
VEGETATION	OPEN HAY FIELD	OPEN GRASSY AREA	OPEN GRASSY AREA
OWNER	GEORGE ELERY SHOVE, ET UX	RONALD JOSEPH RICHARD, ET UX	MRS. LAURA JOHNSON, ET AL
RODS			
PARISH-STATE	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LOUISIANA

**SBI** S&B INFRASTRUCTURE, LTD. Texas Firm Registration Number: F-1582  
S&B JOB NO. U-2605

**CHANGE NOTICE**

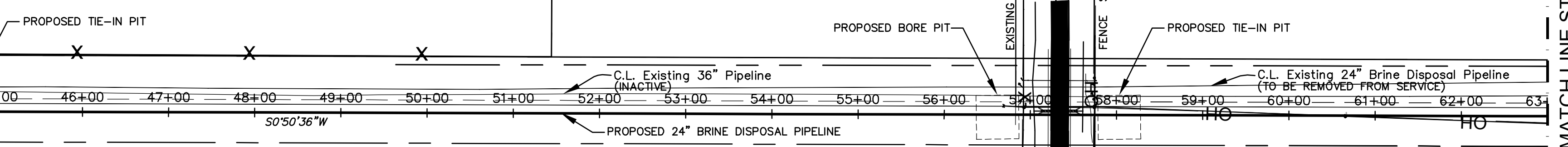
PREPARED BY	CHECKED BY	APPROVED BY	TDC/ERU
J.M. AVENT	C. BRIDENSTINE	H. NICHOLS	

Released for construction CN REVISION NO. 100

Project Auth. #	Task #	RFI #
03191783	WH-MM-826	
Drawing #	Rev. #	CN #
WH-C-501-104	0	100

Sheet 1 of 1

APPROVED FOR CONSTRUCTION FOR TASK NO. WH-MM-826 ONLY



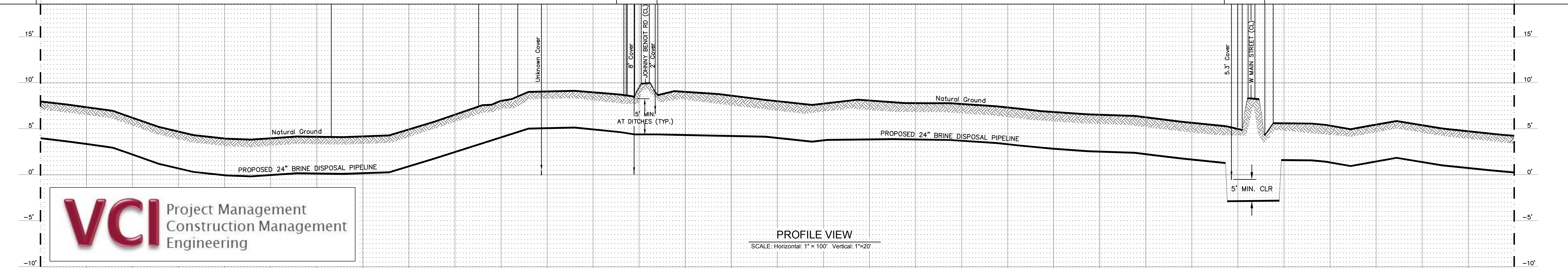
**LEGEND**

- ASPHALT
- BARBED WIRE FENCE
- CHAINLINK FENCE
- GUY WIRE
- OVERHEAD ELECTRIC
- PIPELINE MARKER
- POWER POLE
- PROPERTY LINE
- SET 5/8" I.R. W/CAP
- SET COTTON SPINDLE
- SET IRON ROD & T POST
- VENT PIPE RISER
- TELEPHONE MARKER
- TELEPHONE PEDESTAL

NOTE: CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND DEPTHS OF EXISTING PIPELINES AND UTILITIES PRIOR TO CONSTRUCTION.

CN 100 ISSUE INCLUDES ALL DETAILS ON THIS DOCUMENT

REF. DWG		WH-C-509-035	1296 PSIG	WH-C-509-036
MOP				
MATERIAL				



REGISTRATION STAMP	DESIGNED BY:	8	AERIAL MILE POST MARKERS	1
	DRAWN BY:	7	PIPELINE MARKERS - WARNING SIGNS	4
	CHECKED BY:	6	CP TEST STATIONS	2
	SURVEYOR OF RECORD:	5	NOT USED	
	SIGNATURE:	4	24" 45 DEG. 30 FORGED FITTING ELBOW, 0.500" W.T., TAPERED ENDS TO MATCH PIPE, MSS-SP-75 WPHY 60 W/0.375" THICK INTERNAL CEMENT LINER, 14-16 MILS FBE, 25-30 MILS ARO	4
	DATE:	3	24" 90 DEG. 30 FORGED FITTING ELBOW, 0.500" W.T., TAPERED ENDS TO MATCH PIPE, MSS-SP-75 WPHY 60 W/0.375" THICK INTERNAL CEMENT LINER, 14-16 MILS FBE, 25-30 MILS ARO	0
		2	24" O.D., 0.500" W.T., API 5L X-60-PSL2 PIPE W/0.375" THICK INTERNAL CEMENT LINER, AND 14-16 MILS FBE, + 1" THICK CONC. OUTER COATING	180'
		1	24" O.D., 0.500" W.T., API 5L X-60-PSL2 PIPE W/0.375" THICK INTERNAL CEMENT LINER, AND 14-16 MILS FBE, 25-30 MILS ARO	3,020'
REVISION NUMBER				

NO.	MATERIAL DESCRIPTION	QUANTITY	NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	ENGINEERING MANAGER	D.O.E. APPROVAL	DATE
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PIPELINE ALIGNMENT SHEET  
24" BRINE PIPELINE  
WEST HACKBERRY SPR FACILITY  
TO BRINE DISPOSAL WELL SITE  
STA. 31+00 TO STA. 63+00

WEST HACKBERRY  
CAMERON PARISH, LOUISIANA

OFFICE OF SYSTEMS AND PROJECTS  
STRATEGIC PETROLEUM RESERVE

TASK NUMBER: WH-MM-826  
DISCIPLINE: MAPPING  
SCALE: HORIZONTAL: 1" = 100'  
PROFILE: 1" = 20'  
DRAWING NUMBER: WH-C-501-104  
SHEET C3 OF 15  
REV: 0



TERRAIN	FLAT PASTURE	FLAT PASTURE	FLAT TREED AREA WITH WATER CROSSING	FLAT PASTURE
VEGETATION	OPEN GRASSY AREA	OPEN GRASSY AREA	HEAVY TREED AREA AREA	OPEN GRASSY AREA
OWNER	MRS. LAURA JOHNSON, ET AL	UNKNOWN	CARL P. JOHNSON PRESTON J. JOHNSON	VINCENT HEIRS, INC. (E/2 OF W/2, E/2, W/2 OF SW/4, SW/4 OF NW/4 SECTION 32) COB 227, PG. 565 COB 181, PG. 422 COB 395, PG. 58
RODS				
PARISH-STATE	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LA	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LOUISIANA

**S&B** S&B INFRASTRUCTURE, LTD. Texas Firm Registration Number: F-1582

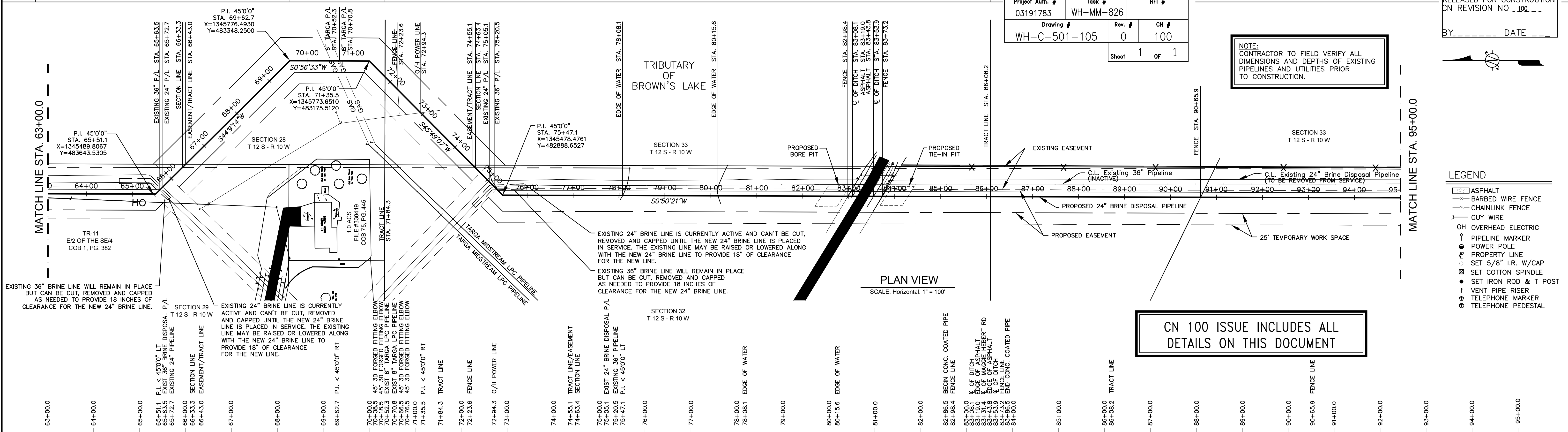
**CHANGE NOTICE**

PREPARED BY	CHECKED BY	APPROVED BY	TDC/ERU
J.M. AVENT	C. BRIDENSTINE	H. NICHOLS	

Project Auth. #	Task #	RFI #
03191783	WH-MM-826	

Drawing #	Rev. #	CN #
WH-C-501-105	0	100

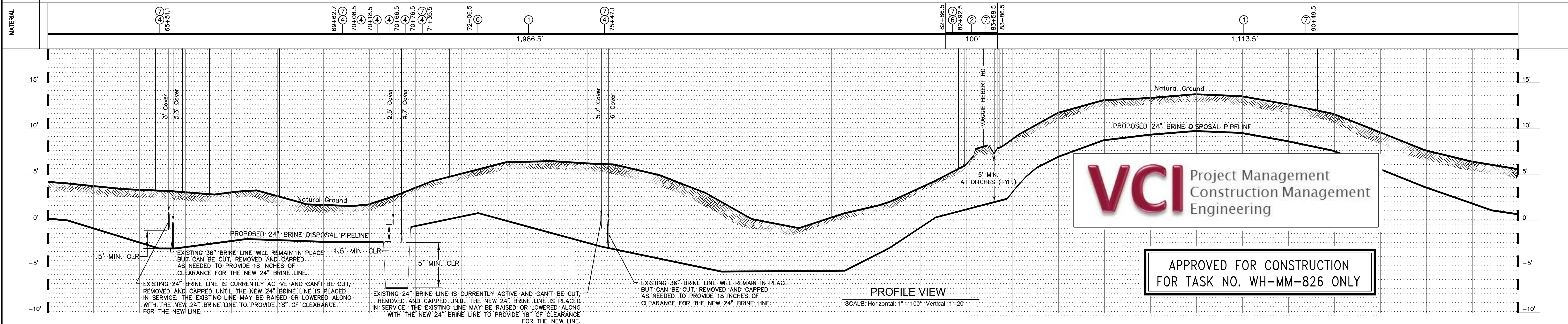
Sheet 1 of 1



**CN 100 ISSUE INCLUDES ALL DETAILS ON THIS DOCUMENT**

- LEGEND**
- ASPHALT
  - BARBED WIRE FENCE
  - CHAINLINK FENCE
  - GUY WIRE
  - OH OVERHEAD ELECTRIC
  - PIPELINE MARKER
  - POWER POLE
  - PROPERTY LINE
  - SET 5/8" I.R. W/CAP
  - SET COTTON SPINDLE
  - SET IRON ROD & T POST
  - VENT PIPE RISER
  - TELEPHONE MARKER
  - TELEPHONE PEDESTAL

REF. DWG	WH-C-509-037	WH-C-509-038
MOP	1296 PSIG	
MATERIAL	① 1,986.5'	② 100'



**APPROVED FOR CONSTRUCTION FOR TASK NO. WH-MM-826 ONLY**

REGISTRATION STAMP	DESIGNED BY:	QUANTITY	NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	ENGINEERING MANAGER	D.O.E. APPROVAL	DATE
	8 AERIAL MILE POST MARKERS	0								
	7 PIPELINE MARKERS - WARNING SIGNS	7								
	6 CP TEST STATIONS	2								
	5 NOT USED									
	4 24" 45 DEG. 3D FORGED FITTING ELBOW, 0.500" W.T. TAPERED ENDS TO MATCH PIPE, MSS-SP-75 WPHY 60 W/0.375" THICK INTERNAL CEMENT LINER, 14-16 MILS FBE, 25-30 MILS ARO	8								
	3 24" 90 DEG. 3D FORGED FITTING ELBOW, 0.500" W.T. TAPERED ENDS TO MATCH PIPE, MSS-SP-75 WPHY 60 W/0.375" THICK INTERNAL CEMENT LINER, 14-16 MILS FBE, 25-30 MILS ARO	0								
	2 24" O.D., 0.500" W.T., API 5L X-60-PSL2 PIPE W/0.375" THICK INTERNAL CEMENT LINER, AND 14-16 MILS FBE, + 1" THICK CONC. OUTER COATING	100'								
	1 24" O.D., 0.500" W.T., API 5L X-60-PSL2 PIPE W/0.375" THICK INTERNAL CEMENT LINER, AND 14-16 MILS FBE, 25-30 MILS ARO	3100'								

PIPELINE ALIGNMENT SHEET  
24" BRINE PIPELINE  
WEST HACKBERRY SPR FACILITY  
TO BRINE DISPOSAL WELL SITE  
STA. 63+00 TO STA. 95+00

WEST HACKBERRY  
CAMERON PARISH, LOUISIANA

OFFICE OF SYSTEMS AND PROJECTS  
STRATEGIC PETROLEUM RESERVE

APPROVED FOR CONSTRUCTION DATE

TASK NUMBER: WH-MM-826  
DISCIPLINE: MAPPING  
SCALE: HORIZONTAL: 1" = 100'  
PROFILE: 1" = 20'

DRAWING NUMBER: WH-C-501-105  
SHEET C4 of 15  
REV: 0



TERRAIN	FLAT PASTURE	FLAT WATER CROSSING
VEGETATION	OPEN GRASSY AREA	WET/OPEN WATER
OWNER	VINCENT HEIRS, INC. (E/2 OF W/2, E/2, W/2 OF SW/4, SW/4 SECTION 32) COB 227, PG. 555 COB 181, PG. 422 COB 395, PG. 58	UNITED STATES OF AMERICA
RODS		
PARISH-STATE	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LOUISIANA

**S&B** S&B INFRASTRUCTURE, LTD. Texas Firm Registration Number: F-1582  
S&B JOB NO. U-2509

**CHANGE NOTICE**

PREPARED BY	CHECKED BY	APPROVED BY	TDC/ERU
J.M. AVENT	C. BRIDENSTINE	H. NICHOLS	

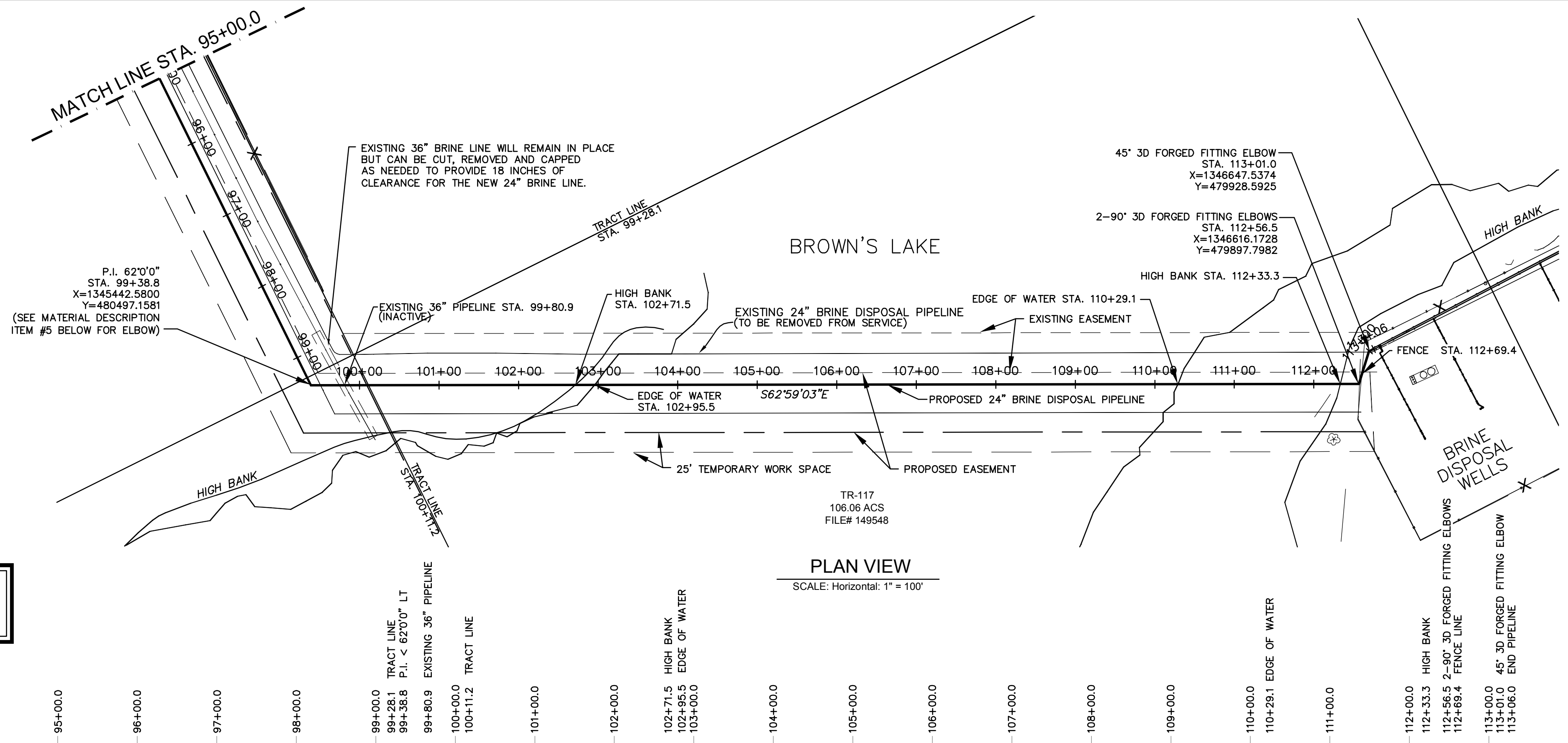
Project Auth. # 03191783 Task # WH-MM-826 RFI #  
Drawing # WH-C-501-106 Rev. # 0 CN # 100  
Sheet 1 OF 1

RELEASED FOR CONSTRUCTION  
CN REVISION NO. 100  
BY \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED FOR CONSTRUCTION  
FOR TASK NO. WH-MM-826 ONLY

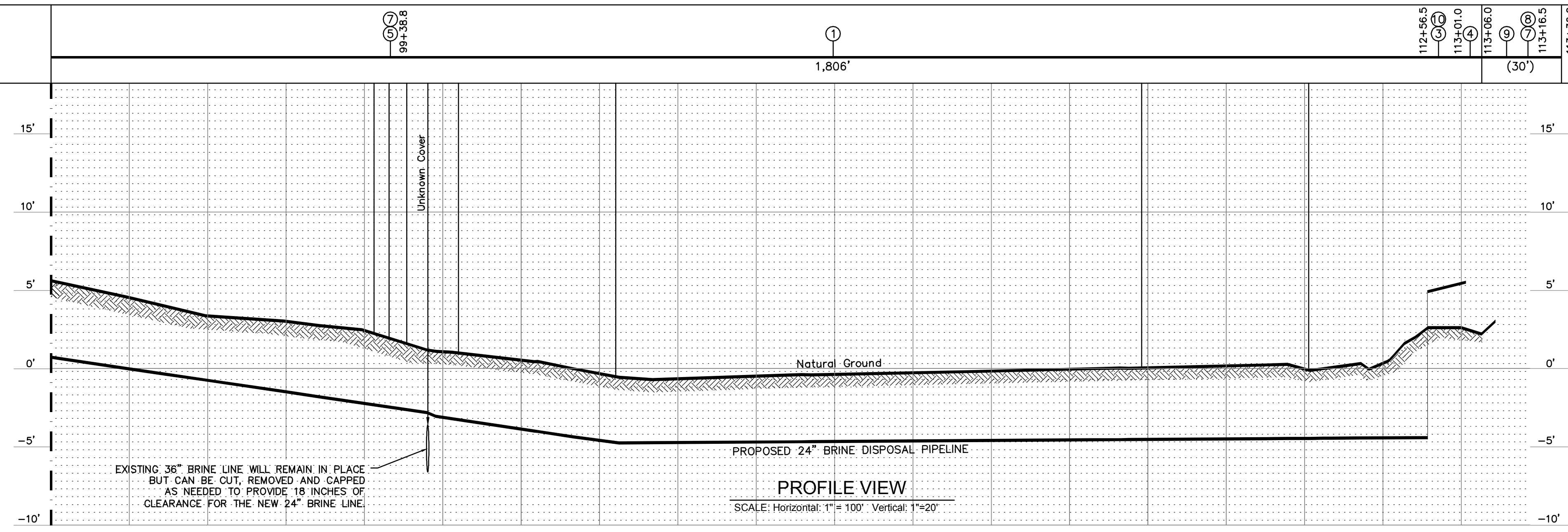
NOTE:  
CONTRACTOR TO FIELD VERIFY ALL  
DIMENSIONS AND DEPTHS OF EXISTING  
PIPELINES AND UTILITIES PRIOR  
TO CONSTRUCTION.

CN 100 ISSUE INCLUDES ALL  
DETAILS ON THIS DOCUMENT



- LEGEND**
- ASPHALT
  - BARBED WIRE FENCE
  - CHAINLINK FENCE
  - GUY WIRE
  - OH OVERHEAD ELECTRIC
  - PIPELINE MARKER
  - POWER POLE
  - PROPERTY LINE
  - SET 5/8" I.R. W/CAP
  - SET COTTON SPINDLE
  - SET IRON ROD & T POST
  - VENT PIPE RISER
  - TELEPHONE MARKER
  - TELEPHONE PEDESTAL

REF. DWG	WH-C-509-039	WH-M-107-074
MOP	1296 PSIG	
MATERIAL		



NOTE:  
FOR ABOVE GROUND PIPE BETWEEN  
STA. 113+06.0 AND 113+36.0, SEE DWG.  
WH-M-107-074 FOR DESIGN AND  
MATERIAL.

NO.	MATERIAL DESCRIPTION	QUANTITY	NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	ENGINEERING MANAGER	D.O.E. APPROVAL	DATE
10	24" X 0.500" W.T., 90 DEG, 3D FORGED FITTING ELBOW W/0.375" THICK INTERNAL CEMENT LINER, BARE PIPE (FOR ABOVE GROUND)	1								
9	24" O.D., 0.500" W.T., API 5L-X60-PSL2 PIPE W/0.375" THICK INTERNAL CEMENT LINER, BARE PIPE (FOR ABOVE GROUND)	30'								
8	AERIAL MILE POST MARKERS	1								
7	PIPELINE MARKERS - WARNING SIGNS	2								
6	CP TEST STATIONS	0								
5	24" 90 DEG SEGMENTED TRIMMED TO 62 DEG, 3D FORGED FITTING ELBOW W/0.375" THICK INTERNAL CEMENT LINER, 14-16 MILS FBE, 25-30 MILS ARO	1								
4	24" 45 DEG. 3D FORGED FITTING ELBOW, 0.500" W.T. TAPERED ENDS TO MATCH PIPE, MSS-SP-75 WPHY 60 W/0.375" THICK INTERNAL CEMENT LINER, BARE PIPE	1								
3	24" 90 DEG. 3D FORGED FITTING ELBOW, 0.500" W.T. TAPERED ENDS TO MATCH PIPE, MSS-SP-75 WPHY 60 W/0.375" THICK INTERNAL CEMENT LINER, 14-16 MILS FBE, 25-30 MILS ARO	1								
2	24" O.D., 0.500" W.T., API 5L X-60-PSL2 PIPE W/0.375" THICK INTERNAL CEMENT LINER, AND 14-16 MILS FBE, + 1" THICK CONC. OUTER COATING	0'								
1	24" O.D., 0.500" W.T., API 5L X-60-PSL2 PIPE W/0.375" THICK INTERNAL CEMENT LINER, AND 14-16 MILS FBE, 25-30 MILS ARO	1806'								

PIPELINE ALIGNMENT SHEET  
24" BRINE PIPELINE  
WEST HACKBERRY SPR FACILITY  
TO BRINE DISPOSAL WELL SITE  
STA. 95+00 TO STA. 113+06

WEST HACKBERRY  
CAMERON PARISH, LOUISIANA

OFFICE OF SYSTEMS AND PROJECTS

STRATEGIC PETROLEUM RESERVE

APPROVED FOR CONSTRUCTION DATE \_\_\_\_\_

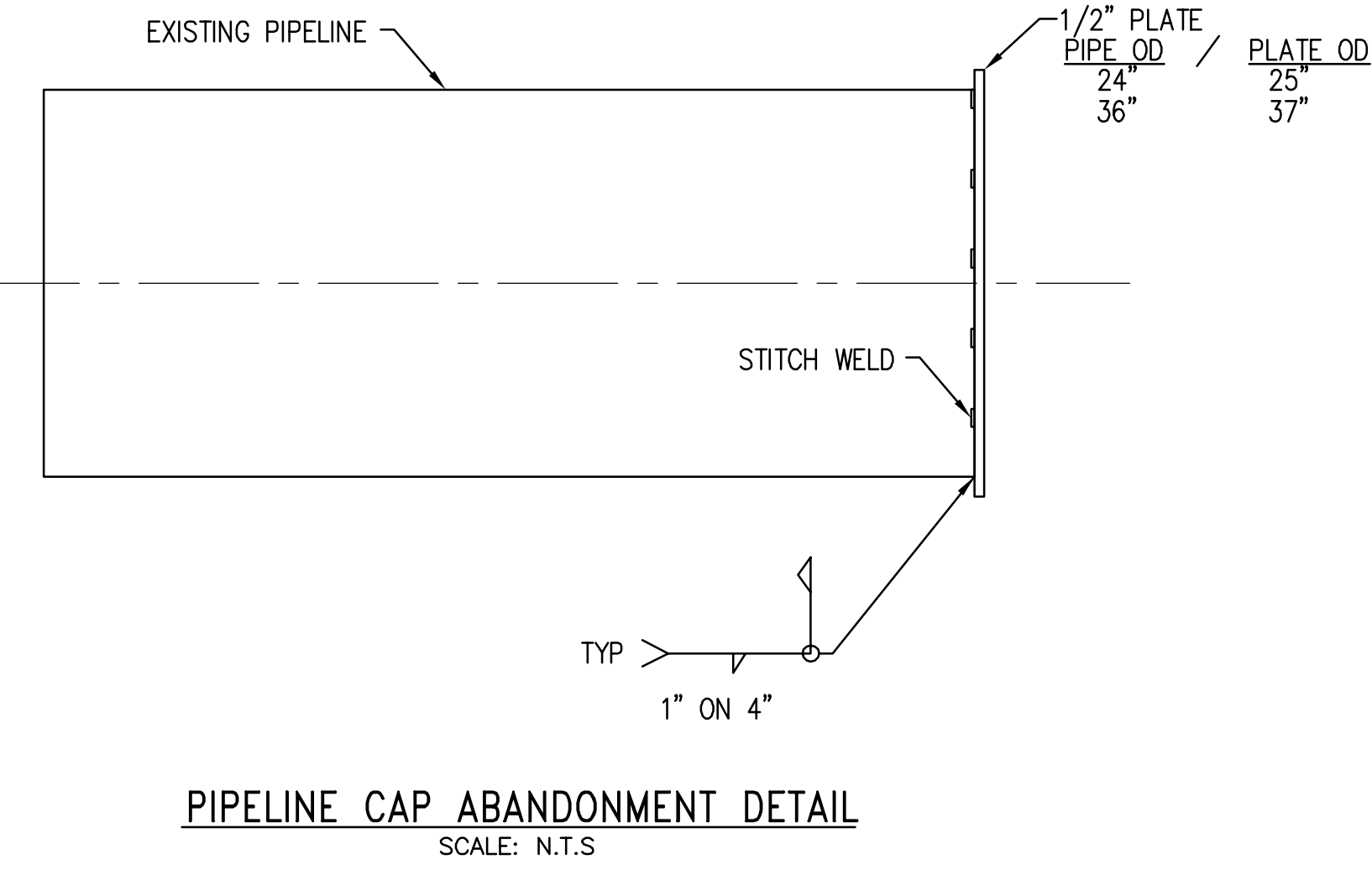
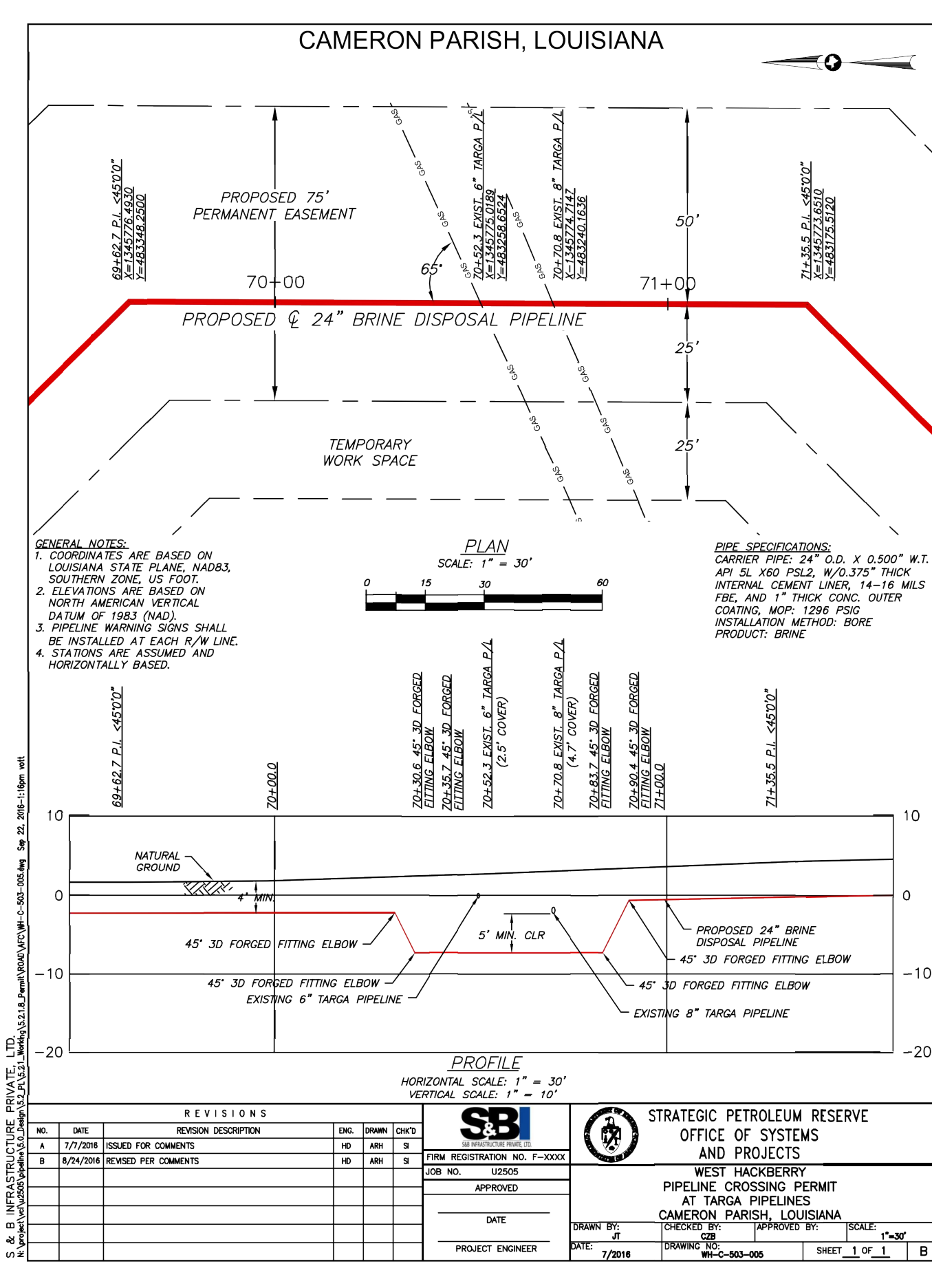
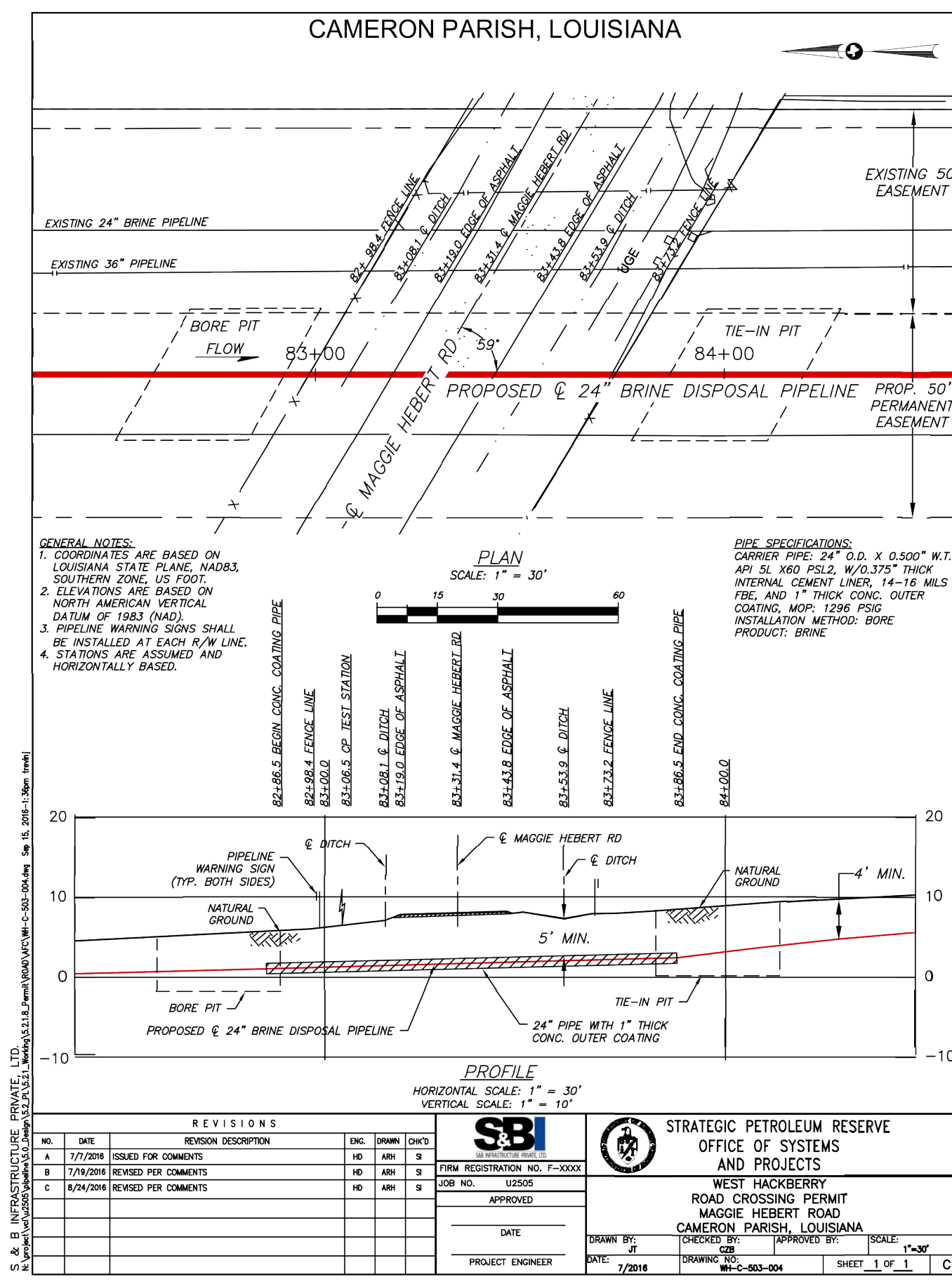
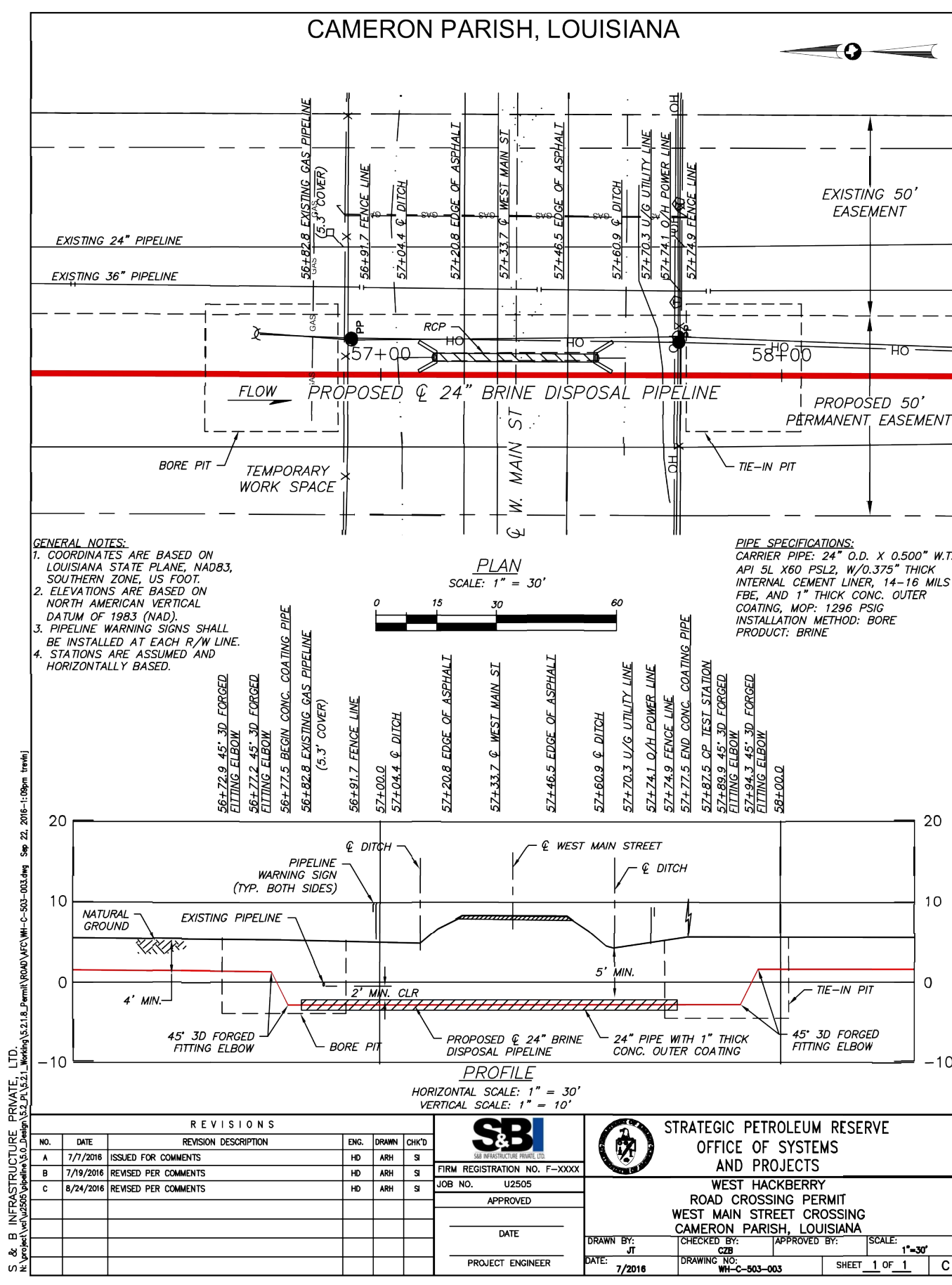
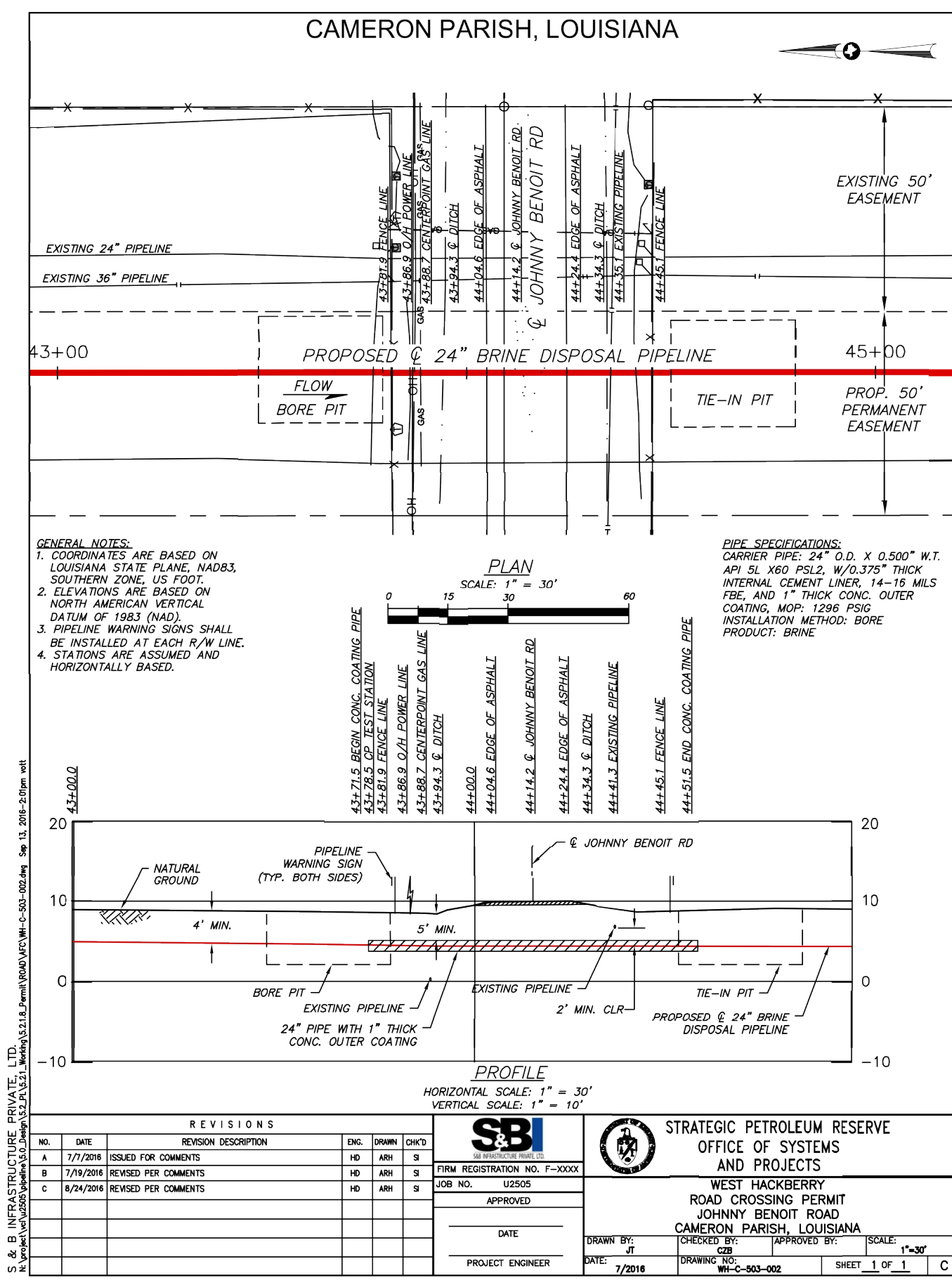
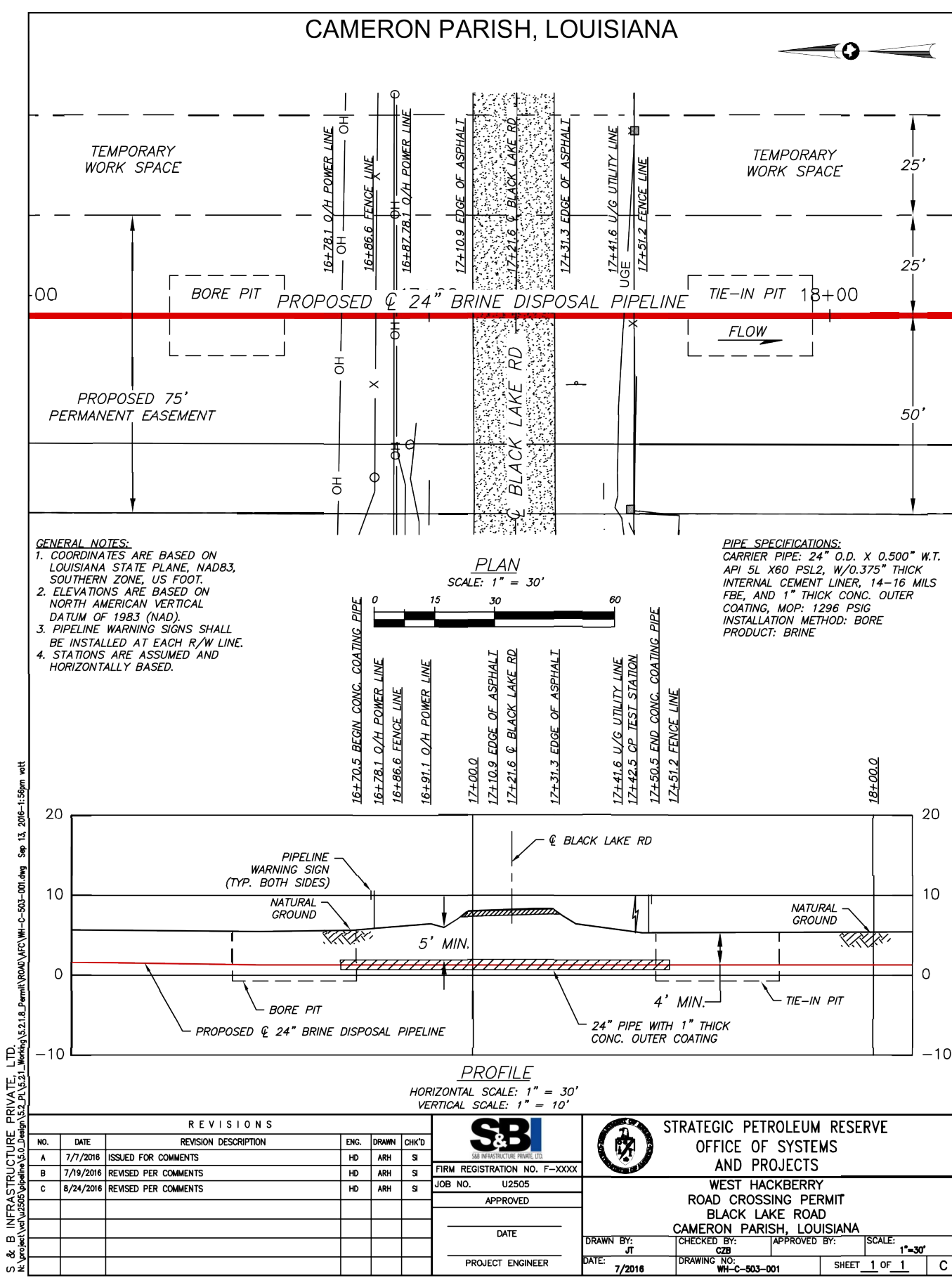
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DISCIPLINE: MAPPING	
SCALE: HORIZONTAL: 1" = 100' PROFILE: 1" = 20'	
DRAWING NUMBER: WH-C-501-106	
SHEET C5 OF 15	

REGISTRATION STAMP

DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
SURVEYOR OF RECORD:	
SIGNATURE:	
DATE:	

ACAD FILENAME:





APPROVED FOR CONSTRUCTION FOR TASK NO. WH-MM-826 ONLY

CN 100 ISSUE INCLUDES ALL DETAILS ON THIS DOCUMENT

**S&B INFRASTRUCTURE, LTD.** S&B JOB NO. U-2505  
 Texas Firm Registration Number: F-1582

**CHANGE NOTICE**

PREPARED BY	CHECKED BY	APPROVED BY	TDC/ERU
J.M. AVENT	C. BRIDENSTINE	H. NICHOLS	

Project Auth. # 03191783 Task # WH-MM-826 RFI #  
 Drawing # WH-C-506-001 Rev. # 0 CN # 100  
 Sheet 1 of 1

**VCI Project Management**  
 Construction Management  
 Engineering

REGISTRATION STAMP	DESIGNED BY:
DRAWN BY:	CHECKED BY:
SURVEYOR OF RECORD:	SIGNATURE:
DATE:	

NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	ENGINEER	D.O.E. APPROVAL	DATE	NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	ENGINEER	D.O.E. APPROVAL	DATE

MISCELLANEOUS PERMITS  
 24" BRINE PIPELINE  
 WEST HACKBERRY SPR FACILITY  
 TO BRINE DISPOSAL WELL SITE  
 PERMITS

WEST HACKBERRY  
 CAMERON PARISH, LOUISIANA

OFFICE OF SYSTEMS AND PROJECTS  
 STRATEGIC PETROLEUM RESERVE

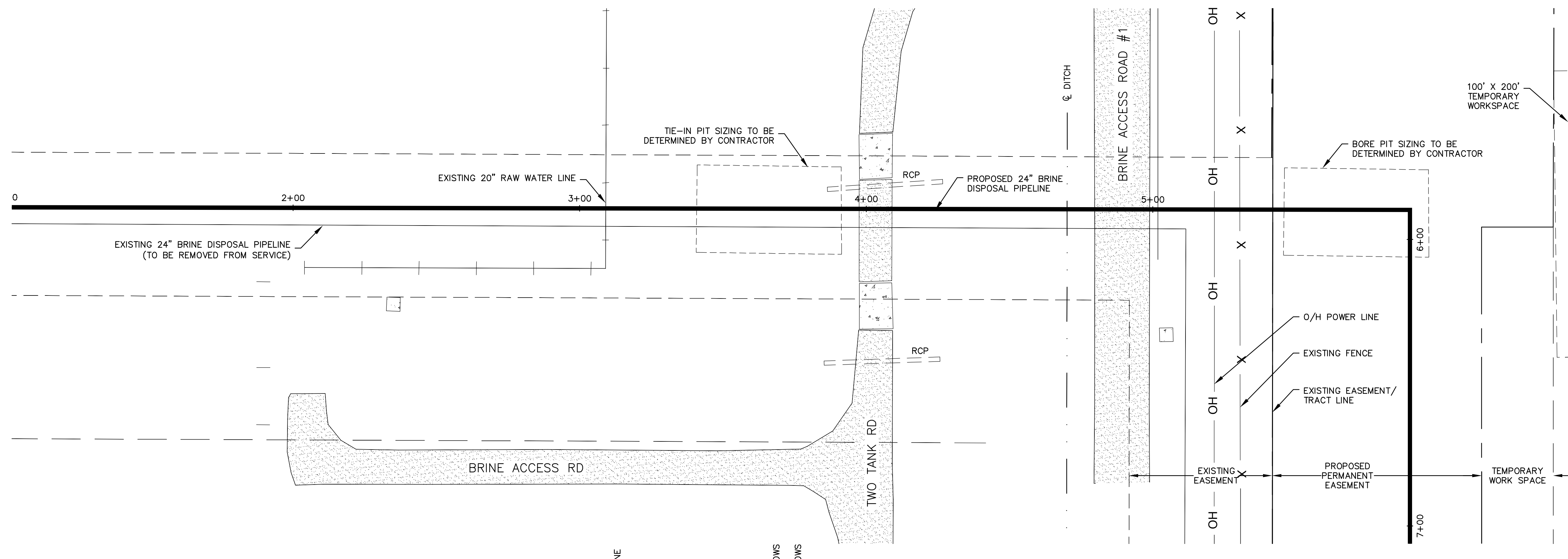
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 DISCIPLINE: MAPPING  
 SCALE: NONE  
 DRAWING NUMBER: WH-C-506-001

APPROVED FOR CONSTRUCTION DATE

SHEET 06 OF 15 REV. 0

A300-FL1100-01



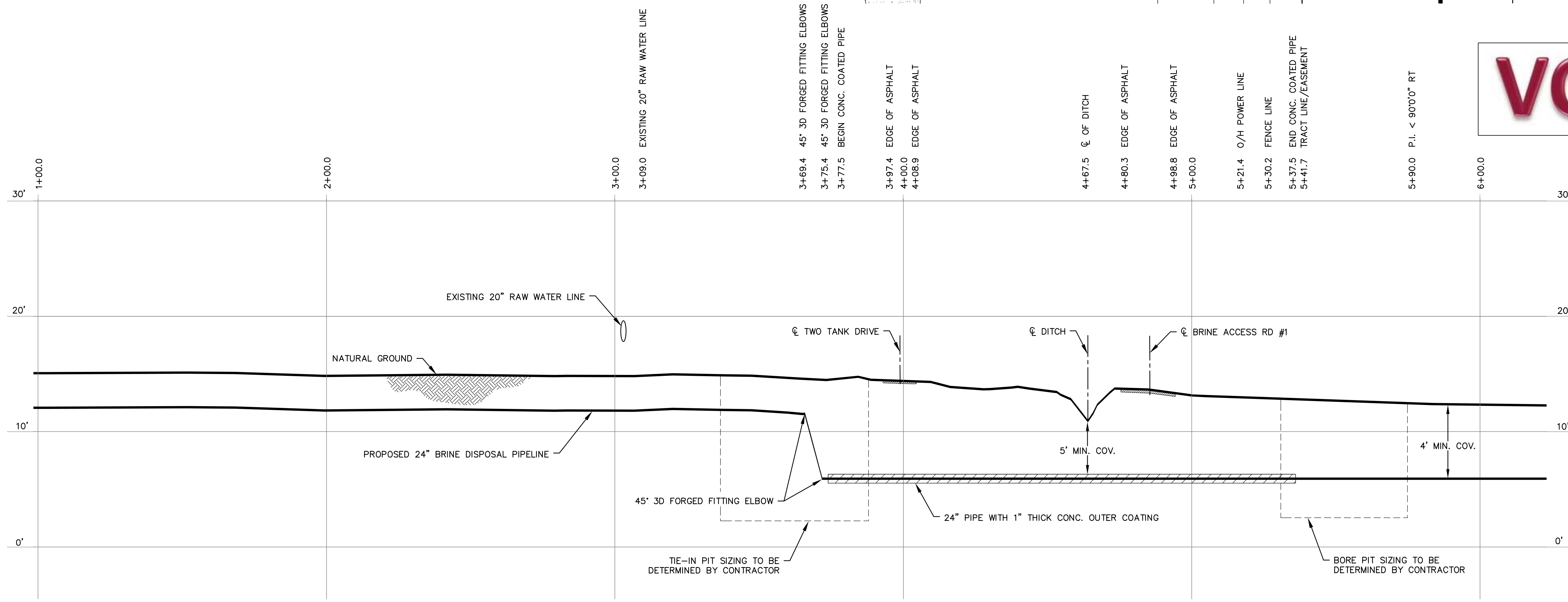
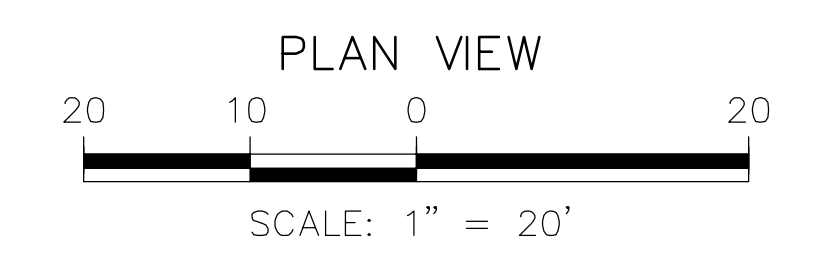


RELEASED FOR CONSTRUCTION  
CN REVISION NO. 100  
BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**S&B** S&B INFRASTRUCTURE, LTD. Texas Firm Registration Number: F-1582

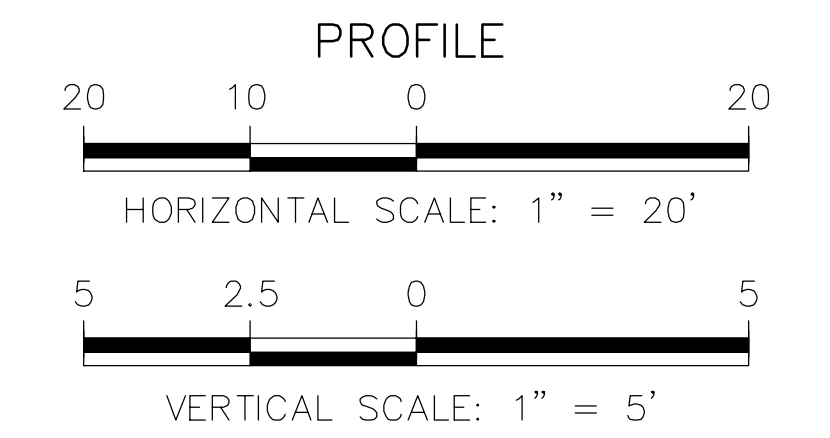
**CHANGE NOTICE**

PREPARED BY	CHECKED BY	APPROVED BY	TDC/ERU
J.M. AVENT	C. BRIDENSTINE	H. NICHOLS	
Project Auth. #	Task #	RFI #	
03191783	WH-MM-826		
Drawing #	Rev. #	CN #	
WH-C-509-033	0	100	
Sheet			1 OF 1



CN 100 ISSUE INCLUDES ALL DETAILS ON THIS DOCUMENT

APPROVED FOR CONSTRUCTION FOR TASK NO. WH-MM-826 ONLY



REGISTRATION STAMP	DESIGNED BY:
	DRAWN BY:
	CHECKED BY:
	SURVEYOR OF RECORD:
	SIGNATURE:
	DATE:

**NOTES:**

- CONTRACTOR TO FIELD VERIFY DIMENSION AND DEPTHS OF EXISTING PIPELINES AND UTILITIES PRIOR TO CONSTRUCTION.
- NEW 24" x 0.500" W.T. API-SL X-60 PIPELINE LIMITED TO 1296 PSIG MOP BY DESIGN.

NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	ENGINEER MANAGER	D.O.E. APPROVAL	DATE	NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	ENGINEER MANAGER	D.O.E. APPROVAL	DATE

PIPELINE DRAWINGS  
24" BRINE PIPELINE  
WEST HACKBERRY SPR FACILITY  
TO BRINE DISPOSAL WELL SITE  
PLANT SERVICE DRIVEWAYS

WEST HACKBERRY  
CAMERON PARISH, LOUISIANA

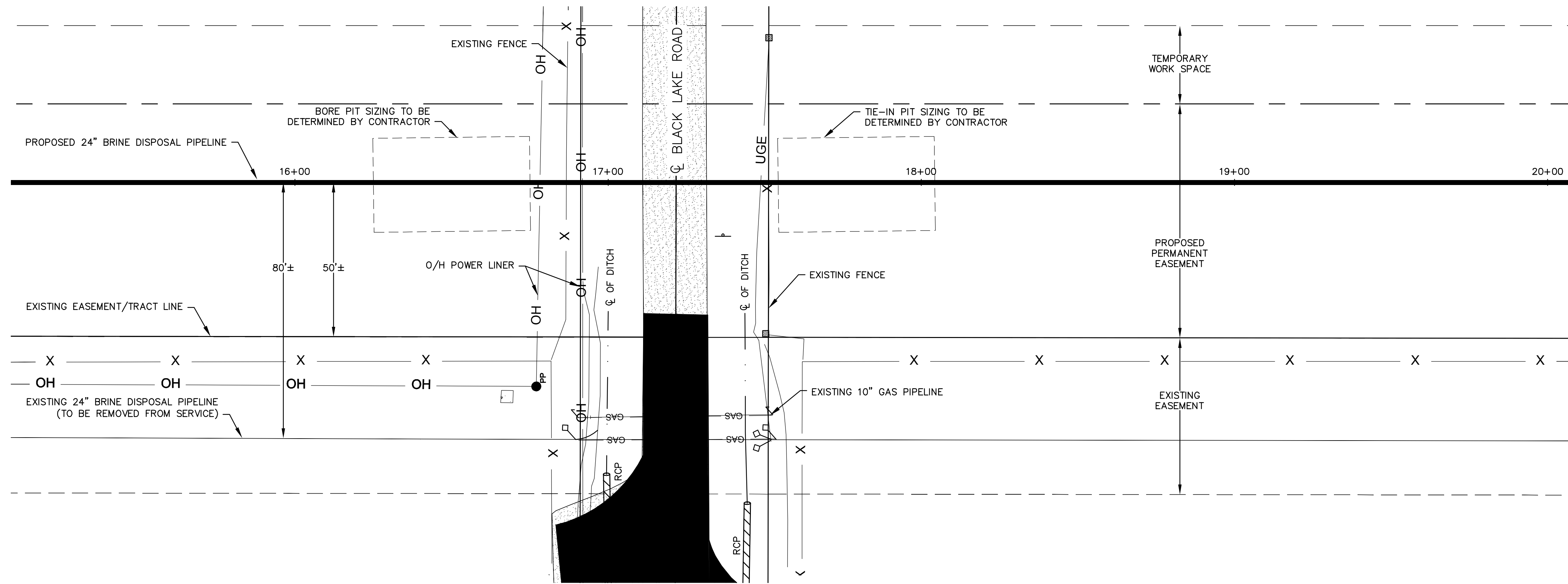
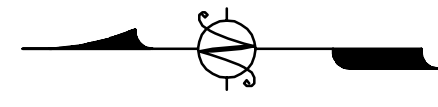
OFFICE OF SYSTEMS AND PROJECTS

STRATEGIC PETROLEUM RESERVE

APPROVED FOR CONSTRUCTION DATE: \_\_\_\_\_

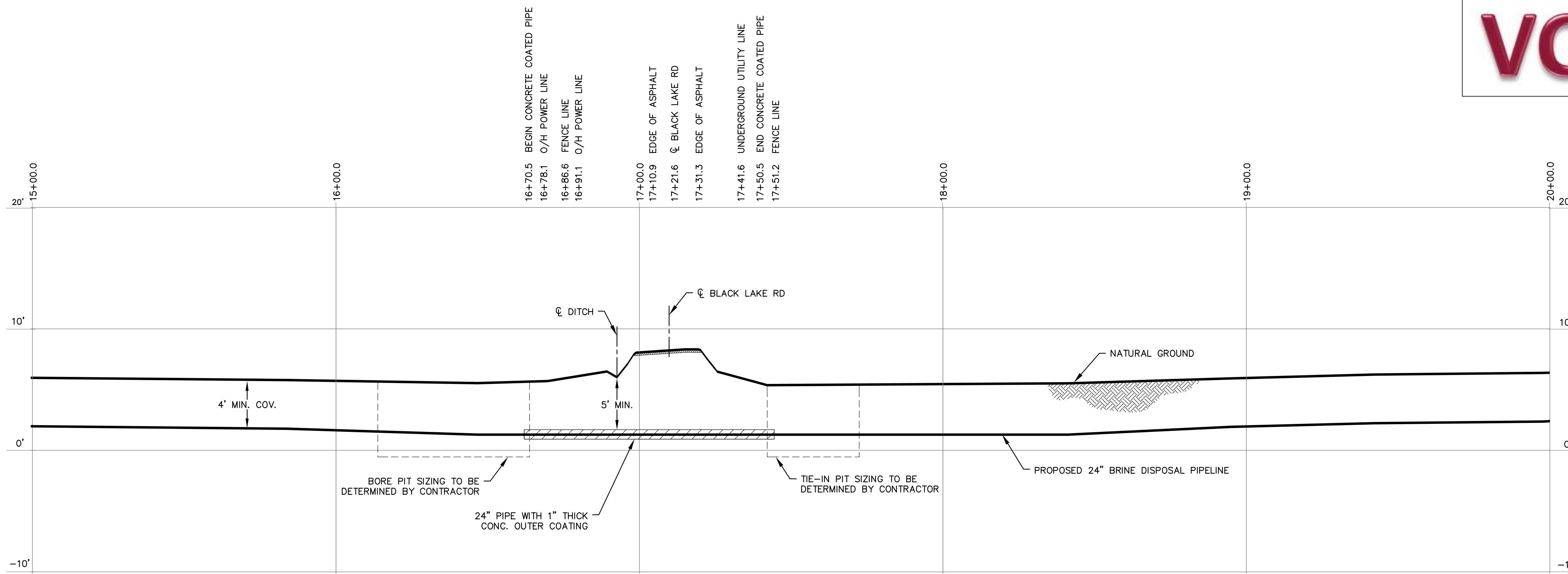
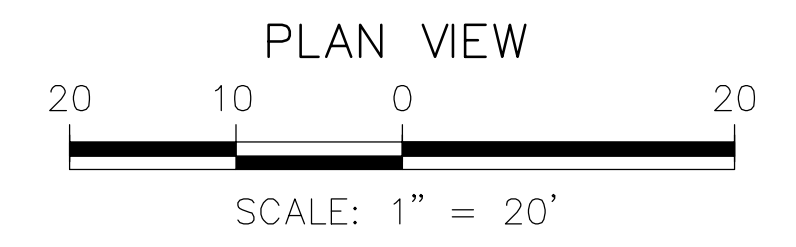
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DISCIPLINE: CIVIL  
SCALE: PLAN: 1"=20' PROFILE HORIZONTAL: 1"=20' PROFILE VERTICAL: 1"=5'  
DRAWING NUMBER: WH-C-509-033  
SHEET 07 OF 15 REV: 0

ACAD FILENAME:



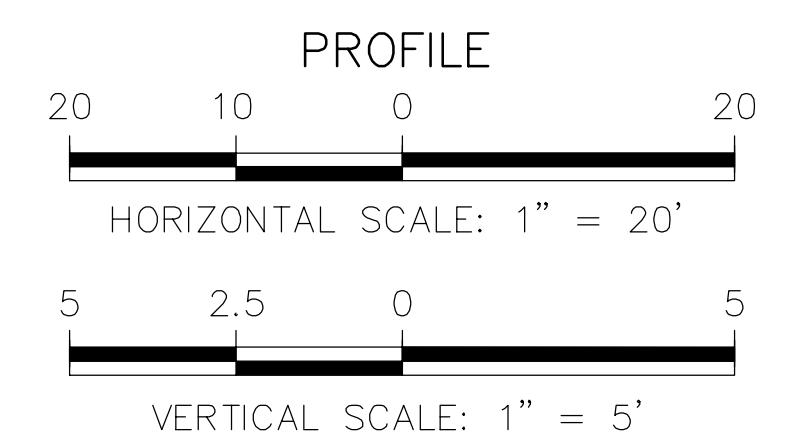
RELEASED FOR CONSTRUCTION  
CN REVISION NO. 100  
BY \_\_\_\_\_ DATE \_\_\_\_\_

<b>S&amp;B</b> S&B INFRASTRUCTURE, LTD.		S&B JOB NO. <u>LI-2505</u>	
		Texas Firm Registration Number: F-1582	
<b>CHANGE NOTICE</b>			
PREPARED BY	CHECKED BY	APPROVED BY	TDC/ERU
J.M. AVENT	C. BRIDENSTINE	H. NICHOLS	
Project Auth. #	Task #	RFI #	
03191783	WH-MM-826		
Drawing #	Rev. #	CN #	
WH-C-509-034	0	100	
Sheet		1 of 1	



CN 100 ISSUE INCLUDES ALL  
DETAILS ON THIS DOCUMENT

APPROVED FOR CONSTRUCTION  
FOR TASK NO. WH-MM-826 ONLY

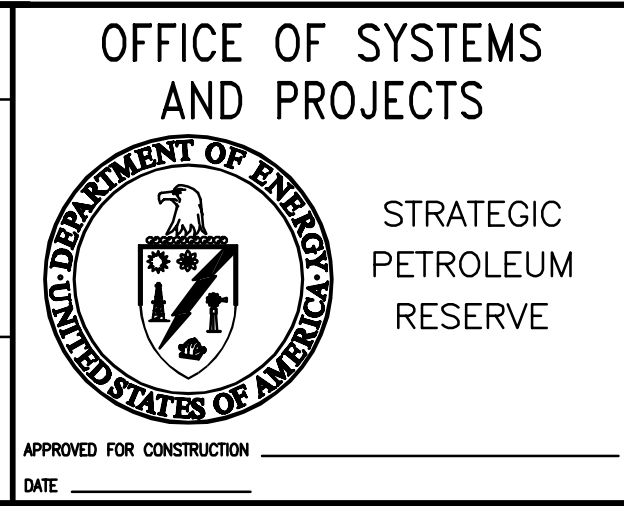


REGISTRATION STAMP
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SURVEYOR OF RECORD:
SIGNATURE:
DATE:
REVISION NUMBER

**NOTES:**  
1. CONTRACTOR TO FIELD VERIFY DIMENSION AND DEPTHS OF EXISTING PIPELINES AND UTILITIES PRIOR TO CONSTRUCTION.  
2. NEW 24" x 0.500" W.T. API-SL X-60 PIPELINE LIMITED TO 1296 PSIG MAOP BY DESIGN.

NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	ENGINEER MANAGER	D.O.E. APPROVAL	DATE	NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	ENGINEER MANAGER	D.O.E. APPROVAL	DATE

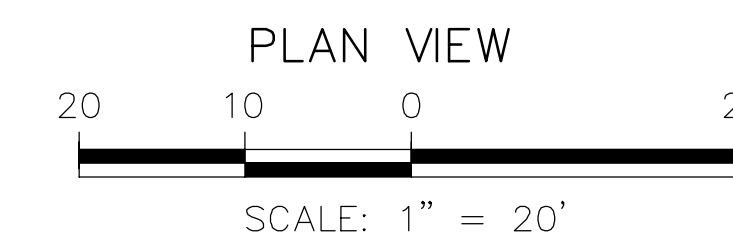
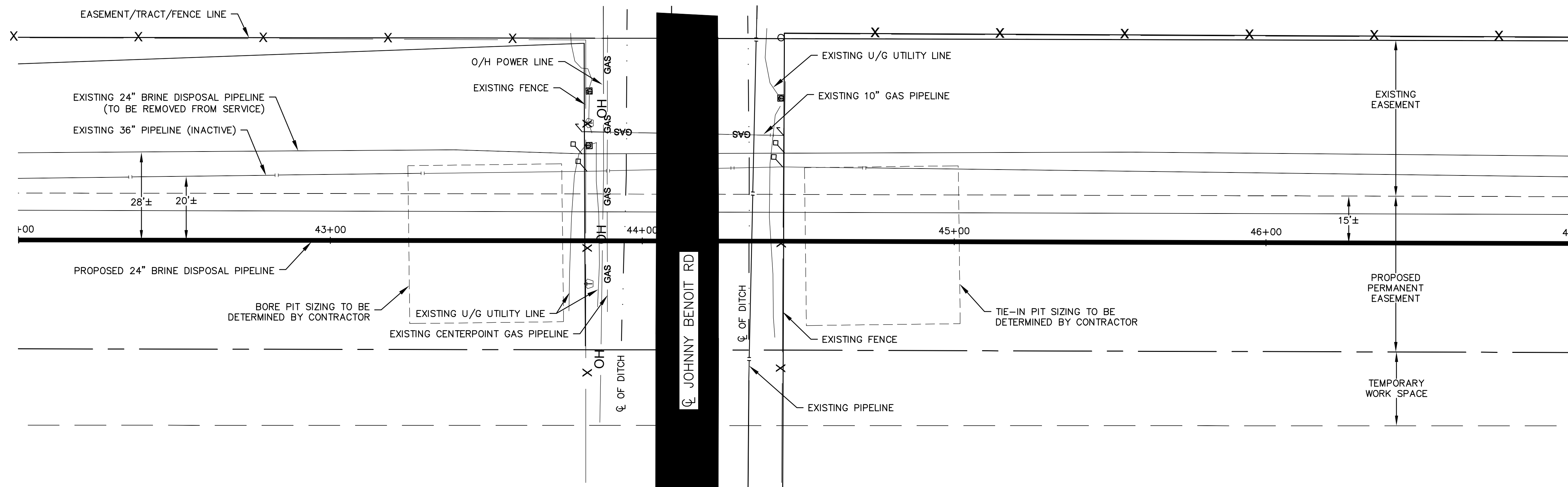
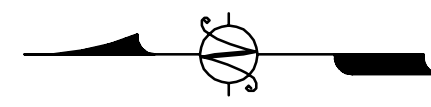
PIPELINE DRAWINGS  
24" BRINE PIPELINE  
WEST HACKBERRY SPR FACILITY  
TO BRINE DISPOSAL WELL SITE  
BLACK LAKE ROAD  
  
WEST HACKBERRY  
CAMERON PARISH, LOUISIANA



TASK NUMBER:	WH-MM-826
DISCIPLINE:	CIVIL
SCALE: PLAN: 1"=20'	PROFILE HORIZONTAL: 1"=20'
PROFILE VERTICAL: 1"=5'	
DRAWING NUMBER:	WH-C-509-034
APPROVED FOR CONSTRUCTION DATE:	
SHEET	08 of 15
REV.	0

ACAD FILENAME:



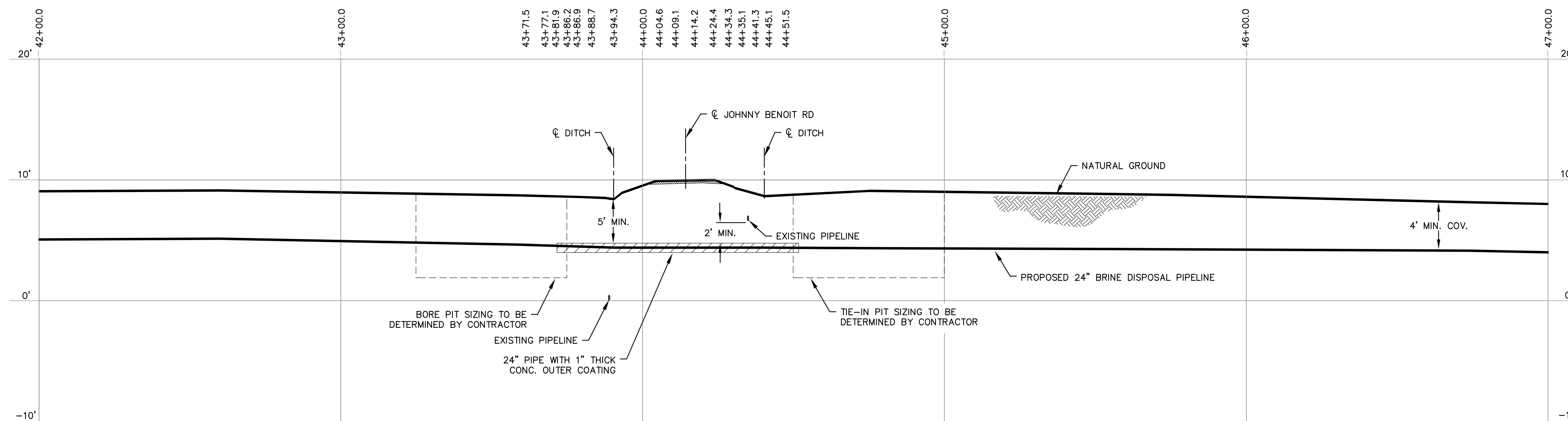


		S&B JOB NO. U-2205	
Texas Firm Registration Number: F-1582			
<b>CHANGE NOTICE</b>			
PREPARED BY	CHECKED BY	APPROVED BY	TDC/ERU
J.M. AVENT	C. BRIDENSTINE	H. NICHOLS	
Project Auth. #	Task #	RFI #	
03191783	WH-MM-826		
Drawing #	Rev. #	CN #	
WH-C-509-035	0	100	
		Sheet 1 OF 1	



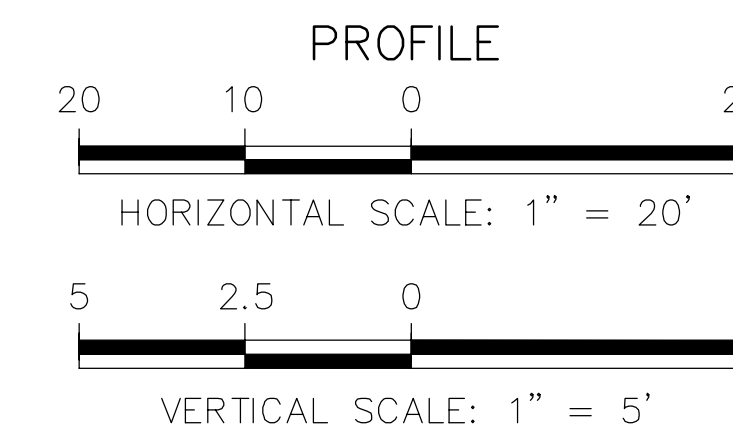
RELEASED FOR CONSTRUCTION  
CN REVISION NO. 100

- 43+71.5 BEGIN CONC. COATED PIPE
- 43+77.1 EXISTING U/G UTILITY LINE
- 43+81.9 FENCE LINE
- 43+86.2 EXISTING U/G UTILITY LINE
- 43+86.9 O/H POWERLINE
- 43+88.7 CENTERPOINT GAS PIPELINE
- 43+94.3  $\phi$  OF DITCH
- 44+00.0 EDGE OF ASPHALT
- 44+04.6 TRACT LINE
- 44+09.1  $\phi$  OF JOHNNY BENOIT RD
- 44+14.2 EDGE OF ASPHALT
- 44+24.4  $\phi$  OF DITCH
- 44+34.3 EXISTING PIPELINE
- 44+41.3 EXISTING U/G UTILITY LINE
- 44+45.1 FENCE LINE
- 44+51.5 END CONC. COATED PIPE



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FOR TASK NO. WH-MM-826 ONLY



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	DRAWN BY:
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	SURVEYOR OF RECORD:
	SIGNATURE:
	DATE:

**NOTES:**

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- NEW 24" x 0.500" W.T. API-5L X-60 PIPELINE LIMITED TO 1296 PSIG MAOP BY DESIGN.

NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	ENGINEER MANAGER	D.O.E. APPROVAL	DATE	NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	ENGINEER MANAGER	D.O.E. APPROVAL	DATE

PIPELINE DRAWINGS  
24" BRINE PIPELINE  
WEST HACKBERRY SPR FACILITY  
TO BRINE DISPOSAL WELL SITE  
JOHNNY BENOIT ROAD

WEST HACKBERRY  
CAMERON PARISH, LOUISIANA

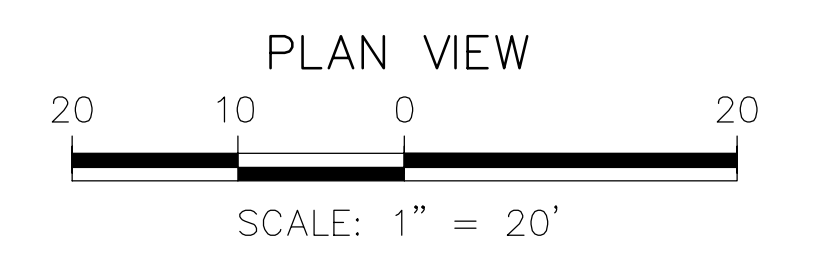
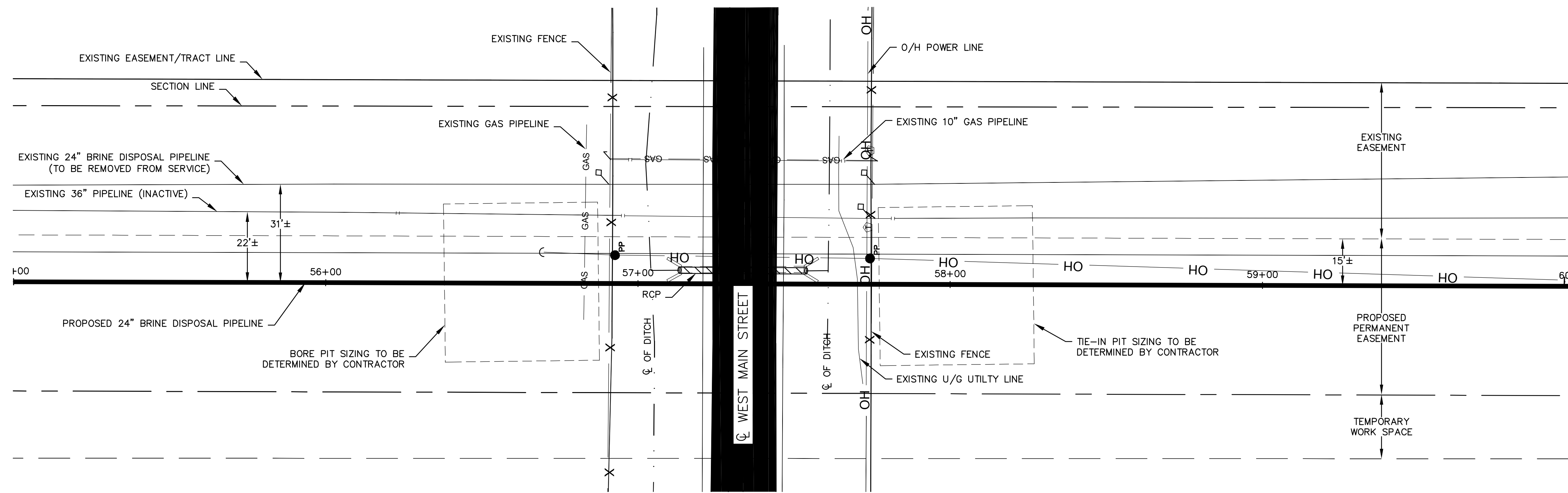
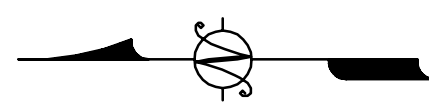
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STRATEGIC PETROLEUM RESERVE

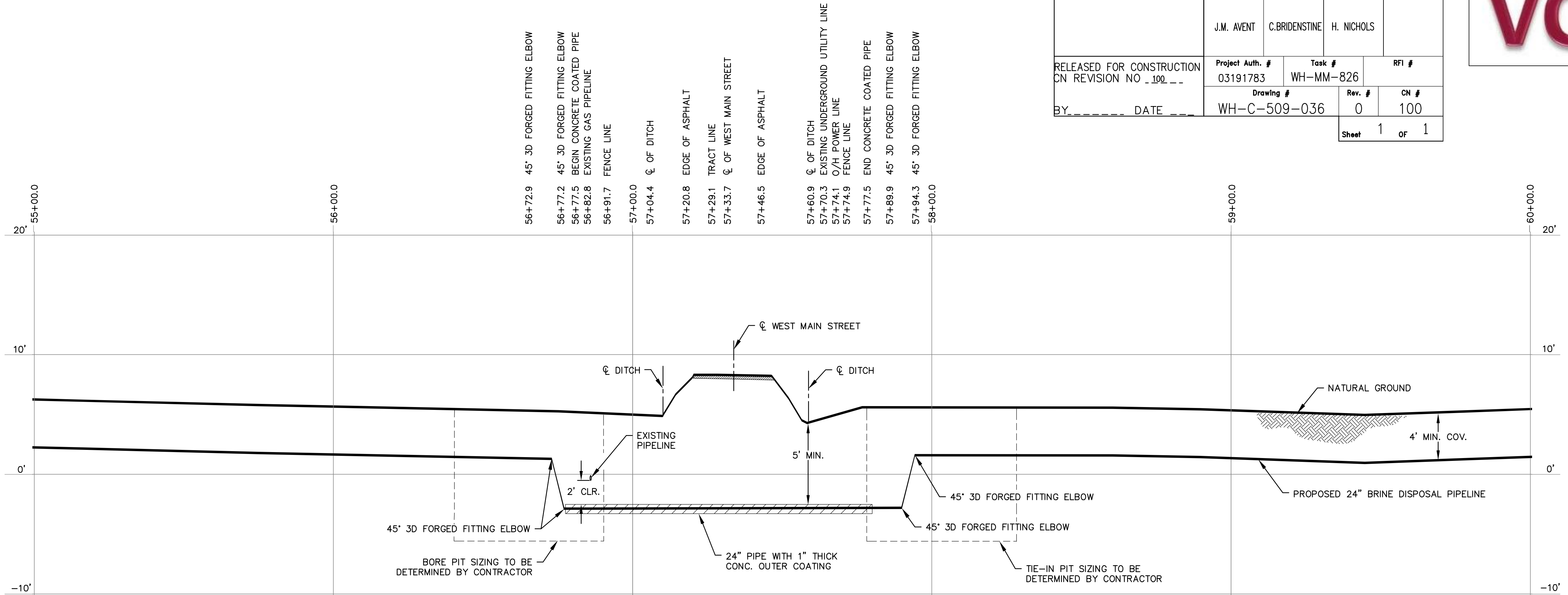
APPROVED FOR CONSTRUCTION

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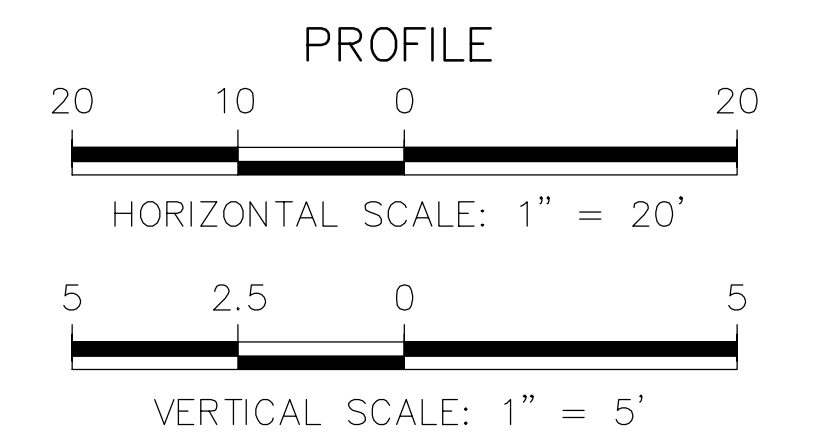


		S&B JOB NO. U-2005	
		Texas Firm Registration Number: F-1582	
<b>CHANGE NOTICE</b>			
PREPARED BY	CHECKED BY	APPROVED BY	TDC/ERU
J.M. AVENT	C. BRIDENSTINE	H. NICHOLS	
Project Auth. #	Task #	RFI #	
03191783	WH-MM-826		
Drawing #	Rev. #	CN #	
WH-C-509-036	0	100	
		Sheet 1 OF 1	



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REVISION NUMBER

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PIPELINE DRAWINGS  
24" BRINE PIPELINE  
WEST HACKBERRY SPR FACILITY  
TO BRINE DISPOSAL WELL SITE  
WEST MAIN STREET

WEST HACKBERRY  
CAMERON PARISH, LOUISIANA

**OFFICE OF SYSTEMS AND PROJECTS**

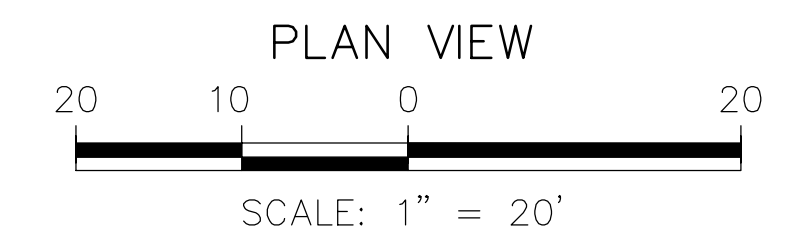
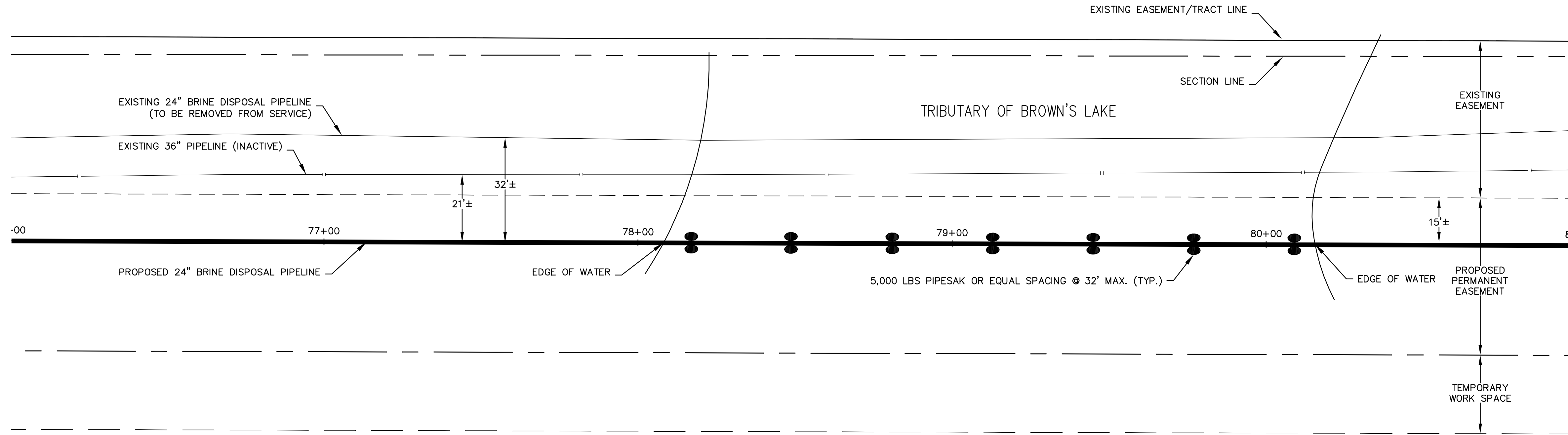
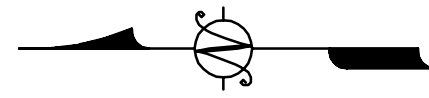
STRATEGIC PETROLEUM RESERVE

APPROVED FOR CONSTRUCTION

TASK NUMBER:	WH-MM-826
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REV.	0

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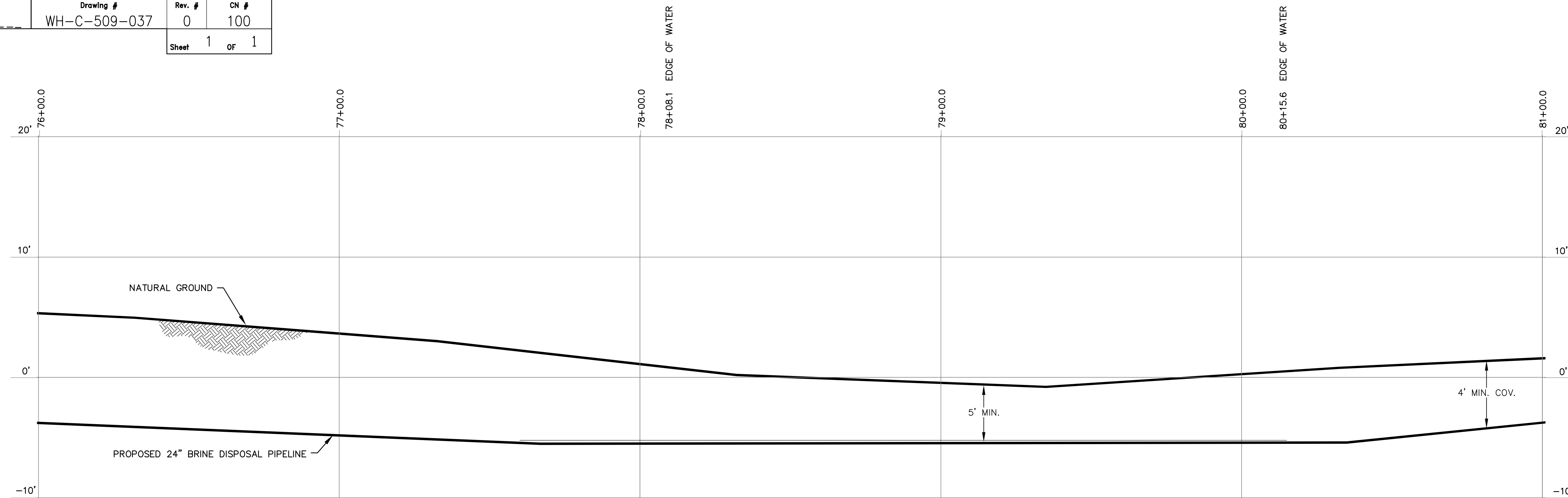




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<b>CHANGE NOTICE</b>			
PREPARED BY	CHECKED BY	APPROVED BY	TDC/ERU
J.M. AVENT	C. BRIDENSTINE	H. NICHOLS	
Project Auth. #	Task #	RFI #	
03191783	WH-MM-826		
Drawing #	Rev. #	CN #	
WH-C-509-037	0	100	
Sheet	1	OF	1

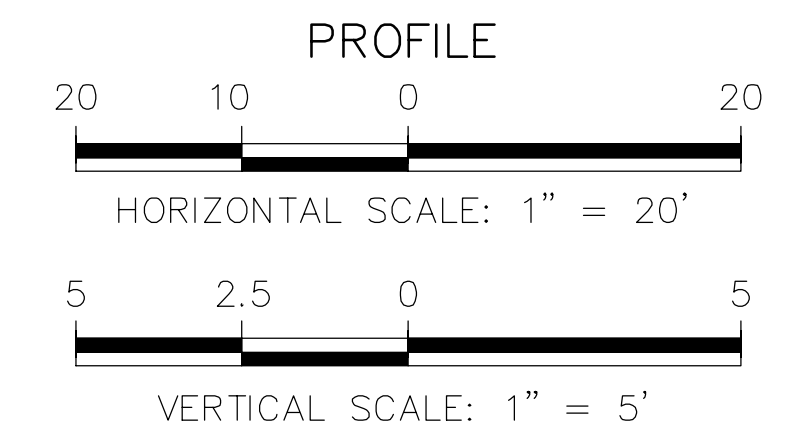


RELEASED FOR CONSTRUCTION  
CN REVISION NO. 100  
BY \_\_\_\_\_ DATE \_\_\_\_\_



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FOR TASK NO. WH-MM-826 ONLY



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	CHECKED BY:
	SURVEYOR OF RECORD:
	SIGNATURE:
	DATE:

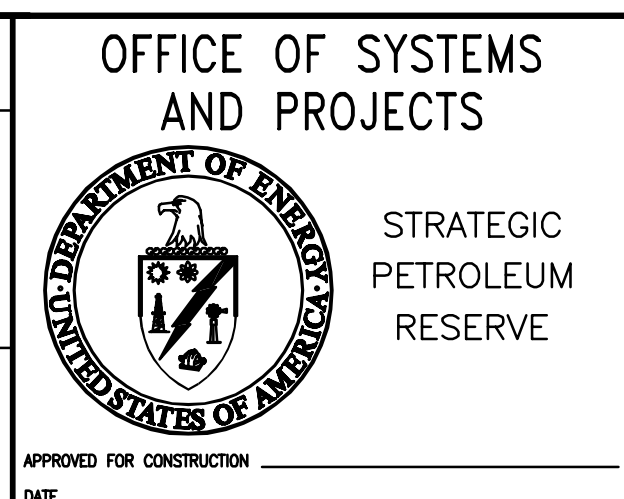
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PIPELINE DRAWINGS  
24" BRINE PIPELINE  
WEST HACKBERRY SPR FACILITY  
TO BRINE DISPOSAL WELL SITE  
TRIBUTARY OF BROWN'S LAKE

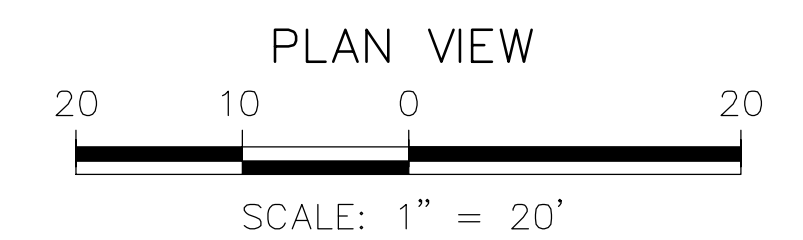
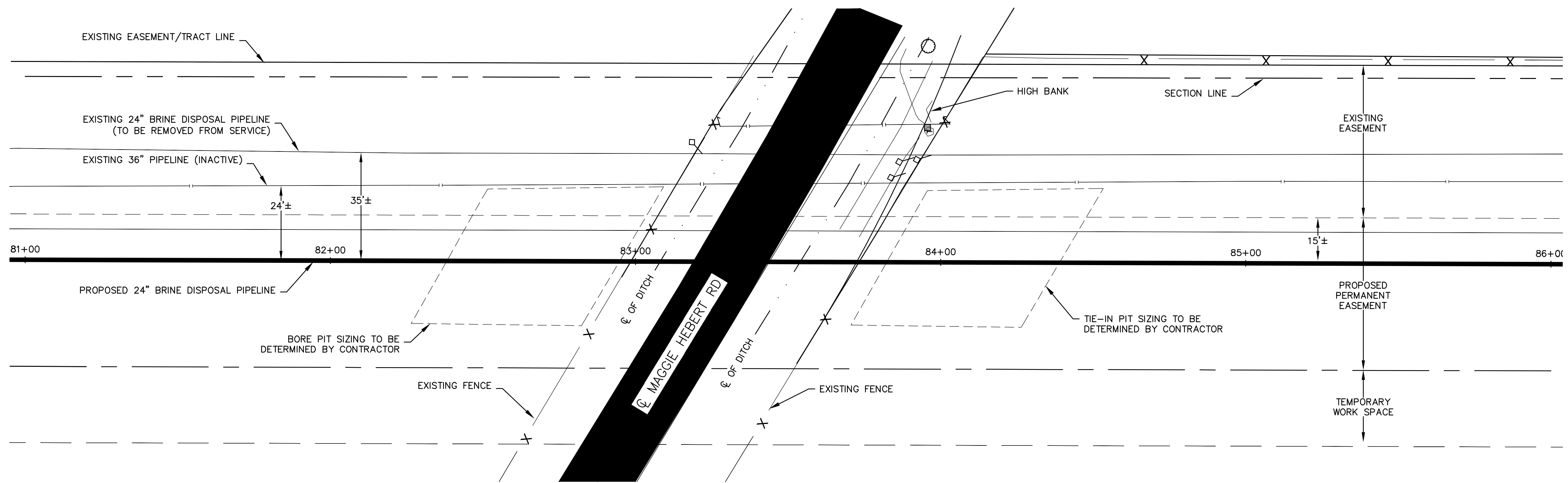
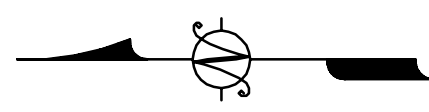
WEST HACKBERRY  
CAMERON PARISH, LOUISIANA



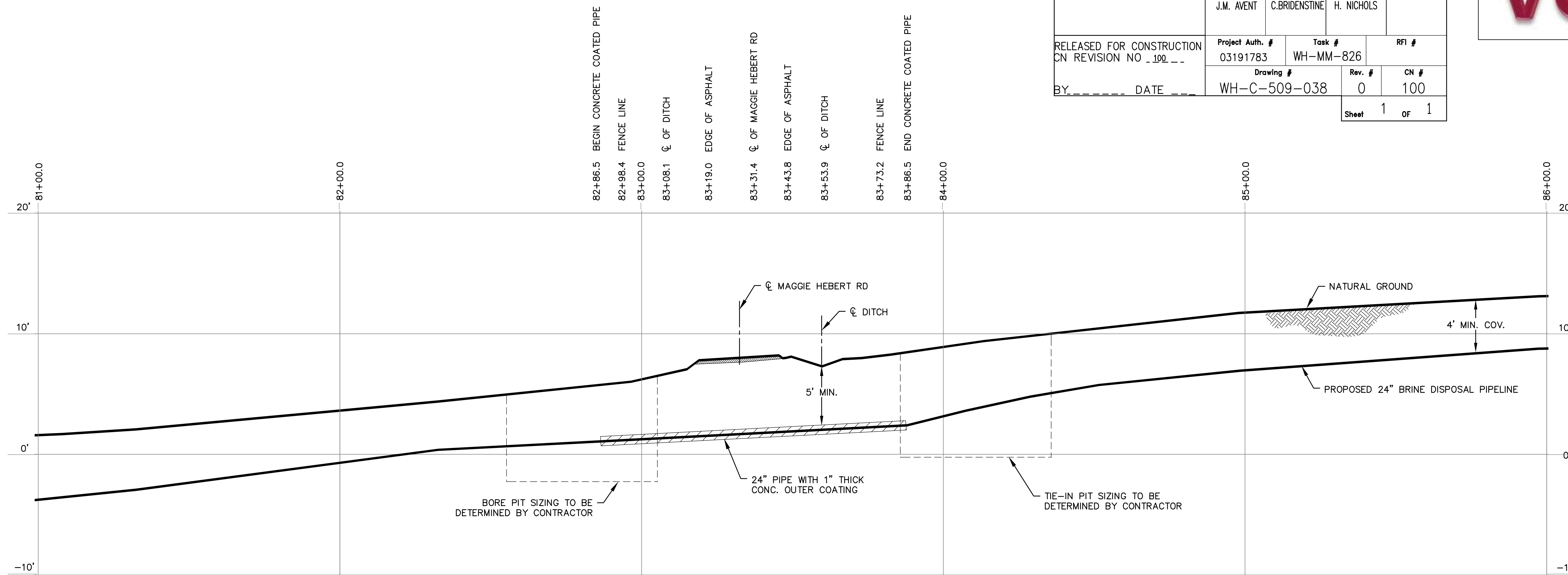
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OF	15
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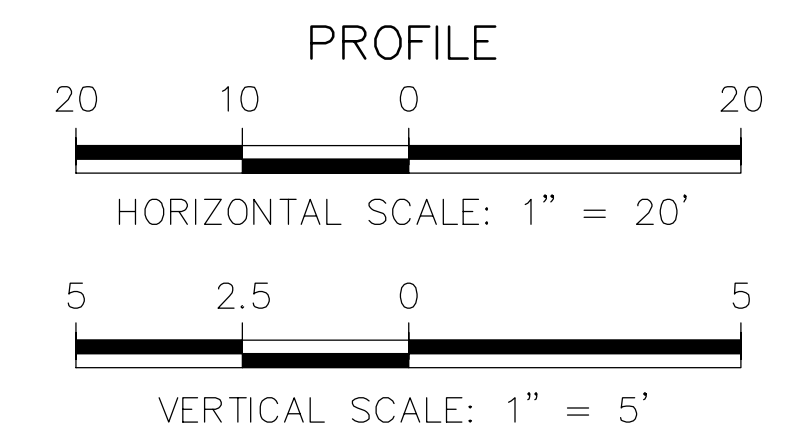


		S&B JOB NO. U-2505	
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<b>CHANGE NOTICE</b>			
PREPARED BY	CHECKED BY	APPROVED BY	TDC/ERU
J.M. AVENT	C. BRIDENSTINE	H. NICHOLS	
Project Auth. #	Task #	RFI #	
03191783	WH-MM-826		
Drawing #	Rev. #	CN #	
WH-C-509-038	0	100	
BY _____ DATE _____		Sheet	1 OF 1



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REVISION NUMBER	DRAWN BY:
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	SIGNATURE:
	DATE:

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PIPELINE DRAWINGS  
24" BRINE PIPELINE  
WEST HACKBERRY SPR FACILITY  
TO BRINE DISPOSAL WELL SITE  
MAGGIE HEBERT ROAD

WEST HACKBERRY  
CAMERON PARISH, LOUISIANA

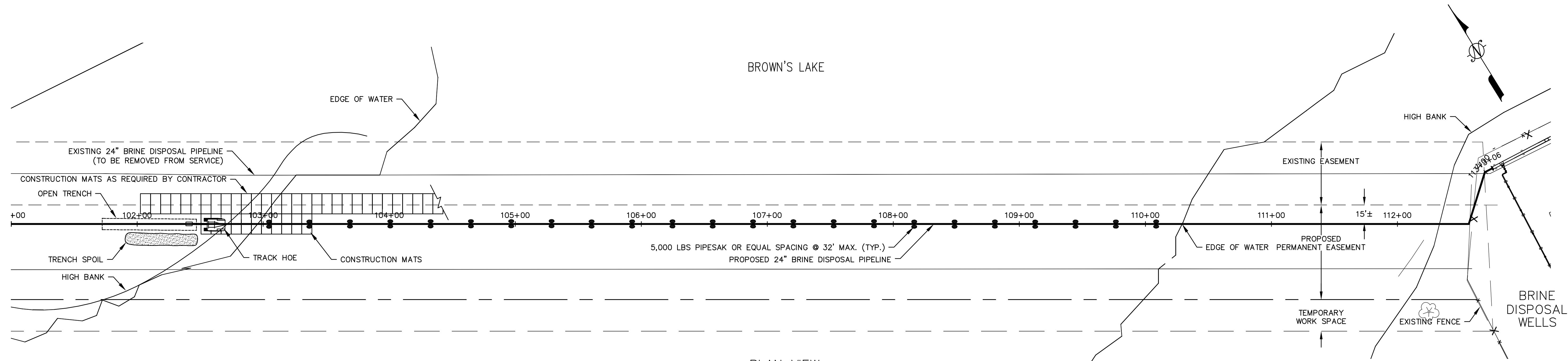
OFFICE OF SYSTEMS AND PROJECTS

STRATEGIC PETROLEUM RESERVE

APPROVED FOR CONSTRUCTION DATE \_\_\_\_\_

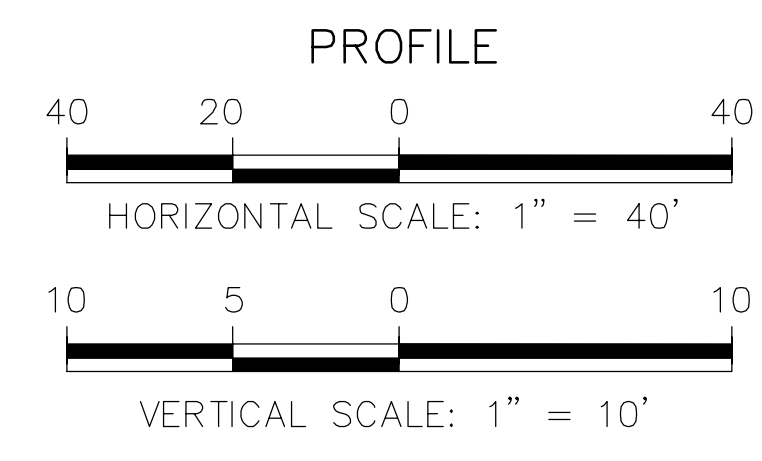
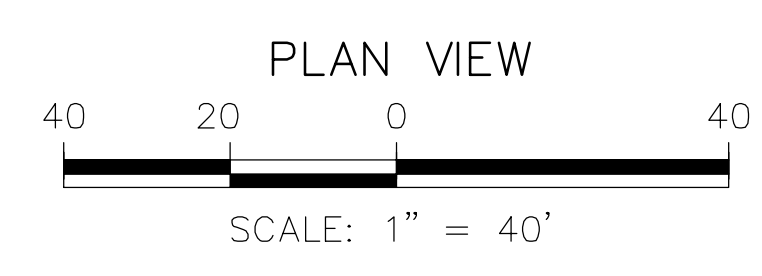
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SHEET	C12 of 15
REV.	0

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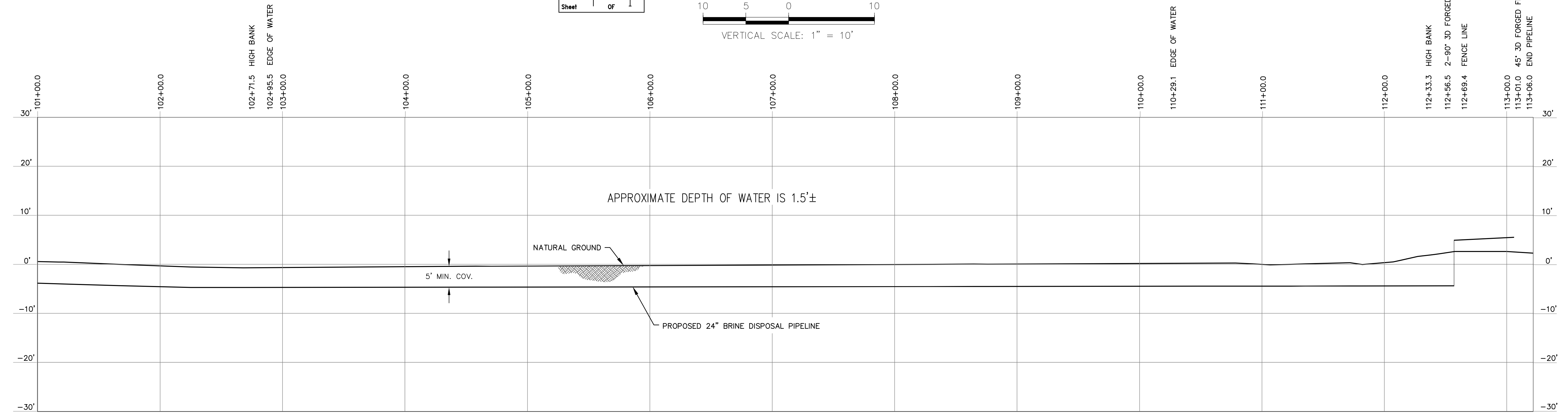


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FOR TASK NO. WH-MM-826 ONLY

S&B INFRASTRUCTURE, LTD. Texas Firm Registration Number: F-1582		S&B JOB NO. U-2505		
		<b>CHANGE NOTICE</b> PREPARED BY: J.M. AVENT CHECKED BY: C. BRIDENSTINE APPROVED BY: H. NICHOLS TDC/ERU:		
RELEASED FOR CONSTRUCTION CN REVISION NO. 100		Project Auth. # 03191783	Task # WH-MM-826	RFI #
BY: _____ DATE: _____		Drawing # WH-C-509-039	Rev. # 0	CN # 100
		Sheet 1 OF 1		



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SIGNATURE:
DATE:
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PIPELINE DRAWINGS  
 24" BRINE PIPELINE  
 WEST HACKBERRY SPR FACILITY  
 TO BRINE DISPOSAL WELL SITE  
 BROWN'S LAKE  
 WEST HACKBERRY  
 CAMERON PARISH, LOUISIANA

OFFICE OF SYSTEMS AND PROJECTS  
 STRATEGIC PETROLEUM RESERVE  
 DEPARTMENT OF ENERGY  
 APPROVED FOR CONSTRUCTION DATE: \_\_\_\_\_

TASK NUMBER: WH-MM-826	REV: 0
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DRAWING NUMBER: WH-C-509-039	
SHEET C13 OF 15	

ACAD FILENAME:

**APPENDIX B**  
**SITE PHOTOGRAPHS**



The following photographs are representative of the general area of the proposed brine disposal pipeline. Unless noted, the photographs reflect the project area from north to south.



View looking east at the temporary construction area near the northern project limits.



View looking north from Johnny Benoit Road.



View looking south from the temporary construction area.



View looking south from Johnny Benoit Road.



View looking south from Black Lake Road.



Zoomed view looking south from Johnny Benoit Road.



Zoomed view looking north from West Main Street.



View looking north from Johnson Lane.



View looking north from West Main Street.



View looking south from the wooded area east of Johnson Lane.



View looking south from West Main Street.



Another view looking south from the wooded area east of Johnson Lane.





View looking south toward the wooded area of the Hackberry Recreation Area.



View looking southwest through the wooded area of the Hackberry Recreation Area.



View looking south at the wooded area of the Hackberry Recreation Area.



View looking south; the Hackberry Recreation Area is located on the left side of the photograph.



View looking southwest through the wooded area of the Hackberry Recreation Area.



View looking south.



View looking south approaching the wetland area located north of Maggie Hebert Road.



View looking south from the wetland area located north of Maggie Hebert Road.



Another view looking south approaching the wetland area located north of Maggie Hebert Road.



View looking north from Maggie Hebert Road.



Reverse view of the previous photograph. View looking north at the wetland area located north of Maggie Hebert Road.



View looking south from Maggie Hebert Road.





View of a typical sign located along the existing brine disposal pipeline.



View looking south.



View looking south, south of Maggie Hebert Road.



View looking south.



View looking south.



View looking south.





View looking southeast.



View looking northwest from the southern end of the project limits.



View looking southeast.

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View looking southeast.

## **APPENDIX C**

# **AGENCY INFORMATION AND CORRESPONDENCE**

**Notice of Proposed Wetlands Involvement for Proposed Brine Disposal Pipeline Replacement Project at the Strategic Petroleum Reserve West Hackberry Facility, Hackberry, Louisiana**

**Intent to Prepare Environmental Assessment Resource Agency Coordination List for the Proposed West Hackberry Brine Disposal Pipeline Project**

**Intent to Prepare Environmental Assessment Letter and Map (dated August 2, 2016)**

**West Hackberry Brine Disposal Pipeline Resource Agency Intent to Prepare Environmental Assessment Communication Log**

**Public Notices and Affidavits (American Press and Cameron Pilot)**

**Resource Agency Coordination List and Emails to Resource Agencies for the Proposed West Hackberry Brine Disposal Pipeline Project Notice of Availability of an Environmental Assessment (December 12, 2016)**

**Adjacent Property Owners Cover Letters for the Proposed West Hackberry Brine Disposal Pipeline Project Notice of Availability of an Environmental Assessment and Public Review Period (December 12, 2016)**

**Agency/Public Comments and Comment/Response Summary**

**APPENDIX C**

**AGENCY INFORMATION AND  
CORRESPONDENCE**

**Notice of Proposed Wetlands Involvement for Proposed Brine Disposal Pipeline  
Replacement Project at the Strategic Petroleum Reserve West Hackberry Facility,  
Hackberry, Louisiana**

# **Notice of Proposed Wetlands Involvement for the Proposed Brine Disposal Pipeline Replacement Project at the Strategic Petroleum Reserve West Hackberry Facility, Hackberry, Louisiana**

**Agency:** U.S. Department of Energy Strategic Petroleum Reserve

**Action:** Notice of Floodplains and Wetlands Involvement

**Summary:** This notice announces the U.S. Department of Energy's (DOE's) intention to prepare an Environmental Assessment (EA) on a proposed action involving the proposed brine disposal pipeline replacement project.

The purpose of the proposed project would be to replace an existing brine disposal pipeline which is functionally obsolete. The proposed project would involve the installation of approximately 2.1 miles of 24 inch pipeline by open cut trenching and jack and bore techniques to replace the existing brine disposal pipeline which would be removed from service. The brine disposal pipeline would support the activities associated with the SPR WH facility located near Hackberry, in Cameron Parish, Louisiana.

The need for the proposed project is to replace the existing, aging brine disposal pipeline with a new pipeline that meets current industry standards for brine transport. The brine disposal pipeline that would be replaced is located between the SPR WH facility and the associated brine injection wells, a distance of approximately 2.1 miles. The proposed pipeline would be installed using open cut methods except at road crossings and environmentally sensitive areas where jack and bore techniques would be utilized as needed.

Implementation of the proposed action would require the acquisition of a permanent right-of-way (ROW) along the length of the pipeline corridor in addition to the existing ROW occupied by the current brine disposal pipeline. A temporary construction easement would additionally be required throughout the duration of the proposed pipeline installation activities. No residential or business relocations or displacements would result from the implementation of the proposed project and the property acquired could still be utilized as, for example, pastureland after the installation of the proposed brine disposal pipeline.

Due to the location of the existing and proposed brine disposal pipeline, some areas of the proposed pipeline installation project would occur within the 100-year floodplain associated with the Gulf Intracoastal Waterway as well as within wetlands associated with Browns Lake. In accordance with 10 Code of Federal Regulations Part 1022, DOE will prepare a floodplain and wetlands assessment and statement of findings and will perform this proposed action in a manner so as to avoid or minimize potential harm to or within the affected floodplain or wetlands. The floodplain and wetlands assessment will be included in the EA being prepared for the proposed action.

**Dates:** Comments on the proposed action due on or before [insert date], 2017.

**Addresses:** Comments regarding this assessment should be addressed to Mr. Will Woods, NEPA Compliance Officer, U.S. Department of Energy, Strategic Petroleum Reserve, Project Management Office, Environment, Safety, Health and Quality Division, 900 Commerce Road East, Mail Stop FE-4441, New Orleans, LA 70123. Comments may also be submitted via facsimile at (504) 818-5329 or electronically at [will.woods@spr.doe.gov](mailto:will.woods@spr.doe.gov). For further information, contact Mr. Woods at (504) 734-4400.

Issued in New Orleans, Louisiana, on [insert date], 2016.

**APPENDIX C**

**AGENCY INFORMATION AND**

**CORRESPONDENCE**

**Intent to Prepare Environmental Assessment Resource Agency Coordination List for the  
Proposed West Hackberry Brine Disposal Pipeline Project**

**Intent to Prepare EA Resource Agency Coordination List for the Proposed West Hackberry Brine Disposal Pipeline Project  
(updated through August 30, 2016)**

Department/Office	Division	Name – Title (Phone Number)	Address
<b>Federal Resource Agencies</b>			
US Army Corps of Engineers	Regulatory Branch, New Orleans District	David Frank – Regulatory Branch Chief (504.862.2255)	P.O. Box 60267 New Orleans, LA 70160
US Army Corps of Engineers	Western Evaluation Section	Darrell Barbara – Chief (504.862.2261)	P.O. Box 60267 New Orleans, LA 70160
US Army Corps of Engineers	Southwest Waterways	Tracy Falk – Operations Manager (504.862.2971)	P.O. Box 60267 New Orleans, LA 70160
US Fish and Wildlife Service	Louisiana Ecological Services Field Office	Brad Rieck – Acting Field Supervisor (337.291.3116)	646 Cajundome Boulevard, Suite 400 Lafayette, LA 70506
US Fish and Wildlife Service	Sabine National Wildlife Refuge	Terrance Delaine – Manager (337.762.3816)	3000 Holly Beach Highway Hackberry, LA 70645
US Environmental Protection Agency	Office of Planning & Coordination	Keith Hayden – Acting Section Chief (800.887.6063 or 214.665.2760)	1445 Ross Avenue Dallas, TX 75202
US Department of Homeland Security	US Coast Guard, Eighth District	Rear Admiral David R. Callahan – District Commander (504.589.6295)	Hale Boggs Federal Building 500 Poydras Street New Orleans, LA 70130
US Department of Transportation	US Maritime Administration	Maritime Administration (855.368.4200)	1200 New Jersey Avenue, SE Washington, D.C. 20590
National Oceanic and Atmospheric Administration	National Marine Fisheries Service	Protected Resources Division (727.824.5312)	263 13 <sup>th</sup> Avenue South Saint Petersburg, FL 33701
National Oceanic and Atmospheric Administration	National Marine Fisheries Service, Habitat Conservation Division	Richard Hartman – Team Leader (225.389.0508)	c/o LSU, Military Science Building, Room 266, South Stadium Drive Baton Rouge, LA 70803
US Department of Agriculture	Natural Resources Conservation Service	Kevin Norton – State Conservationist (318.473.7751)	3737 Government Street Alexandria, LA 71303
<b>State Resource Agencies</b>			
Louisiana Department of Culture, Recreation & Tourism	State Historic Preservation Officer	Phil Boggan – Assistant Secretary (225.342.8200)	P.O. Box 44247 Baton Rouge, LA 70804
Louisiana Department of Natural Resources (LDNR)	Office of the Secretary	Thomas Harris – Secretary (225.342.2710)	P.O. Box 94396 Baton Rouge, LA 70804
LDNR Office of Coastal Management	Interagency Affairs & Field Services	Donald Haydel – Administrator (225.342.8953)	P.O. Box 44487 Baton Rouge, LA 70821-4487
LDNR Office of Coastal Management	Permits/Mitigation Division	Karl Morgan – Permits & Mitigation Administrator (225.342.6470)	P.O. Box 44487 Baton Rouge, LA 70821-4487
LDNR Office of Conservation	Environmental Division	Gary Snellgrove – Division Director (225.342.5540)	P.O. Box 94275 Baton Rouge, LA 70804

West Hackberry Brine Disposal Pipeline Replacement Project – DOE/EA-2039

Department/Office	Division	Name – Title (Phone Number)	Address
<b>State Resource Agencies Continued</b>			
LDNR Office of Conservation	Pipeline Division	Steven Giambrone – Director (225.342.5505)	P.O. Box 94275 Baton Rouge, LA 70804
Louisiana Department of Wildlife and Fisheries	Office of the Secretary	Charlie Melancon – Secretary (225.765.2800)	P.O. Box 98000 Baton Rouge, LA 70898
Louisiana Department of Wildlife and Fisheries	Louisiana Natural Heritage Program	Carolyn Michon – Biologist (225.765.2357)	P.O. Box 98000 Baton Rouge, LA 70898
Louisiana Department of Environmental Quality	Office of the Secretary	Chuck Carr Brown, Ph.D. – Secretary (225.219.3935)	P.O. Box 4301 Baton Rouge, LA 70821-4301
Louisiana Office of State Lands	Administration Section	Spencer Robinson – Administrator (225.342.4578)	P.O. Box 44124 Baton Rouge, LA 70704
Louisiana Department of Transportation and Development	Floodplain Management Office	Chief, Floodplain Management & Engineering (225.379.3014)	1201 Capital Access Road Baton Rouge, LA 70802
<b>Local Resource Agencies</b>			
Cameron Parish	Permitting	Myles Hebert – Floodplain Administrator Kara Bonsall – Coastal Zone Administrator (377.775.2800)	P.O. Box 1280 Cameron, LA 70631
Cameron Parish	Parks and Recreation (Hackberry Recreation District)	Dwayne Sanner – Director (377.762.7402)	1095 Poncho Sanner Lane Hackberry, LA 70645

**APPENDIX C**  
**AGENCY INFORMATION AND**  
**CORRESPONDENCE**

**Intent to Prepare Environmental Assessment Letter and Map (dated August 2, 2016)**



August 2, 2016

«CONTACT»  
«AGENCY»  
«DIVISION»  
«ADDRESS LINE1»  
«ADDRESS LINE2»

Subject: Brine Disposal Pipeline Replacement Project, Strategic Petroleum Reserve, West Hackberry Facility, Cameron Parish, Louisiana

Dear «GREETING» «CONTACT»:

Pursuant to the National Environmental Policy Act, the United States Department of Energy (DOE) intends to prepare an Environmental Assessment (EA) for the proposed replacement of the existing brine disposal pipeline (the Pipeline) between the Strategic Petroleum Reserve (SPR) West Hackberry (WH) facility and the associated brine injection wells near Hackberry, Cameron Parish, Louisiana. Both the existing and proposed brine disposal pipelines are approximately 2.1 miles in length. The potential environmental impacts of this proposed project would be evaluated in conformance with DOE and Council on Environmental Quality (CEQ) regulations and provisions. A description of the WH facility and the proposed project are provided below.

The WH storage facility includes approximately 2.29 square kilometers (565 acres) of land atop the WH salt dome. The WH salt dome was selected as a storage site early in the SPR program as the existing brine caverns could be readily converted to oil storage as well as the site's optimal proximity to commercial marine and pipeline crude oil distribution facilities. The WH facility was developed by the DOE in 1977 to store petroleum products that may be presidentially ordered into the marketplace to alleviate the effects of a supply disruption to the United States. The WH facility has operated continuously since 1979. Brine is injected into and/or pumped out of the WH salt dome utilizing the Pipeline and brine injection wells when deemed necessary to fulfill oil/petroleum requirements. The Pipeline which connects the WH facility to the brine injection wells was constructed in 1978, began operation in 1979, and is near the end of the Pipeline's functional lifespan. The Pipeline is proposed to be replaced to allow for continued, optimum operations at the WH facility.

As part of the brine pipeline replacement project (proposed action), the DOE proposes to replace the Pipeline by installing a new brine disposal pipeline; the existing Pipeline would be abandoned-in-place. The new Pipeline would be installed adjacent to the existing pipeline except near Johnson Lane in which the current Pipeline traverses property between two single-family residences.

Implementation of the proposed action would require the acquisition of land. The associated land acquisition would consist of both the fee simple acquisition of land as required for the proposed Pipeline as well as the temporary acquisition of land as required for construction activities. Approximately 50-100 feet of land adjacent to the Pipeline would be acquired via fee simple acquisition to enable the replacement of the Pipeline in support of the proposed action. One

construction staging area would be located on a temporary construction easement contiguous to the Pipeline near the northern project limits. Additionally, a 25 foot temporary construction easement would be required along the Pipeline corridor.

The Pipeline would traverse lands within the 100-year floodplain, wetlands and open water habitats associated with Black Lake. In accordance with 10 Code of Federal Regulations (CFR) Part 1022 (Compliance with Floodplain and Wetland Environmental Review Requirements), the DOE would prepare a floodplain and wetlands assessment as well as a statement of findings and would perform this proposed action in a manner so as to avoid or minimize potential harm to or within the affected floodplain or wetlands. The floodplain and wetlands assessment would be included in the EA prepared for the proposed action.

The «AGENCY» has been identified as part of an outreach effort under NEPA for a review of resources under your agency's jurisdiction. In this regard, DOE respectfully requests your comments regarding any potential impacts of this proposed project that should be considered during the preparation of the Environmental Assessment for this action. In your response to this request for input from your agency, please indicate if your agency would like to be notified of the availability of the draft EA for review.

Please direct any written comments or requests for additional information to Mr. Will Woods, Environmental Specialist, U.S. Department of Energy, Strategic Petroleum Reserve, Project Management Office, Environment, Safety, and Health Division, 900 Commerce Road East, New Orleans, LA 70123 or by email at [Will.Woods@spr.doe.gov](mailto:Will.Woods@spr.doe.gov). You may also contact Mr. Gabriel Adams, Fluor Federal Petroleum Operations (FFPO), Management and Operations Contractor, U.S. Department of Energy, Strategic Petroleum Reserve, Project Management Office at 504-734-4503 or by email at [Gabriel.Adams@spr.doe.gov](mailto:Gabriel.Adams@spr.doe.gov).

Thank you in advance for your expeditious attention to this project.

Sincerely,

William C. Gibson, Jr.

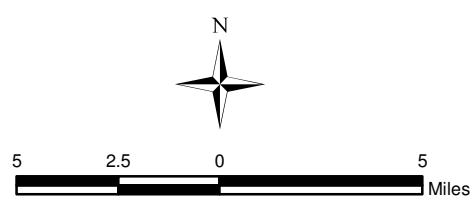
Project Manager  
Strategic Petroleum Reserve

cc: K. Batiste, DOE  
G. Adams, FFPO  
B. Castille, S&B Infrastructure, Ltd.



PATH: N:\SPR\DESIGN\GIS\MAPS\WEST HACKBERRY\WH\_VICINITY\_MAP\_082216.mxd

SOURCE: ESRI StreetMap USA



## EXHIBIT 1 VICINITY MAP

Brine Disposal Pipeline Replacement Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana






**APPENDIX C**

**AGENCY INFORMATION AND**

**CORRESPONDENCE**

**West Hackberry Brine Disposal Pipeline Resource Agency Intent to Prepare  
Environmental Assessment Communication Log**

## West Hackberry Brine Disposal Pipeline Communication Log

Document Title		West Hackberry Brine Disposal Pipeline Replacement Project - EA		Preparer	Barbara Castille/Josh Geyer		Date:	11-18-16	
Document Date		August 30, 2016		Firm	S&B Infrastructure, Ltd.				
Commenter		Resource Agencies							
Item	Resource Agency or Contractor	Address	Commenter and Contact Information	Comment Log	Comment or Request for Information	How Addressed (or why not addressed)	Log Check		
1	USDA-NRCS Soils Section	3737 Government Street Alexandria, LA 71302	Mitchell Mouton Assistant State Soil Scientist <a href="mailto:mitchell.mouton@la.usda.gov">mitchell.mouton@la.usda.gov</a> Phone: (318) 473-7789 Cell: (337) 412-9304	Request by email to Will Woods (DOE); August 8, 2016; 9:56 am.	Do you have a GIS Shape file that will have the location of the 50-100 feet of land adjacent to the existing pipeline that will be permanently converted to additional right-of-way? I need to be able to determine the soil type and acreage for this area.	See #5, #6 and #7.		08-08-16	
2	Office of State Lands		Adam Cox <a href="mailto:adam.cox@la.gov">adam.cox@la.gov</a> Phone: (225) 342-4567	Request by email to Gabriel Adams (FFPO); August 8, 2016; 2:53 pm.	Per our phone conversation, I am requesting that you send the State Land Office detailed plats regarding the brine disposal replacement project in Cameron Parish.	See #3 and #4.		08-08-16	
3	S&B Infrastructure, Ltd.	3535 Sage Road Houston, TX 77056	Barbara Castille <a href="mailto:bcastille@sbinfra.com">bcastille@sbinfra.com</a> Phone: (713) 845-5392	Telephone call to Adam Cox; August 8, 2016; 3:30 pm.	Mr. Cox requested a detailed map of the pipeline project area. Maps will be transmitted via email if less than 10MB. Maps are being finalized and will be transmitted in 1-2 days.	See #2 and #4.		08-08-16	
4	S&B Infrastructure, Ltd. (S&BI)	3535 Sage Road Houston, TX 77056	Barbara Castille <a href="mailto:bcastille@sbinfra.com">bcastille@sbinfra.com</a> Phone: (713) 845-5392	Email to Adam Cox; August 9, 2016; 4:23 pm.	See #2 and #3.	The detailed designs for the brine disposal pipeline replacement project were emailed as requested. Two files were provided. The first file consisted of an overview map of the pipeline alignment on an aerial photograph. The second file consisted of the proposed pipeline design drawings.		08-09-16	
5	S&B Infrastructure, Ltd.	3535 Sage Road Houston, TX 77056	Barbara Castille <a href="mailto:bcastille@sbinfra.com">bcastille@sbinfra.com</a> Phone: (713) 845-5392	Email to Mitchell Mouton; August 9, 2016; 5:11 pm.	See #1, #6 and #7.	The GIS shape files for the brine disposal pipeline replacement project were emailed as requested. Four files were provided. The 1 <sup>st</sup> file contained an overview map for use with the GIS shape files. The 2 <sup>nd</sup> file contained the GIS shape files. The 3 <sup>rd</sup> file contained the Web Soil Survey soil information for the project area. The 4 <sup>th</sup> file contained the Web Soil Survey prime farmland soils for the project area.		08-09-16	

West Hackberry Brine Disposal Pipeline Replacement Project – DOE/EA-2039

Document Title		West Hackberry Brine Disposal Pipeline Replacement Project - EA		Preparer	Barbara Castille/Josh Geyer		Date:	11-18-16	
Document Date		August 30, 2016		Firm	S&B Infrastructure, Ltd.				
Commenter		Resource Agencies							
Item	Resource Agency or Contractor	Address	Commenter and Contact Information	Comment Log	Comment or Request for Information	How Addressed (or why not addressed)	Log Check		
6	USDA-NRCS Soils Section	3737 Government Street Alexandria, LA 71302	Mitchell Mouton Assistant State Soil Scientist <a href="mailto:mitchell.mouton@la.usda.gov">mitchell.mouton@la.usda.gov</a> Phone: (318) 473-7789 Cell: (337) 412-9304	Email to Barbara Castille (S&BI); August 10, 2016; 2:30 pm.	Thanked Ms. Castille for the emailed information on August 9, 2016.	See #1, #5 and #7.		08-10-16	
7	USDA-NRCS Soils Section	3737 Government Street Alexandria, LA 71302	Kevin Norton State Conservationist Phone: (318) 473-7751	Letter to Will Woods; August 10, 2016. Forwarded to Barbara Castille on August 16, 2016.	Provided information on the Farmland Protection Policy Act and attached the NRCS-CPA-106 form for Farmland Conversion Impact Rating for Corridor Type Projects.	The requisite areas of the NRCS-CPA-106 form will be completed and returned to the NRCS.		08-16-16	
8	S&B Infrastructure, Ltd.	3535 Sage Road Houston, TX 77056	Barbara Castille <a href="mailto:blcastille@sbinfra.com">blcastille@sbinfra.com</a> Phone: (713) 845-5392	Email to Kevin Norton; August 30, 2016; 4:02 pm.	Provided the information which was necessary to finalize the NRCS-CPA_106 form. See #1, #5, #6 and #7.	Addressed the requisite areas of the NRCS-CPA-106 form for Farmland Conversion Impact Rating for Corridor Type Projects.		08-30-16	
9	NOAA-NMFS	PO Box 44487 Baton Rouge, LA 70802	Virginia M. Fay Assistant Regional Administrator via Jan Koellen <a href="mailto:jan.koellen@noaa.gov">jan.koellen@noaa.gov</a> Phone: (225) 389-0508x202	Email to Will Woods; September 12, 2016. 11:32 am. Forwarded to Barbara Castille on September 12, 2016.	Provided Comment Letter. Recommended adding sections titled "Essential Fish Habitat", "Fishery Resources" and "Mitigation". EA should include a monitoring plan for wetlands and not assume all impacts would be "temporary".	The EA has and "Essential Fish Habitat" section and will include "Fishery Resources" and "Mitigation" sections if deemed necessary.		09-12-16	
10	OCM-LDNR	PO Box 44487 Baton Rouge, LA 70802	Jeff Harris Consistency Section <a href="mailto:Jeff.Harris@la.gov">Jeff.Harris@la.gov</a> Phone: (225) 342-7949	Email to Hoot Gibson; September 15, 2016. 7:30 am. Forwarded to Barbara Castille on September 15, 2016.	Provided Comment Letter. OCM is concerned with any foreseeable effects on the land use, water use or natural resources of the coastal zone. OCM policy is to remove all pipelines in the coastal zone upon decommission.	A conference call was scheduled for October 5, 2016 between OCM-LDNR, DOE, FFPO, VCI and S&BI to discuss the proposed project and how it pertains to coastal areas.		09-15-16	
11	OCM-LDNR	PO Box 44487 Baton Rouge, LA 70802	Jeff Harris Consistency Section <a href="mailto:Jeff.Harris@la.gov">Jeff.Harris@la.gov</a> Phone: (225) 342-7949	Email to Gabriel Adams September 27, 2016. 2:04 pm.	Stated that the OCM would like a plat showing existing and proposed pipeline routes ahead of the conference call.	Gabriel Adams replied with an email on September 27, 2016 with the detailed alignments. Additional emails between Jeff and Gabriel discussed the location in which the proposed pipeline would diverge from the existing pipeline alignment.		09-27-16	

West Hackberry Brine Disposal Pipeline Replacement Project – DOE/EA-2039

Document Title		West Hackberry Brine Disposal Pipeline Replacement Project - EA		Preparer	Barbara Castille/Josh Geyer		Date:	11-18-16	
Document Date		August 30, 2016		Firm	S&B Infrastructure, Ltd.				
Commenter		Resource Agencies							
Item	Resource Agency or Contractor	Address	Commenter and Contact Information	Comment Log	Comment or Request for Information	How Addressed (or why not addressed)	Log Check		
12	OCM-LDNR	PO Box 44487 Baton Rouge, LA 70802	Jeff Harris Consistency Section <a href="mailto:Jeff.Harris@la.gov">Jeff.Harris@la.gov</a> Phone: (225) 342-7949	Conference call. October 5, 2016	A conference call between OCM-LDNR, DOE, FFPO, VCI and S&BI was conducted to discuss the proposed project and how the project pertains to coastal areas. A point of clarification was made that the existing pipeline would not be abandoned-in-place but removed from service and retained if use was required in the future. Pipelines would be removed from the ground upon decommissioning of the WH facility at a later date.	The EA was updated to state that the existing pipeline would be removed from service but would remain in place.		10-05-16	
13	OCM-LDNR	PO Box 44487 Baton Rouge, LA 70802	Jeff Harris Consistency Section <a href="mailto:Jeff.Harris@la.gov">Jeff.Harris@la.gov</a> Phone: (225) 342-7949	Email to Gabriel Adams October 6, 2016. 7:00 pm. Forwarded to Barbara Castille on October 6, 2016.	This was a courtesy email showing the location of soil borings in close proximity to the project area which were depicted on DNR's SONRIS GIS system.	Areas of boring locations were reviewed and determined that such locations would have no impact on the proposed project.		10-06-16	
14	US Army Corps of Engineers, New Orleans District	7400 Leake Avenue New Orleans, LA 70118	Darrell Barbara Chief, Western Evaluation Section Regulatory Branch <a href="mailto:Darrell.Barbara@usace.army.mil">Darrell.Barbara@usace.army.mil</a> Phone: (504) 862-2260	Email to Gabriel Adams September 23, 2016. 9:57 am. Forwarded to Barbara Castille on September 23, 2016.	Based on initial assessments a Department of Army permit under Section 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act will likely be required. Recommends receiving an Approved Jurisdiction prior to submittal of the Joint Permit Application. The project may be located within an existing US Army Corps of Engineers Civil Works Project.	Section 10 and Section 404 permit applications will be completed by the FFPO for USACE permit authorization at a later date. The EA was updated to state that the existing pipeline would be removed from service but would remain in place.		09-23-16	
15	Floodplain Management Program-LDOT	PO Box 94245 Baton Rouge, LA 70804	Jennifer Rachal, CFM National Flood Insurance Program Coordinator <a href="mailto:Jennifer.Rachal@la.gov">Jennifer.Rachal@la.gov</a> Phone: (225) 379-3005	Email to Gabriel Adams and Will Woods September 19, 2016. 1:27 pm. Forwarded to Barbara Castille on September 19, 2016.	The map provided does not offer enough information or detail to accurately create a firmette. Please respond with a map or location zoomed in, so that I may accurately respond to the request.	S&B Infrastructure, Ltd. (S&BI), provided the Floodplain Exhibit which was utilized for the EA (FEMA 1999, FIRM Panel No. 22023C0400H).		09-19-16	
16	S&B Infrastructure, Ltd.	3535 Sage Road Houston, TX 77056	Barbara Castille <a href="mailto:bcastille@sbinfra.com">bcastille@sbinfra.com</a> Phone: (713) 845-5392	Email to Jennifer Rachal; September 19, 2016; 2:02 pm.	Provided the Floodplain Exhibit which was utilized for the EA (FEMA 1999, FIRM Panel No. 22023C0400H).	S&BI provided the Floodplain Exhibit which was utilized for the EA (FEMA 1999, FIRM Panel No. 22023C0400H).		09-19-16	




West Hackberry Brine Disposal Pipeline Replacement Project – DOE/EA-2039

Document Title		West Hackberry Brine Disposal Pipeline Replacement Project - EA		Preparer	Barbara Castille/Josh Geyer		Date:	11-18-16	
Document Date		August 30, 2016		Firm	S&B Infrastructure, Ltd.				
Commenter		Resource Agencies							
Item	Resource Agency or Contractor	Address	Commenter and Contact Information	Comment Log	Comment or Request for Information	How Addressed (or why not addressed)	Log Check		
17	Floodplain Management Program-LDOT	PO Box 94245 Baton Rouge, LA 70804	Jennifer Rachal, CFM National Flood Insurance Program Coordinator <a href="mailto:Jennifer.Rachal@la.gov">Jennifer.Rachal@la.gov</a> Phone: (225) 379-3005	Telephone Call to Barbara Castille; September 19, 2016; 2:10 pm.	Jennifer explained that FEMA data had been updated and she wanted the Floodplain Exhibit updated with the new data and submitted for review.	Provided the updated Floodplain Exhibit which would be utilized for the EA (FEMA 2012, FIRM Panel No. 22023C0375H).		09-19-16	
18	S&B Infrastructure, Ltd.	3535 Sage Road Houston, TX 77056	Barbara Castille <a href="mailto:bcastille@sbinfra.com">bcastille@sbinfra.com</a> Phone: (713) 845-5392	Email to Jennifer Rachal; September 19, 2016; 4:13 pm.	Provided the updated Floodplain Exhibit which would be utilized for the EA (FEMA 2012, FIRM Panel No. 22023C0375H).	Provided the updated Floodplain Exhibit which would be utilized for the EA (FEMA 2012, FIRM Panel No. 22023C0375H).		09-19-16	
19	Floodplain Management Program-LDOT	PO Box 94245 Baton Rouge, LA 70804	Jennifer Rachal, CFM National Flood Insurance Program Coordinator <a href="mailto:Jennifer.Rachal@la.gov">Jennifer.Rachal@la.gov</a> Phone: (225) 379-3005	Email to Barbara Castille October 18, 2016. 1:54 pm.	Attached the Solicitation of Views for Floodplains stating adequate water flow must occur during improvements and construction with assurance no back up of water occurs.	Acknowledged.		10-18-16	
20	S&B Infrastructure, Ltd.	3535 Sage Road Houston, TX 77056	Barbara Castille <a href="mailto:bcastille@sbinfra.com">bcastille@sbinfra.com</a> Phone: (713) 845-5392	Email to Jennifer Rachal; September 18, 2016; 2:25 pm.	Acknowledged that the Solicitation of Views had been received for the West Hackberry Brine Disposal Pipeline Replacement Project.	New floodplain data would be used in the EA.		10-18-16	
21	US Coast Guard 8 <sup>th</sup> District	Unknown	Unknown	Email to Barbara Castille September 26, 2016; 11:18 am.	Email was in regard to a telephone conversation between Gabriel Adams and an individual from the US Coast Guard 8 <sup>th</sup> District stating they had no comments on the EA at this time, but would like to review the Draft EA when available.	Acknowledged. The US Coast Guard would receive a copy of the Draft EA during the Public Comment Period.		09-26-16	
22	US Coast Guard	MSU Lake Charles, LA	Roderick Bawar Waterways Management <a href="mailto:Roderick.C.Bawar@uscg.mil">Roderick.C.Bawar@uscg.mil</a>	Email to Gabriel Adams October 10, 2016. 3:15 pm. Forwarded to Barbara Castille on October 10, 2016.	Email was in regard to the availability of the Draft EA and when the project would go to construction.	Acknowledged. The US Coast Guard would receive a copy of the Draft EA during the Public Comment Period.		10-10-16	
23	LDEQ	PO Box 4301 Baton Rouge, LA 70821-4301	Linda Hardy Office of the Secretary <a href="mailto:linda.hardy@la.gov">linda.hardy@la.gov</a> Phone: (225) 219-3954	Email to Will Woods October 3, 2016. 1:15 pm. Forwarded to Gabriel Adams and Barbara Castille on October 4, 2016.	LDEQ has no objections based on the information provided but has general comments including permits which may be necessary for the proposed project.	Acknowledged.		10-04-16	



West Hackberry Brine Disposal Pipeline Replacement Project – DOE/EA-2039

<b>Document Title</b>		West Hackberry Brine Disposal Pipeline Replacement Project - EA		<b>Preparer</b>	Barbara Castille/Josh Geyer		<b>Date:</b> 11-18-16
<b>Document Date</b>		August 30, 2016		<b>Firm</b>	S&B Infrastructure, Ltd.		
<b>Commenter</b>		Resource Agencies					
Item	Resource Agency or Contractor	Address	Commenter and Contact Information	Comment Log	Comment or Request for Information	How Addressed (or why not addressed)	Log Check
24	US Army Corps of Engineers, New Orleans District	7400 Leake Avenue New Orleans, LA 70118	Karen Clement Assistant Operations Manager, Completed Works <a href="mailto:karen.l.clement@usace.army.mil">karen.l.clement@usace.army.mil</a> Phone: (504) 862-2313	Email to Gabriel Adams and Will Woods October 14, 2016. 10:43 am. Forwarded to Barbara Castille on October 14, 2016.	Official response to Solicitation of Views request. The proposed project is not anticipated to impact any Corps of Engineers projects but a Department of the Army permit under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act will be required. Application of permit should be well in advance of the work to be performed.	Section 10 and Section 404 permit applications will be completed by the FFPO for USACE permit authorization at a later date.	 10-14-16

 = Completed

**P** = Pending

## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Tuesday, August 09, 2016 4:23 PM  
**To:** 'adam.cox@la.gov'  
**Cc:** Woods, Will; Batiste, Katherine; 'Adams, Gabriel'; Joshua Geyer (jageyer@sbinfra.com)  
**Subject:** West Hackberry Pipeline Replacement Project, Cameron Parish  
**Attachments:** 1\_WestHackberry\_EA\_AerialMap\_ForUseWithDesignFiles\_ToOfficeOfStateLands\_ACox\_080916.pdf; 2\_WestHackberry\_EA\_DesignFiles\_ToOfficeOfStateLands\_ACox\_080916.pdf

Mr. Cox—

We are pleased to provide you with the detailed designs for the brine disposal pipeline replacement project as requested. We have attached two files for your review. The first file consists of an overview map of the pipeline alignment on an aerial photograph. The second file consists of the proposed pipeline design drawings. Please note that minor changes to the design drawings may occur as the project progresses.

If you have any questions following your review of the attached information, please let me know or feel free to contact Gabriel Adams.

Thank you for your review of this important project.

Sincerely,

Barbara

### **Barbara Castille**

Manager, Environmental Planning

### **S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)

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---

**From:** Adams, Gabriel [<mailto:Gabriel.Adams@spr.doe.gov>]  
**Sent:** Monday, August 08, 2016 3:04 PM  
**To:** Castille, Barbara; Fogle, William  
**Cc:** Woods, Will; Batiste, Katherine; Sevcik, Bob; Wesley, Louis  
**Subject:** FW: Pipeline Replacement Project, Cameron Parish

Barbara,

Could you please provide Mr. Cox the additional information he has requested?

Please advise.

Gabriel Adams, REM | [Fluor Federal Petroleum Operations, LLC](#) | Pollution Prevention Specialist, Environmental Department |

Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

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**From:** Adam Cox [<mailto:Adam.Cox@LA.GOV>]

**Sent:** Monday, August 08, 2016 2:53 PM

**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>

**Subject:** Pipeline Replacement Project, Cameron Parish

Mr. Adams,

Per our phone conversation, I am requesting that you send the State Land Office detailed plats regarding the brine disposal replacement project in Cameron Parish.

Thank you,

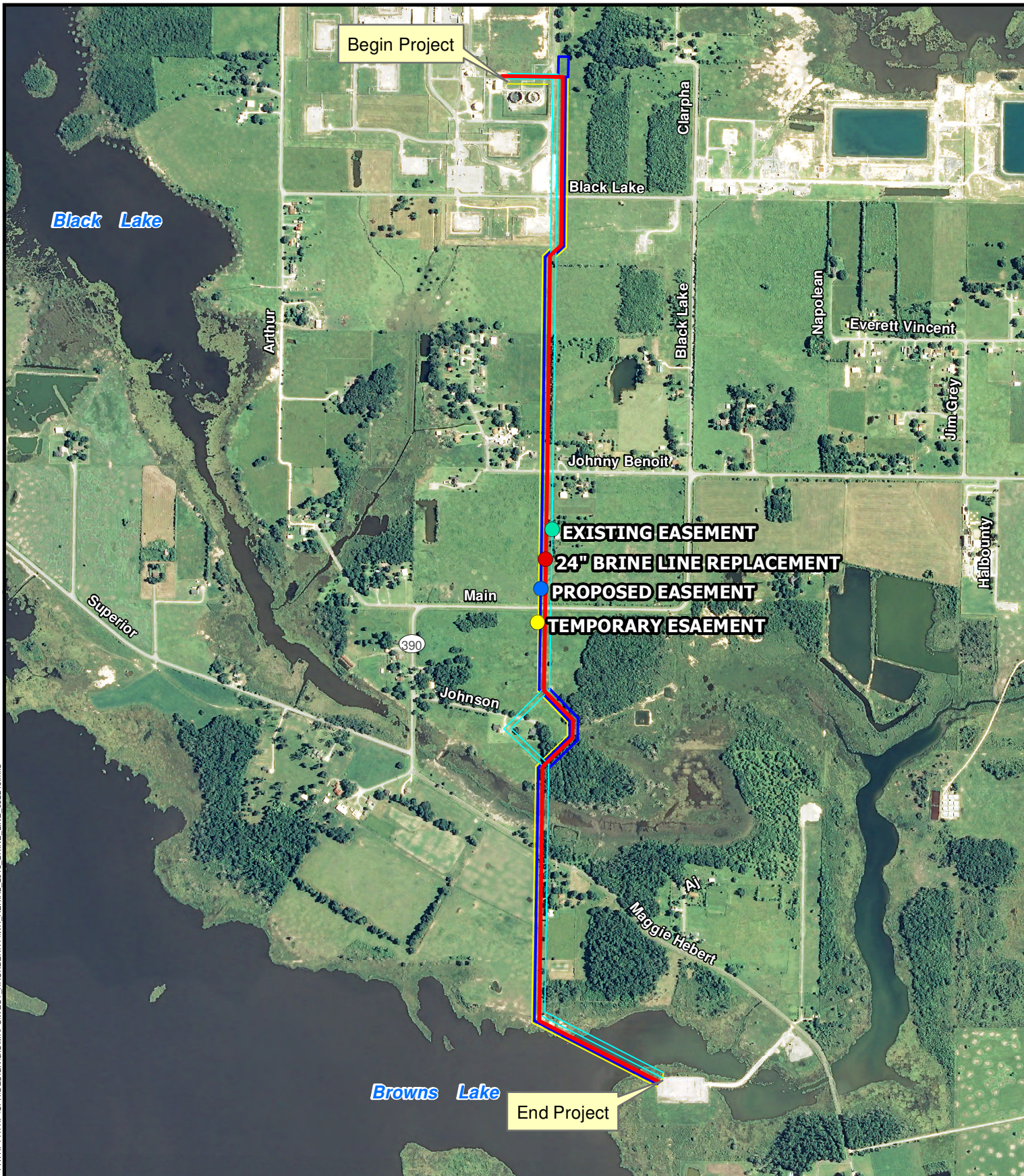
Adam Cox

Office of State Lands

Phone: (225) 342-4567

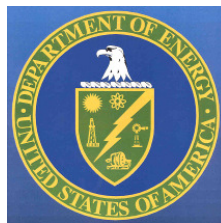
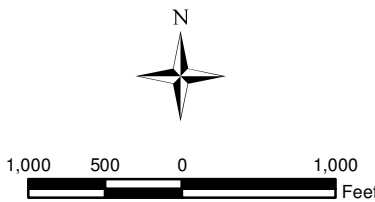
E-mail: [adam.cox@la.gov](mailto:adam.cox@la.gov)





PATH: I:\SPRDESIGN\GIS\MAPS\WEST HACKBERRY\WH\_AERIAL\_2013\_BRINE\_LINE\_032216.mxd

SOURCE: USDA-NAIP, 2013

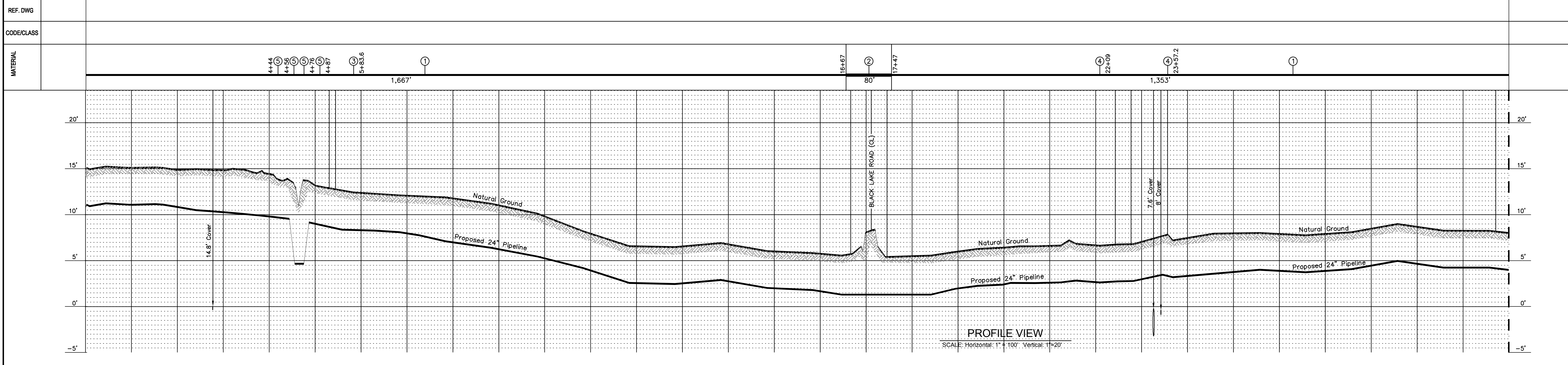
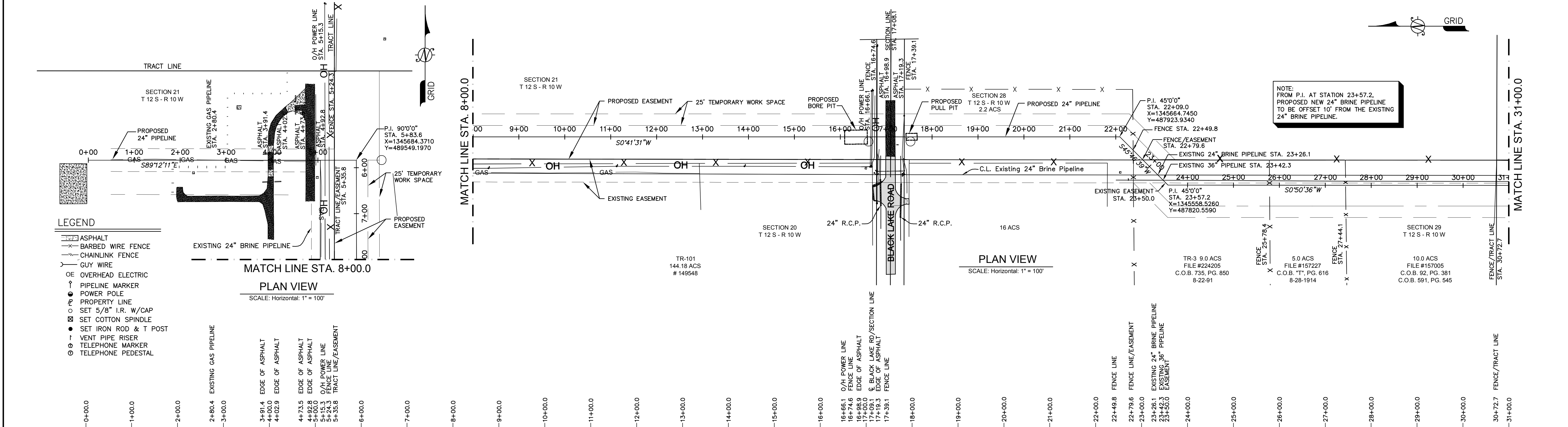


## AERIAL PHOTOGRAPH, 2013

Brine Disposal Pipeline Replacement Project  
 West Hackberry, Strategic Petroleum Reserve  
 Cameron Parish, Louisiana



TERRAIN	GRASSY AREA		GRASSY AREA		GRASSY AREA		GRASSY AREA								
VEGETATION															
OWNER	UNITED STATES OF AMERICA				UNITED STATES OF AMERICA				UNITED STATES OF AMERICA				TRIDENT ENERGY GROUP	U.R. GASSEN ET AL	DONALD B. DEROUEN ESTATE DOROTHY MAE DEROUEN LYONS
RODS															
PARISH-STATE	CAMERON PARISH, LOUISIANA				CAMERON PARISH, LOUISIANA				CAMERON PARISH, LOUISIANA				CAMERON PARISH, LOUISIANA	CAMERON PARISH, LA	CAMERON PARISH, LOUISIANA



REGISTRATION STAMP	DESIGNED BY:																							
	DRAWN BY:																							
	CHECKED BY:																							
	SURVEYOR OF RECORD:																							
	SIGNATURE:																							
	DATE:																							
	NO.																							

5	24" 22.5 DEG, 3D FORGED BEND W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	4					
4	24" 45 DEG, 3D FORGED BEND W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	2					
3	24" 90 DEG, 3D FORGED BEND W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	1					
2	24" O.D., 0.500" W.T., API 5L X-52 PIPE W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE, 30 MILS ARO, + 2.5" THICK CONC. OUTER COATING	80'					
1	24" O.D., 0.500" W.T., API 5L X-52 PIPE W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	3020'	A	ISSUED FOR REVIEW			

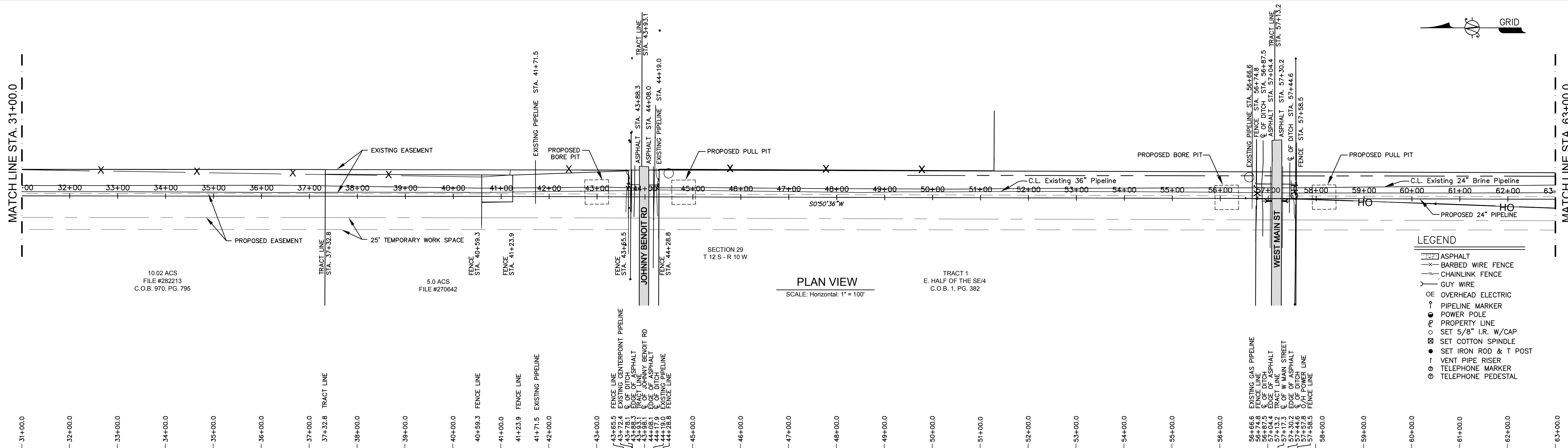
DR	JT	CZB	ER		8/15/16
DRAWN BY	CHECKED BY	PROJECT ENGINEER	ENGINEERING MANAGER	D.O.E.	DATE

<b>PROPOSED 24" PIPELINE</b>		<b>OFFICE OF SYSTEMS AND PROJECTS</b>	
<b>WEST HACKBERRY S.P.R. FACILITY TO BRINE DISPOSAL WELL SITE</b>		<b>STRATEGIC PETROLEUM RESERVE</b>	
<b>EXHIBIT 8-1</b>		<b>WEST HACKBERRY</b>	
<b>CAMERON PARISH, LOUISIANA</b>		<b>APPROVED FOR CONSTRUCTION</b>	
		DATE:	

TASK NUMBER:	
DISCIPLINE:	
DATE:	JUNE 15, 2016
SCALE:	HORIZONTAL: 1" = 100' PROFILE: 1" = 20'
DRAWING NUMBER:	XXXXXXXXXX
SHEET	1 of 4
REV.	A

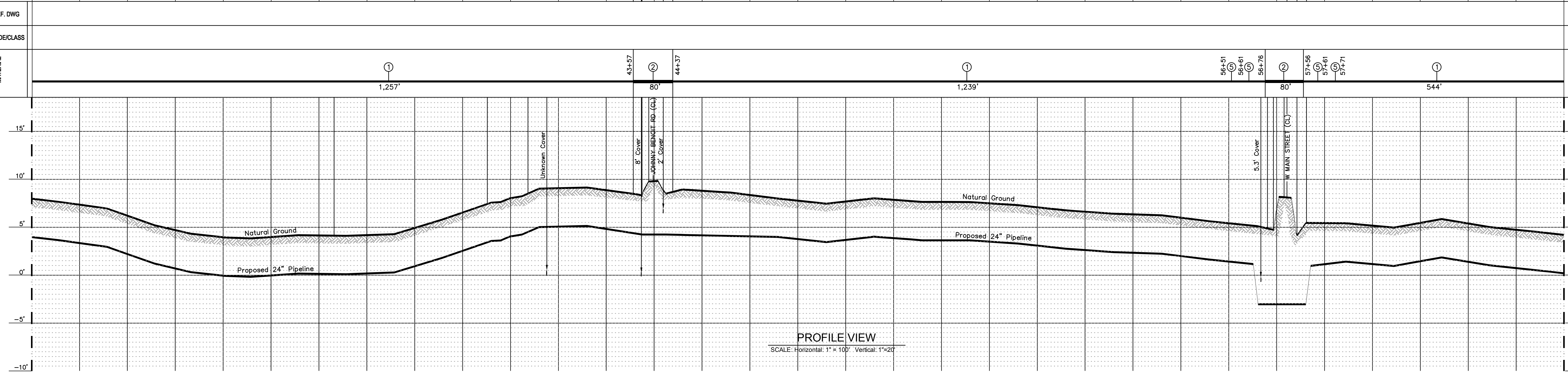
ACAD FILENAME:

TERRAIN			
VEGETATION			
OWNER	GEORGE ELERY SHOVE, ET UX	RONALD JOSEPH RICHARD, ET UX	MRS. LAURA JOHNSON, ET AL
RODS			
PARISH-STATE	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LOUISIANA




**LEGEND**

- ▭ ASPHALT
- x- BARBED WIRE FENCE
- CHAINLINK FENCE
- GUY WIRE
- OE OVERHEAD ELECTRIC
- PIPELINE MARKER
- POWER POLE
- ⊕ PROPERTY LINE
- SET 5/8" I.R. W/CAP
- ⊗ SET COTTON SPINDLE
- SET IRON ROD & T POST
- ↑ VENT PIPE RISER
- ⊕ TELEPHONE MARKER
- ⊙ TELEPHONE PEDESTAL



REGISTRATION STAMP	DESIGNED BY:										
	DRAWN BY:										
	CHECKED BY:										
	SURVEYOR OF RECORD:	5	24" 22.5 DEG, 3D FORGED BEND W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	4							
	SIGNATURE:	3	24" 45 DEG, 3D FORGED BEND W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	0							
	DATE:	2	24" 90 DEG, 3D FORGED BEND W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	0							
		1	24" O.D., 0.500" W.T., API 5L X-52 PIPE W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE, 30 MILS ARO, + 2.5" THICK CONC. OUTER COATING	160'							
			24" O.D., 0.500" W.T., API 5L X-52 PIPE W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	3,040'	A	ISSUED FOR REVIEW				8/15/16	
REVISION NUMBER	NO.	MATERIAL DESCRIPTION	QUANTITY	NO.	CHANGE DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT ENGINEER	ENGINEERING MANAGER	D.O.E. APPROVAL	DATE

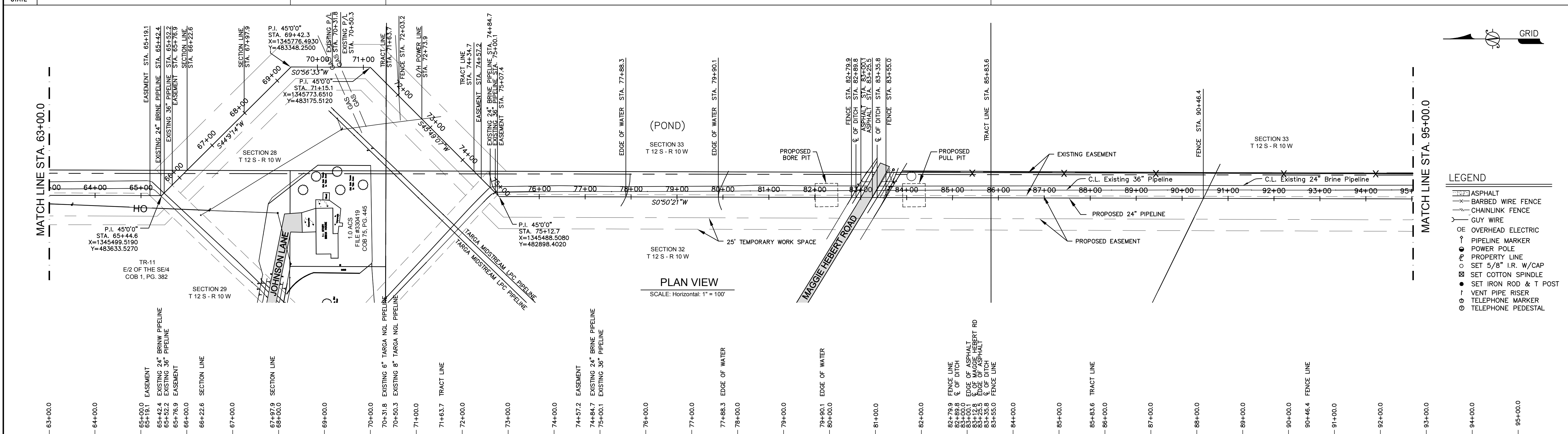
**PROPOSED 24" PIPELINE**  
**WEST HACKBERRY S.P.R. FACILITY TO**  
**BRINE DISPOSAL WELL SITE**  
**EXHIBIT 8-2**  
**WEST HACKBERRY**  
**CAMERON PARISH, LOUISIANA**

**OFFICE OF SYSTEMS AND PROJECTS**  
  
**STRATEGIC PETROLEUM RESERVE**  
APPROVED FOR CONSTRUCTION

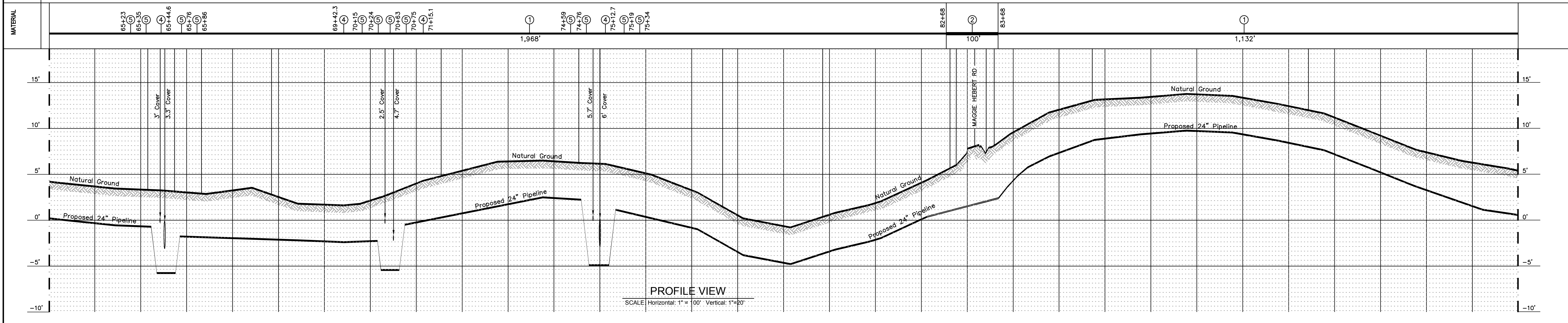
TASK NUMBER:	
DISCIPLINE:	
DATE:	JUNE 15, 2016
SCALE:	HORIZONTAL: 1" = 100' PROFILE: 1" = 20'
DRAWING NUMBER:	XXXXXXXXXX
SHEET:	2 of 4
REV:	A

ACAD FILENAME:

TERRAIN				
VEGETATION				
OWNER	MRS. LAURA JOHNSON, ET AL	CARL BLAINE JOHNSON ET UX	CARL P. JOHNSON PRESTON J. JOHNSON	VINCENT HEIRS, INC. (E/2 OF W/2, E/2, W/2 OF SW/4, SW/4 OF NW/4 SECTION 32) COB 227, PG. 565 COB 181, PG. 422 COB 395, PG. 58
RODS				
PARISH-STATE	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LA	CAMERON PARISH, LOUISIANA	CAMERON PARISH, LOUISIANA



REF. DWG	
CODE/CLASS	
MATERIAL	



REGISTRATION STAMP

DESIGNED BY: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_

CHECKED BY: \_\_\_\_\_

SURVEYOR OF RECORD: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

MATERIAL DESCRIPTION	QUANTITY	NO.	CHANGE DESCRIPTION
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4 24" 45 DEG, 3D FORGED BEND W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	4		
3 24" 90 DEG, 3D FORGED BEND W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	0		
2 24" O.D., 0.500" W.T., API 5L X-52 PIPE W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE, 30 MILS ARO, + 2.5" THICK CONC. OUTER COATING	100'		
1 24" O.D., 0.500" W.T., API 5L X-52 PIPE W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	3,100'	A	ISSUED FOR REVIEW

PROPOSED 24" PIPELINE  
WEST HACKBERRY S.P.R. FACILITY TO  
BRINE DISPOSAL WELL SITE

EXHIBIT 8-3

WEST HACKBERRY  
CAMERON PARISH, LOUISIANA

OFFICE OF SYSTEMS AND PROJECTS

STRATEGIC PETROLEUM RESERVE

APPROVED FOR CONSTRUCTION

TASK NUMBER: \_\_\_\_\_

DISCIPLINE: \_\_\_\_\_

DATE: JUNE 15, 2016

SCALE: HORIZONTAL: 1" = 100'  
PROFILE: 1" = 20'

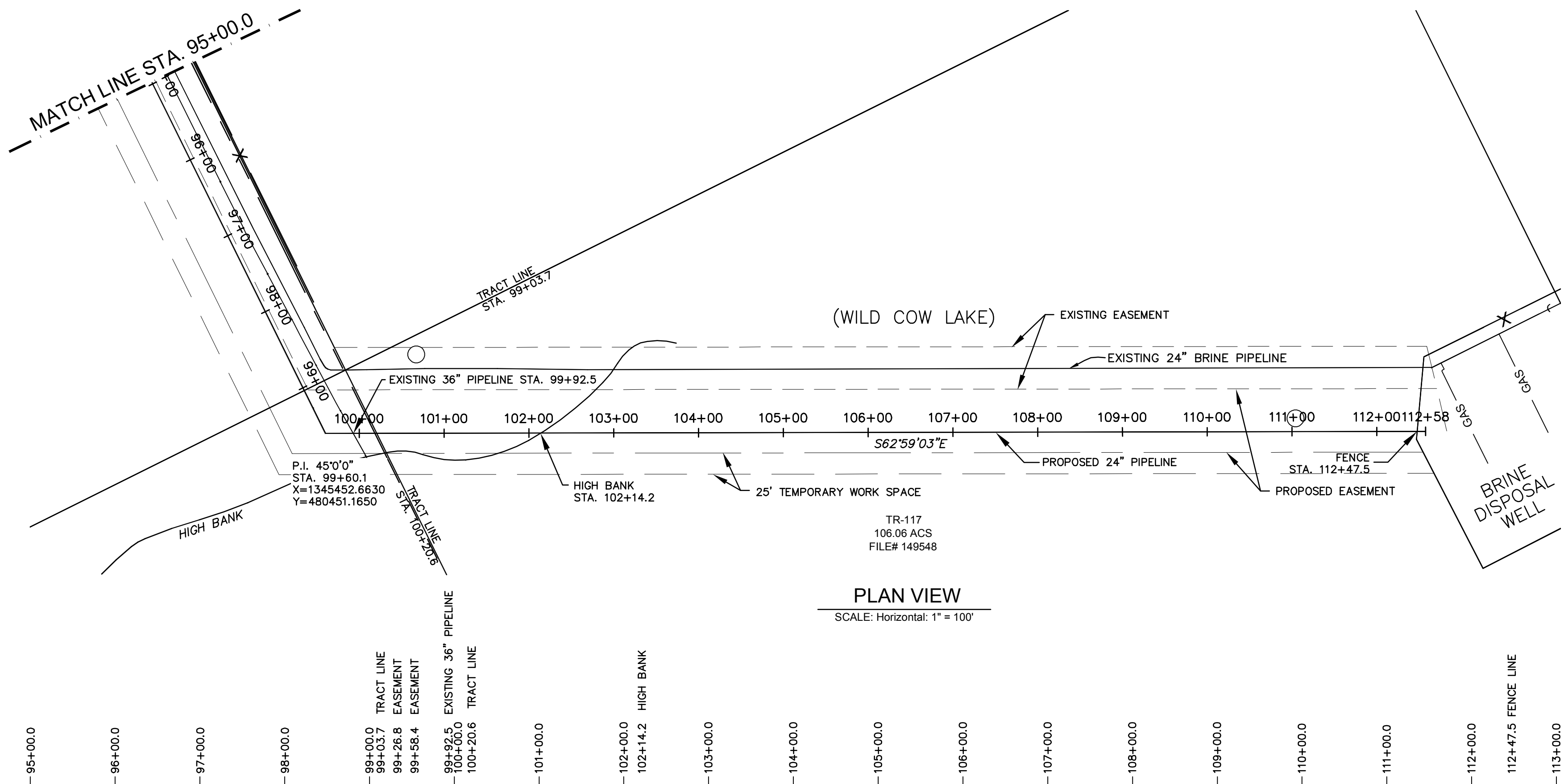
DRAWING NUMBER: XXXXXXXXXXXX

SHEET 3 of 4

REV: A

ACAD FILENAME:

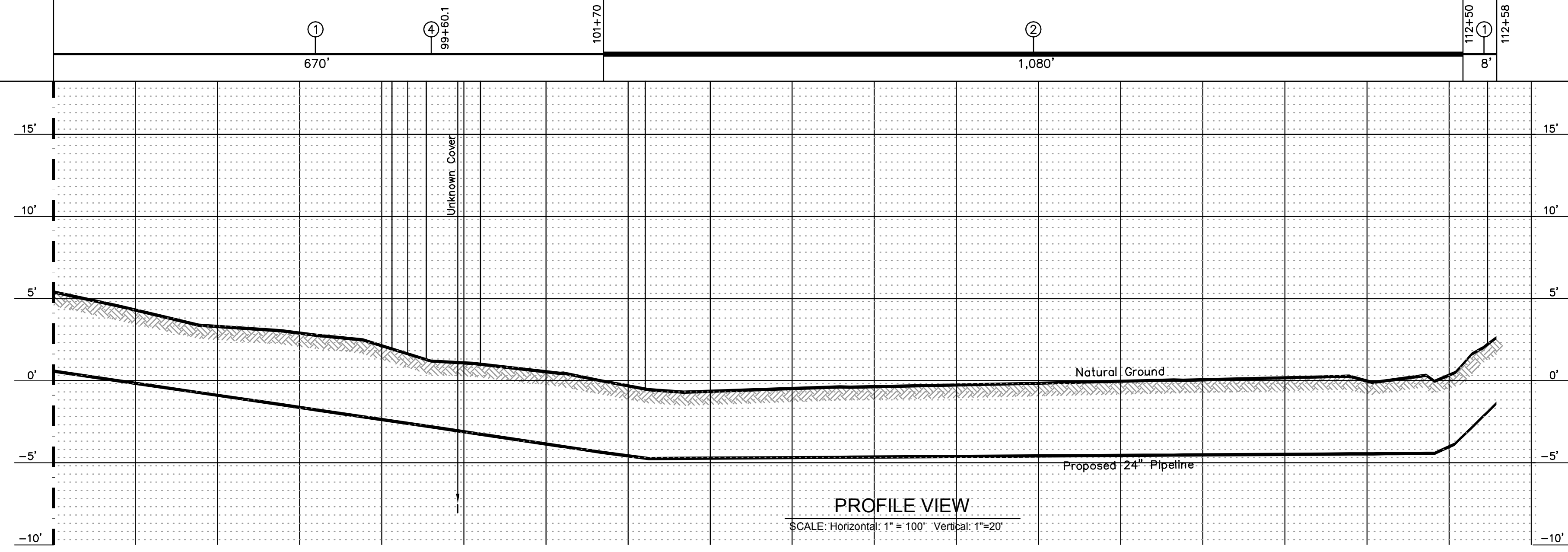
TERRAIN	
VEGETATION	
OWNER	VINCENT HEIRS, INC. (E/2 OF W/2, E/2, W/2 OF SW/4, SW/4 OF NW/4 SECTION 32) COB 227, PG. 585 COB 181, PG. 422 COB 385, PG. 58
RODS	UNITED STATES OF AMERICA
PARISH-STATE	CAMERON PARISH, LOUISIANA



LEGEND

[Symbol]	ASPHALT
[Symbol]	BARBED WIRE FENCE
[Symbol]	CHAINLINK FENCE
[Symbol]	GUY WIRE
[Symbol]	OVERHEAD ELECTRIC
[Symbol]	PIPELINE MARKER
[Symbol]	POWER POLE
[Symbol]	PROPERTY LINE
[Symbol]	SET 5/8" I.R. W/CAP
[Symbol]	SET COTTON SPINDLE
[Symbol]	SET IRON ROD & T POST
[Symbol]	VENT PIPE RISER
[Symbol]	TELEPHONE MARKER
[Symbol]	TELEPHONE PEDESTAL

REF. DWG	
CODE/CLASS	



REGISTRATION STAMP	DESIGNED BY:	
	DRAWN BY:	
	CHECKED BY:	
	SURVEYOR OF RECORD:	
	SIGNATURE:	
	DATE:	
REVISION NUMBER		

NO.	MATERIAL DESCRIPTION	QUANTITY	NO.	CHANGE DESCRIPTION	DATE
4	24" 45 DEG, 3D FORGED BEND W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	1			
3	24" 90 DEG, 3D FORGED BEND W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	0			
2	24" O.D., 0.500" W.T., API 5L X-52 PIPE W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE, 30 MILS ARO, + 2.5" THICK CONC. OUTER COATING	1,080'			
1	24" O.D., 0.500" W.T., API 5L X-52 PIPE W/0.375" THICK INTERNAL CONC. LINER, AND 14-16 MILS FBE	678'	A	ISSUED FOR REVIEW	8/15/16

PROPOSED 24" PIPELINE  
WEST HACKBERRY S.P.R. FACILITY TO  
BRINE DISPOSAL WELL SITE

EXHIBIT 8-4

WEST HACKBERRY  
CAMERON PARISH, LOUISIANA

OFFICE OF SYSTEMS AND PROJECTS

STRATEGIC PETROLEUM RESERVE

APPROVED FOR CONSTRUCTION

TASK NUMBER:	
DISCIPLINE:	
DATE:	JUNE 15, 2016
SCALE:	HORIZONTAL: 1" = 100' PROFILE: 1" = 20'
DRAWING NUMBER:	XXXXXXXXXX
SHEET	4 of 4
REV:	A

ACAD FILENAME:



## Castille, Barbara

---

**From:** Castille, Barbara  
**Sent:** Tuesday, August 09, 2016 5:11 PM  
**To:** 'mitchell.mouton@la.usda.gov'  
**Cc:** Woods, Will; Batiste, Katherine; 'Adams, Gabriel'; Joshua Geyer (jageyer@sbinfra.com)  
**Subject:** RE: Brine Disposal Pipeline Replacement Project - Strategic Petroleum Reserve - West Hackberry Facility - Cameron Parish, Louisiana  
**Attachments:** 1a\_WestHackberry\_EA\_MaximumROW\_OverviewMap\_ForUseWithGISShapeFile\_ToNRCS\_MMouton\_080916.pdf;  
2a\_WestHackberry\_EA\_MaximumROW\_GISShapeFile\_ToNRCS\_MMouton\_080916.zip;  
3a\_WestHackberry\_EA\_WebSoilSurvey\_ToNRCS\_MMouton\_080916.pdf;  
4a\_WestHackberry\_EA\_PrimeFarmland\_ToNRCS\_MMouton\_080916.pdf

Tracking:	Recipient	Delivery	Read
	'mitchell.mouton@la.usda.gov'		
	Woods, Will		
	Batiste, Katherine		
	'Adams, Gabriel'		
	Joshua Geyer (jageyer@sbinfra.com)	Delivered: 8/9/2016 5:11 PM	
	Geyer, Joshua		Read: 8/9/2016 5:14 PM

Mr. Mouton—

We are pleased to provide you with the GIS shape files for the brine disposal pipeline replacement project as requested. For your review, we have attached 4 files. The 1<sup>st</sup> file contains an overview map for use with the GIS shape files. The 2<sup>nd</sup> file contains the GIS shape files. The shape files represent the maximum area of proposed disturbance along the pipeline corridor which includes the existing pipeline easement, the immediately adjacent proposed pipeline easement and a temporary construction easement. The 3<sup>rd</sup> file contains the Web Soil Survey soil information for the project area. The 4<sup>th</sup> file contains the Web Soil Survey prime farmland soils for the project area.

If you have any questions following your review of the attached information, please let me know or feel free to contact Gabriel Adams.

Thank you for your review of this important project.

Sincerely,

Barbara

**Barbara Castille**  
Manager, Environmental Planning

**S&B Infrastructure, Ltd.**  
530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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---

**From:** Adams, Gabriel [<mailto:Gabriel.Adams@spr.doe.gov>]  
**Sent:** Monday, August 08, 2016 10:49 AM  
**To:** Castille, Barbara; Fogle, William  
**Cc:** Woods, Will; Batiste, Katherine; Wesley, Louis; Sevcik, Bob  
**Subject:** FW: Brine Disposal Pipeline Replacement Project - Strategic Petroleum Reserve - West Hackberry Facility - Cameron Parish, Louisiana  
**Importance:** High

Barbara,

Please see the email below from the NRCS for Louisiana.

Please advise.

Gabriel Adams, REM | **Fluor Federal Petroleum Operations, LLC** | Pollution Prevention Specialist, Environmental Department |  
*Contractor to the U. S. Department of Energy SPR* | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

---

**From:** Woods, Will  
**Sent:** Monday, August 08, 2016 10:25 AM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>  
**Subject:** FW: Brine Disposal Pipeline Replacement Project - Strategic Petroleum Reserve - West Hackberry Facility - Cameron Parish, Louisiana

Gabe: Please forward as appropriate and cc me.

---

**From:** Mouton, Mitchell - NRCS, ALEXANDRIA, LA [<mailto:mitchell.mouton@la.usda.gov>]  
**Sent:** Monday, August 08, 2016 9:56 AM  
**To:** Woods, Will <[Will.Woods@SPR.DOE.GOV](mailto:Will.Woods@SPR.DOE.GOV)>  
**Subject:** Brine Disposal Pipeline Replacement Project - Strategic Petroleum Reserve - West Hackberry Facility - Cameron Parish, Louisiana

Mr. Woods,

For the above referenced project do you have a GIS Shapefile that will have the location of the 50-100 feet of land adjacent to the existing pipeline that will be permanently converted to additional right-of-way? I need to be able to determine the soil type and acreage for this area.

Thanks,

**Mitchell Mouton**

Assistant State Soil Scientist

USDA-NRCS Soils Section

3737 Government Street

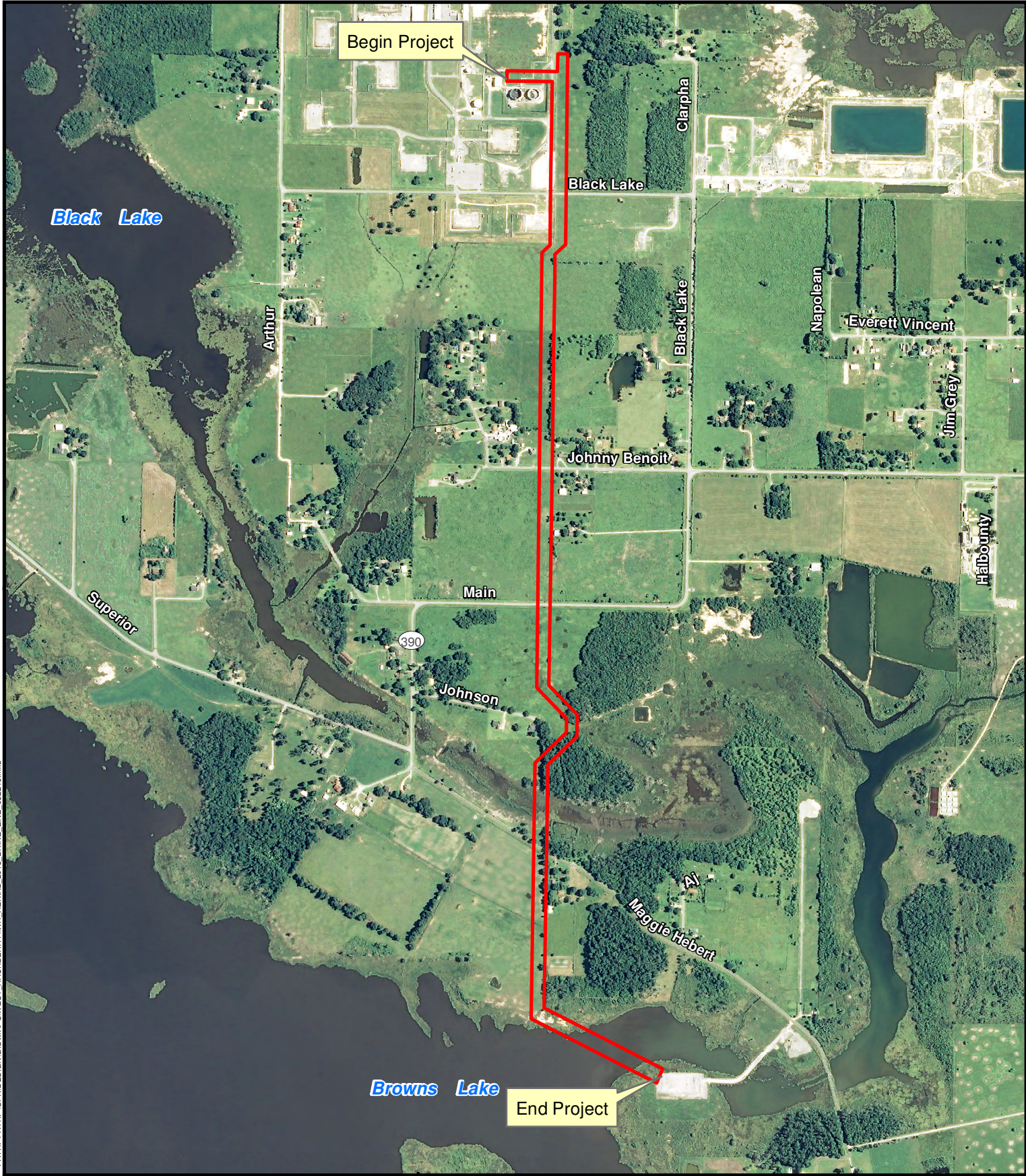
Work (318) 473-7789

Work Cell (337) 412-9304

Email: [mitchell.mouton@la.usda.gov](mailto:mitchell.mouton@la.usda.gov)

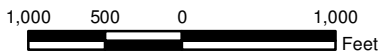
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PATH: I:\SPRDESIGN\GIS\MAPS\WEST HACKBERRY\WH\_AERIAL\_2013\_BRINE\_LINE\_032216.mxd

SOURCE: USDA-NAIP, 2013










## AERIAL PHOTOGRAPH, 2013

Brine Disposal Pipeline Replacement Project  
 West Hackberry, Strategic Petroleum Reserve  
 Cameron Parish, Louisiana



## West Hackberry Brine Disposal Pipeline Replacement Project – GIS Shape Files

Name	Type	Compressed size	Size	Ratio	Date modified
 NEW_ROW_080916.cpg	CPG File	1 KB	1 KB	0%	8/9/2016 10:28 AM
 NEW_ROW_080916.dbf	DBF File	1 KB	1 KB	50%	8/9/2016 10:28 AM
 NEW_ROW_080916.prj	PRJ File	1 KB	1 KB	17%	8/9/2016 10:15 AM
 NEW_ROW_080916.sbn	SBN File	1 KB	1 KB	50%	8/9/2016 10:28 AM
 NEW_ROW_080916.sbx	SBX File	1 KB	1 KB	50%	8/9/2016 10:28 AM
 NEW_ROW_080916.shp	DWG TrueView Shape Source	1 KB	1 KB	29%	8/9/2016 10:28 AM
 NEW_ROW_080916.shx	DWG TrueView Compiled Shape	1 KB	1 KB	49%	8/9/2016 10:28 AM



United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for **Cameron Parish, Louisiana**

## West Hackberry Brine Disposal Pipeline Replacement Project



# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Map Unit Legend.....	10
Map Unit Descriptions.....	10
Cameron Parish, Louisiana.....	12
Cw—Crowley-Vidrine complex, 0 to 1 percent slopes.....	12
GB—Ged mucky clay.....	14
GC—Gentilly muck, 0 to 0.5 percent slopes, very frequently flooded.....	15
Mr—Edgerly loam, 0 to 1 percent slopes.....	16
Mt—Mowata-Vidrine complex, 0 to 1 percent slopes.....	17
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# **How Soil Surveys Are Made**

---

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

## Custom Soil Resource Report

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

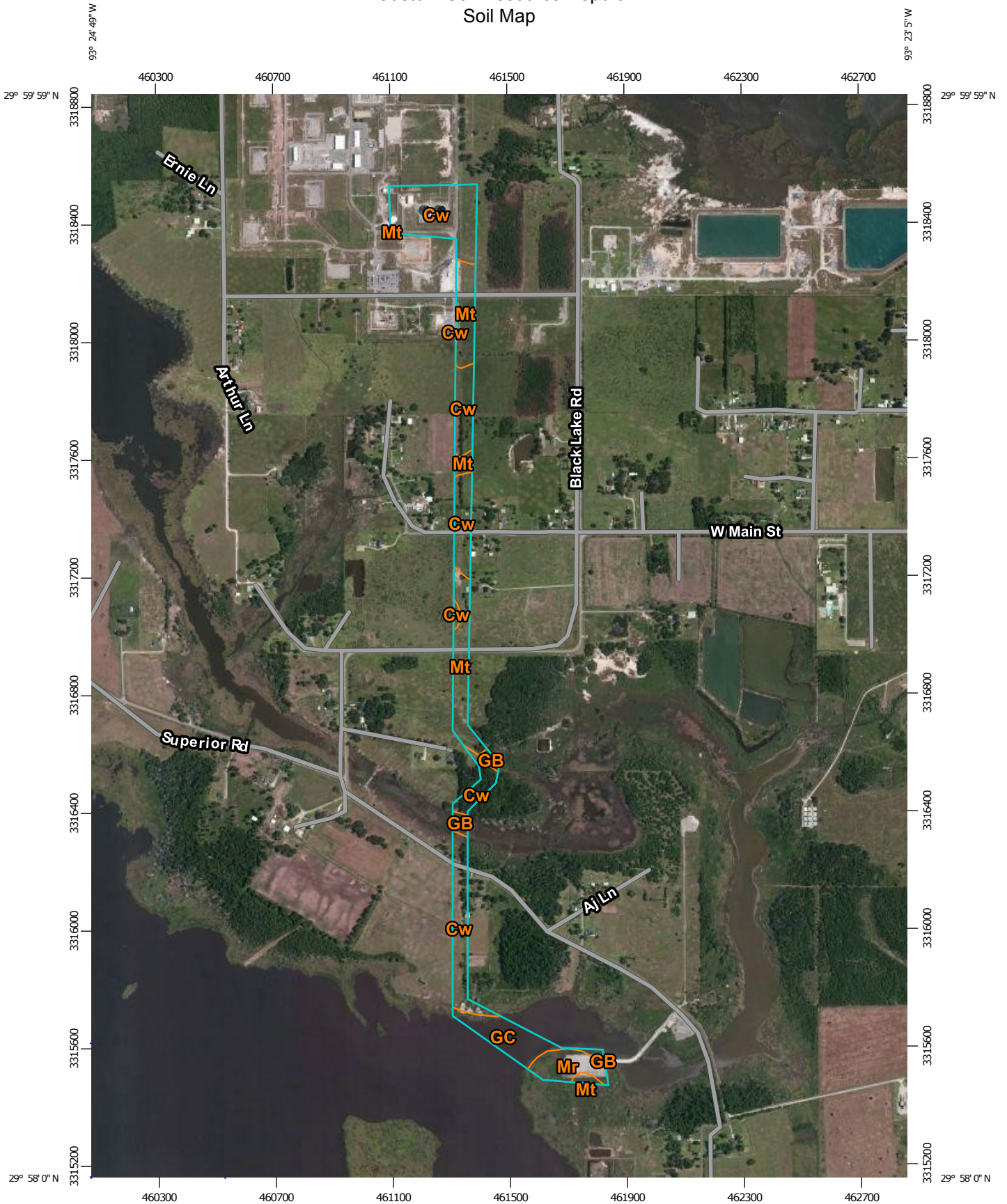
# Soil Map

---

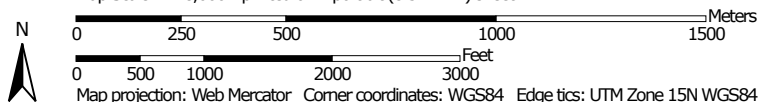
The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



# Custom Soil Resource Report Soil Map




Map Scale: 1:18,000 if printed on A portrait (8.5" x 11") sheet.





### MAP LEGEND


**Area of Interest (AOI)**

 Area of Interest (AOI)




















**Soils**






 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

**Special Point Features**






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cameron Parish, Louisiana  
 Survey Area Data: Version 13, Sep 28, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2011—May 26, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Cameron Parish, Louisiana (LA023)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cw	Crowley-Vidrine complex, 0 to 1 percent slopes	35.4	54.4%
GB	Ged mucky clay	1.6	2.4%
GC	Gentilly muck, 0 to 0.5 percent slopes, very frequently flooded	7.6	11.7%
Mr	Edgerly loam, 0 to 1 percent slopes	5.3	8.2%
Mt	Mowata-Vidrine complex, 0 to 1 percent slopes	15.2	23.3%
<b>Totals for Area of Interest</b>		<b>65.0</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

## Custom Soil Resource Report

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.



## Cameron Parish, Louisiana

### Cw—Crowley-Vidrine complex, 0 to 1 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2thq2  
*Elevation:* 10 to 80 feet  
*Mean annual precipitation:* 59 to 65 inches  
*Mean annual air temperature:* 67 to 70 degrees F  
*Frost-free period:* 240 to 300 days  
*Farmland classification:* All areas are prime farmland

#### Map Unit Composition

*Crowley and similar soils:* 55 percent  
*Vidrine and similar soils:* 35 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Crowley

##### Setting

*Landform:* Terraces  
*Landform position (three-dimensional):* Riser  
*Microfeatures of landform position:* Bars  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Pleistocene age clayey fluviomarine deposits derived from igneous, metamorphic and sedimentary rock

##### Typical profile

*Ap - 0 to 7 inches:* silt loam  
*Eg - 7 to 17 inches:* silt loam  
*Btg1 - 17 to 40 inches:* silty clay  
*Btg2 - 40 to 80 inches:* clay loam

##### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Somewhat poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low (0.01 to 0.06 in/hr)  
*Depth to water table:* About 6 to 9 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 2 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 10.0  
*Available water storage in profile:* High (about 10.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* D

## Description of Vidrine

### Setting

*Landform:* Flats

*Landform position (three-dimensional):* Rise

*Microfeatures of landform position:* Mounds

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Loamy eolian deposits over clayey fluviomarine deposits of pleistocene age

### Typical profile

*A - 0 to 6 inches:* silt loam

*E - 6 to 14 inches:* silt loam

*Bt/E - 14 to 18 inches:* silty clay

*Btg - 18 to 65 inches:* silty clay

*BCtg - 65 to 80 inches:* silty clay loam

### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Somewhat poorly drained

*Runoff class:* Very high

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.01 in/hr)

*Depth to water table:* About 14 to 24 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Salinity, maximum in profile:* Nonsaline (0.0 to 1.0 mmhos/cm)

*Sodium adsorption ratio, maximum in profile:* 8.0

*Available water storage in profile:* High (about 9.9 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* D

## Minor Components

### Egerly

*Percent of map unit:* 3 percent

*Landform:* Flats

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Linear

*Across-slope shape:* Concave

### Acadiana

*Percent of map unit:* 3 percent

*Landform:* Stream terraces

*Landform position (three-dimensional):* Riser

*Down-slope shape:* Linear

*Across-slope shape:* Convex

### Frost

*Percent of map unit:* 2 percent

*Landform:* Depressions

*Landform position (three-dimensional):* Dip

## Custom Soil Resource Report

*Down-slope shape:* Concave  
*Across-slope shape:* Concave

### **Mowata**

*Percent of map unit:* 2 percent  
*Landform:* Depressions  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave

## **GB—Ged mucky clay**

### **Map Unit Setting**

*National map unit symbol:* 1vvgb  
*Mean annual precipitation:* 43 to 61 inches  
*Mean annual air temperature:* 59 to 77 degrees F  
*Frost-free period:* 259 to 313 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Ged and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Ged**

#### **Setting**

*Landform:* Marshes  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Fluid clayey alluvium

#### **Typical profile**

*H1 - 0 to 14 inches:* mucky clay  
*H2 - 14 to 44 inches:* clay  
*H3 - 44 to 60 inches:* clay

#### **Properties and qualities**

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Very poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* About 0 inches  
*Frequency of flooding:* Frequent  
*Frequency of ponding:* Frequent  
*Available water storage in profile:* High (about 9.6 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

## Custom Soil Resource Report

*Land capability classification (nonirrigated): 7w*  
*Hydrologic Soil Group: D*

### Minor Components

#### Minor components

*Percent of map unit: 20 percent*

## GC—Gentilly muck, 0 to 0.5 percent slopes, very frequently flooded

### Map Unit Setting

*National map unit symbol: 2tpnh*  
*Elevation: 0 feet*  
*Mean annual precipitation: 59 to 67 inches*  
*Mean annual air temperature: 63 to 79 degrees F*  
*Frost-free period: 219 to 365 days*  
*Farmland classification: Not prime farmland*

### Map Unit Composition

*Gentilly, very frequently flooded, and similar soils: 80 percent*  
*Minor components: 20 percent*  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Gentilly, Very Frequently Flooded

#### Setting

*Landform: Marshes*  
*Landform position (three-dimensional): Dip*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Parent material: Thin herbaceous organic material over semifluid clayey over consolidated clayey alluvium*

#### Typical profile

*Oa - 0 to 10 inches: muck*  
*Cg1 - 10 to 40 inches: clay*  
*Cg2 - 40 to 79 inches: clay*

#### Properties and qualities

*Slope: 0 to 1 percent*  
*Depth to restrictive feature: More than 80 inches*  
*Natural drainage class: Very poorly drained*  
*Runoff class: Negligible*  
*Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)*  
*Depth to water table: About 0 inches*  
*Frequency of flooding: Very frequent*  
*Frequency of ponding: Frequent*  
*Salinity, maximum in profile: Slightly saline to strongly saline (4.0 to 16.0 mmhos/cm)*  
*Sodium adsorption ratio, maximum in profile: 16.0*



## Custom Soil Resource Report

*Available water storage in profile:* High (about 10.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7w

*Hydrologic Soil Group:* D

### Minor Components

#### **Clovelly, very frequently flooded**

*Percent of map unit:* 15 percent

*Landform:* Marshes

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Linear

*Across-slope shape:* Linear

#### **Lafitte, very frequently flooded**

*Percent of map unit:* 5 percent

*Landform:* Marshes

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Linear

*Across-slope shape:* Linear

## Mr—Edgerly loam, 0 to 1 percent slopes

### Map Unit Setting

*National map unit symbol:* 2qrt8

*Elevation:* 0 to 20 feet

*Mean annual precipitation:* 52 to 66 inches

*Mean annual air temperature:* 57 to 79 degrees F

*Frost-free period:* 245 to 304 days

*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Edgerly and similar soils:* 82 percent

*Minor components:* 18 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Edgerly

#### Setting

*Landform:* Flats

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loamy fluviomarine deposits of pleistocene age

#### Typical profile

*Ap - 0 to 7 inches:* loam

*Bt - 7 to 31 inches:* loam

*Btg - 31 to 80 inches:* clay loam

## Custom Soil Resource Report

### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Poorly drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 18 to 30 inches  
*Frequency of flooding:* Rare  
*Frequency of ponding:* None  
*Salinity, maximum in profile:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 4.0  
*Available water storage in profile:* High (about 12.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* 3w  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* D

### Minor Components

#### Leton

*Percent of map unit:* 6 percent  
*Landform:* Flats, drainageways

#### Kaplan

*Percent of map unit:* 4 percent  
*Landform:* Ridges

#### Vidrine

*Percent of map unit:* 3 percent  
*Landform:* Ridges, flats  
*Microfeatures of landform position:* Mounds

#### Midland

*Percent of map unit:* 2 percent  
*Landform:* Flats, depressions

#### Crowley

*Percent of map unit:* 2 percent  
*Landform:* Ridges

#### Mowata

*Percent of map unit:* 1 percent  
*Landform:* Drainageways, flats

## Mt—Mowata-Vidrine complex, 0 to 1 percent slopes

### Map Unit Setting

*National map unit symbol:* 2thq6  
*Elevation:* 10 to 80 feet  
*Mean annual precipitation:* 59 to 66 inches

## Custom Soil Resource Report

*Mean annual air temperature:* 67 to 72 degrees F  
*Frost-free period:* 240 to 304 days  
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Mowata and similar soils:* 60 percent  
*Vidrine and similar soils:* 30 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Mowata

#### Setting

*Landform:* Drainageways  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Parent material:* Late pleistocene age loamy fluviomarine deposits derived from igneous, metamorphic and sedimentary rock

#### Typical profile

*Ap - 0 to 8 inches:* silt loam  
*Eg - 8 to 18 inches:* silt loam  
*Btg/E - 18 to 34 inches:* clay loam  
*Btg - 34 to 80 inches:* silty clay

#### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Poorly drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* About 0 to 24 inches  
*Frequency of flooding:* Rare  
*Frequency of ponding:* None  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* High (about 11.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* D

### Description of Vidrine

#### Setting

*Landform:* Flats  
*Landform position (three-dimensional):* Rise  
*Microfeatures of landform position:* Mounds  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Loamy eolian deposits over clayey fluviomarine deposits of pleistocene age

## Custom Soil Resource Report

### Typical profile

*A - 0 to 6 inches:* silt loam  
*E - 6 to 19 inches:* silt loam  
*Bt/E - 19 to 22 inches:* silt loam  
*Btg - 22 to 60 inches:* silty clay  
*BCtg - 60 to 80 inches:* silty clay loam

### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Somewhat poorly drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.01 in/hr)  
*Depth to water table:* About 14 to 24 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Salinity, maximum in profile:* Nonsaline (0.0 to 1.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 8.0  
*Available water storage in profile:* High (about 10.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* D

### Minor Components

#### Crowley

*Percent of map unit:* 3 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Riser  
*Microfeatures of landform position:* Bars  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear

#### Leton

*Percent of map unit:* 3 percent  
*Landform:* Depressions  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave

#### Elderly

*Percent of map unit:* 2 percent  
*Landform:* Flats  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave

#### Midland

*Percent of map unit:* 2 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Microfeatures of landform position:* Open depressions  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave



## Custom Soil Resource Report

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## Geyer, Joshua

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**From:** Mouton, Mitchell - NRCS, ALEXANDRIA, LA <mitchell.mouton@la.usda.gov>  
**Sent:** Wednesday, August 10, 2016 2:30 PM  
**To:** Castille, Barbara  
**Cc:** Woods, Will; Batiste, Katherine; Adams, Gabriel; Geyer, Joshua  
**Subject:** RE: Brine Disposal Pipeline Replacement Project - Strategic Petroleum Reserve - West Hackberry Facility - Cameron Parish, Louisiana

Thank you very much.

-Mitchell

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**From:** Castille, Barbara [<mailto:blcastille@sbinfra.com>]  
**Sent:** Tuesday, August 09, 2016 5:11 PM  
**To:** Mouton, Mitchell - NRCS, ALEXANDRIA, LA <[mitchell.mouton@la.usda.gov](mailto:mitchell.mouton@la.usda.gov)>  
**Cc:** Woods, Will <[Will.Woods@spr.doe.gov](mailto:Will.Woods@spr.doe.gov)>; Batiste, Katherine <[Katherine.Batiste@spr.doe.gov](mailto:Katherine.Batiste@spr.doe.gov)>; Adams, Gabriel <[Gabriel.Adams@spr.doe.gov](mailto:Gabriel.Adams@spr.doe.gov)>; Geyer, Joshua <[jageyer@sbinfra.com](mailto:jageyer@sbinfra.com)>  
**Subject:** RE: Brine Disposal Pipeline Replacement Project - Strategic Petroleum Reserve - West Hackberry Facility - Cameron Parish, Louisiana

Mr. Mouton—

We are pleased to provide you with the GIS shape files for the brine disposal pipeline replacement project as requested. For your review, we have attached 4 files. The 1<sup>st</sup> file contains an overview map for use with the GIS shape files. The 2nd file contains the GIS shape files. The shape files represent the maximum area of proposed disturbance along the pipeline corridor which includes the existing pipeline easement, the immediately adjacent proposed pipeline easement and a temporary construction easement. The 3<sup>rd</sup> file contains the Web Soil Survey soil information for the project area. The 4<sup>th</sup> file contains the Web Soil Survey prime farmland soils for the project area.

If you have any questions following your review of the attached information, please let me know or feel free to contact Gabriel Adams.

Thank you for your review of this important project.

Sincerely,

Barbara

**Barbara Castille**  
Manager, Environmental Planning

**S&B Infrastructure, Ltd.**  
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**From:** Adams, Gabriel [<mailto:Gabriel.Adams@spr.doe.gov>]  
**Sent:** Monday, August 08, 2016 10:49 AM  
**To:** Castille, Barbara; Fogle, William  
**Cc:** Woods, Will; Batiste, Katherine; Wesley, Louis; Sevcik, Bob  
**Subject:** FW: Brine Disposal Pipeline Replacement Project - Strategic Petroleum Reserve - West Hackberry Facility - Camercon Parish, Louisiana  
**Importance:** High

Barbara,

Please see the email below from the NRCS for Louisiana.

Please advise.

Gabriel Adams, REM | **Fluor Federal Petroleum Operations, LLC** | Pollution Prevention Specialist, Environmental Department |  
*Contractor to the U. S. Department of Energy SPR* | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

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**From:** Woods, Will  
**Sent:** Monday, August 08, 2016 10:25 AM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>  
**Subject:** FW: Brine Disposal Pipeline Replacement Project - Strategic Petroleum Reserve - West Hackberry Facility - Camercon Parish, Louisiana

Gabe: Please forward as appropriate and cc me.

---

**From:** Mouton, Mitchell - NRCS, ALEXANDRIA, LA [<mailto:mitchell.mouton@la.usda.gov>]  
**Sent:** Monday, August 08, 2016 9:56 AM  
**To:** Woods, Will <[Will.Woods@SPR.DOE.GOV](mailto:Will.Woods@SPR.DOE.GOV)>  
**Subject:** Brine Disposal Pipeline Replacement Project - Strategic Petroleum Reserve - West Hackberry Facility - Camercon Parish, Louisiana

Mr. Woods,

For the above referenced project do you have a GIS Shapefile that will have the location of the 50-100 feet of land adjacent to the existing pipeline that will be permanently converted to additional right-of-way? I need to be able to determine the soil type and acreage for this area.

Thanks,

**Mitchell Mouton**  
Assistant State Soil Scientist  
USDA-NRCS Soils Section  
3737 Government Street  
Work (318) 473-7789  
Work Cell (337) 412-9304  
Email: [mitchell.mouton@la.usda.gov](mailto:mitchell.mouton@la.usda.gov)

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## Castille, Barbara

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**From:** Adams, Gabriel <Gabriel.Adams@spr.doe.gov>  
**Sent:** Tuesday, August 16, 2016 6:23 AM  
**To:** Castille, Barbara  
**Cc:** Fogle, William; Geyer, Joshua  
**Subject:** FW: USDA Natural Resources Conservation Service - WH Brine Pipeline Replacement Project  
**Attachments:** FFPA Review Depart of Natural REsources Conservation Service.pdf

Barbara,

Another agency response.

Regards,

Gabriel Adams, REM | **Fluor Federal Petroleum Operations, LLC** | Pollution Prevention Specialist, Environmental Department |

Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

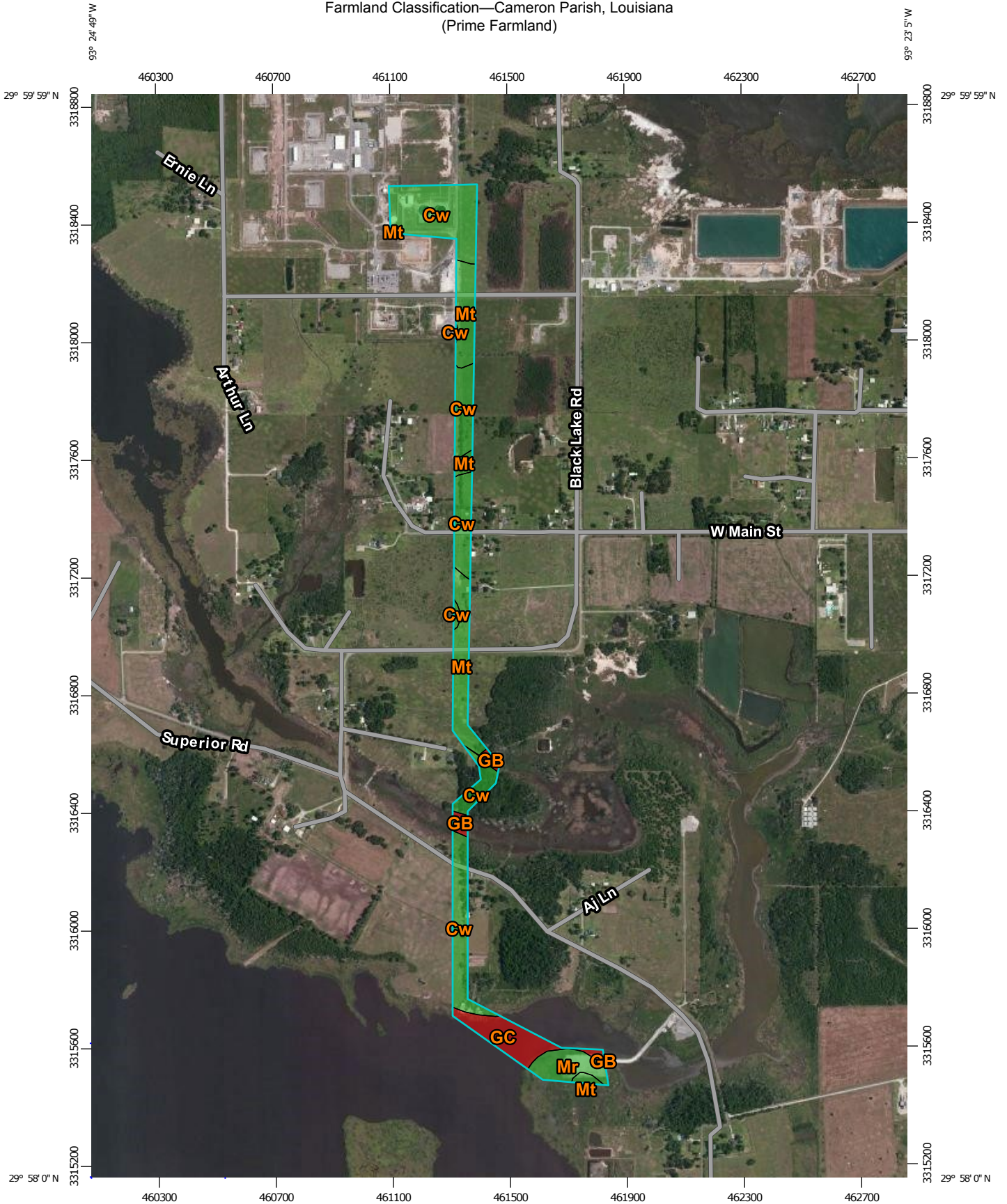
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**From:** Woods, Will  
**Sent:** Monday, August 15, 2016 1:18 PM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>  
**Cc:** Batiste, Katherine <[Katherine.Batiste@SPR.DOE.GOV](mailto:Katherine.Batiste@SPR.DOE.GOV)>  
**Subject:** USDA Natural Resources Conservation Service - WH Brine Pipeline Replacement Project

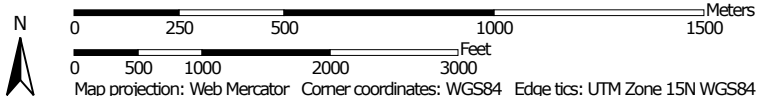
For your action as appropriate.

I received the attached documents this morning from the USDA, Natural Resources Conservation Service, regarding the WH Brine Pipeline Replacement Project.

Farmland Classification—Cameron Parish, Louisiana  
(Prime Farmland)



Map Scale: 1:18,000 if printed on A portrait (8.5" x 11") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

Farmland Classification—Cameron Parish, Louisiana  
(Prime Farmland)









**MAP LEGEND**








**Area of Interest (AOI)**

 Area of Interest (AOI)




**Soils**








**Soil Rating Polygons**






-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available







**Soil Rating Lines**










-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained

-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

**Soil Rating Points**

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season


-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

**Water Features**




Farmland Classification—Cameron Parish, Louisiana  
(Prime Farmland)

## MAP INFORMATION

 Streams and Canals


### Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cameron Parish, Louisiana  
Survey Area Data: Version 13, Sep 28, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2011—May 26, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Farmland Classification

Farmland Classification— Summary by Map Unit — Cameron Parish, Louisiana (LA023)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Cw	Crowley-Vidrine complex, 0 to 1 percent slopes	All areas are prime farmland	35.4	54.4%
GB	Ged mucky clay	Not prime farmland	1.6	2.4%
GC	Gentilly muck, 0 to 0.5 percent slopes, very frequently flooded	Not prime farmland	7.6	11.7%
Mr	Edgerly loam, 0 to 1 percent slopes	All areas are prime farmland	5.3	8.2%
Mt	Mowata-Vidrine complex, 0 to 1 percent slopes	All areas are prime farmland	15.2	23.3%
<b>Totals for Area of Interest</b>			<b>65.0</b>	<b>100.0%</b>

### Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

### Rating Options

*Aggregation Method:* No Aggregation Necessary

*Tie-break Rule:* Lower



August 10, 2016

Mr. Will Woods  
Environmental Specialist - Department of Energy  
SPR Project Management Office  
Environmental, Safety, and Health Division  
900 Commerce Road East  
New Orleans, LA 70123

RE: Brine Disposal Pipeline Replacement Project - Strategic Petroleum Reserve  
West Hackberry Facility, Cameron Parish, Louisiana

Dear Mr. Woods:

I have reviewed the above referenced project for potential requirements of the Farmland Protection Policy Act (FPPA) and potential impact to Natural Resource Conservation Service projects in the immediate vicinity.

Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

The project map and narrative submitted with your request indicates that the proposed new pipeline will potentially impact the following prime or unique farmland soils:

Soil Mapunit Symbol and Name	Acres	RV
Cw – Crowley-Vidrine complex, 0 to 1 percent slopes	17.5	87
Mr – Edgerly loam, 0 to 1 percent slopes	0.5	100
Mt – Mowata-Vidrine complex, 0 to 1 percent slopes	8.3	87
	26.3	Avg. RV 87

Please find attached a CPA-106 'Farmland Conversion Impact Rating for Corridor Type Projects' form with our agencies information completed. Furthermore, we do not predict impacts to NRCS work in the vicinity.

For specific information about the soils found in the project area, please visit our Web Soil Survey at the following location: <http://websoilsurvey.nrcs.usda.gov/>. Also, for more information on FPPA requirements or the process to receive a Farmland Conversion Impact Rating (Form AD-1006 or CPA-106) please visit the following location: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/>

Please direct all future correspondence to me at the address shown below.

Respectfully,

Acting for: Kevin Norton  
State Conservationist

Attachment

FARMLAND CONVERSION IMPACT RATING  
FOR CORRIDOR TYPE PROJECTS

<b>PART I (To be completed by Federal Agency)</b>		3. Date of Land Evaluation Request 8/5/16	4. Sheet 1 of _____
1. Name of Project Brine Disposal Pipeline Replacement Project	5. Federal Agency Involved Department of Energy		
2. Type of Project New Pipeline	6. County and State Cameron Parish, Louisiana		

<b>PART II (To be completed by NRCS)</b>		1. Date Request Received by NRCS 8/6/16	2. Person Completing Form M. Mouton
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input checked="" type="checkbox"/> NO <input checked="" type="checkbox"/>		4. Acres Irrigated   Average Farm Size 590	
5. Major Crop(s) Rice and Soybeans	6. Farmable Land in Government Jurisdiction Acres: 566,352 % 76	7. Amount of Farmland As Defined in FPPA Acres: 500,847 % 72	
8. Name Of Land Evaluation System Used Cameron Parish LESA	9. Name of Local Site Assessment System N/A	10. Date Land Evaluation Returned by NRCS 8/10/16	

<b>PART III (To be completed by Federal Agency)</b>	Alternative Corridor For Segment _____			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly				
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres In Corridor				

<b>PART IV (To be completed by NRCS) Land Evaluation Information</b>				
A. Total Acres Prime And Unique Farmland	26.3			
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	<0.0001			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	16.3			

<b>PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)</b>	87			
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<b>PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))</b>	Maximum Points				
1. Area in Nonurban Use	15				
2. Perimeter in Nonurban Use	10				
3. Percent Of Corridor Being Farmed	20				
4. Protection Provided By State And Local Government	20				
5. Size of Present Farm Unit Compared To Average	10				
6. Creation Of Nonfarmable Farmland	25				
7. Availability Of Farm Support Services	5				
8. On-Farm Investments	20				
9. Effects Of Conversion On Farm Support Services	25				
10. Compatibility With Existing Agricultural Use	10				
<b>TOTAL CORRIDOR ASSESSMENT POINTS</b>	160	0	0	0	0

<b>PART VII (To be completed by Federal Agency)</b>					
Relative Value Of Farmland (From Part V)	100	87	0	0	0
Total Corridor Assessment (From Part VI above or a local site assessment)	160	0	0	0	0
<b>TOTAL POINTS (Total of above 2 lines)</b>	260	87	0	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>
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5. Reason For Selection:

Signature of Person Completing this Part: \_\_\_\_\_ DATE \_\_\_\_\_

NOTE: Complete a form for each segment with more than one Alternate Corridor

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**CORRIDOR - TYPE SITE ASSESSMENT CRITERIA**

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

More than 90 percent - 15 points  
90 to 20 percent - 14 to 1 point(s)  
Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?

More than 90 percent - 10 points  
90 to 20 percent - 9 to 1 point(s)  
Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

More than 90 percent - 20 points  
90 to 20 percent - 19 to 1 point(s)  
Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site is protected - 20 points  
Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ?

(Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)

As large or larger - 10 points  
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project - 25 points  
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)  
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available - 5 points  
Some required services are available - 4 to 1 point(s)  
No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment - 20 points  
Moderate amount of on-farm investment - 19 to 1 point(s)  
No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted - 25 points  
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)  
No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points  
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)  
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

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## Geyer, Joshua

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**From:** Castille, Barbara  
**Sent:** Tuesday, August 30, 2016 4:02 PM  
**To:** kevin.norton@la.usda.gov  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov); Batiste, Katherine (Katherine.Batiste@spr.doe.gov); Woods, Will (Will.Woods@spr.doe.gov); Geyer, Joshua  
**Subject:** FW: USDA Natural Resources Conservation Service - WH Brine Pipeline Replacement Project  
**Attachments:** FPPA Review Depart of Natural REsources Conservation Service.pdf; NRCS\_CPA\_106 Form\_toKNorton\_083016\_FINAL.pdf

Mr. Norton—

Attached for your review is the completed Farmland Conversion Impact Rating Form For Corridor Type Projects (NRCS-CPA-106). This form was completed for the proposed West Hackberry Brine Disposal Pipeline Replacement Project located in Hackberry, Louisiana.

If you have any questions as you review the form, please feel free to contact Mr. Will Woods or Mr. Gabriel Adams at the email addresses listed on this email.

Many thanks,

Barbara

**Barbara Castille**  
Manager, Environmental Planning

**S&B Infrastructure, Ltd.**  
530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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**From:** Adams, Gabriel [<mailto:Gabriel.Adams@spr.doe.gov>]  
**Sent:** Tuesday, August 16, 2016 6:23 AM  
**To:** Castille, Barbara  
**Cc:** Fogle, William; Geyer, Joshua  
**Subject:** FW: USDA Natural Resources Conservation Service - WH Brine Pipeline Replacement Project

Barbara,

Another agency response.

Regards,

Gabriel Adams, REM | [Fluor Federal Petroleum Operations, LLC](#) | Pollution Prevention Specialist, Environmental Department |  
Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

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**From:** Woods, Will

**Sent:** Monday, August 15, 2016 1:18 PM

**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>

**Cc:** Batiste, Katherine <[Katherine.Batiste@SPR.DOE.GOV](mailto:Katherine.Batiste@SPR.DOE.GOV)>

**Subject:** USDA Natural Resources Conservation Service - WH Brine Pipeline Replacement Project

For your action as appropriate.

I received the attached documents this morning from the USDA, Natural Resources Conservation Service, regarding the WH Brine Pipeline Replacement Project.

**FARMLAND CONVERSION IMPACT RATING  
FOR CORRIDOR TYPE PROJECTS**

<b>PART I (To be completed by Federal Agency)</b>		3. Date of Land Evaluation Request <b>8/5/16</b>	4. Sheet 1 of _____
1. Name of Project <b>Brine Disposal Pipeline Replacement Project</b>		5. Federal Agency Involved <b>Department of Energy</b>	
2. Type of Project <b>New Pipeline</b>		6. County and State <b>Cameron Parish, Louisiana</b>	
<b>PART II (To be completed by NRCS)</b>		1. Date Request Received by NRCS <b>8/6/16</b>	2. Person Completing Form <b>M. Mouton</b>
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated   Average Farm Size <b>590</b>	
5. Major Crop(s) <b>Rice and Soybeans</b>	6. Farmable Land in Government Jurisdiction Acres: <b>566,352</b> % <b>76</b>		7. Amount of Farmland As Defined in FPPA Acres: <b>500,847</b> % <b>72</b>
8. Name Of Land Evaluation System Used <b>Cameron Parish LESA</b>	9. Name of Local Site Assessment System <b>N/A</b>	10. Date Land Evaluation Returned by NRCS <b>8/10/16</b>	

<b>PART III (To be completed by Federal Agency)</b>	<b>Alternative Corridor For Segment</b>			
	<b>Corridor A</b>	<b>Corridor B</b>	<b>Corridor C</b>	<b>Corridor D</b>
A. Total Acres To Be Converted Directly	<b>0</b>			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	<b>0</b>			
C. Total Acres In Corridor	<b>32.93</b>			

<b>PART IV (To be completed by NRCS) Land Evaluation Information</b>	
A. Total Acres Prime And Unique Farmland	<b>26.3</b>
B. Total Acres Statewide And Local Important Farmland	
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	<b>&lt;0.0001</b>
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	<b>16.3</b>

<b>PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)</b>	
	<b>87</b>

<b>PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))</b>	Maximum Points				
1. Area in Nonurban Use	15	<b>13</b>			
2. Perimeter in Nonurban Use	10	<b>9</b>			
3. Percent Of Corridor Being Farmed	20	<b>0</b>			
4. Protection Provided By State And Local Government	20	<b>0</b>			
5. Size of Present Farm Unit Compared To Average	10	<b>0</b>			
6. Creation Of Nonfarmable Farmland	25	<b>0</b>			
7. Availability Of Farm Support Services	5	<b>5</b>			
8. On-Farm Investments	20	<b>0</b>			
9. Effects Of Conversion On Farm Support Services	25	<b>0</b>			
10. Compatibility With Existing Agricultural Use	10	<b>0</b>			
<b>TOTAL CORRIDOR ASSESSMENT POINTS</b>	<b>160</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>

<b>PART VII (To be completed by Federal Agency)</b>					
Relative Value Of Farmland (From Part V)	100	<b>87</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total Corridor Assessment (From Part VI above or a local site assessment)	160	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL POINTS (Total of above 2 lines)</b>	<b>260</b>	<b>114</b>	<b>0</b>	<b>0</b>	<b>0</b>

1. Corridor Selected: <b>Corridor A</b>	2. Total Acres of Farmlands to be Converted by Project: <b>0.00</b>	3. Date Of Selection: <b>8/30/16</b>	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>
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5. Reason For Selection:  
**The Build Alternative and the No Build Alternative were the only alternatives advanced for study. The No Build Alternative would not meet the purpose and need of the proposed brine disposal pipeline replacement project. The proposed pipeline will be located immediately adjacent to the existing pipeline. All Prime and Unique Farmland within the project area is utilized for pastureland, transportation corridors, residential structures and the SPR Facility. No property designated as Prime and Unique Farmland, within the project area, is actively utilized for crop production or farming.**

Signature of Person Completing this Part: **Josh Geyer and Barbara Castille** DATE **8/30/16**

NOTE: Complete a form for each segment with more than one Alternate Corridor

## CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

More than 90 percent - 15 points  
90 to 20 percent - 14 to 1 point(s)  
Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?

More than 90 percent - 10 points  
90 to 20 percent - 9 to 1 point(s)  
Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

More than 90 percent - 20 points  
90 to 20 percent - 19 to 1 point(s)  
Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site is protected - 20 points  
Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ?

(Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)  
As large or larger - 10 points  
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project - 25 points  
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)  
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available - 5 points  
Some required services are available - 4 to 1 point(s)  
No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment - 20 points  
Moderate amount of on-farm investment - 19 to 1 point(s)  
No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted - 25 points  
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)  
No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points  
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)  
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

---

## Geyer, Joshua

---

**From:** Adams, Gabriel <Gabriel.Adams@spr.doe.gov>  
**Sent:** Monday, September 12, 2016 11:49 AM  
**To:** Castille, Barbara  
**Subject:** FW: NMFS letter drsp Sep 12, 2016, RE: EA for proposed "Brine Disposal Pipeline Project, West Hackberry Facility" (Docket No. 16-ESH-006) by undated letter  
**Attachments:** NMFS letter drsp Sep 12, 2016, EA for proposed "Brine Disposal Pipeline Project, West Hackberry Facility" (Docket No. 16-ESH-006) by undated letter.pdf  
**Importance:** High  
**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Here is a new letter.

Gabriel Adams, REM | [Fluor Federal Petroleum Operations, LLC](#) | Pollution Prevention Specialist, Environmental Department |  
Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

**From:** Jan Koellen - NOAA Federal [<mailto:jan.koellen@noaa.gov>]  
**Sent:** Monday, September 12, 2016 11:32 AM  
**To:** Woods, Will <[Will.Woods@SPR.DOE.GOV](mailto:Will.Woods@SPR.DOE.GOV)>  
**Cc:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>; Rusty Swafford <[rusty.swafford@noaa.gov](mailto:rusty.swafford@noaa.gov)>; David Dale <[david.dale@noaa.gov](mailto:david.dale@noaa.gov)>; Sharon Rolfes <[Sharon.Rolfes@noaa.gov](mailto:Sharon.Rolfes@noaa.gov)>  
**Subject:** NMFS letter drsp Sep 12, 2016, RE: EA for proposed "Brine Disposal Pipeline Project, West Hackberry Facility" (Docket No. 16-ESH-006) by undated letter

See attached.

--  
Jan Koellen  
Office Automation  
Baton Rouge Office  
NOAA NMFS HCD  
225-389-0508x202  
[jan.koellen@noaa.gov](mailto:jan.koellen@noaa.gov)





UNITED STATES DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office

263 13th Avenue South

St. Petersburg, Florida 33701-5505

<http://sero.nmfs.noaa.gov>

September 12, 2016 F/SER46/BH:jk  
225/389-0508

Mr. Will Woods, Project Manager  
U.S. Department of Energy  
900 Commerce East  
New Orleans, Louisiana 70123

Dear Mr. Woods:

NOAA's National Marine Fisheries Service (NMFS) has received an undated letter from Mr. William Gibson of the Department of Energy (DOE) announcing their plans to prepare an Environmental Assessment (EA) for the proposed "**Brine Disposal Pipeline Project, West Hackberry Facility**" (Docket No. 16-ESH-006). The DOE proposes to replace an existing brine disposal pipeline between the Strategic Petroleum Reserve West Hackberry facility and associated brine injection well near Hackberry in Cameron Parish, Louisiana. The DOE is requesting comments on resources and issues to be addressed in the EA for this proposed action.

Wetlands potentially impacted by construction of the project consist of saline to brackish marsh vegetated with saltgrass, smooth cordgrass, and marshhay cordgrass. Depending on the tidal connectivity and location of the wetlands in the project area, they could be categorized as essential fish habitat (EFH) for postlarval and/or juvenile life stages of white shrimp, brown shrimp, gray snapper, lane snapper, and red drum. Primary categories of EFH which may be in the project area include estuarine emergent wetlands, estuarine water column, and estuarine mud bottoms. Detailed information on EFH for federally managed fishery species is provided in the 2005 generic amendment of the Fishery Management Plans for the Gulf of Mexico prepared by the Gulf of Mexico Fishery Management Council (GMFMC). The generic amendment was prepared as required by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; P.L. 104-297).

In addition to being designated as EFH, wetlands in the project area provide nursery and foraging habitats supportive of a variety of economically important marine fishery species, including striped mullet, Atlantic croaker, gulf menhaden, spotted and sand seatrout, southern flounder, and blue crab. Some of these species serve as prey for other fish species managed under the Magnuson-Stevens Act by the GMFMC (e.g., mackerels, snappers, and groupers) and highly migratory species managed by the NMFS (e.g., billfishes and sharks). These wetlands also produce nutrients and detritus, important components of the aquatic food web, which contribute to the overall productivity of the Calcasieu Lake estuary. We recommend the EA fully describe the use of various habitats in the project area by these species.

To fully address EFH and estuarine-dependent fisheries of the project area, we recommend the EA include sections titled "Essential Fish Habitat" and "Fishery Resources" which describe the potential impacts of the proposed project on the various categories of EFH and non-tidal wetlands and on marine fishery species within the project area. The EFH section should analyze the



potential impacts of the proposed project on federally managed species and life stages utilizing these categories of EFH and fully evaluate alternative measures to avoid, minimize, and offset adverse impacts to EFH and marine fishery species. Descriptive and analytical information, coupled with a statement of the DOE's conclusions regarding the effects of the action on EFH and marine fishery species would provide the basic details necessary for an EFH assessment pursuant to the requirements of 50 CFR 600.920(e).

The NMFS recommends a section titled "Mitigation" be included in the EA which discusses measures to avoid, minimize, and offset impacts to EFH and non-tidal wetlands. The EA should not assume all wetland areas disturbed "temporarily" by installation of the pipeline will return to pre-existing conditions. Rather, the EA should include a monitoring plan to evaluate the degree to which areas impacted by project implementation recover from construction activities. Additionally, the EA should discuss compensatory mitigation alternatives for all wetland areas which do not fully recover from project implementation. If specifics of the mitigation plan are not included in the draft EA, the document should clearly state any compensatory mitigation plan to offset impacts to EFH or non-tidal wetlands would be developed in consultation with NMFS, and would include monitoring components, success criteria, and an identification of additional steps which might be necessary to ensure mitigation success.

We appreciate your consideration of our comments and request notification once the EA is published. If you wish to discuss this project further or have questions concerning our recommendations, please contact Brandon Howard at (225) 389-0508, extension 207.

Sincerely,

A handwritten signature in blue ink that reads "Virginia M. Fay". The signature is written in a cursive, flowing style.

Virginia M. Fay  
Assistant Regional Administrator  
Habitat Conservation Division

c:  
DOE, Gabriel Adams  
F/SER46, Swafford  
F/SER4, Dale, Rolfes  
Files

## Geyer, Joshua

---

**From:** Adams, Gabriel <Gabriel.Adams@spr.doe.gov>  
**Sent:** Thursday, September 15, 2016 7:35 AM  
**To:** Westbrook, Thomas; Wesley, Louis; Sevcik, Bob; Castille, Barbara  
**Cc:** Woods, Will; Batiste, Katherine  
**Subject:** FW: C20160130 DOE Strategic Petroleum Reserve  
**Attachments:** C20160130 let DOE SPR.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Please see.

Gabriel Adams, REM | [Fluor Federal Petroleum Operations, LLC](#) | Pollution Prevention Specialist, Environmental Department |  
Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

---

**From:** Jeff Harris [<mailto:Jeff.Harris@LA.GOV>]  
**Sent:** Thursday, September 15, 2016 7:30 AM  
**To:** Gibson, Hoot <[Hoot.Gibson@SPR.DOE.GOV](mailto:Hoot.Gibson@SPR.DOE.GOV)>  
**Cc:** Woods, Will <[Will.Woods@SPR.DOE.GOV](mailto:Will.Woods@SPR.DOE.GOV)>; Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>; [darrell.barbara@usace.army.mil](mailto:darrell.barbara@usace.army.mil); Rod Pierce <[Rod.Pierce@LA.GOV](mailto:Rod.Pierce@LA.GOV)>; [kb\\_cppi@camtel.net](mailto:kb_cppi@camtel.net); Dave Butler <[dbutler@wlf.la.gov](mailto:dbutler@wlf.la.gov)>  
**Subject:** C20160130 DOE Strategic Petroleum Reserve

Mr. Gibson—

In response to your request, please find the attached comment letter from the Louisiana Department of Natural Resources, Office of Coastal Management, in regards to the proposed replacement of a brine disposal pipeline at the West Hackberry SPR facility.

Please write or call if there are any questions.

Thank you,

--Jeff

Jeff Harris  
Consistency Section  
Office of Coastal Management  
Louisiana Department of Natural Resources  
(225) 342-7949

---

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State of Louisiana  
DEPARTMENT OF NATURAL RESOURCES  
OFFICE OF COASTAL MANAGEMENT

September 15, 2016

William C. Gibson, Jr.  
Department of Energy  
Strategic Petroleum Reserve  
Project Management Office  
900 Commerce East  
New Orleans, LA 70123  
Via e-mail: [william.gibson@spr.doe.gov](mailto:william.gibson@spr.doe.gov)

Re: **C20160130 Coastal Zone Consistency**  
Department of Energy Strategic Petroleum Reserve (SPR)  
Direct Federal Action  
Brine Disposal Pipeline Replacement Project, Strategic Petroleum Reserve, West  
Hackberry Facility, **Cameron Parish**

Dear Mr. Gibson:

The Louisiana Department of Natural Resources, Office of Coastal Management (OCM), has reviewed your letter, received August 8, 2016, requesting comments on the referenced project (copy attached for your reference).

The Department of Energy (DOE) intends to prepare an Environmental Assessment (EA) for the replacement of an existing brine disposal pipeline near Hackberry, Louisiana. The proposed activity includes abandonment-in-place of the existing 2.1-mile brine pipeline; installation of a new pipeline along an adjacent path; and acquisition of permanent and temporary Rights of Way for the pipeline and construction activities, respectively.

These actions will occur within the Louisiana coastal zone and so will, at the appropriate planning stage, require consistency review by OCM pursuant to the Coastal Zone Management Act of 1970, as amended (CZMA).

Broadly, OCM is concerned with any reasonably foreseeable effects on the land use, water use, or natural resources of the coastal zone. Of particular concern is the prevention of the loss of wetlands. Your consistency determination and EA should address the measures to be taken to avoid and minimize the adverse impacts to coastal wetlands. Compensatory mitigation will be required for any unavoidable losses to habitat value, including indirect and cumulative losses.

It is the policy of OCM that all pipelines in the coastal zone are to be removed upon decommissioning; therefore the proposed abandonment in place of the existing brine pipeline is



C20160130  
William Gibson, Jr.  
September 15, 2016  
Page 2

unlikely to be found to be consistent with the Louisiana Coastal Resources Program. DOE should instead plan to remove the pipeline, and evaluate the resulting environmental impacts as well as those of the installation of its replacement.

OCM appreciates the opportunity to provide comments at this early stage of project planning. Please notify our office of the availability of the draft EA for review. If you should have any questions on this matter, please contact Jeff Harris of the Consistency Section at (225) 342-7949 or [Jeff.Harris@LA.gov](mailto:Jeff.Harris@LA.gov).

Sincerely yours,

**/S/ Don Haydel**  
Acting Administrator  
Interagency Affairs/Field Services Division

DH/SK/jdh

#### **ATTACHMENT**

cc: Will Woods, PMO  
Gabriel Adams, FFPO  
Darrell Barbara, COE-NOD  
Rod Peirce, OCM/FI  
Kara Bonsall, Cameron Parish  
Dave Butler, LDWF



Department of Energy  
Strategic Petroleum Reserve Project Management Office  
900 Commerce East  
New Orleans, Louisiana 70123

C20160130  
SOV  
JDH

16-ESH-006

Mr. Karl Morgan  
Louisiana Department of Natural Resources  
Office of Coastal Management  
Permits/Mitigation Division  
P.O. Box 44487  
Baton Rouge, LA 70821-4487

OFFICE OF COASTAL MANAGEMENT

2016 AUG - 8 PM 2: 04

RECEIVED

BRINE DISPOSAL PIPELINE REPLACEMENT PROJECT, STRATEGIC  
PETROLEUM RESERVE, WEST HACKBERRY FACILITY, CAMERON PARISH,  
LOUISIANA

Dear Mr. Morgan:

Pursuant to the National Environmental Policy Act, the United States Department of Energy (DOE) intends to prepare an Environmental Assessment (EA) for the proposed replacement of the existing brine disposal pipeline (the Pipeline) between the Strategic Petroleum Reserve (SPR) West Hackberry (WH) facility and the associated brine injection wells near Hackberry, Cameron Parish, Louisiana. Both the existing and proposed brine disposal pipelines are approximately 2.1 miles in length. The potential environmental impacts of this proposed project would be evaluated in conformance with DOE and Council on Environmental Quality (CEQ) regulations and provisions. A description of the WH facility and the proposed project are provided below.

The WH storage facility includes approximately 2.29 square kilometers (565 acres) of land atop the WH salt dome. The WH salt dome was selected as a storage site early in the SPR program as the existing brine caverns could be readily converted to oil storage as well as the site's optimal proximity to commercial marine and pipeline crude oil distribution facilities. The WH facility was developed by the DOE in 1977 to store petroleum products that may be presidentially ordered into the marketplace to alleviate the effects of a supply disruption to the United States. Brine is injected into and/or pumped out of the WH salt dome utilizing the Pipeline and brine injection wells when deemed necessary to fulfill mission requirements. The Pipeline which connects the WH facility to the brine injection wells was permitted in 1978 and began operation upon completion, and is near the end of the Pipeline's functional lifespan. The Pipeline is proposed to be replaced to allow for continued, optimum operations at the WH facility.

As part of the brine pipeline replacement project (proposed action), the DOE proposes to replace the Pipeline by installing a new brine disposal pipeline; the existing Pipeline would be abandoned-in-place. The new Pipeline would be installed adjacent to the existing pipeline except near Johnson Lane in which the current Pipeline traverses' property between two single-family residences.

Implementation of the proposed action would require the acquisition of new rights-of-way. The associated new land acquisition effort would consist of both perpetual pipeline easements required for the proposed replacement Pipeline, as well as temporary construction easements required for construction activities. Approximately 50-100 feet of land adjacent to the Pipeline would be required to install, operate, and maintain the replacement of Pipeline. One construction staging area would be located on a temporary construction easement contiguous to the Pipeline near the northern project limits. Additionally, a 25-foot temporary construction easement would be required along the Pipeline corridor.

The pipeline would traverse lands within the 100-year floodplain, wetlands and open water habitats associated with Black Lake. In accordance with 10 Code of Federal Regulations (CFR) Part 1022 (Compliance with Floodplain and Wetland Environmental Review Requirements), the DOE would prepare a floodplain and wetlands assessment as well as a statement of findings and would perform this proposed action in a manner so as to avoid or minimize potential harm to or within the affected floodplain or wetlands. The floodplain and wetlands assessment would be included in the EA prepared for the proposed action.

The Louisiana Department of Natural Resources has been identified as part of an outreach effort under National Environmental Protection Agency (NEPA) for a review of resources under your agency's jurisdiction. In this regard, DOE respectfully requests your comments regarding any potential impacts of this proposed project that should be considered during the preparation of the Environmental Assessment for this action. In your response to this request for input from your agency, please indicate if your agency would like to be notified of the availability of the draft EA for review.

Mr. Karl Morgan

3

Please direct any written comments or requests for additional information to Mr. Will Woods, Environmental Specialist, DOE, SPR Project Management Office (PMO), Environmental, Safety, and Health Division, 900 Commerce Road East, New Orleans, Louisiana 70123, or by email at [Will.Woods@spr.doe.gov](mailto:Will.Woods@spr.doe.gov). You may also contact Mr. Gabriel Adams, Fluor Federal Petroleum Operations (FFPO), Management and Operating Contractor, DOE, SPRPMO at (504) 734-4503, or by email at [Gabriel.Adams@spr.doe.gov](mailto:Gabriel.Adams@spr.doe.gov).

Thank you in advance for your expeditious attention to this project.

Sincerely,

A handwritten signature in black ink that reads "William C. Gibson, Jr." with a stylized flourish at the end.

William C. Gibson, Jr.  
Project Manager

FE-4441 (KBatiste)

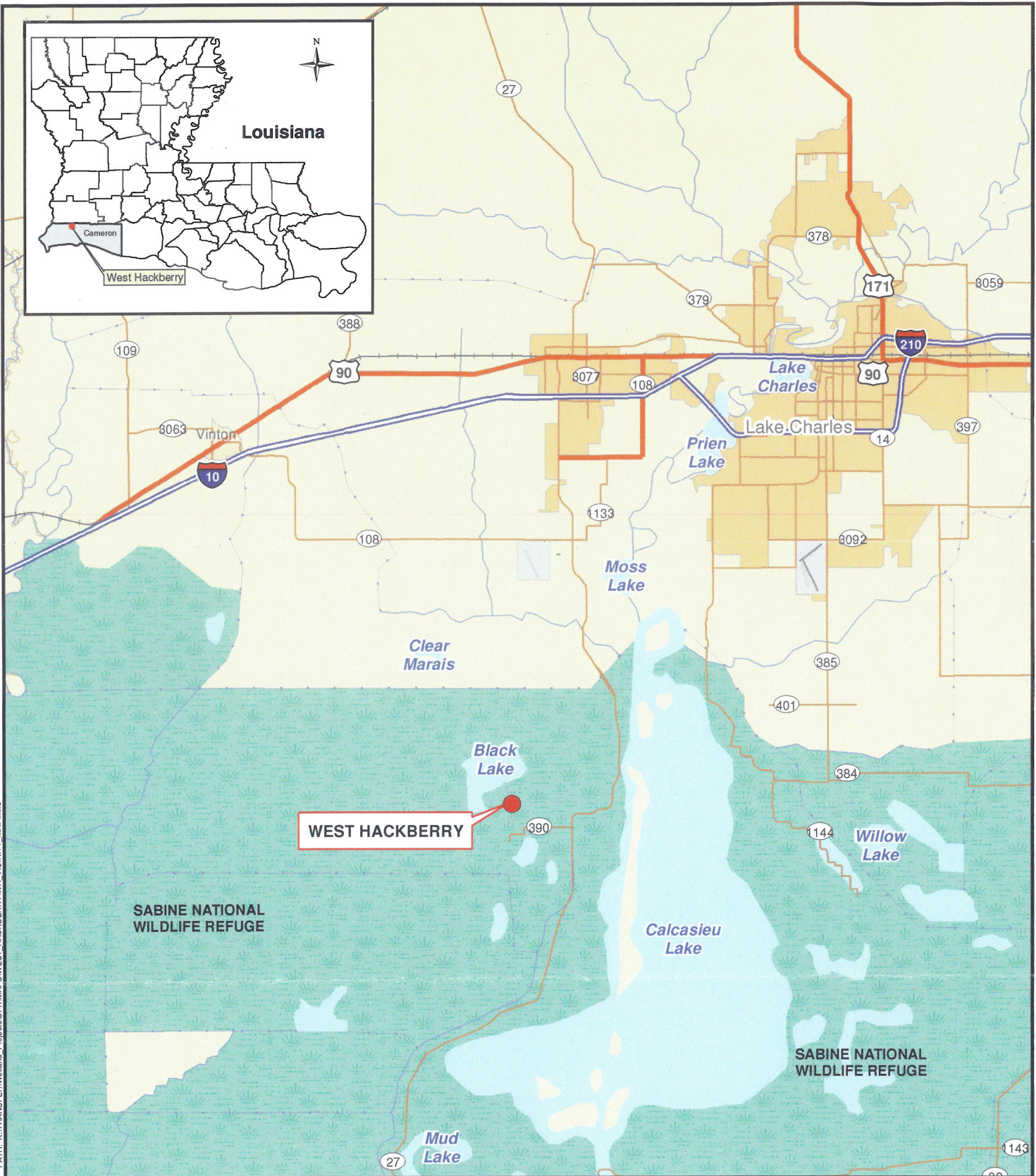
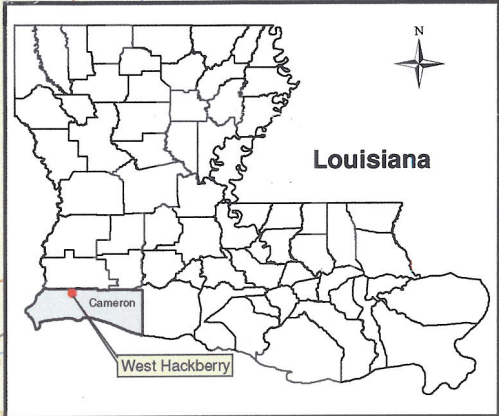
Enclosure

cc:

G. Adams, FFPO

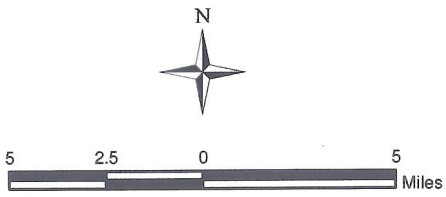
B. Castille, S&B





PATH: K:\TRANSFER\Wetland - Projects\SPR\MAPS\WEST HACKBERRY\WH\_VICINITY\_MAP.mxd

SOURCE: ESRI StreetMap USA



# EXHIBIT 1 VICINITY MAP

Brine Line Replacement Pipe Route Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana



## Geyer, Joshua

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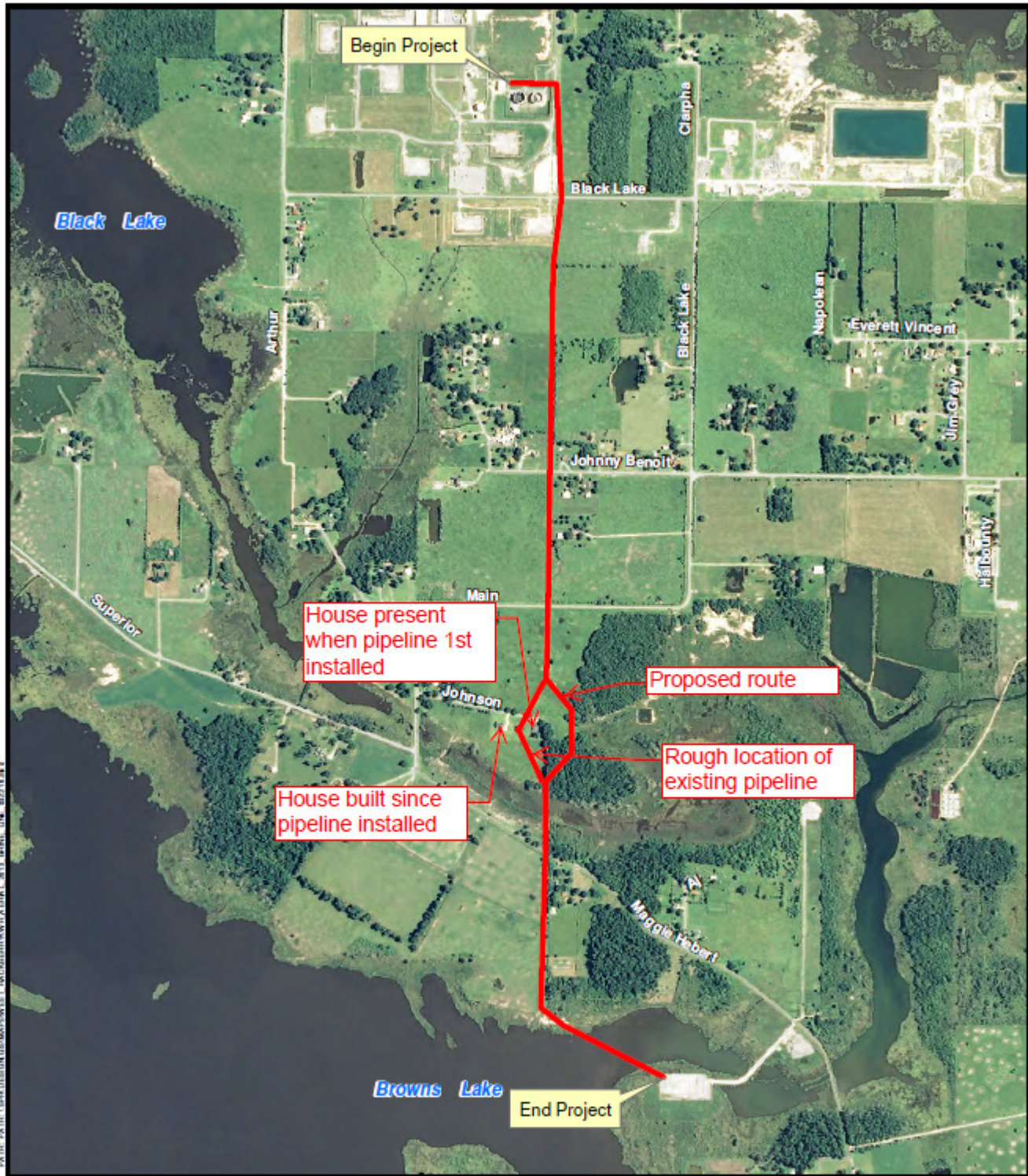
**From:** Adams, Gabriel <Gabriel.Adams@spr.doe.gov>  
**Sent:** Tuesday, October 04, 2016 1:40 PM  
**To:** Harris, Jeff  
**Cc:** Castille, Barbara; Fogle, William; Sevcik, Bob  
**Subject:** RE: DOE EA 2039 WH Brine Line Replacement LA DNR OCM C20160130

**Importance:** High

Jeff,

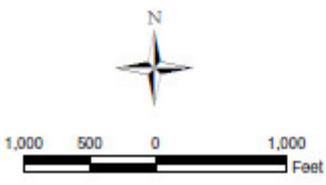
When you look at the red line route on the maps, that is the proposed route. Where the route jogs to the east of a house is where we propose to change from the original route. When the pipeline was originally installed, there was only one house and the pipeline jogged to the west of the house. Since that time a second house was built and that put a house on both sides of the pipeline, leading to the change to go to the east away from both houses.

Do you understand what I have said? If not, please let me know.



PATH: F:\3111-LEBR DESIGN\BRMAPSW\EST-IMAGE\2013\AERIAL\_2013\_BROWN\_LAKE\_021113\_004

SOURCE: USDA-NRIP, 2013



## EXHIBIT 4 AERIAL PHOTOGRAPH, 2013

Brine Disposal Pipeline Replacement Project  
 West Hackberry, Strategic Petroleum Reserve  
 Cameron Parish, Louisiana

Regards,

Gabriel Adams, REM | [Fluor Federal Petroleum Operations, LLC](#) | Pollution Prevention Specialist, Environmental Department |  
Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov)|O 504.734.4503|F 504.818.5503

---

**From:** Jeff Harris [<mailto:Jeff.Harris@LA.GOV>]  
**Sent:** Tuesday, September 27, 2016 3:29 PM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>  
**Subject:** RE: DOE EA 2039 WH Brine Line Replacement LA DNR OCM C20160130

More than enough, thanks. One question, though – As I recall the replacement would diverge from the route of the existing pipeline, for a part of the route. Have those details been worked out yet?

--Jeff

---

**From:** Adams, Gabriel [<mailto:Gabriel.Adams@SPR.DOE.GOV>]  
**Sent:** Tuesday, September 27, 2016 2:22 PM  
**To:** Jeff Harris  
**Cc:** Castille, Barbara; Sevcik, Bob  
**Subject:** RE: DOE EA 2039 WH Brine Line Replacement LA DNR OCM C20160130

Jeff,

Does this give you enough detail?

Please advise.

Gabriel Adams, REM | [Fluor Federal Petroleum Operations, LLC](#) | Pollution Prevention Specialist, Environmental Department |  
Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov)|O 504.734.4503|F 504.818.5503

---

**From:** Jeff Harris [<mailto:Jeff.Harris@LA.GOV>]  
**Sent:** Tuesday, September 27, 2016 2:09 PM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>  
**Subject:** RE: DOE EA 2039 WH Brine Line Replacement LA DNR OCM C20160130

6-7 MB for certain; maybe as much as 15? I'm not sure.

---

**From:** Adams, Gabriel [<mailto:Gabriel.Adams@SPR.DOE.GOV>]  
**Sent:** Tuesday, September 27, 2016 2:08 PM  
**To:** Jeff Harris  
**Subject:** RE: DOE EA 2039 WH Brine Line Replacement LA DNR OCM C20160130

What is the size limit on your email server for attachments?

Thanks,

Gabriel Adams, REM | [Fluor Federal Petroleum Operations, LLC](#) | Pollution Prevention Specialist, Environmental Department |  
Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov)|O 504.734.4503|F 504.818.5503



---

**From:** Jeff Harris [<mailto:Jeff.Harris@LA.GOV>]  
**Sent:** Tuesday, September 27, 2016 2:04 PM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>  
**Subject:** Re: DOE EA 2039 WH Brine Line Replacement LA DNR OCM C20160130

Thanks, Gabriel.

If there's no objection, I'll be inviting the Consistency Section supervisor, Sara Krupa, and the Interagency Affairs Program Administrator Charles Reulet, to sit in as well.

It would be helpful if we had a plat showing the route of the current and proposed pipelines ahead of time, if those are available.

--Jeff

---

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## Geyer, Joshua

---

**From:** Adams, Gabriel <Gabriel.Adams@spr.doe.gov>  
**Sent:** Thursday, October 06, 2016 7:02 AM  
**To:** Fogle, William; Castille, Barbara; Sevcik, Bob; Woods, Will; Vedros, Chris  
**Subject:** FW: Brine pipeline route

**Importance:** High

FYI!!!!!!!!!!!!!!

Gabriel Adams, REM | **Fluor Federal Petroleum Operations, LLC** | Program Manager, Sustainability, Environmental & Sustainability Department |  
*Contractor to the U. S. Department of Energy SPR* | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

---

**From:** Jeff Harris [<mailto:Jeff.Harris@LA.GOV>]  
**Sent:** Thursday, October 06, 2016 7:00 AM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>  
**Subject:** Brine pipeline route

Gabriel—

To follow up on our teleconference yesterday, I'm forwarding an image from DNR's SONRIS GIS system showing the location of the soil borings I mentioned, in case it has implications to your planning and/or your NEPA documents.

The small purple icons on the image are all locations of Coastal Use Permits issued by the Office of Coastal Management. Most of them seem to be soil borings related to a law suit regarding oil & gas contamination; the yellow circle calls out those along the pipeline route. The Permit documents can be viewed at the following links.

P20141128

<http://ucmwww.dnr.state.la.us/ucmsearch/FindDocuments.aspx?idx=xrefnum&val=P20141128&qtype=eq>

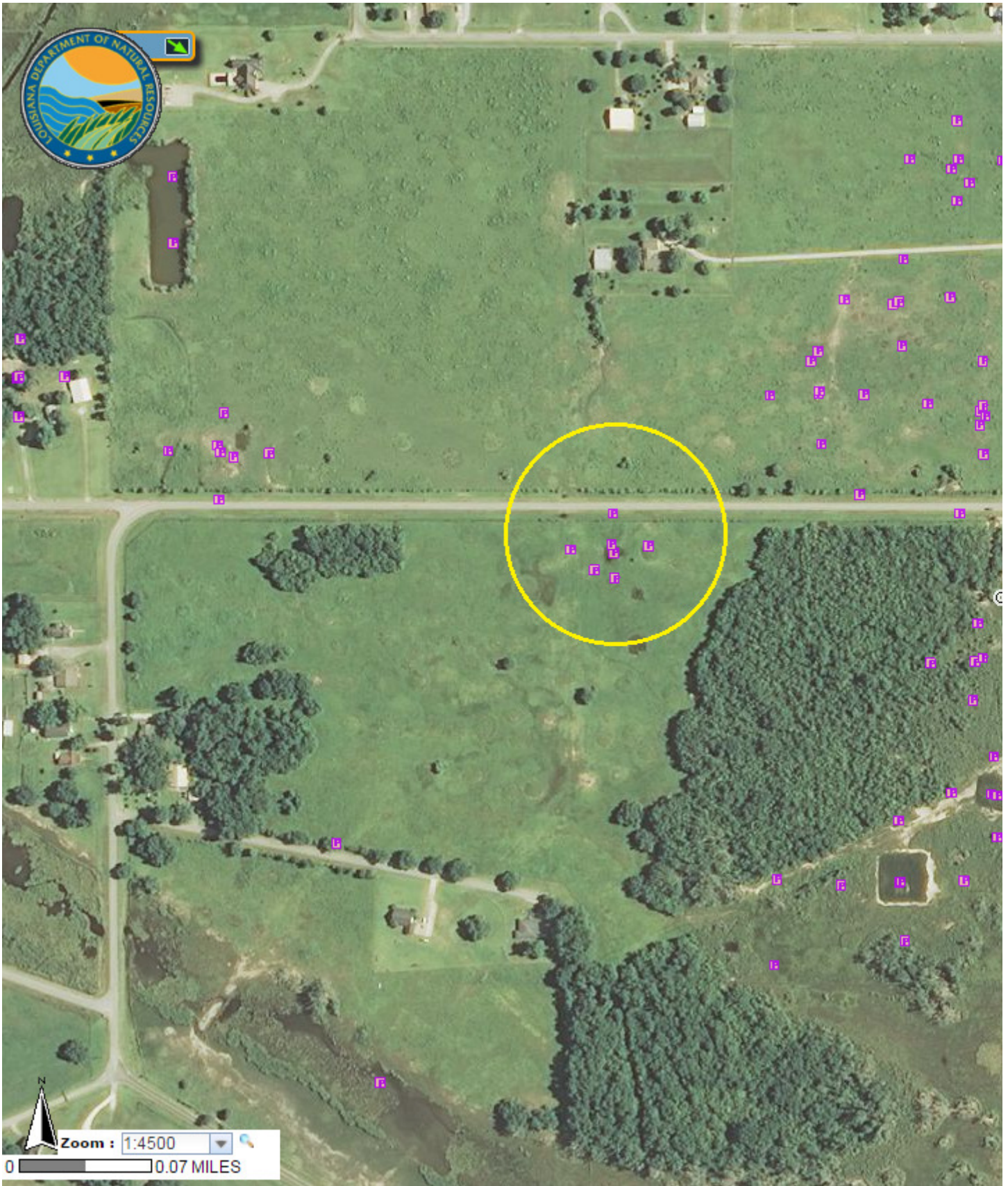
P20130716

<http://ucmwww.dnr.state.la.us/ucmsearch/FindDocuments.aspx?idx=xrefnum&val=P20130716&qtype=eq>

P20130141

<http://ucmwww.dnr.state.la.us/ucmsearch/FindDocuments.aspx?idx=xrefnum&val=P20130141&qtype=eq>

--Jeff



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## Geyer, Joshua

---

**From:** Adams, Gabriel <Gabriel.Adams@spr.doe.gov>  
**Sent:** Friday, September 23, 2016 10:07 AM  
**To:** Castille, Barbara  
**Cc:** Fogle, William  
**Subject:** FW: DOE- Brine Disposal Pipeline Replacement Project, Strategic Petroleum Reserve  
**Attachments:** DOE Brine Disposal Pipeline Project.pdf; DOE letter .pdf; 408 buffer areas.JPG; C20160130 DOE SPR.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Gabriel Adams, REM | Fluor Federal Petroleum Operations, LLC | Pollution Prevention Specialist,  
Environmental Department | Contractor to the U. S. Department of Energy SPR |  
[gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

-----Original Message-----

**From:** Barbara, Darrell MVN [<mailto:Darrell.Barbara@usace.army.mil>]  
**Sent:** Friday, September 23, 2016 9:57 AM  
**To:** Woods, Will <[Will.Woods@SPR.DOE.GOV](mailto:Will.Woods@SPR.DOE.GOV)>; Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>  
**Cc:** Jeff Harris <[Jeff.Harris@LA.GOV](mailto:Jeff.Harris@LA.GOV)>; Heffner, Robert A MVN <[Robert.A.Heffner@usace.army.mil](mailto:Robert.A.Heffner@usace.army.mil)>;  
Falk, Tracy A MVN <[Tracy.A.Falk@usace.army.mil](mailto:Tracy.A.Falk@usace.army.mil)>; Little, James MVN  
<[James.Little@usace.army.mil](mailto:James.Little@usace.army.mil)>; Archer, Brenda A MVN <[Brenda.A.Archer@usace.army.mil](mailto:Brenda.A.Archer@usace.army.mil)>  
**Subject:** DOE- Brine Disposal Pipeline Replacement Project, Strategic Petroleum Reserve

DARRELL S. BARBARA

Chief, Western Evaluation Section, Regulatory Branch U.S. Army Corps of Engineers, New Orleans  
District

(504) 862-2261 / fax: (504) 862-2574

[darrell.barbara@usace.army.mil](mailto:darrell.barbara@usace.army.mil)



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT  
7400 LEAKE AVENUE  
NEW ORLEANS, LOUISIANA 70118

9/23/2016

Western Evaluation Section  
Operations Division

**SUBJECT:** MVN-2016-1237-EFF  
16-ESH-006 (DOE) Strategic Petroleum Reserve-Brine Disposal Pipeline Replacement Project

William C. Gibson, Jr.  
Department of Energy  
Strategic Petroleum Reserve  
Project management Office  
900 Commerce East  
New Orleans, LA 70123

Dear Mr. Gibson:

Reference is made to your letter 16-ESH-006, requesting initial remarks and/or observations on your project to replace an existing brine disposal pipeline near Hackberry, Louisiana, in Cameron Parish. Work associated with this project will include abandonment in place of the existing 2.1 mile brine pipeline, installation of a new pipeline along an adjacent path, and acquisition of permanent and temporary rights of way for the pipeline and construction activities.

Based on your descriptions of the project and its locations, it is our initial assessment that a Department of the Army permit under Section 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act (33 U.S.C. 1344) from this office will likely be required for the subject work. With that, it is recommended that you look to acquire a Jurisdictional Determination from our Surveillance and Enforcement Section (CEMVN-OD-SS) prior to submittal of your Joint Permit Application, as to help us properly assess impacts associated with the work, during our review of your application. Be aware that upon our review of your application, our permit decision reflects the national concern for both protecting and utilizing important resources such as those potentially affected by your proposal. According to the Section 404(b)(1) Guidelines, a permit cannot be issued for a non-water dependent activity if there is a feasible less damaging alternative available. Since the proposed activity may be located within a wetland, it must comply with criteria outlined on our Guidelines for Specification of Disposal Sites for Dredge or Fill Material (40 CFR Part 230). Specifically, Section 230.10 (a) requires that no discharge of dredge or fill material shall be granted if there is a less damaging practicable alternative to the proposed discharge. Where the applicant can demonstrate a lack of practicable alternatives, reveal the public and/or private benefit of the proposed project, and the authorization is not contrary to the overall public interest, a permit can usually be issued. Prior to permit issuance we must determine that impacts have been avoided to the maximum extent practicable, remaining unavoidable impacts are minimized, and a mitigation plan is developed to compensate any unavoidable loss of aquatic resources.



Your enclosed EXIBIT 1 Vicinity Map provides minimal location information, however be aware that the subject work may be located within an area that may alter or occupy an existing US Army Corps of Engineers Civil Works Project (see attached plat). Upon receipt of your Joint Permit Application, a copy will be forwarded to the appropriate Operations Manager with this District for their review, pursuant to 33 USC 408 (Section 408).

We look forward to being notified of the availability of a draft EA for review, and will provide any information or recommendations that we can to aid in processing your Department of the Army permit for the project. If you have any questions, feel free to contact Darrell S. Barbara with this office at (504) 862-2261 or at darrell.barbara@usace.army.mil.

Sincerely,

**BARBARA.DARR  
ELL.SAM.123084  
6096**

Digitally signed by  
BARBARA.DARRELL.SAM.1230846096  
DN: c=US, o=U.S. Government, ou=DoD,  
ou=PKI, ou=USA,  
cn=BARBARA.DARRELL.SAM.123084609  
6  
Date: 2016.09.23 09:52:17 -05'00'

Darrell S. Barbara  
Chief, Western Evaluation Section  
Regulatory Branch

C20160130  
SOV

JDH



**Department of Energy**  
**Strategic Petroleum Reserve Project Management Office**  
900 Commerce East  
New Orleans, Louisiana 70123

RECEIVED  
2016 AUG -8 PM 2: 04  
OFFICE OF COASTAL MANAGEMENT

16-ESH-006

Mr. Karl Morgan  
Louisiana Department of Natural Resources  
Office of Coastal Management  
Permits/Mitigation Division  
P.O. Box 44487  
Baton Rouge, LA 70821-4487

**BRINE DISPOSAL PIPELINE REPLACEMENT PROJECT, STRATEGIC  
PETROLEUM RESERVE, WEST HACKBERRY FACILITY, CAMERON PARISH,  
LOUISIANA**

Dear Mr. Morgan:

Pursuant to the National Environmental Policy Act, the United States Department of Energy (DOE) intends to prepare an Environmental Assessment (EA) for the proposed replacement of the existing brine disposal pipeline (the Pipeline) between the Strategic Petroleum Reserve (SPR) West Hackberry (WH) facility and the associated brine injection wells near Hackberry, Cameron Parish, Louisiana. Both the existing and proposed brine disposal pipelines are approximately 2.1 miles in length. The potential environmental impacts of this proposed project would be evaluated in conformance with DOE and Council on Environmental Quality (CEQ) regulations and provisions. A description of the WH facility and the proposed project are provided below.

The WH storage facility includes approximately 2.29 square kilometers (565 acres) of land atop the WH salt dome. The WH salt dome was selected as a storage site early in the SPR program as the existing brine caverns could be readily converted to oil storage as well as the site's optimal proximity to commercial marine and pipeline crude oil distribution facilities. The WH facility was developed by the DOE in 1977 to store petroleum products that may be presidentially ordered into the marketplace to alleviate the effects of a supply disruption to the United States. Brine is injected into and/or pumped out of the WH salt dome utilizing the Pipeline and brine injection wells when deemed necessary to fulfill mission requirements. The Pipeline which connects the WH facility to the brine injection wells was permitted in 1978 and began operation upon completion, and is near the end of the Pipeline's functional lifespan. The Pipeline is proposed to be replaced to allow for continued, optimum operations at the WH facility.

As part of the brine pipeline replacement project (proposed action), the DOE proposes to replace the Pipeline by installing a new brine disposal pipeline; the existing Pipeline would be abandoned-in-place. The new Pipeline would be installed adjacent to the existing pipeline except near Johnson Lane in which the current Pipeline traverses' property between two single-family residences.

Implementation of the proposed action would require the acquisition of new rights-of-way. The associated new land acquisition effort would consist of both perpetual pipeline easements required for the proposed replacement Pipeline, as well as temporary construction easements required for construction activities. Approximately 50-100 feet of land adjacent to the Pipeline would be required to install, operate, and maintain the replacement of Pipeline. One construction staging area would be located on a temporary construction easement contiguous to the Pipeline near the northern project limits. Additionally, a 25-foot temporary construction easement would be required along the Pipeline corridor.

The pipeline would traverse lands within the 100-year floodplain, wetlands and open water habitats associated with Black Lake. In accordance with 10 Code of Federal Regulations (CFR) Part 1022 (Compliance with Floodplain and Wetland Environmental Review Requirements), the DOE would prepare a floodplain and wetlands assessment as well as a statement of findings and would perform this proposed action in a manner so as to avoid or minimize potential harm to or within the affected floodplain or wetlands. The floodplain and wetlands assessment would be included in the EA prepared for the proposed action.

The Louisiana Department of Natural Resources has been identified as part of an outreach effort under National Environmental Protection Agency (NEPA) for a review of resources under your agency's jurisdiction. In this regard, DOE respectfully requests your comments regarding any potential impacts of this proposed project that should be considered during the preparation of the Environmental Assessment for this action. In your response to this request for input from your agency, please indicate if your agency would like to be notified of the availability of the draft EA for review.



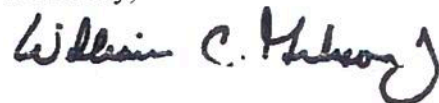
Mr. Karl Morgan

3

Please direct any written comments or requests for additional information to Mr. Will Woods, Environmental Specialist, DOE, SPR Project Management Office (PMO), Environmental, Safety, and Health Division, 900 Commerce Road East, New Orleans, Louisiana 70123, or by email at [Will.Woods@spr.doe.gov](mailto:Will.Woods@spr.doe.gov). You may also contact Mr. Gabriel Adams, Fluor Federal Petroleum Operations (FFPO), Management and Operating Contractor, DOE, SPRPMO at (504) 734-4503, or by email at [Gabriel.Adams@spr.doe.gov](mailto:Gabriel.Adams@spr.doe.gov).

Thank you in advance for your expeditious attention to this project.

Sincerely,

A handwritten signature in black ink that reads "William C. Gibson, Jr." with a stylized flourish at the end.

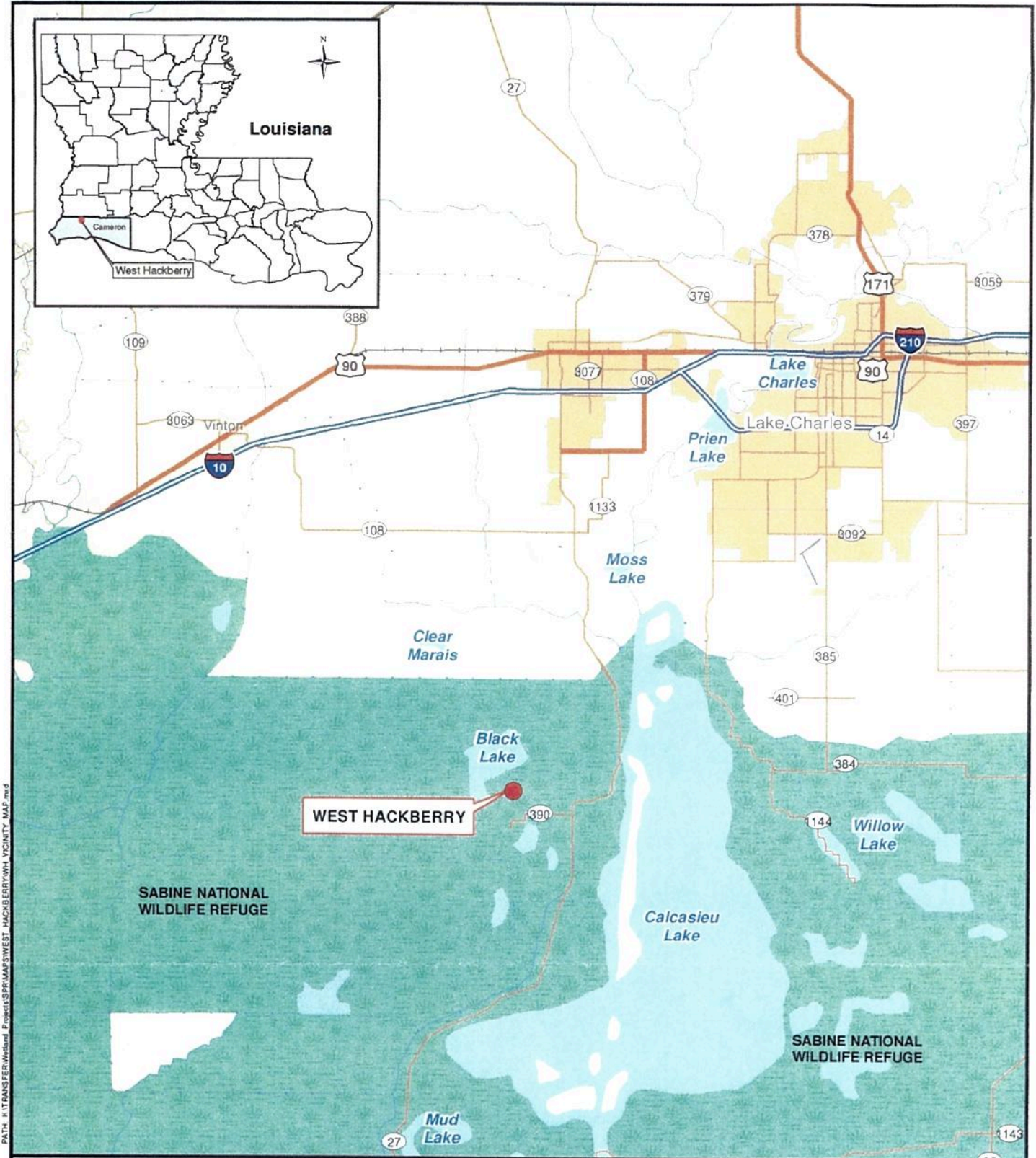
William C. Gibson, Jr.  
Project Manager

FE-4441 (KBatiste)

Enclosure

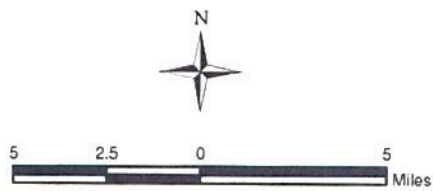
cc:

G. Adams, FFPO  
B. Castille, S&B



PATH: K:\TRANSFER\Wahland\_P\Project\SPR\MAP\SWEST\_HACKBERRY\WH\_VICINITY\_MAP.mxd

SOURCE: ESRI StreetMap USA

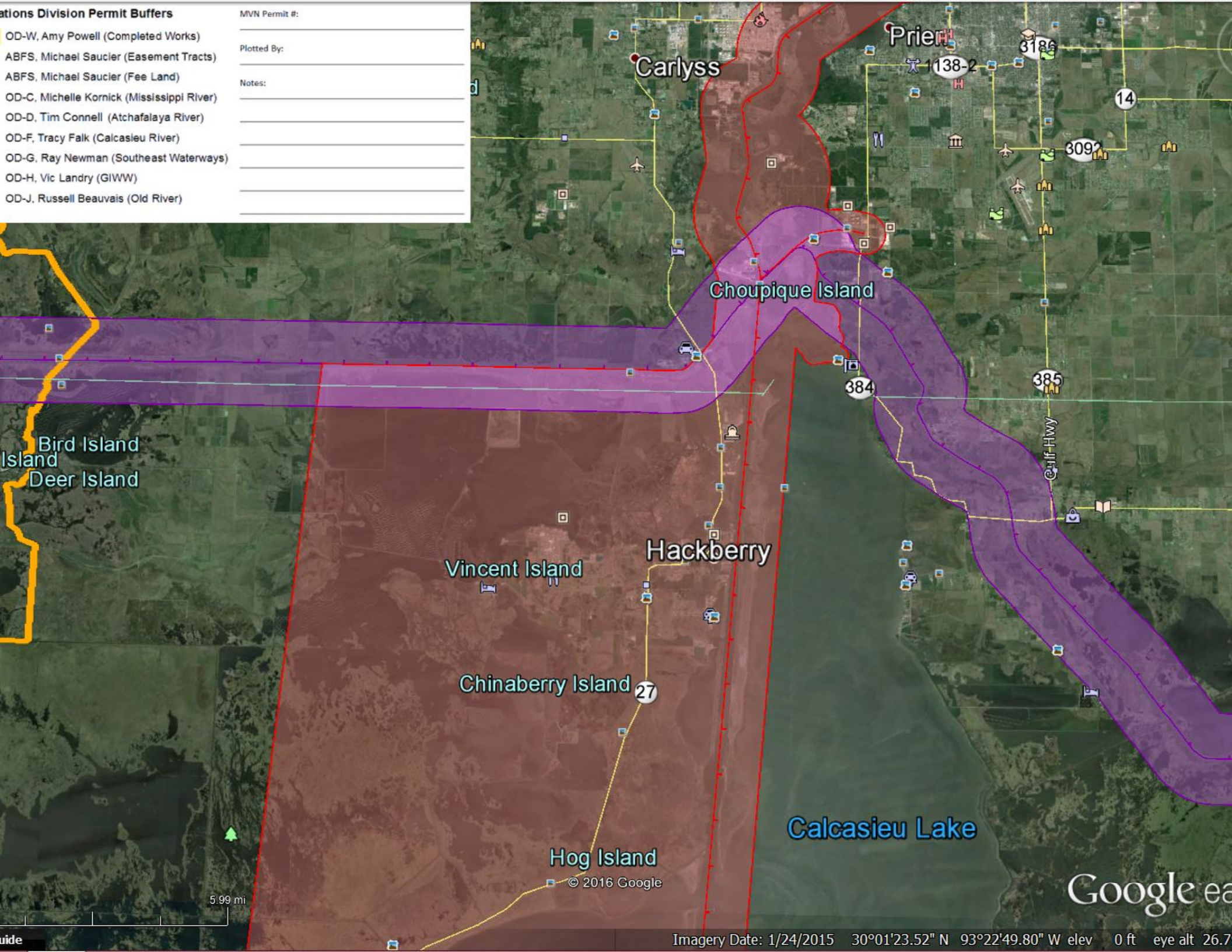


### EXHIBIT 1 VICINITY MAP

Brine Line Replacement Pipe Route Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana



Operations Division Permit Buffers	
OD-W, Amy Powell (Completed Works)	MVN Permit #:
ABFS, Michael Saucier (Easement Tracts)	Plotted By:
ABFS, Michael Saucier (Fee Land)	Notes:
OD-C, Michelle Kornick (Mississippi River)	
OD-D, Tim Connell (Atchafalaya River)	
OD-F, Tracy Falk (Calcasieu River)	
OD-G, Ray Newman (Southeast Waterways)	
OD-H, Vic Landry (GIWW)	
OD-J, Russell Beauvais (Old River)	







**State of Louisiana**  
**DEPARTMENT OF NATURAL RESOURCES**  
**OFFICE OF COASTAL MANAGEMENT**

September 15, 2016

William C. Gibson, Jr.  
Department of Energy  
Strategic Petroleum Reserve  
Project Management Office  
900 Commerce East  
New Orleans, LA 70123  
Via e-mail: [william.gibson@spr.doe.gov](mailto:william.gibson@spr.doe.gov)

Re: **C20160130 Coastal Zone Consistency**  
Department of Energy Strategic Petroleum Reserve (SPR)  
Direct Federal Action  
Brine Disposal Pipeline Replacement Project, Strategic Petroleum Reserve, West  
Hackberry Facility, **Cameron Parish**

Dear Mr. Gibson:

The Louisiana Department of Natural Resources, Office of Coastal Management (OCM), has reviewed your letter, received August 8, 2016, requesting comments on the referenced project (copy attached for your reference).

The Department of Energy (DOE) intends to prepare an Environmental Assessment (EA) for the replacement of an existing brine disposal pipeline near Hackberry, Louisiana. The proposed activity includes abandonment-in-place of the existing 2.1-mile brine pipeline; installation of a new pipeline along an adjacent path; and acquisition of permanent and temporary Rights of Way for the pipeline and construction activities, respectively.

These actions will occur within the Louisiana coastal zone and so will, at the appropriate planning stage, require consistency review by OCM pursuant to the Coastal Zone Management Act of 1970, as amended (CZMA).

Broadly, OCM is concerned with any reasonably foreseeable effects on the land use, water use, or natural resources of the coastal zone. Of particular concern is the prevention of the loss of wetlands. Your consistency determination and EA should address the measures to be taken to avoid and minimize the adverse impacts to coastal wetlands. Compensatory mitigation will be required for any unavoidable losses to habitat value, including indirect and cumulative losses.

It is the policy of OCM that all pipelines in the coastal zone are to be removed upon decommissioning; therefore the proposed abandonment in place of the existing brine pipeline is

C20160130  
William Gibson, Jr.  
September 15, 2016  
Page 2

unlikely to be found to be consistent with the Louisiana Coastal Resources Program. DOE should instead plan to remove the pipeline, and evaluate the resulting environmental impacts as well as those of the installation of its replacement.

OCM appreciates the opportunity to provide comments at this early stage of project planning. Please notify our office of the availability of the draft EA for review. If you should have any questions on this matter, please contact Jeff Harris of the Consistency Section at (225) 342-7949 or [Jeff.Harris@LA.gov](mailto:Jeff.Harris@LA.gov).

Sincerely yours,

**/S/ Don Haydel**  
Acting Administrator  
Interagency Affairs/Field Services Division

DH/SK/jdh

#### **ATTACHMENT**

cc: Will Woods, PMO  
Gabriel Adams, FFPO  
Darrell Barbara, COE-NOD  
Rod Peirce, OCM/FI  
Kara Bonsall, Cameron Parish  
Dave Butler, LDWF

## Geyer, Joshua

---

**From:** Adams, Gabriel <Gabriel.Adams@spr.doe.gov>  
**Sent:** Monday, September 19, 2016 1:46 PM  
**To:** Castille, Barbara  
**Cc:** Woods, Will; Batiste, Katherine; Fogle, William  
**Subject:** FW: Solicitation of Views for floodplains for the West Hackberry Facility

**Importance:** High

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Barbara,

Here is a request for additional information.

Regards,

Gabriel Adams, REM | **Fluor Federal Petroleum Operations, LLC** | Pollution Prevention Specialist, Environmental Department |  
Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

---

**From:** Jennifer Rachal [<mailto:Jennifer.Rachal@la.gov>]  
**Sent:** Monday, September 19, 2016 1:27 PM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>; Woods, Will <[Will.Woods@SPR.DOE.GOV](mailto:Will.Woods@SPR.DOE.GOV)>  
**Subject:** Solicitation of Views for floodplains for the West Hackberry Facility

Hi Will and Gabriel,

I am reviewing a request for a Solicitation of Views for floodplains for the West Hackberry Facility in regards to the Brine Disposal Pipeline Replacement Project. The map provided does not offer enough information or detail to accurately create a firmette. Please respond with a map or location zoomed in, so that I may accurately respond to the request.

*Jennifer D. Rachal*, CFM

National Flood Insurance Program Coordinator  
Floodplain Management Program  
Louisiana Department of Transportation and Development  
P.O. Box 94245  
Baton Rouge, Louisiana 70804  
Office: (225)379-3005  
Fax: (225)379-3002

## Geyer, Joshua

---

**From:** Castille, Barbara  
**Sent:** Monday, September 19, 2016 2:02 PM  
**To:** 'Jennifer.Rachal@la.gov'  
**Cc:** Woods, Will; 'Adams, Gabriel'; Batiste, Katherine; Fogle, William; Joshua Geyer (jageyer@sbinfra.com)  
**Subject:** RE: Solicitation of Views for floodplains for the West Hackberry Facility  
**Attachments:** WestHackberry\_EA\_FEMA\_MAP\_ToFloodplainManagementProgram\_JRachal\_091916.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

<b>Tracking:</b>	<b>Recipient</b>	<b>Delivery</b>	<b>Read</b>
	'Jennifer.Rachal@la.gov'		
	Woods, Will		
	'Adams, Gabriel'		
	Batiste, Katherine		
	Fogle, William		
	Joshua Geyer (jageyer@sbinfra.com)	Delivered: 9/19/2016 2:02 PM	
	Geyer, Joshua		Read: 9/19/2016 2:03 PM

Ms. Rachal—

As requested, attached is a map of the Brine Disposal Pipeline Replacement Project location which illustrates the designated FEMA floodplain within and adjacent to the project area.

If you need any supplemental information, please contact Will Woods or Gabriel Adams and we will be pleased to provide additional information to you for your review of this important project.

Sincerely,

Barbara

**Barbara Castille**  
Manager, Environmental Planning

**S&B Infrastructure, Ltd.**  
530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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---

**From:** Adams, Gabriel [<mailto:Gabriel.Adams@spr.doe.gov>]  
**Sent:** Monday, September 19, 2016 1:46 PM  
**To:** Castille, Barbara  
**Cc:** Woods, Will; Batiste, Katherine; Fogle, William  
**Subject:** FW: Solicitation of Views for floodplains for the West Hackberry Facility  
**Importance:** High

Barbara,

Here is a request for additional information.

Regards,

Gabriel Adams, REM | **Fluor Federal Petroleum Operations, LLC** | Pollution Prevention Specialist, Environmental Department |  
Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

---

**From:** Jennifer Rachal [<mailto:Jennifer.Rachal@la.gov>]  
**Sent:** Monday, September 19, 2016 1:27 PM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>; Woods, Will <[Will.Woods@SPR.DOE.GOV](mailto:Will.Woods@SPR.DOE.GOV)>  
**Subject:** Solicitation of Views for floodplains for the West Hackberry Facility

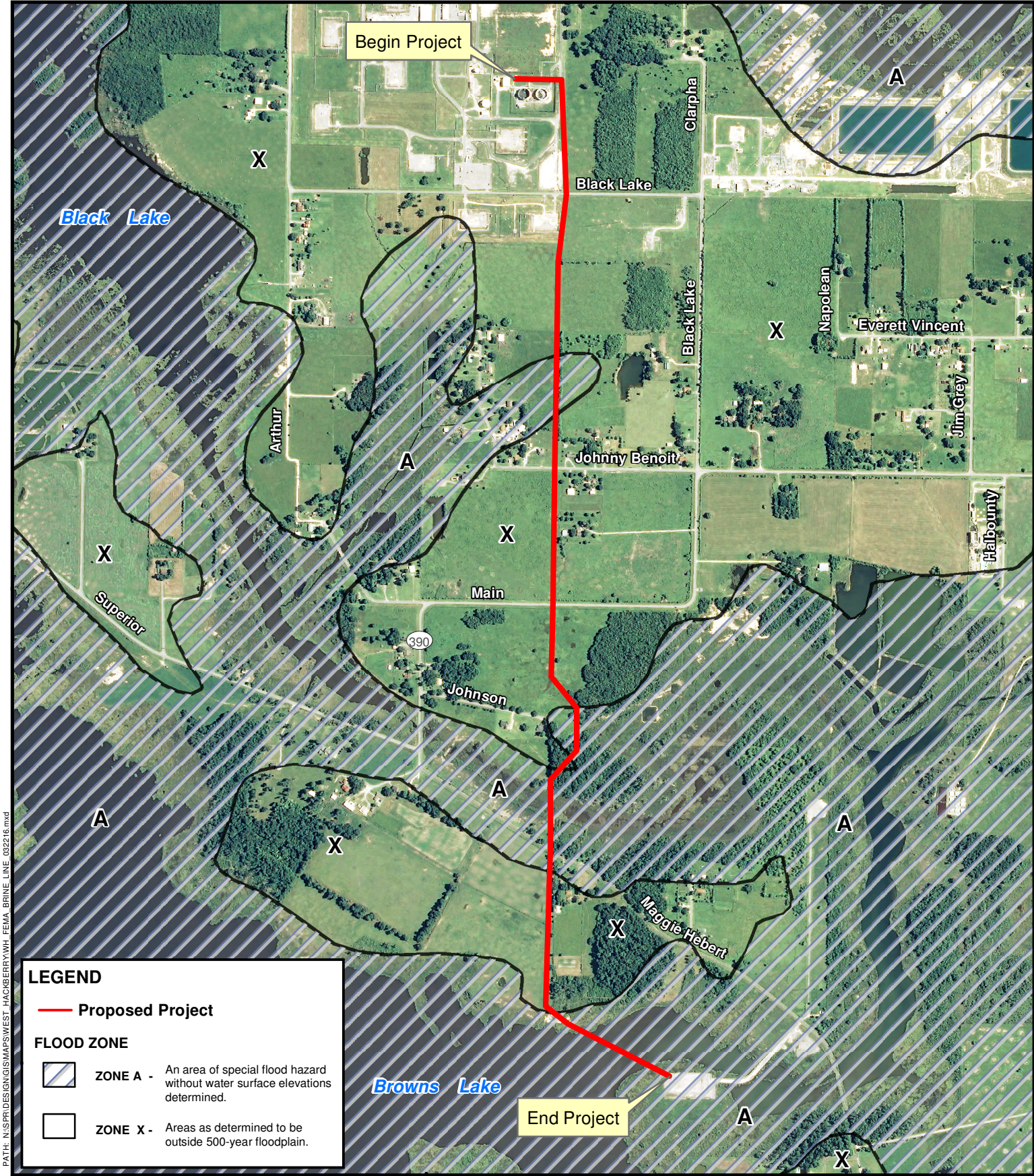
Hi Will and Gabriel,

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*Jennifer D. Rachal*, CFM

National Flood Insurance Program Coordinator  
Floodplain Management Program  
Louisiana Department of Transportation and Development  
P.O. Box 94245  
Baton Rouge, Louisiana 70804  
Office: (225)379-3005  
Fax: (225)379-3002







PATH: N:\SPR\DESIGN\GIS\MAPS\WEST HACKBERRY\WH FEMA BRINE LINE 032216.mxd

**LEGEND**

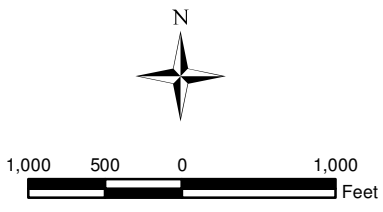
— Proposed Project

**FLOOD ZONE**

 **ZONE A** - An area of special flood hazard without water surface elevations determined.

 **ZONE X** - Areas as determined to be outside 500-year floodplain.

SOURCE: FEMA 1999, Panel No. 22023C0400H, USDA-NAIP, 2013



## EXHIBIT 6 FLOODPLAIN MAP

Brine Disposal Pipeline Replacement Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana



## Geyer, Joshua

---

**From:** Castille, Barbara  
**Sent:** Monday, September 19, 2016 4:13 PM  
**To:** 'Jennifer.Rachal@la.gov'  
**Cc:** 'Woods, Will'; 'Adams, Gabriel'; 'Batiste, Katherine'; 'Fogle, William'; Joshua Geyer (jageyer@sbinfra.com)  
**Subject:** RE: Solicitation of Views for floodplains for the West Hackberry Facility  
**Attachments:** WestHackberry\_EA\_FEMA\_RevisedMap\_2012\_ToFloodplainManagementProgram\_JRachal\_091916.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

<b>Tracking:</b>	<b>Recipient</b>	<b>Delivery</b>	<b>Read</b>
	'Jennifer.Rachal@la.gov'		
	'Woods, Will'		
	'Adams, Gabriel'		
	'Batiste, Katherine'		
	'Fogle, William'		
	Joshua Geyer (jageyer@sbinfra.com)	Delivered: 9/19/2016 4:13 PM	
	Geyer, Joshua		Read: 9/19/2016 4:13 PM

Ms. Rachal—

As requested, attached is an updated FEMA Map of the proposed Brine Disposal Pipeline project area for your review and comment.

If you have any questions or need any additional information, please let us know.

Many thanks,

Barbara

**Barbara Castille**  
**S&B Infrastructure, Ltd.**  
Direct: (713) 845-5392  
[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)

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---

**From:** Castille, Barbara  
**Sent:** Monday, September 19, 2016 2:02 PM  
**To:** 'Jennifer.Rachal@la.gov'

**Cc:** Woods, Will; 'Adams, Gabriel'; Batiste, Katherine; Fogle, William; Joshua Geyer ([jageyer@sbinfra.com](mailto:jageyer@sbinfra.com))  
**Subject:** RE: Solicitation of Views for floodplains for the West Hackberry Facility

Ms. Rachal—

As requested, attached is a map of the Brine Disposal Pipeline Replacement Project location which illustrates the designated FEMA floodplain within and adjacent to the project area.

If you need any supplemental information, please contact Will Woods or Gabriel Adams and we will be pleased to provide additional information to you for your review of this important project.

Sincerely,

Barbara

**Barbara Castille**  
Manager, Environmental Planning  
**S&B Infrastructure, Ltd.**  
530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)

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---

**From:** Adams, Gabriel [<mailto:Gabriel.Adams@spr.doe.gov>]  
**Sent:** Monday, September 19, 2016 1:46 PM  
**To:** Castille, Barbara  
**Cc:** Woods, Will; Batiste, Katherine; Fogle, William  
**Subject:** FW: Solicitation of Views for floodplains for the West Hackberry Facility  
**Importance:** High

Barbara,

Here is a request for additional information.

Regards,

Gabriel Adams, REM | **Fluor Federal Petroleum Operations, LLC** | Pollution Prevention Specialist, Environmental Department |  
Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

---

**From:** Jennifer Rachal [<mailto:Jennifer.Rachal@la.gov>]  
**Sent:** Monday, September 19, 2016 1:27 PM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>; Woods, Will <[Will.Woods@SPR.DOE.GOV](mailto:Will.Woods@SPR.DOE.GOV)>  
**Subject:** Solicitation of Views for floodplains for the West Hackberry Facility

Hi Will and Gabriel,



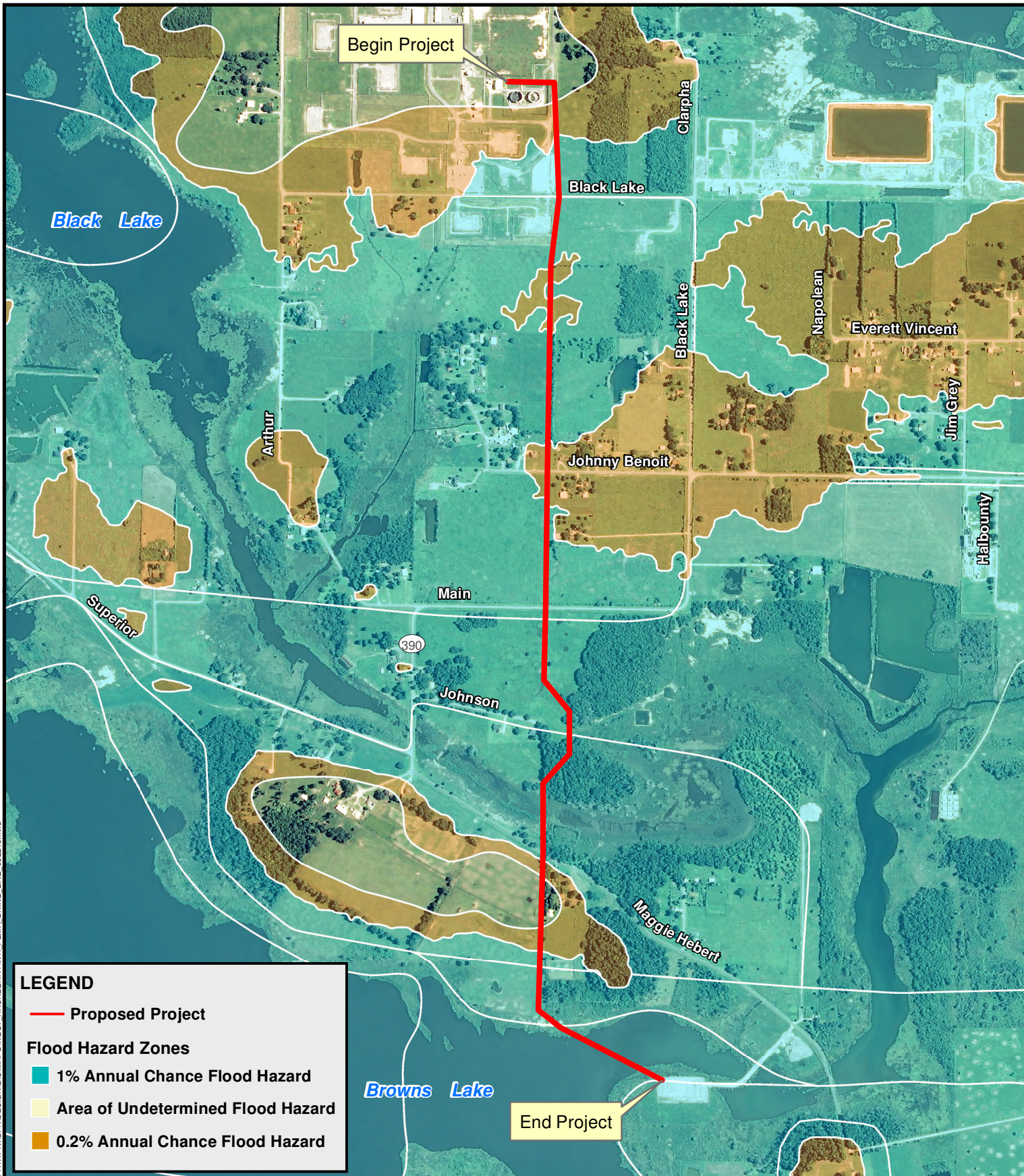
I am reviewing a request for a Solicitation of Views for floodplains for the West Hackberry Facility in regards to the Brine Disposal Pipeline Replacement Project. The map provided does not offer enough information or detail to accurately create a firmette. Please respond with a map or location zoomed in, so that I may accurately respond to the request.

*Jennifer D. Rachal*, CFM

National Flood Insurance Program Coordinator  
Floodplain Management Program  
Louisiana Department of Transportation and Development  
P.O. Box 94245  
Baton Rouge, Louisiana 70804  
Office: (225)379-3005  
Fax: (225)379-3002



PATH: N:\SPR\DESIGN\MAPS\WEST HACKBERRY\WH FEMA BRINE LINE 032216.mxd



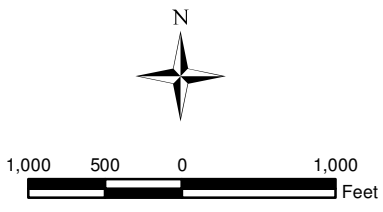
**LEGEND**

- Proposed Project

**Flood Hazard Zones**

- 1% Annual Chance Flood Hazard
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard

SOURCE: FEMA 11/16/2012, Panel No. 22023C0375H, USDA-NAIP, 2013



## EXHIBIT 6 FLOODPLAIN MAP

Brine Disposal Pipeline Replacement Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana



## Geyer, Joshua

---

**From:** Jennifer Rachal <Jennifer.Rachal@la.gov>  
**Sent:** Tuesday, October 18, 2016 1:54 PM  
**To:** Castille, Barbara  
**Subject:** RE: Solicitation of Views for floodplains for the West Hackberry Facility  
**Attachments:** Brine Disposal Pipeline Replacement Project West Hackberry Facility.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Attached is the Solicitation of Views for the Brine Disposal Pipeline Replacement Project West Hackberry Facility. If you have further questions or concerns, please feel free to contact me.

*Jennifer D. Rachal, CFM*

National Flood Insurance Program Coordinator  
Floodplain Management Program  
Louisiana Department of Transportation and Development  
P.O. Box 94245  
Baton Rouge, Louisiana 70804  
Office: (225)379-3005  
Fax: (225)379-3002

---

**From:** Castille, Barbara [mailto:[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)]  
**Sent:** Monday, September 19, 2016 4:13 PM  
**To:** Jennifer Rachal  
**Cc:** Woods, Will; Adams, Gabriel; Batiste, Katherine; Fogle, William; Geyer, Joshua  
**Subject:** RE: Solicitation of Views for floodplains for the West Hackberry Facility

Ms. Rachal—

As requested, attached is an updated FEMA Map of the proposed Brine Disposal Pipeline project area for your review and comment.

If you have any questions or need any additional information, please let us know.

Many thanks,

Barbara

**Barbara Castille**  
**S&B Infrastructure, Ltd.**  
Direct: (713) 845-5392  
[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)

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**Sent:** Monday, September 19, 2016 2:02 PM  
**To:** 'Jennifer.Rachal@la.gov'  
**Cc:** Woods, Will; 'Adams, Gabriel'; Batiste, Katherine; Fogle, William; Joshua Geyer ([jageyer@sbinfra.com](mailto:jageyer@sbinfra.com))  
**Subject:** RE: Solicitation of Views for floodplains for the West Hackberry Facility

Ms. Rachal—

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Barbara

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Manager, Environmental Planning

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**Cc:** Woods, Will; Batiste, Katherine; Fogle, William  
**Subject:** FW: Solicitation of Views for floodplains for the West Hackberry Facility  
**Importance:** High

Barbara,

Here is a request for additional information.

Regards,

Gabriel Adams, REM | **Fluor Federal Petroleum Operations, LLC** | Pollution Prevention Specialist, Environmental Department |  
Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

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**Sent:** Monday, September 19, 2016 1:27 PM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>; Woods, Will <[Will.Woods@SPR.DOE.GOV](mailto:Will.Woods@SPR.DOE.GOV)>  
**Subject:** Solicitation of Views for floodplains for the West Hackberry Facility



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*Jennifer D. Rachal*, CFM

National Flood Insurance Program Coordinator  
Floodplain Management Program  
Louisiana Department of Transportation and Development  
P.O. Box 94245  
Baton Rouge, Louisiana 70804  
Office: (225)379-3005  
Fax: (225)379-3002

## Geyer, Joshua

---

**From:** Castille, Barbara  
**Sent:** Tuesday, October 18, 2016 2:24 PM  
**To:** Jennifer.Rachal@la.gov  
**Cc:** Fogle, William (William.Fogle@SPR.DOE.GOV); Woods, Will (Will.Woods@spr.doe.gov); Adams, Gabriel (Gabriel.Adams@spr.doe.gov); Batiste, Katherine (Katherine.Batiste@spr.doe.gov); Joshua Geyer (jageyer@sbinfra.com)  
**Subject:** FW: Solicitation of Views for floodplains for the West Hackberry Facility  
**Attachments:** Brine Disposal Pipeline Replacement Project West Hackberry Facility.pdf

<b>Tracking:</b>	<b>Recipient</b>	<b>Delivery</b>	<b>Read</b>
	Jennifer.Rachal@la.gov		
	Fogle, William (William.Fogle@SPR.DOE.GOV)		
	Woods, Will (Will.Woods@spr.doe.gov)		
	Adams, Gabriel (Gabriel.Adams@spr.doe.gov)		
	Batiste, Katherine (Katherine.Batiste@spr.doe.gov)		
	Joshua Geyer (jageyer@sbinfra.com)	Delivered: 10/18/2016 2:24 PM	
	Geyer, Joshua		Read: 10/18/2016 2:25 PM

Ms. Rachal—

Thank you. I received you Solicitation of Views for the West Hackberry Brine Disposal Pipeline Replacement Project.

We appreciate your attention to this important project.

Sincerely,

Barbara

**Barbara Castille**  
Manager, Environmental Planning

**S&B Infrastructure, Ltd.**  
530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
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National Flood Insurance Program Coordinator  
Floodplain Management Program  
Louisiana Department of Transportation and Development  
P.O. Box 94245  
Baton Rouge, Louisiana 70804  
Office: (225)379-3005  
Fax: (225)379-3002

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**Sent:** Monday, September 19, 2016 4:13 PM  
**To:** Jennifer Rachal  
**Cc:** Woods, Will; Adams, Gabriel; Batiste, Katherine; Fogle, William; Geyer, Joshua  
**Subject:** RE: Solicitation of Views for floodplains for the West Hackberry Facility

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**To:** 'Jennifer.Rachal@la.gov'  
**Cc:** Woods, Will; 'Adams, Gabriel'; Batiste, Katherine; Fogle, William; Joshua Geyer ([jageyer@sbinfra.com](mailto:jageyer@sbinfra.com))  
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**To:** Castille, Barbara  
**Cc:** Woods, Will; Batiste, Katherine; Fogle, William  
**Subject:** FW: Solicitation of Views for floodplains for the West Hackberry Facility  
**Importance:** High

Barbara,

Here is a request for additional information.

Regards,

Gabriel Adams, REM | **Fluor Federal Petroleum Operations, LLC** | Pollution Prevention Specialist, Environmental Department |  
*Contractor to the U. S. Department of Energy SPR* | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

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**From:** Jennifer Rachal [<mailto:Jennifer.Rachal@la.gov>]  
**Sent:** Monday, September 19, 2016 1:27 PM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>; Woods, Will <[Will.Woods@SPR.DOE.GOV](mailto:Will.Woods@SPR.DOE.GOV)>  
**Subject:** Solicitation of Views for floodplains for the West Hackberry Facility

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*Jennifer D. Rachal, CFM*

National Flood Insurance Program Coordinator  
Floodplain Management Program  
Louisiana Department of Transportation and Development  
P.O. Box 94245  
Baton Rouge, Louisiana 70804  
Office: (225)379-3005  
Fax: (225)379-3002

## Geyer, Joshua

---

**From:** Adams, Gabriel <Gabriel.Adams@spr.doe.gov>  
**Sent:** Monday, September 26, 2016 11:18 AM  
**To:** Castille, Barbara  
**Cc:** Fogle, William; Woods, Will; Sevcik, Bob; Vedros, Chris  
**Subject:** EA 2039 WH Brine Line US Coast Guard

**Importance:** High

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Barbara,

I just received a phone call from the US Coast Guard 8<sup>th</sup> District in New Orleans. They do not have any comments at this time on the EA. However, they wish to review the Draft EA when it is available.

Regards,

Gabriel Adams, REM | [Fluor Federal Petroleum Operations, LLC](#) | Pollution Prevention Specialist, Environmental Department |  
Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

**Geyer, Joshua**

---

**From:** Adams, Gabriel <Gabriel.Adams@spr.doe.gov>  
**Sent:** Thursday, October 20, 2016 3:30 PM  
**To:** Castille, Barbara  
**Cc:** Woods, Will; Sevcik, Bob; Fogle, William  
**Subject:** FW: DOE West Hackberry SPR Brine Disposal Pipeline Replacement

Greetings,

This gentleman from the USCG wishes to be informed of the availability of the Draft EA for the brine line replacement project and when the project goes to construction.

Regards,

Gabriel Adams, REM | Fluor Federal Petroleum Operations, LLC | Program Manager, Sustainability, Environmental & Sustainability Department | Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

-----Original Message-----

**From:** Bawar, Roderick C MST2 [<mailto:Roderick.C.Bawar@uscg.mil>]  
**Sent:** Thursday, October 20, 2016 3:15 PM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>  
**Cc:** Flanagan, Lindsey N MST1 <[Lindsey.N.Flanagan@uscg.mil](mailto:Lindsey.N.Flanagan@uscg.mil)>; Taylor, Jaime K MST3 <[Jaime.K.Taylor@uscg.mil](mailto:Jaime.K.Taylor@uscg.mil)>; Oyler, Michael S MSTC <[Michael.S.Oyler@uscg.mil](mailto:Michael.S.Oyler@uscg.mil)>; Robinson, Nathaniel L LCDR <[Nathaniel.L.Robinson@uscg.mil](mailto:Nathaniel.L.Robinson@uscg.mil)>; Cost, Daniel H CDR <[Daniel.H.Cost@uscg.mil](mailto:Daniel.H.Cost@uscg.mil)>  
**Subject:** RE: DOE West Hackberry SPR Brine Disposal Pipeline Replacement

Good Afternoon Mr. Adams,

Just connecting with you on this project, to start sometime in January. If you have new details, please provide. Also on our phone conversation, you mentioned another upcoming project. Those details would be greatly appreciated. Thank you.

VR  
Roderick C. Bawar, MST2  
Waterways Management  
Facilities Inspection  
MSU Lake Charles, LA  
U.S. Coast Guard

-----Original Message-----

**From:** Wiener, Dimitrios N LT  
**Sent:** Wednesday, September 28, 2016 12:14 PM  
**To:** Bawar, Roderick C MST2; Taylor, Jaime K MST3  
**Cc:** Cost, Daniel H CDR; Bizzaro, Peter A LT; Robinson, Nathaniel L LCDR; Oyler, Michael S MSTC  
**Subject:** FW: DOE West Hackberry SPR Brine Disposal Pipeline Replacement  
**Importance:** High

**WWM Team,**

**This is another one. Brine Pipe replacement for the SPR. Seems like Mr. Wright does not believe it will conflict with our mission.**

**V/R,**

**LT Wiener**

**-----Original Message-----**

**From: Wright, Rusty H. CIV**

**Sent: Monday, September 26, 2016 12:46 PM**

**To: Wiener, Dimitrios N LT**

**Subject: FW: DOE West Hackberry SPR Brine Disposal Pipeline Replacement**

**Importance: High**

**LT Bizzaro is out of the office.**

**FYI**

**v/r**

**Rusty Wright**

**USCG**

**504.671.2138**

**504.559.1514 cell**

**-----Original Message-----**

**From: Wright, Rusty H. CIV**

**Sent: Monday, September 26, 2016 11:19 AM**

**To: Bizzaro, Peter A LT**

**Cc: Dittman, Paul E CAPT; Tuckey, Christopher B LCDR; Miller, Shelley R CIV**

**Subject: DOE West Hackberry SPR Brine Disposal Pipeline Replacement**

**Importance: High**

**LT,**

**We are in receipt of the attached letter from DOE.**

**My discussion with DOE leads me to think there will not be any impact to our mission. I did ask to be kept informed as the project progresses.**

**Let me know if you have any questions.**

**Respectfully,**

**Rusty Wright**

**Energy Projects Program Manager**

**Eighth Coast Guard District**

**Hale Boggs Federal Building**

**500 Poydras Street**

**Room 1230**

**New Orleans, Louisiana 70130**

**Work: 504-671-2138**

**Cell: 504-559-1514**



**"With honor and integrity, we will safeguard the American people, our homeland, and our values."**

## Geyer, Joshua

---

**From:** Adams, Gabriel <Gabriel.Adams@spr.doe.gov>  
**Sent:** Tuesday, October 04, 2016 8:04 AM  
**To:** Castille, Barbara; Fogle, William  
**Cc:** Woods, Will; Sevcik, Bob  
**Subject:** FW: DEQ SOV 160825/0945 Brine Disposal Pipeline Replacement, Strategic Petroleum Reserve

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Received today.

Gabriel Adams, REM | [Fluor Federal Petroleum Operations, LLC](#) | Program Manager, Sustainability, Environmental & Sustainability Department |  
Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

---

**From:** Woods, Will  
**Sent:** Tuesday, October 04, 2016 7:26 AM  
**To:** Adams, Gabriel <Gabriel.Adams@SPR.DOE.GOV>; Wesley, Louis <Louis.Wesley@SPR.DOE.GOV>; Sevcik, Bob <Bob.Sevcik@SPR.DOE.GOV>  
**Subject:** FW: DEQ SOV 160825/0945 Brine Disposal Pipeline Replacement, Strategic Petroleum Reserve

Received today.

---

**From:** Linda (Brown) Hardy [<mailto:Linda.Hardy@la.gov>]  
**Sent:** Monday, October 03, 2016 1:15 PM  
**To:** Woods, Will <[Will.Woods@SPR.DOE.GOV](mailto:Will.Woods@SPR.DOE.GOV)>  
**Cc:** Yasoob Zia <[Yasoob.Zia@LA.GOV](mailto:Yasoob.Zia@LA.GOV)>  
**Subject:** DEQ SOV 160825/0945 Brine Disposal Pipeline Replacement, Strategic Petroleum Reserve

October 3, 2016

Will Woods, Environmental Specialist  
DOE, SPR Management Office (PMO)  
900 Commerce Road East  
New Orleans, LA 70123  
[Will.Woods@spr.doe.gov](mailto:Will.Woods@spr.doe.gov)

RE: 160825/0945 Brine Disposal Pipeline Replacement, Strategic Petroleum Reserve  
Dept. of Energy SPR Funding  
Cameron Parish

Dear Mr. Woods:

The Department of Environmental Quality (LDEQ), Business and Community Outreach Division has received your request for comments on the above referenced project.

After reviewing your request, the Department has no objections based on the information provided in your submittal. However, for your information, the following general comments have been included. Please be advised that if you

should encounter a problem during the implementation of this project, you should immediately notify LDEQ's Single-Point-of-contact (SPOC) at (225) 219-3640.

- Please take any necessary steps to obtain and/or update all necessary approvals and environmental permits regarding this proposed project.
- If your project results in a discharge to waters of the state, submittal of a Louisiana Pollutant Discharge Elimination System (LPDES) application may be necessary.
- If the project results in a discharge of wastewater to an existing wastewater treatment system, that wastewater treatment system may need to modify its LPDES permit before accepting the additional wastewater.
- All precautions should be observed to control nonpoint source pollution from construction activities. LDEQ has stormwater general permits for construction areas equal to or greater than one acre. It is recommended that you contact the LDEQ Water Permits Division at (225) 219-9371 to determine if your proposed project requires a permit.
- If your project will include a sanitary wastewater treatment facility, a Sewage Sludge and Biosolids Use or Disposal Permit is required. An application or Notice of Intent will be required if the sludge management practice includes preparing biosolids for land application or preparing sewage sludge to be hauled to a landfill. Additional information may be obtained on the LDEQ website at <http://www.deq.louisiana.gov/portal/tabid/2296/Default.aspx> or by contacting the LDEQ Water Permits Division at (225) 219- 9371.
- If any of the proposed work is located in wetlands or other areas subject to the jurisdiction of the U.S. Army Corps of Engineers, you should contact the Corps directly regarding permitting issues. If a Corps permit is required, part of the application process may involve a water quality certification from LDEQ.
- All precautions should be observed to protect the groundwater of the region.
- Please be advised that water softeners generate wastewaters that may require special limitations depending on local water quality considerations. Therefore if your water system improvements include water softeners, you are advised to contact the LDEQ Water Permits to determine if special water quality-based limitations will be necessary.
- Any renovation or remodeling must comply with LAC 33:III.Chapter 28, Lead-Based Paint Activities; LAC 33:III.Chapter 27, Asbestos-Containing Materials in Schools and State Buildings (includes all training and accreditation); and LAC 33:III.5151, Emission Standard for Asbestos for any renovations or demolitions.
- If any solid or hazardous wastes, or soils and/or groundwater contaminated with hazardous constituents are encountered during the project, notification to LDEQ's Single-Point-of-Contact (SPOC) at (225) 219-3640 is required. Additionally, precautions should be taken to protect workers from these hazardous constituents.

**Currently, Cameron Parish is classified as attainment with the National Ambient Air Quality Standards and has no general conformity determination obligations.**

Please send all future requests to my attention. If you have any questions, please feel free to contact me at (225) 219-3954 or by email at [linda.hardy@la.gov](mailto:linda.hardy@la.gov).

Sincerely,

*Linda M. Hardy*

Louisiana Dept. of Environmental Quality  
Office of the Secretary  
P.O. Box 4301  
Baton Rouge, LA 70821-4301  
Phone: (225) 219-3954  
Fax: (225) 219-3971  
Email: [linda.hardy@la.gov](mailto:linda.hardy@la.gov)

## Geyer, Joshua

---

**From:** Adams, Gabriel <Gabriel.Adams@spr.doe.gov>  
**Sent:** Thursday, October 06, 2016 2:27 PM  
**To:** Castille, Barbara  
**Cc:** Fogle, William; Sevcik, Bob; Woods, Will; Vedros, Chris  
**Subject:** FW: Brine Disposal PRP  
**Attachments:** Brine Disposal PRP.pdf

**Importance:** High

Barbara,

Here is a letter from LA DNR Office of Conservation.

Regards,

Gabriel Adams, REM | Fluor Federal Petroleum Operations, LLC | Program Manager, Sustainability, Environmental & Sustainability Department | Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

-----Original Message-----

**From:** Woods, Will  
**Sent:** Thursday, October 06, 2016 2:24 PM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>  
**Subject:** FW: Brine Disposal PRP

Gabe,

Please forward as required.

-----Original Message-----

**From:** Mike Kline [<mailto:Mike.Kline@LA.GOV>]  
**Sent:** Thursday, October 06, 2016 2:21 PM  
**To:** Woods, Will <[Will.Woods@SPR.DOE.GOV](mailto:Will.Woods@SPR.DOE.GOV)>  
**Subject:** FW: Brine Disposal PRP

Mr. Woods, please let me know that you have received this SOV response.

Thanks,

Mike Kline  
Geologist  
Office of Conservation  
Department of Natural Resources

-----Original Message-----

**From:** [geodatainc@bellsouth.net](mailto:geodatainc@bellsouth.net) [<mailto:geodatainc@bellsouth.net>]  
**Sent:** Thursday, October 06, 2016 2:16 PM  
**To:** Mike Kline  
**Subject:** Brine Disposal PRP



Please open the attached document.

---

**CONFIDENTIALITY NOTICE**

This email communication may contain confidential information which also may be legally privileged and is intended only for the use of the intended recipients identified above. If you are not the intended recipient of this communication, you are hereby notified that any unauthorized review, use, dissemination, distribution, downloading, or copying of this communication is strictly prohibited. If you are not the intended recipient and have received this communication in error, please immediately notify us by reply email, delete the communication and destroy all copies.

**COMPUTER SYSTEM USE/CONSENT NOTICE**

This message was sent from a computer system which is the property of the State of Louisiana and the Department of Natural Resources (DNR). It is for authorized business use only. Users (authorized or unauthorized) have no explicit or implicit expectation of privacy. Any or all uses of this system and all files on this system may be intercepted, monitored, recorded, copied, audited, inspected, and disclosed to Department of Natural Resources and law enforcement personnel. By using this system the user consents to such interception, monitoring, recording, copying, auditing, inspection, and disclosure at the discretion of DNR.



**JOHN BEL EDWARDS**  
GOVERNOR

**State of Louisiana**  
**DEPARTMENT OF NATURAL RESOURCES**  
**OFFICE OF CONSERVATION**

**THOMAS F. HARRIS**  
SECRETARY

**RICHARD P. IEYOUB**  
COMMISSIONER OF CONSERVATION

September 26, 2016

**TO:** Mr. Will Woods, Environmental Specialist - DOE  
SPR Project Management Office  
900 Commerce Road East  
New Orleans, Louisiana 70123

**RE:** Solicitation of Views  
Brine Disposal PRP  
SPR – West Hackberry Facility  
Cameron Parish

Dear Mr. Woods:

In response to your letter dated August 1, 2016, concerning the referenced matter, please be advised that the Office of Conservation collects and maintains many types of information regarding oil and gas exploration, production, distribution, and other data relative to the petroleum industry as well as related and non-related injection well information, surface mining and ground water information and other natural resource related data. Most information concerning oil, gas and injection wells for any given area of the state, including the subject area of your letter can be obtained through records search via the SONRIS data access application available at:

<http://www.dnr.louisiana.gov>

A review of our computer records for the referenced project area indicates that there are oil, gas and injection wells located in the vicinity of the project area. The DNR water well database indicates that there are registered water wells in the vicinity of the project area. Additionally, unregistered water wells may be located in the area.

The Office of Conservation maintains records of all activities within its jurisdiction in paper, microfilm or electronic format. These records may be accessed during normal business hours, Monday through Friday, except on State holidays or emergencies that require the Office to be closed. Please call 225-342-5540 for specific contact information or for directions to the Office of Conservation, located in the LaSalle Building, 617 North Third Street, Baton Rouge, Louisiana. For pipelines and other underground hazards, please contact Louisiana One Call at 1-800-272-3020 prior to commencing operations. Should you need to direct your inquiry to any of our Divisions, you may use the following contact information:

<u>Division</u>	<u>Contact</u>	<u>Phone No.</u>	<u>E-mail Address</u>
Engineering	Jeff Wells	225-342-5638	jeff.wells@la.gov
Pipeline	Steven Giambrone	225-342-2989	steven.giambrone@la.gov
Injection & Mining	Brad Bourgoyne	225-342-4286	brad.bourgoyne@la.gov
Geological	Mike Kline	225-342-3335	mike.kline@la.gov
Environmental	Gary Snellgrove	225-342-7222	gary.snellgrove@la.gov

If you have difficulty in accessing the data via the referenced website because of computer related issues, you may obtain assistance from our technical support section by selecting Help on the SONRIS tool bar and submitting an email describing your problems and including a telephone number where you may be reached.

Sincerely,



Richard P. Ieyou

*APC* Commissioner of Conservation

RPI:MSK:mks

## Geyer, Joshua

---

**From:** Adams, Gabriel <Gabriel.Adams@spr.doe.gov>  
**Sent:** Friday, October 14, 2016 11:20 AM  
**To:** Castille, Barbara  
**Cc:** Woods, Will; Sevcik, Bob  
**Subject:** FW: SOV response Brine Disposal Pipeline Replacement Project (MVN-2016-01256-SB)

Here is a Corps of Engineers response.

Gabriel Adams, REM | **Fluor Federal Petroleum Operations, LLC** | Program Manager, Sustainability, Environmental & Sustainability Department |  
*Contractor to the U. S. Department of Energy SPR* | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

---

**From:** Woods, Will  
**Sent:** Friday, October 14, 2016 11:07 AM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>; Sevcik, Bob <[Bob.Sevcik@SPR.DOE.GOV](mailto:Bob.Sevcik@SPR.DOE.GOV)>  
**Subject:** FW: SOV response Brine Disposal Pipeline Replacement Project (MVN-2016-01256-SB)

FYI

Sent from my Windows 10 phone

---

**From:** [Clement, Karen L MVN](#)  
**Sent:** Friday, October 14, 2016 10:43 AM  
**To:** [Woods, Will](#)  
**Cc:** [Adams, Gabriel](#)  
**Subject:** SOV response Brine Disposal Pipeline Replacement Project (MVN-2016-01256-SB)

Mr. Woods,

Please take this email as our official SOV response.

This is in response to your Solicitation of Views request, concerning the Brine Disposal Pipeline Replacement Project at Hackberry, Louisiana, in Cameron Parish.

We have reviewed your request for potential Department of the Army regulatory requirements and impacts on any Department of the Army projects.

We do not anticipate any adverse impacts to any Corps of Engineers projects.

We have reviewed your project as proposed and determined that a Department of the Army permit under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act will be required.

Please be advised that this property is in the Louisiana Coastal Zone and a Coastal Use Permit may be required prior to initiation of any activities on this site. For additional information, contact Ms. Christine Charrier, Office of Coastal Management, Louisiana Department of Natural Resources at (225) 342 7953.

You are advised that this determination is valid for a period of 5 years from the date of this letter unless new information warrants revision prior to the expiration date or the District Commander has identified, after public notice



and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

Off-site locations of activities such as borrow, disposals, haul-and detour-roads and work mobilization site developments may be subject to Department of the Army regulatory requirements and may have an impact on a Department of the Army project.

You should apply for said permit well in advance of the work to be performed. The application should include sufficiently detailed maps, drawings, photographs, and descriptive text for accurate evaluation of the proposal.

Please contact Mr. Robert Heffner, of our Regulatory Branch by telephone at (504) 862-1288, or by e-mail at [Robert.A.Heffner@usace.army.mil](mailto:Robert.A.Heffner@usace.army.mil) for questions concerning wetlands determinations or need for on-site evaluations. Questions concerning regulatory permit requirements may be addressed to Mr. Darrell Barbara by telephone at (504) 862-2260 or by email at [Darrell.Barbara@usace.army.mil](mailto:Darrell.Barbara@usace.army.mil).

Future correspondence concerning this matter should reference our account number MVN-2015-01256-SB. This will allow us to more easily locate records of previous correspondence, and thus provide a quicker response.

Thanks,  
Karen

Karen L. Clement  
Asst Operations Manager, Completed Works  
Operations Division  
New Orleans District Corps of Engineers  
CEMVN-OD-W  
7400 Leake Avenue  
New Orleans, LA 70118  
(504) 862-2313

**APPENDIX C**  
**AGENCY INFORMATION AND**  
**CORRESPONDENCE**

**Public Notices and Affidavits (American Press and Cameron Pilot)**

# Affidavit of Publication

## LEGALS

posed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility in Cameron Parish, Louisiana.

The draft EA document has been posted at the following websites: [energy.gov/node/2191870](http://energy.gov/node/2191870) and

<http://www.spr.doe.gov/esh/default.html> and <http://www.spr.doe.gov/N-EPA/default.htm>. The review period will be from Monday, December 12, 2016 through Friday, January 13, 2017.

The draft EA document is additionally available at the following libraries during the review period:

Cameron Parish Library-Hackberry Branch, 983 Main Street, Hackberry, LA 70645

Cameron Main Library, 501 Marshall Street, Cameron, LA 70631

Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607

Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663

Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

**PUBLIC COMMENT OPPORTUNITIES:** Comments on the document should be sent by January 13, 2017, to Mr. Will Woods at the following email address: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov) or by fax to (504) 818-5329, or by USPS to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

### Public Notice of Availability

Environmental Assessment for the Strategic Petroleum Reserve Brine Disposal Pipeline Replacement Project, West Hackberry Facility, Cameron Parish, Louisiana. The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project pro-

Dec 12 11  
00980770

## STATE OF LOUISIANA Parish of Calcasieu

Before me the undersigned authority, personally came and appeared



who being duly sworn, deposes and says:

He/She is a duly authorized agent of

**LAKE CHARLES AMERICAN PRESS**

a newspaper published daily at 4900 Highway 90 East, Lake Charles, Louisiana, 70615. (Mail address: P.O. Box 2893 Lake Charles, LA 70602)

The attached Notice was published in said newspaper in its issue(s) dated:

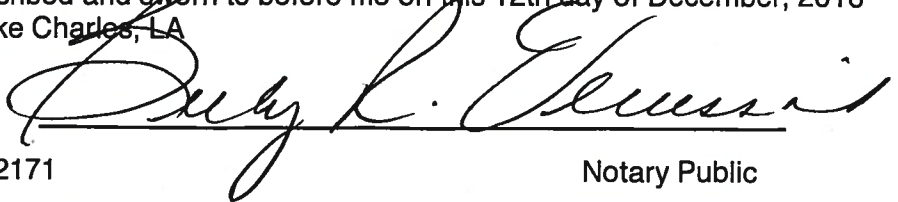
00980770 - \$109.23

December 12, 2016



Duly Authorized Agent

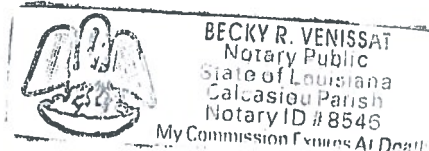
Subscribed and sworn to before me on this 12th day of December, 2016 at Lake Charles, LA



00102171

Notary Public

S&B INFRASTRUCTURE, LTD.



**Public Notice of Availability  
Environmental Assessment  
for the Strategic Petroleum  
Reserve Brine Disposal  
Pipeline Replacement Project,  
West Hackberry Facility,  
Cameron Parish, Louisiana**

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility in Cameron Parish, Louisiana.

The draft EA document has been posted at the following web-sites:

[energy.gov/node/2191870](http://energy.gov/node/2191870),  
<http://www.spr.doe.gov/esh/default.html> and  
<http://www.spr.doe.gov/NEPA/default.htm>.

The review period will be from Monday, December 12, 2016 through Friday, January 13, 2017.

The draft EA document is additionally available at the following libraries during the review period:

Cameron Parish Library-Hackberry Branch, 983 Main Street, Hackberry, LA 70645

Cameron Main Library, 501 Marshall Street, Cameron, LA 70631

Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607

Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663

Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

**PUBLIC COMMENT OPPORTUNITIES:** Comments on the document should be sent by January 13, 2017, to Mr. Will Woods at the following email address: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by USPS to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

RUN: Dec. 15 (D 37)

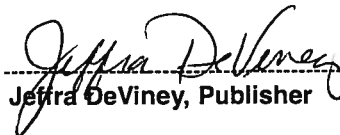
# State of Louisiana

## Parish of Calcasieu

Before me the undersigned authority, personally came and appeared Jerry Wise, who, being duly sworn, deposes and says: That he is the publisher of the Cameron Parish Pilot, a newspaper published weekly at Cameron, Louisiana.

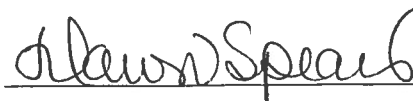
That the hereto attached notice was published in said newspaper in its issues dated

December 15, 2016

  
Jeffra DeViney, Publisher

Sworn and subscribed to at my office in DeQuincy, Louisiana, on this 15th day of Deeember A.D., 2016

Before me,



Dawn Spears, Notary Public

55475



**APPENDIX C**

**AGENCY INFORMATION AND  
CORRESPONDENCE**

**Resource Agency Coordination List and Emails to Resource Agencies for the Proposed  
West Hackberry Brine Disposal Pipeline Project Notice of Availability of an  
Environmental Assessment (December 12, 2016)**

**Resource Agency Coordination List for the Proposed West Hackberry Brine Disposal Pipeline Project  
Notice of Availability of an Environmental Assessment (updated through December 12, 2016)**

Department/Office	Division	Name/Title (Email/Phone Number)	Address	Notice of Availability (Emailed 12-12-16)
<b>Federal Resource Agencies</b>				
US Army Corps of Engineers	Regulatory Branch, New Orleans District	Martin S. Mayer – Regulatory Branch Chief Martin.S.Mayer@usace.army.mil (504.862.2255)	P.O. Box 60267, New Orleans, LA 70160 or 7400 Leake Avenue, New Orleans 70118	✓ Martin Mayer
US Army Corps of Engineers	Western Evaluation Section Regulatory Branch	Darrell S. Barbara – Chief Darrell.Barbara@usace.army.mil (504.862.2261)	P.O. Box 60267, New Orleans, LA 70160 or 7400 Leake Avenue, New Orleans 70118	✓ Darrell Barbara
US Army Corps of Engineers	Operations Division, New Orleans District	Karen L. Clement – Assistant Operations Manager, Completed Works Karen.L.Clement@usace.army.mil (504.862.2313)	P.O. Box 60267, New Orleans, LA 70160 or 7400 Leake Avenue, New Orleans 70118	✓ Karen Clement
US Army Corps of Engineers	Southwest Waterways	Tracy Falk – Operations Manager Tracy.A.Falk@usace.army.mil (504.862.2971)	P.O. Box 60267, New Orleans, LA 70160 or 7400 Leake Avenue, New Orleans 70118	✓ Tracy Falk
US Fish and Wildlife Service	Louisiana Ecological Services Field Office	Brad Rieck – Acting Field Supervisor Brad_Rieck@fws.gov (337.291.3116)	646 Cajundome Boulevard, Suite 400 Lafayette, LA 70506	✓ Brad Rieck
US Fish and Wildlife Service	Sabine National Wildlife Refuge	Terrance Delaine – Manager SWLRComplex@fws.gov or Terry.Delaine@fws.gov (337.762.3816)	3000 Holly Beach Highway Hackberry, LA 70645	✓ Terrance Delaine
US Environmental Protection Agency	Office of Planning & Coordination	Robert Houston – Chief, Office of Planning & Coordination Houston.Robert@epa.gov (800.887.6063 or 214.665.8565)	1445 Ross Avenue Dallas, TX 75202	✓ Robert Houston
US Department of Homeland Security	US Coast Guard, Eighth District	Rear Admiral David R. Callahan – District Commander (504.589.6298) Angela Songy (Angela.H.Songy@uscg.mil)	Hale Boggs Federal Building 500 Poydras Street New Orleans, LA 70130	✓ RA David Callahan (via Angela Songy)
US Department of Homeland Security	US Coast Guard	David M. Frank – Bridge Administration, Branch Supervisor David.M.Frank@uscg.mil (504.671.6127)	Hale Boggs Federal Building 500 Poydras Street New Orleans, LA 70130	✓ David Frank
US Department of Homeland Security	US Coast Guard	Roderick C. Bawar, MST2 Waterways Management, Facilities Inspection, Marine Safety Unit (MSU) Lake Charles Roderick.C.Bawar@uscg.mil (337.491.7800)	127 West Broad Street, Suite 200, Lake Charles, LA 70601	✓ Roderick Bawar

West Hackberry Brine Disposal Pipeline Replacement Project – DOE/EA-2039

Department/Office	Division	Name/Title (Email/Phone Number)	Address	Notice of Availability (Emailed 12-12-16)
US Department of Transportation	US Maritime Administration	John P. Quinn – Associated Administrator, Environment and Compliance John.Quinn@dot.gov (202.366.1931)	1200 New Jersey Avenue, SE Washington, D.C. 20590	✓ John Quinn
National Oceanic and Atmospheric Administration	National Marine Fisheries Service	Virginia M. Fay, Assistant Regional Administrator, Habitat Conservation Division Jan Koellen (jan.koellen@noaa.gov) (727.824.5312)	263 13 <sup>th</sup> Avenue South Saint Petersburg, FL 33701	✓ Virginia Fay (via Jan Koellen)
National Oceanic and Atmospheric Administration	National Marine Fisheries Service, Habitat Conservation Division	Richard Hartman – Team Leader Brandon Howard Brandon.Howard@noaa.gov (225.389.0508)	c/o LSU, Military Science Building, Room 266, South Stadium Drive Baton Rouge, LA 70803	✓ Brandon Howard
US Department of Agriculture	Natural Resources Conservation Service	Kevin Norton – State Soil Conservationist Kevin.Norton@la.usda.gov Mitchell Mouton – Assistant State Soil Conservationist Mitchell.Mouton@la.usda.gov (318.473.7751)	3737 Government Street Alexandria, LA 71303	✓ Kevin Norton ✓ Mitchell Mouton
<b>State Resource Agencies</b>				
Louisiana Department of Culture, Recreation & Tourism	State Historic Preservation Officer	Phil Boggan – Assistant Secretary pboggan@crt.state.la.us (225.342.8200)	P.O. Box 44247 Baton Rouge, LA 70804	✓ Phil Boggan
Louisiana Department of Natural Resources (LDNR)	Office of the Secretary	Thomas Harris – Secretary Thomas.Harris@la.gov (225.342.2710)	P.O. Box 94396 Baton Rouge, LA 70804	✓ Thomas Harris
LDNR Office of Coastal Management	Interagency Affairs & Field Services	Donald Haydel – Administrator Donald.Haydel@la.gov Jeff Harris Jeff.Harris@la.gov (225.342.8953)	P.O. Box 44487 Baton Rouge, LA 70804	✓ Donald Haydel ✓ Jeff Harris
LDNR Office of Coastal Management	Permits/Mitigation Division	Karl Morgan – Permits & Mitigation Administrator Karl.Morgan@la.gov (225.342.6470)	P.O. Box 44487 Baton Rouge, LA 70804	✓ Karl Morgan
LDNR Office of Conservation	Environmental Division  Geological Division	Richard P. Ieyoub – Commissioner of Conservation Richard.Ieyoub@la.gov (225.342.5540) Gary Snellgrove – Environmental Division Director Gary.Snellgrove@la.gov (225.342.7222) Mike Kline – Geological Division Director Mike.Kline@la.gov (225.342.3335)	P.O. Box 94275 Baton Rouge, LA 70804 or LaSalle Building, 617 North 3 <sup>rd</sup> Street, Baton Rouge, LA 70802	✓ Richard Ieyoub ✓ Gary Snellgrove ✓ Mike Kline

West Hackberry Brine Disposal Pipeline Replacement Project – DOE/EA-2039

Department/Office	Division	Name/Title (Email/Phone Number)	Address	Notice of Availability (Emailed 12-12-16)
LDNR Office of Conservation	Pipeline Division Engineering Division Injection and Mining Division	Steven Giambrone – Pipeline Division Director Steven.Giambrone@la.gov (225.342.2989) Jeff Wells – Engineering Division Director Jeff.Wells@la.gov (225.342.5638) Brad Bourgoyne – I & M Division Director Brad.Bourgoyne@la.gov (225.342.4286)	P.O. Box 94275 Baton Rouge, LA 70804 or LaSalle Building, 617 North 3 <sup>rd</sup> Street, Baton Rouge, LA 70802	✓ Steven Giambrone ✓ Jeff Wells ✓ Brad Bourgoyne
Louisiana Department of Wildlife and Fisheries	Office of the Secretary	Charlie Melancon – Secretary Kayla Kirby – Executive Assistant (kkirby@wlf.la.gov) (225.765.2800)	P.O. Box 98000 Baton Rouge, LA 70898	✓ Charlie Melancon (via Kayla Kirby)
Louisiana Department of Wildlife and Fisheries	Louisiana Natural Heritage Program	Amity Bass – Program Manager abass@wlf.la.gov (225.765.2975) Keri Landry – Biologist klandry@wlf.la.gov (225.765.2809) Carolyn Michon – Biologist/Data Manager cminchon@wlf.la.gov (225.765.2357)	P.O. Box 98000 Baton Rouge, LA 70898	✓ Amity Bass ✓ Keri Landry ✓ Carolyn Michon
Louisiana Department of Environmental Quality	Office of the Secretary	Chuck Carr Brown, Ph.D. – Secretary DEQ-WWWOfficeoftheSecretaryContact@la.gov (225.219.3935) Linda M. Hardy – Office of the Secretary Linda.Hardy@la.gov	P.O. Box 4301 Baton Rouge, LA 70821-4301	✓ Chuck Carr Brown ✓ Linda Hardy
Louisiana Office of State Lands	Administration Section	Spencer Robinson – Administrator Adam Cox Adam.Cox@la.gov (225.342.4578)	P.O. Box 44124 Baton Rouge, LA 70704	✓ Adam Cox
Louisiana Department of Transportation and Development	Floodplain Management Office	Jennifer D. Rachal, CFM National Flood Insurance Program Coordinator, Floodplain Management Program Jennifer.Rachal@la.gov (225.379.3005; 225.379.3002 fax)	1201 Capital Access Road Baton Rouge, LA 70802 or PO Box 94245, Baton Rouge, LA 70804	✓ Jennifer Rachal
<b>Local Resource Agencies</b>				
Cameron Parish	Permitting	Myles Hebert – Floodplain Administrator mh_cppj@camtel.net Kara Bonsall – Coastal Zone Administrator Kb_cppj@camtel.net (377.775.2800)	P.O. Box 1280 Cameron, LA 70631	✓ Myles Hebert ✓ Kara Bonsall
Cameron Parish	Parks and Recreation Hackberry Recreation District	Dwayne Sanner – Director dsanner@hilcorp.com (377.762.7402)	1095 Poncho Sanner Lane Hackberry, LA 70645	✓ Dwayne Sanner

## Castille, Barbara

---

**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 11:48 AM  
**To:** 'martin.s.mayer@usace.army.mil'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToUSACE\_MMayer\_121216\_FINAL.pdf

Mr. Mayer—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Martin Mayer, Chief, Regulatory Branch, MVN-OD, US Army Corps of Engineers, New Orleans District, 7400 Leake Avenue, New Orleans, Louisiana 70118

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 11:48 AM  
**To:** 'darrell.barbara@usace.army.mil'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToUSACE\_DBarbara\_121216\_FINAL.pdf

Mr. Barbara—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Darrell Barbara, Chief, Western Evaluation Section, Regulatory Branch, US Army Corps of Engineers, New Orleans District, 7400 Leake Avenue, New Orleans, Louisiana 70118

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

## Castille, Barbara

---

**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 5:28 PM  
**To:** 'karen.l.Clement@usace.army.mil'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToUSACE\_KClement\_121216\_FINAL.pdf

[Reference MVN-2015-01256-SB]

Ms. Clement—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Karen M. Clement, Assistant Operations Manager, Completed Works, Operations Division, US Army Corps of Engineers, New Orleans District, 7400 Leake Avenue, New Orleans, Louisiana 70118

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS: Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).



## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 11:48 AM  
**To:** 'tracy.a.falk@usace.army.mil'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToUSACE\_TFalk\_121216\_FINAL.pdf

Mr. Falk—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Tracy Falk, Chief, US Army Corps of Engineers, New Orleans District, Southwest Waterways, 7400 Leake Avenue, New Orleans, Louisiana 70118

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 12:04 PM  
**To:** 'brad\_riek@fws.gov'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToUSFWS\_BRieck\_121216\_FINAL.pdf

Mr. Rieck—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Brad Rieck, US Fish and Wildlife Service, Louisiana Ecological Services Field Office, 646 Cajundome Boulevard, Suite 400, Lafayette, LA 70506

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 12:12 PM  
**To:** 'SWLRComplex@fws.gov'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToUSFWS\_TDelaine\_121216\_FINAL.pdf

Mr. Delaine--

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Terrance Delaine, US Fish and Wildlife Service, Sabine National Wildlife Refuge, 3000 Holly Beach Highway, Hackberry, LA 70645

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

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## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 12:26 PM  
**To:** 'houston.robert@epa.gov'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToUSEPA\_RHouston\_121216\_FINAL.pdf

Mr. Houston—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Robert Houston, Chief, US Environmental Protection Agency, Office of Planning & Coordination, 1445 Ross Avenue, Dallas, TX 75202

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

## Castille, Barbara

---

**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 12:34 PM  
**To:** 'Angela.H.Songy@uscg.mil'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToUSCG\_RADCallahan\_121216\_FINAL.pdf

[Angela Songy for Rear Admiral David R. Callahan]

Rear Admiral David Callahan--

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**  
Manager, Environmental Planning  
**S&B Infrastructure, Ltd.**  
530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)

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To: Rear Admiral David Callahan, District Commander, US Coast Guard, Hale Boggs Federal Building, 500 Poydras Street, New Orleans, LA 70130

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).



## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 3:40 PM  
**To:** 'david.m.frank@uscg.mil'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToUSCG\_DFrank\_121216\_FINAL.pdf

Mr. Frank—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: David M. Frank, Branch Supervisor, Bridge Administration, US Coast Guard, Hale Boggs Federal Building, 500 Poydras Street, New Orleans, LA 70130

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

## Castille, Barbara

---

**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 5:11 PM  
**To:** 'Roderick.C.Bawar@uscg.mil'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToUSCG\_RBawar\_121216\_FINAL.pdf

Mr. Bawar—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Roderick C. Bawar, MST2, US Coast Guard, Waterways Management, Facilities Inspection, Marine Safety Unit, 127 West Broad Street, Suite 200, Lake Charles, LA 70601

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

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## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 2:52 PM  
**To:** 'john.quinn@dot.gov'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToUSDOT\_JQuinn\_121216\_FINAL.pdf

Mr. Quinn—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

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- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
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The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
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[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: John P. Quinn, Associate Administrator for Environment and Compliance, US Department of Transportation, 1200 New Jersey Avenue, SE, Washington, DC 20590

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
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- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

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## Castille, Barbara

---

**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 10:24 AM  
**To:** 'jan.koellen@noaa.gov'; 'brandon.howard@noaa.gov'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToNOAA\_NMFS\_VFay\_121216\_FINAL.pdf;  
WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToNOAA\_NMFS\_BHoward\_121216\_FINAL.pdf

[To Jan Koellen for Virginia Fay]

Ms. Fay and Mr. Howard—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**  
Manager, Environmental Planning  
**S&B Infrastructure, Ltd.**  
530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)

This e-mail, including any attached files, may contain confidential and privileged information. Any review, use, distribution or disclosure of included information by unintended recipients is strictly prohibited. If you are not a named recipient or authorized to receive and/or act on information sent to a

To: Virginia Fay, Assistant Regional Administrator, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Habitat Conservation Division, Southeast Regional Office, 263 13<sup>th</sup> Avenue South, St. Petersburg, Florida 33701

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

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The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
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- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

To: Brandon Howard, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Habitat Conservation Division, LSU Military Science Building, Room 266, South Stadium Drive, Baton Rouge, LA 70803

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

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## Castille, Barbara

---

**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 9:26 AM  
**To:** kevin.norton@la.usda.gov; mitchell.mouton@la.usda.gov  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToUSDA\_121216\_FINAL.pdf

Mr. Norton and Mr. Mouton—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

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Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
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[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Kevin Norton, Mitchell Mouton, US Department of Agriculture, Natural Resources Conservation Service, State Office, 3737 Government Street, Alexandria, LA 71302

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

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## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 2:30 PM  
**To:** 'pboggan@crt.state.la.us'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToLADCRT\_PBoggan\_121216\_FINAL.pdf

Mr. Boggan—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

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Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
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**Barbara Castille**

To: Phil Boggan, State Historic Preservation Officer, Louisiana Department of Culture, Recreation and Tourism, PO Box 44247, Baton Rouge, LA 70804

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

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The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

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## Castille, Barbara

---

**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 2:32 PM  
**To:** 'thomas.harris@la.gov'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToLADNR\_OfficeOfConserv\_THarris121216\_FINAL.pdf

Mr. Harris—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

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Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
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To: Thomas Harris, Secretary, Louisiana Department of Natural Resources, Office of Conservation, PO Box 94275, Baton Rouge, LA 70804

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

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## Castille, Barbara

---

**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 10:55 AM  
**To:** 'donald.haydel@la.gov'; 'jeff.harris@la.gov'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToOCM\_DHaydel\_J Harris\_121216\_FINAL.pdf

Mr. Haydel and Mr. Harris—

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Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

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To: Donald Haydel, Jeff Harris, Louisiana Department of Natural Resources, Office of Coastal Management, Interagency Affairs & Field Services, PO Box 44487, Baton Rouge, LA 70804

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

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- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 10:56 AM  
**To:** 'karl.morgan@la.gov'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToOCM\_KMorgan\_121216\_FINAL.pdf

Mr. Morgan—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Karl Morgan, Louisiana Department of Natural Resources, Office of Coastal Management, Permits and Mitigation Division, PO Box 44487, Baton Rouge, LA 70804

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
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The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

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- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 2:31 PM  
**To:** 'richard.leyoub@la.gov'; 'gary.snellgrove@la.gov'; 'mike.kline@la.gov'; 'steven.giambrone@la.gov'; 'jeff.wells@la.gov'; 'brad.bourgoyne@la.gov'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToLADNR\_OfficeOfConserv\_121216\_FINAL.pdf

Mr. leyoub, Mr. Snellgrove, Mr. Kline, Mr. Giambrone, Mr. Wells, Mr. Bourgoyne—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
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[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Richard Ieyoub, Gary Snellgrove, Mike Kline, Steven Giambrone, Jeff Wells, Brad Bourgoyne, Louisiana Department of Natural Resources, Office of Conservation, PO Box 94275, Baton Rouge, LA 70804

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
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The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

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- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

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## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 3:59 PM  
**To:** 'kkirby@wlf.la.gov'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToLAWLF\_CMelancon\_121216\_FINAL.pdf

[To Kayla Kirby for Charlie Melancon]

Mr. Melancon—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

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- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
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- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Charlie Melancon, Secretary, Louisiana Department of Wildlife and Fisheries, PO Box 98000, Baton Rouge, LA 70898

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
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The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

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- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
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- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 4:09 PM  
**To:** 'abass@wlf.la.gov'; 'klandry@wlf.la.gov'; 'cmichon@wlf.la.gov'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToLANaturalHeritage\_121216\_FINAL.pdf

Ms. Bass, Ms. Landry, Ms. Michon—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
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The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
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To: Amity Bass, Keri Landry, Carolyn Michon, Louisiana Department of Wildlife and Fisheries, Natural Heritage Program, PO Box 98000, Baton Rouge, LA 70898

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

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The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

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- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

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## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 4:19 PM  
**To:** 'DEQ-WWWOfficeoftheSecretaryContact@la.gov'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToDEQ\_CCarrBrown\_121216\_FINAL.pdf

Mr. Brown—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

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Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
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[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Chuck Carr Brown, PhD, Secretary, Louisiana Department of Environmental Quality, PO Box 4301, Baton Rouge, LA 70821

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

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- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 5:00 PM  
**To:** 'linda.hardy@la.gov'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToDEQ\_LHardy\_121216\_FINAL.pdf

Ms. Hardy—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Linda M. Hardy, Office of the Secretary, Louisiana Department of Environmental Quality, PO Box 4301, Baton Rouge, LA 70821

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
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- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 9:47 AM  
**To:** adam.cox@la.gov  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToOfficeOfStateLands\_121216\_FINAL.pdf

Mr. Cox—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Adam Cox, Office of State Lands, PO Box 44124, Baton Rouge, LA 70704

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 3:07 PM  
**To:** Jennifer.Rachal@la.gov  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToFloodplain\_JRachal\_121216\_FINAL.pdf

Ms. Rachal —

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Jennifer D. Rachal, National Flood Insurance Program Coordinator, Floodplain Management Program, Louisiana Department of Transportation and Development, PO Box 94245, Baton Rouge, LA 70804

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS: Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 3:29 PM  
**To:** 'mh\_cppj@camtel.net'; 'kb\_cppj@camtel.net'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToCameronParishPermitting\_121216\_FINAL.pdf

Mr. Hebert and Ms. Bonsall—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Myles Hebert, Floodplain Administrator, and Kara Bonsall, Coastal Zone Administrator, Permitting Department, Cameron Parish, PO Box 1280, Cameron, LA 70631

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).



## Castille, Barbara

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**From:** Castille, Barbara  
**Sent:** Monday, December 12, 2016 3:29 PM  
**To:** 'dsanner@hilcorp.com'  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** WestHackberry\_NoticeOfAvailability\_DraftEnvironmentalAssessment\_ToCameronParishParks\_121216\_FINAL.pdf

Mr. Sanner—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)

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To: Dwayne Sanner, Director, Parks and Recreation Department, Hackberry Recreation District, Cameron Parish, 1095 Poncho Sanner Lane, Hackberry, LA 70645

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).

**APPENDIX C**

**AGENCY INFORMATION AND  
CORRESPONDENCE**

**Adjacent Property Owners Cover Letters for the Proposed West Hackberry Brine Disposal  
Pipeline Project Notice of Availability of an Environmental Assessment and  
Public Review Period (December 12, 2016)**



Department of Energy  
Strategic Petroleum Reserve Project Management Office  
900 Commerce East  
New Orleans, LA 70123  
December 12, 2016

Judd Addison or Current Resident  
165 Johnny Benoit Rd.  
Hackberry, LA 70645

Dear Mr. Addison,

Please find enclosed a copy of the notice for Public Review being placed into local newspapers in your area. This notice applies to the proposed Brine Disposal Pipeline Replacement Project associated with the West Hackberry SPR site. You have been selected to receive a direct notice since your property was noted in the review as having a proximity to the installation project.

Thank you for your time and consideration in this matter.

Attachments: 2



Department of Energy  
Strategic Petroleum Reserve Project Management Office  
900 Commerce East  
New Orleans, LA 70123  
December 12, 2016

Ms. Kristen D Brown or Current Resident  
170 Johnny Benoit Rd.  
Hackberry, LA 70645

Dear Ms. Brown,

Please find enclosed a copy of the notice for Public Review being placed into local newspapers in your area. This notice applies to the proposed Brine Disposal Pipeline Replacement Project associated with the West Hackberry SPR site. You have been selected to receive a direct notice since your property was noted in the review as having a proximity to the installation project.

Thank you for your time and consideration in this matter.

Attachments: 2





Department of Energy  
Strategic Petroleum Reserve Project Management Office  
900 Commerce East  
New Orleans, LA 70123  
December 12, 2016

Bethany O Richard or Current Resident  
192 Johnny Benoit Rd.  
Hackberry, LA 70645

Dear Ms. Richard,

Please find enclosed a copy of the notice for Public Review being placed into local newspapers in your area. This notice applies to the proposed Brine Disposal Pipeline Replacement Project associated with the West Hackberry SPR site. You have been selected to receive a direct notice since your property was noted in the review as having a proximity to the installation project.

Thank you for your time and consideration in this matter.

Attachments: 2



Department of Energy  
Strategic Petroleum Reserve Project Management Office  
900 Commerce East  
New Orleans, LA 70123  
December 12, 2016

Ronald Richard or Current Resident  
190 Johnny Benoit Rd.  
Hackberry, LA 70645

Dear Mr. Richard,

Please find enclosed a copy of the notice for Public Review being placed into local newspapers in your area. This notice applies to the proposed Brine Disposal Pipeline Replacement Project associated with the West Hackberry SPR site. You have been selected to receive a direct notice since your property was noted in the review as having a proximity to the installation project.

Thank you for your time and consideration in this matter.

Attachments: 2



Department of Energy  
Strategic Petroleum Reserve Project Management Office  
900 Commerce East  
New Orleans, LA 70123  
December 12, 2016

James K. Brown or Current Resident  
620 W. Main St.  
Hackberry, LA 70645

Dear Mr. Brown,

Please find enclosed a copy of the notice for Public Review being placed into local newspapers in your area. This notice applies to the proposed Brine Disposal Pipeline Replacement Project associated with the West Hackberry SPR site. You have been selected to receive a direct notice since your property was noted in the review as having a proximity to the installation project.

Thank you for your time and consideration in this matter.

Attachments: 2



Department of Energy  
Strategic Petroleum Reserve Project Management Office  
900 Commerce East  
New Orleans, LA 70123  
December 12, 2016

Arthur Seay or Current Resident  
223 Johnny Benoit Rd.  
Hackberry, LA 70645

Dear Mr. Seay,

Please find enclosed a copy of the notice for Public Review being placed into local newspapers in your area. This notice applies to the proposed Brine Disposal Pipeline Replacement Project associated with the West Hackberry SPR site. You have been selected to receive a direct notice since your property was noted in the review as having a proximity to the installation project.

Thank you for your time and consideration in this matter.

Attachments: 2



Department of Energy  
Strategic Petroleum Reserve Project Management Office  
900 Commerce East  
New Orleans, LA 70123  
December 12, 2016

Mr. Carl P Johnson, Sr.  
895 Johnson Lane.  
Hackberry, LA 70645

Dear Mr. Lane,

Please find enclosed a copy of the notice for Public Review being placed into local newspapers in your area. This notice applies to the proposed Brine Disposal Pipeline Replacement Project associated with the West Hackberry SPR site. You have been selected to receive a direct notice since your property was noted in the review as having a proximity to the installation project.

Thank you for your time and consideration in this matter.

Attachments: 2





Department of Energy  
Strategic Petroleum Reserve Project Management Office  
900 Commerce East  
New Orleans, LA 70123  
December 12, 2016

Kirk Sanner or Current Resident  
131 Maggie Hebert Rd.  
Hackberry, LA 70645

Dear Mr. Sanner,

Please find enclosed a copy of the notice for Public Review being placed into local newspapers in your area. This notice applies to the proposed Brine Disposal Pipeline Replacement Project associated with the West Hackberry SPR site. You have been selected to receive a direct notice since your property was noted in the review as having a proximity to the installation project.

Thank you for your time and consideration in this matter.

Attachments: 2



Department of Energy  
Strategic Petroleum Reserve Project Management Office  
900 Commerce East  
New Orleans, LA 70123  
December 12, 2016

Mr. Terry Hebert or Current Resident  
226 Maggie Hebert Rd.  
Hackberry, LA 70645

Dear Mr. Hebert,

Please find enclosed a copy of the notice for Public Review being placed into local newspapers in your area. This notice applies to the proposed Brine Disposal Pipeline Replacement Project associated with the West Hackberry SPR site. You have been selected to receive a direct notice since your property was noted in the review as having a proximity to the installation project.

Thank you for your time and consideration in this matter.

Attachments: 2

**APPENDIX C**  
**AGENCY INFORMATION AND**  
**CORRESPONDENCE**

**Agency/Public Comments and Comment/Response Summary**

## Castille, Barbara

---

**From:** Martinez, Eli <martinez.eli@epa.gov>  
**Sent:** Thursday, December 15, 2016 4:45 PM  
**To:** Castille, Barbara  
**Cc:** Houston, Robert  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Attachments:** Sign Letter Brine Disposal Pipeline Replacement Project.pdf

Ms. Castille-

Attached please find the response to the correspondence below, regarding the project title: Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project. The hard copy of this response was mailed to you today.

Eli Martinez  
US EPA Region 6 (6EN-XP)  
Compliance Assurance and Enforcement Division  
1445 Ross Avenue, Suite 1200  
Dallas, Texas 75202

---

**From:** Houston, Robert  
**Sent:** Monday, December 12, 2016 1:18 PM  
**To:** Castille, Barbara <[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)>  
**Cc:** Adams, Gabriel (<[Gabriel.Adams@spr.doe.gov](mailto:Gabriel.Adams@spr.doe.gov)>) <[Gabriel.Adams@spr.doe.gov](mailto:Gabriel.Adams@spr.doe.gov)>; Martinez, Eli <[martinez.eli@epa.gov](mailto:martinez.eli@epa.gov)>  
**Subject:** RE: Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project

Thank you for the information provided. EPA Region 6 will follow-up.

Robert Houston  
Chief, Special Projects Section  
U.S. Environmental Protection Agency  
1445 Ross Avenue, Suite 1200 (6EN-WS)  
Dallas, Texas 75202-2733  
Office: (214) 665-8565  
eMail: [houston.robert@epa.gov](mailto:houston.robert@epa.gov)

---

**From:** Castille, Barbara [<mailto:blcastille@sbinfra.com>]  
**Sent:** Monday, December 12, 2016 12:26 PM  
**To:** Houston, Robert <[Houston.Robert@epa.gov](mailto:Houston.Robert@epa.gov)>  
**Cc:** Adams, Gabriel (<[Gabriel.Adams@spr.doe.gov](mailto:Gabriel.Adams@spr.doe.gov)>) <[Gabriel.Adams@spr.doe.gov](mailto:Gabriel.Adams@spr.doe.gov)>  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project

Mr. Houston—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS TX 75202-2733

December 15, 2016

Barbara Castille  
Manager, Environmental Planning  
S&B Infrastructure, Ltd.  
530 Wells Fargo Drive  
Houston, Texas 77090

SUBJECT: Environmental Assessment for the Brine Disposal Pipeline Replacement Project associated with the Strategic Petroleum Reserve, West Hackberry Facility, Cameron Parish, Louisiana.

Dear Ms. Castille:

The Environmental Protection Agency (EPA) has reviewed the Environmental Assessment for the Brine Disposal Pipeline Replacement Project associated with the Strategic Petroleum Reserve, West Hackberry Facility, Cameron Parish, Louisiana. Our review and comments are in accordance with Section 309 of the Clean Air Act and the National Environmental Policy Act (NEPA).

Based upon the environmental assessment information, EPA has no comments to offer on the proposed project. Thank you for this opportunity to comment. If you have any questions, please contact Eli Martinez of my staff at 214/655-2119 or at [martinez.eli@epa.gov](mailto:martinez.eli@epa.gov) for assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Houston".

Robert Houston  
Chief, Special Projects Section

## Geyer, Joshua

---

**From:** Castille, Barbara  
**Sent:** Thursday, December 15, 2016 12:39 PM  
**To:** Geyer, Joshua  
**Subject:** FW: Email 1 of 4

**Importance:** High

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**From:** Adams, Gabriel [mailto:Gabriel.Adams@spr.doe.gov]  
**Sent:** Thursday, December 15, 2016 11:14 AM  
**To:** Castille, Barbara  
**Subject:** FW: Email 1 of 4  
**Importance:** High

Barbara,

Below is the body of the email Will Woods received from the NO District Corps of Engineers. There were attachments to the email. I will send you the attachments in 4 separate emails.

Regards,

Gabriel Adams, REM | [Fluor Federal Petroleum Operations, LLC](#) | Program Manager, Sustainability, Environmental & Sustainability Department |  
Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

---

**From:** Woods, Will  
**Sent:** Thursday, December 15, 2016 11:07 AM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>  
**Subject:** RE: Email 1 of 4

I couldn't capture the subject and other metadata from top of the Email, but here is the body

Dear Mr. Woods, I have preliminarily reviewed the draft Environmental Assessment (EA) prepared by DOE, for a proposal to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana. Based on my review, I would like to provide the following comments and initial observations:

1. Based on the location of the project site, as depicted within the draft EA and Site Location Maps, the proposed work is located within the LA Coastal Zone (see attached map), and submittal of a Joint Permit Application through the Dept. of Natural Resources, Office of Coastal Management will be required. A copy of the complete application will be forwarded to this office for our review and processing.
2. The proposed project is entirely located within the USACE, New Orleans District, and submittal to other USACE Districts will not be required. (see attached map)

3. As described within the Draft EA, it appears that the subject work will require authorization from this office under Section 10 of the River and Harbors Act and Section 404 of the Clean Water Act. Impacts to jurisdictional wetlands from the project show to be likely, therefore, as to clearly verify the extent of wetlands and waters of the U.S. to be affected, it is recommended that a Jurisdictional Determination (JD) be acquired from our Surveillance and Enforcement Section, prior to or at least concurrent with submittal of your Joint Permit application. An approved JD or Preliminary JD will be required from this office, so that we can properly determine whether the work will comply with our Programmatic General Permit or Standard Permit process. This information is also necessary for an assigned project manager to properly assess the project's potential impacts to jurisdictional wetlands. Your intended plans for mitigating any anticipated and unavoidable impacts to jurisdictional wetlands should be included within your joint permit application.

4. According to the location of the proposed work, the activities may alter, occupy, or use areas know to have existing federally authorized civil works project in the area. (see attached map). Hence, upon our receipt of your Joint Permit application from DNR, a copy will be forwarded by this office to the appropriate Operations Manager (OD-F) with this District, who has oversight of this area and will review your application as to the need for Section 408 Approval/Permission.

5. It appears that your project involves the discharge of dredge or fill material into waters of the U.S., therefore a state Water Quality Certification may be required from the LA Department of Environmental Quality. If it is determined that an individual certification is required from DEQ for the proposed work, a copy of your joint permit application will be forwarded by us to that agency, for their review and processing.

6. Our permit decision reflects the national concern for both protecting and utilizing important resources such as those potentially affected by the project. According to the Section 404(b)(1) Guidelines, a permit cannot be issued for a non-water dependent activity if there is a feasible less damaging alternative available. Since the proposed activity may be located within a wetland, it must comply with criteria outlined on our Guidelines for Specification of Disposal Sites for Dredge or Fill Material (40 CFR Part 230). Specifically, Section 230.10 (a) requires that no discharge of dredge or fill material shall be granted if there is a less damaging practicable alternative to the proposed discharge. Where the applicant can demonstrate a lack of practicable alternatives, reveal the public and/or private benefit of the proposed project, and the authorization is not contrary to the overall public interest, a permit can usually be issued. Prior to permit issuance, we must determine that impacts have been avoided to the maximum extent practicable, remaining unavoidable impacts are minimized, and a mitigation plan is developed to compensate any unavoidable loss of aquatic resources.

Thank you, and feel free to contact me if you have any questions.

DARRELL S. BARBARA

Chief, Western Evaluation Section, Regulatory Branch U.S. Army Corps of Engineers, New Orleans District

(504) 862-2261 / fax: (504) 862-2574

[darrell.barbara@usace.army.mil](mailto:darrell.barbara@usace.army.mil)

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**From:** Adams, Gabriel

**Sent:** Thursday, December 15, 2016 10:51 AM

**To:** Woods, Will <[Will.Woods@SPR.DOE.GOV](mailto:Will.Woods@SPR.DOE.GOV)>

**Subject:** RE: Email 1 of 4

Can you send me the text body of the email that had this attached? I received all 4 emails and attachments.

Gabriel Adams, REM | [Fluor Federal Petroleum Operations, LLC](#) | Program Manager, Sustainability, Environmental & Sustainability Department |

Contractor to the U. S. Department of Energy SPR | [gabriel.adams@spr.doe.gov](mailto:gabriel.adams@spr.doe.gov) | O 504.734.4503 | F 504.818.5503

---

**From:** Woods, Will  
**Sent:** Thursday, December 15, 2016 10:45 AM  
**To:** Adams, Gabriel <[Gabriel.Adams@SPR.DOE.GOV](mailto:Gabriel.Adams@SPR.DOE.GOV)>  
**Subject:** Email 1 of 4

Gabe: I am sending you four separate emails of an email that I received regarding draft EA 2039. I thought I had forwarded it to you yesterday, but it was stuck in my Outbox and Helpdesk has told me to try to send these to you individually. Something is wrong with one of the files that keeps me from forwarding the original email to you.

Let me know if you get this and the other three emails.

To: Darrell Barbara, Chief, Western Evaluation Section, Regulatory Branch, US Army Corps of Engineers, New Orleans District, 7400 Leake Avenue, New Orleans, Louisiana 70118

Date: December 12, 2016

Project: West Hackberry Brine Disposal Pipeline Replacement Project

Agency: Department of Energy, Strategic Petroleum Reserve

Action: Notice of Availability of an Environmental Assessment

Summary: Notice is hereby given that the Department of Energy, Strategic Petroleum Reserve Project Management Office (DOE/SPRPMO) is issuing a draft Environmental Assessment (EA) in connection with potential impacts related to the replacement of an existing, aging brine disposal pipeline with a new pipeline at the West Hackberry facility in Cameron Parish, Louisiana. The proposed action would involve the installation of approximately 2.1 miles of 24-inch pipeline to replace the existing brine disposal pipeline which would remain in place but would be removed from service. The proposed pipeline would be installed using open cut trenching methods except at road crossings in which jack and bore techniques would be utilized as needed.

Review

Period: The draft EA review period will occur from December 12, 2016 until January 13, 2017.

Websites: The draft EA will be available for review at the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The public is invited to review and comment on the draft EA that has been prepared to analyze potential environmental consequences of the proposed project. The SPRPMO has prepared the draft EA in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), and the Department of Energy regulations for implementing the National Environmental Policy Act (10 CFR 1021). Requests for an electronic copy or hard copy should be mailed to: Draft Environmental Assessment, Mr. Will Woods, 900 East Commerce Road, Mail Stop FE-4441, New Orleans, LA 70123. Requests may also be submitted by fax to Mr. Woods at (504) 818-5329 or by e-mail to: [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov).

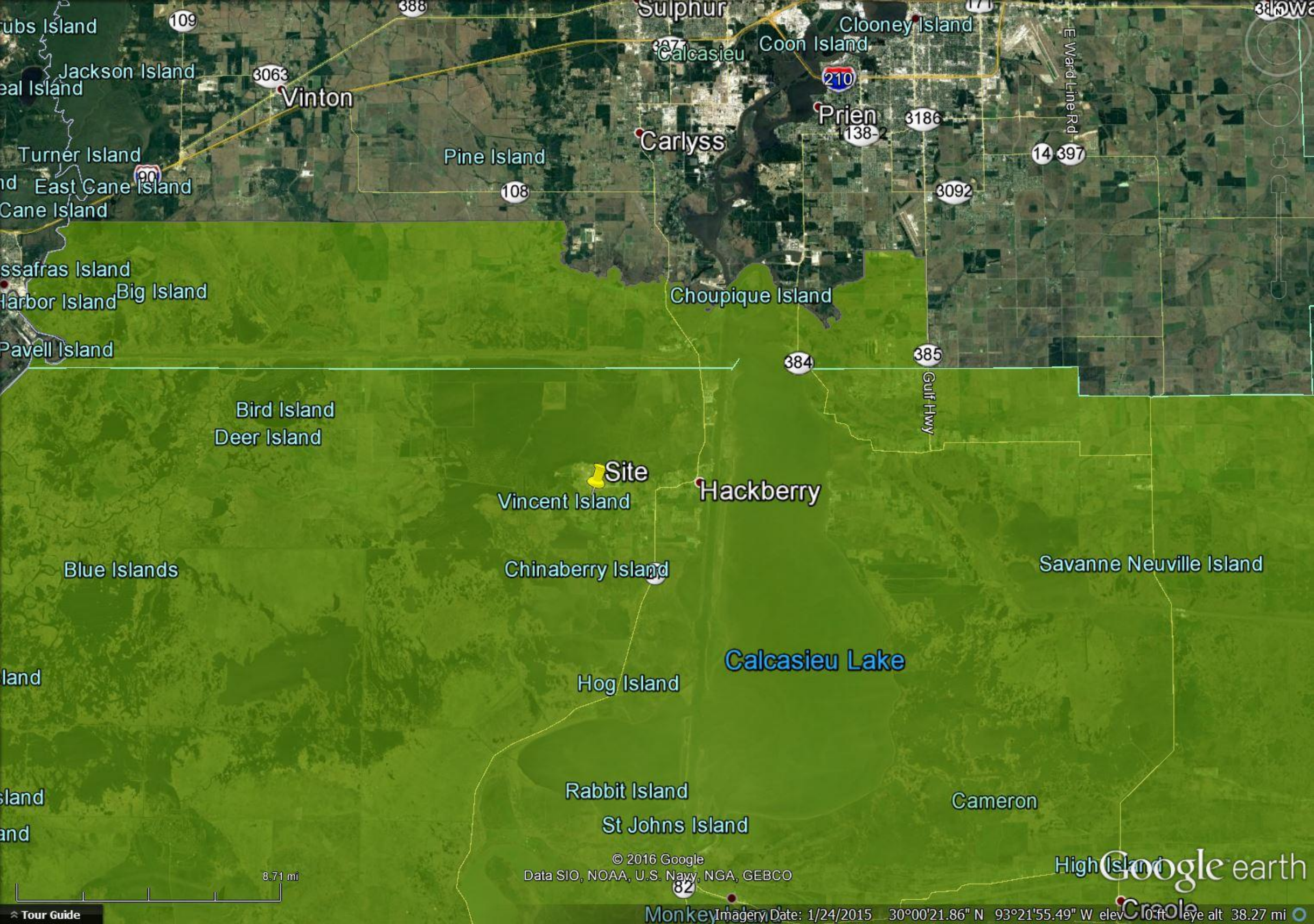
Copies of the draft EA are available for public viewing at the following locations:

- Cameron Parish Library-Hackberry Branch, 983, Main Street, Hackberry, LA 70645
- Cameron Main Library, 501 Marshall Street, Cameron, LA 70631
- Cameron Parish Library-Grand Lake Branch, 10200 Gulf Highway, Lake Charles, LA 70607
- Sulphur Regional Library, 1160 Cypress Street, Sulphur, LA 70663
- Calcasieu Parish Central Library, 301 W. Claude Street, Lake Charles, LA 70605

All comments on the draft EA should be submitted in writing by January 13, 2017 to Mr. Woods at the address, fax number, or e-mail listed above.

**FOR FURTHER INFORMATION ON THE DOE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCESS:** Information on Department of Energy National Environmental Policy Act compliance and implementation is available from: The U.S. Department of Energy, Office of NEPA Policy and Compliance (GC-54), 1000 Independence Avenue, S.W., Washington, D.C. 20585-0119 or leave a message on their toll-free number: 1-800-472-2756; fax to: 202-586-7031; or e-mail them to: [askNEPA@hq.doe.gov](mailto:askNEPA@hq.doe.gov).





Subs Island

Jackson Island  
Deal Island

Turner Island  
East Cane Island  
Cane Island

Sassafras Island  
Harbor Island  
Big Island  
Pavell Island

Bird Island  
Deer Island

Blue Islands

land

land

land

8.71 mi

© 2016 Google  
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

High Island  
Google earth

Monkey  
Imagery Date: 1/24/2015 30°00'21.86" N 93°21'55.49" W elev 10 ft eye alt 38.27 mi

Tour Guide



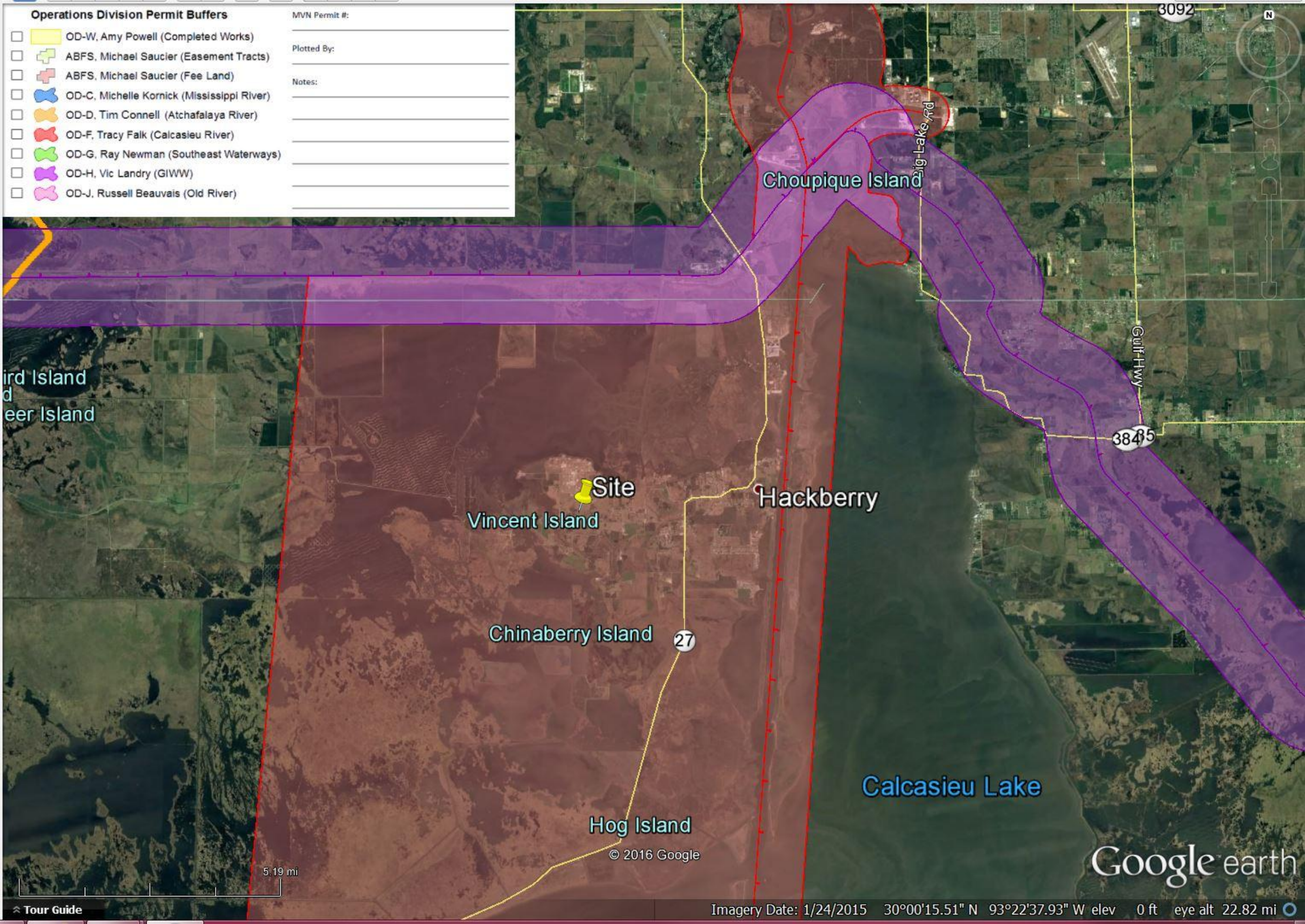
**Operations Division Permit Buffers**

MVN Permit #:

Plotted By:

Notes:

- OD-W, Amy Powell (Completed Works)
- ABFS, Michael Saucier (Easement Tracts)
- ABFS, Michael Saucier (Fee Land)
- OD-C, Michelle Kornick (Mississippi River)
- OD-D, Tim Connell (Atchafalaya River)
- OD-F, Tracy Falk (Calcasieu River)
- OD-G, Ray Newman (Southeast Waterways)
- OD-H, Vic Landry (GIWW)
- OD-J, Russell Beauvais (Old River)



Choupique Island

Hackberry

Vincent Island

Chinaberry Island

Hog Island

Calcasieu Lake

Site

27

38 45

3092

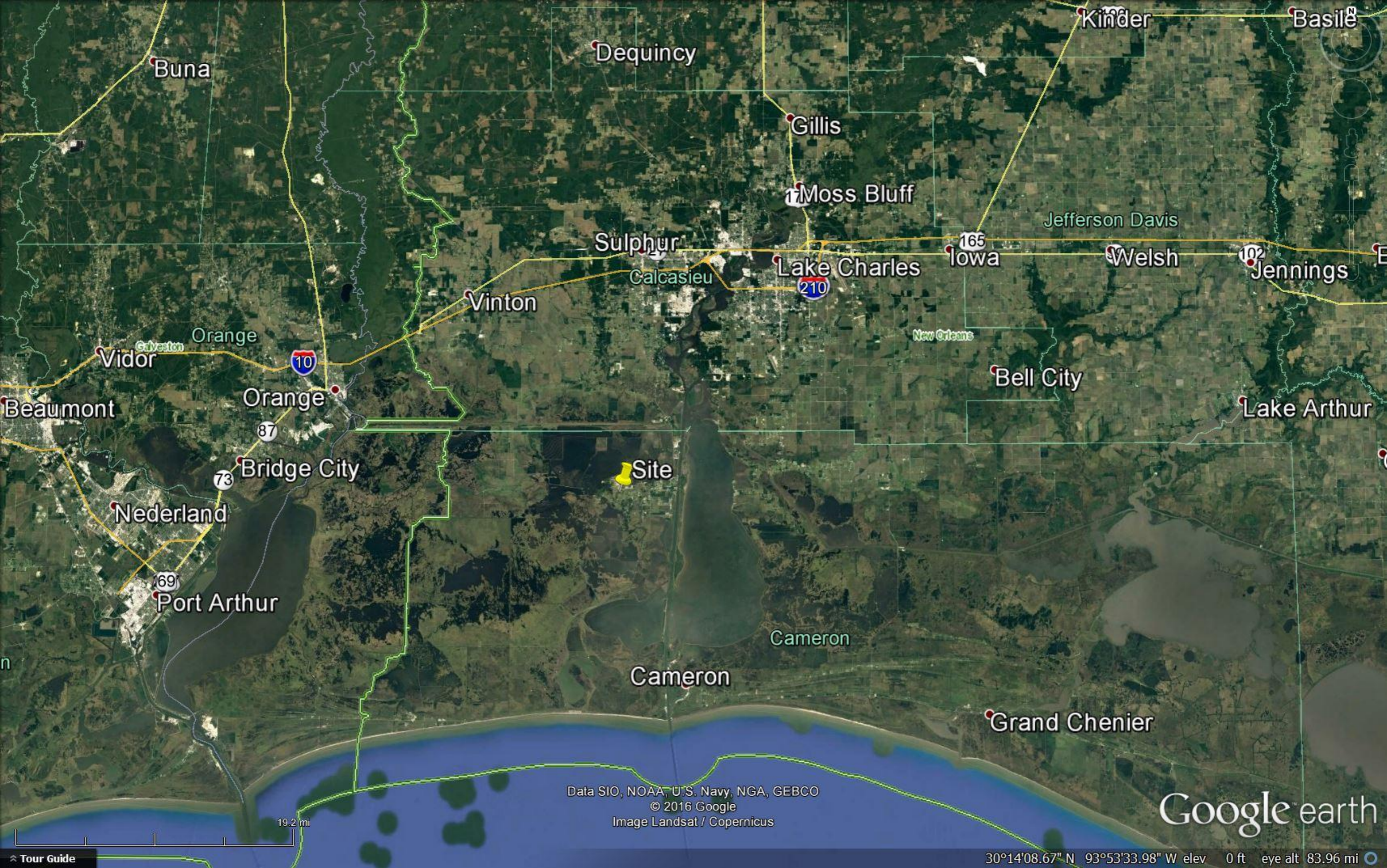


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Google earth

5.19 mi





Buna

Dequincy

Kinder

Basile

Gillis

Moss Bluff

Jefferson Davis

Sulphur

Lake Charles

165 Iowa

Welsh

102 Jennings

Vinton

Calcasieu

New Orleans

Bell City

Orange

Vidor

Orange

Beaumont

Lake Arthur

73 Bridge City

Site

Nederland

69 Port Arthur

Cameron

Cameron

Grand Chenier

Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
© 2016 Google  
Image Landsat / Copernicus

Google earth

19.2 mi

30°14'08.67" N 93°53'33.98" W elev 0 ft eye alt 83.96 mi

Tour Guide



## Castille, Barbara

---

**From:** Jeff Harris <Jeff.Harris@la.gov>  
**Sent:** Thursday, December 22, 2016 10:14 AM  
**To:** Castille, Barbara; Donald Haydel  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov); darrell.barbara@usace.army.mil  
**Subject:** RE: Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Ms. Castille—

Thank you for forwarding the Notice of Availability for the referenced Draft Environmental Assessment. By letter of September 15, 2016, the Louisiana Department of Natural Resources, Office of Coastal Management (OCM) submitted preliminary comments regarding this project to Mr. William Gibson of the Department of Energy. We also discussed OCM's concerns in a teleconference with Mr. Gibson and other DOE and contractor representatives on October 5, 2016.

As noted in those earlier communications, the Department of Energy must submit a consistency determination for the proposed activity. This determination should clearly describe the measures to be taken to avoid and minimize impacts to wetlands, and should specifically state that the existing pipeline and associated infrastructure will be removed upon the decommissioning of the Strategic Petroleum Reserve Hackberry facility, if not earlier.

Because this project will also require review by the Army Corps of Engineers-New Orleans District, I recommend that your consistency determination be submitted using the online Joint Permit Application ([http://workflow.dnr.state.la.us/sundown/cart\\_prod/pkg\\_dnr\\_wf.initiate](http://workflow.dnr.state.la.us/sundown/cart_prod/pkg_dnr_wf.initiate)).

We appreciate your efforts at early coordination. Please contact me if you have any questions.

--Jeff

Jeff Harris  
Consistency Section  
Office of Coastal Management  
Louisiana Department of Natural Resources  
(225) 342-7949

---

**From:** Castille, Barbara [mailto:blcastille@sbinfra.com]  
**Sent:** Monday, December 12, 2016 10:55 AM  
**To:** Donald Haydel; Jeff Harris  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project

Mr. Haydel and Mr. Harris—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve

(SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive

Houston, Texas 77090

Direct: (713) 845-5392

Main: (713) 845-5401

Cell: (281) 960-6421

[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)

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## Castille, Barbara

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**From:** Marceaux, Joshua <joshua\_marceaux@fws.gov>  
**Sent:** Friday, December 16, 2016 7:43 AM  
**To:** Castille, Barbara  
**Subject:** Fwd: FW: Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Ms. Castille,

We responded to the POC for this awhile back-no comment. Please see emails below. Thanks

Joshua C. Marceaux

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

Southwest Louisiana National Wildlife Refuge Complex

Lacassine National Wildlife Refuge

office: 337/774-5923

cell: 33/452-9179

----- Forwarded message -----

**From:** **Brad Rieck** <[brad\\_rieck@fws.gov](mailto:brad_rieck@fws.gov)>  
**Date:** Thu, Dec 15, 2016 at 4:36 PM  
**Subject:** RE: FW: Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**To:** Joshua Marceaux <[joshua\\_marceaux@fws.gov](mailto:joshua_marceaux@fws.gov)>  
**Cc:** David Soileau <[david\\_soileau@fws.gov](mailto:david_soileau@fws.gov)>

OK. Just call her and let her know. Thanks.

---

Brad Rieck

Deputy Field Supervisor

Louisiana Ecological Services Office

U.S. Fish and Wildlife Service

646 Cajundome Boulevard; Suite 400

Lafayette, LA

337-291-3116 (phone)

337-291-3139 (fax)

[Brad\\_Rieck@fws.gov](mailto:Brad_Rieck@fws.gov)

NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

**From:** Marceaux, Joshua [mailto:[joshua\\_marceaux@fws.gov](mailto:joshua_marceaux@fws.gov)]

**Sent:** Thursday, December 15, 2016 1:52 PM

**To:** Brad Rieck

**Cc:** David Soileau

**Subject:** Re: FW: Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project

I took care of this awhile back. It was not a big deal and was a no comment/no objection to the draft EA sent to POC in email. Never seen an ER for it and don't think we will.

-Josh

On Thu, Dec 15, 2016 at 10:46 AM, Brad Rieck <[brad\\_rieck@fws.gov](mailto:brad_rieck@fws.gov)> wrote:

Have we done/do we have an ER for this? Someone please call Ms. Castille and let her know if we have, or we will respond when ER comes out. Thanks.

---

Brad Rieck

Deputy Field Supervisor

Louisiana Ecological Services Office

U.S. Fish and Wildlife Service

646 Cajundome Boulevard; Suite 400

Lafayette, LA

337-291-3116 (phone)

337-291-3139 (fax)

[Brad\\_Rieck@fws.gov](mailto:Brad_Rieck@fws.gov)

NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

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**From:** Castille, Barbara [mailto:[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)]

**Sent:** Monday, December 12, 2016 12:04 PM

**To:** [brad\\_rieck@fws.gov](mailto:brad_rieck@fws.gov)

**Cc:** Adams, Gabriel ([Gabriel.Adams@spr.doe.gov](mailto:Gabriel.Adams@spr.doe.gov))

**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project

Mr. Rieck—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)

- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive

Houston, Texas 77090

Direct: (713) 845-5392

Main: (713) 845-5401

Cell: (281) 960-6421

[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)

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Joshua C. Marceaux

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

Southwest Louisiana National Wildlife Refuge Complex

Lacassine National Wildlife Refuge

office: 337/774-5923

cell: 337/452-9179

--

Joshua C. Marceaux

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

Southwest Louisiana National Wildlife Refuge Complex

Lacassine National Wildlife Refuge

office: 337/774-5923

cell: 337/452-9179



## Castille, Barbara

---

**From:** Keri Landry <klandry@wlf.la.gov>  
**Sent:** Tuesday, December 13, 2016 10:18 AM  
**To:** Castille, Barbara; Amity Bass; Carolyn Michon  
**Cc:** Adams, Gabriel (Gabriel.Adams@spr.doe.gov)  
**Subject:** RE: Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project

Hi Barbara,

Thank you, appropriate staff will review the EA and provide any comments by the January 13<sup>th</sup> deadline.

Keri

**Keri Landry**, Endangered Species Biologist

[Gopher Tortoise Council](#) Co-chair

LA Natural Heritage Program

LA Dept. of Wildlife & Fisheries

2000 Quail Drive, Rm 224

Baton Rouge, LA 70808

Office: (225) 765-2809 x1460

Fax: (225)765- 2818

[klandry@wlf.la.gov](mailto:klandry@wlf.la.gov)

[www.wlf.louisiana.gov](http://www.wlf.louisiana.gov)

---

**From:** Castille, Barbara [<mailto:blcastille@sbinfra.com>]

**Sent:** Monday, December 12, 2016 4:09 PM

**To:** Amity Bass; Keri Landry; Carolyn Michon

**Cc:** Adams, Gabriel ([Gabriel.Adams@spr.doe.gov](mailto:Gabriel.Adams@spr.doe.gov))

**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project

Ms. Bass, Ms. Landry, Ms. Michon—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>
- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)

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JOHN BEL EDWARDS  
GOVERNOR

*State of Louisiana*  
DEPARTMENT OF WILDLIFE AND FISHERIES

CHARLES J. MELANCON  
SECRETARY

**December 19, 2016**

Mr. Will Woods  
Strategic Petroleum Reserve  
FE-4441  
900 East Commerce Road  
New Orleans, LA 70123

RE: *Application Number: Draft Environmental Assessment/West Hackberry*  
*Applicant: U.S. Department of Energy/Strategic Petroleum Reserve Project Management Office*  
*Notice Date: December 12, 2016*

Dear Mr. Wood:

The professional staff of the Louisiana Department of Wildlife and Fisheries (LDWF) has reviewed the above referenced notice for the proposed installation of a 2.1-mile, 24-inch brine disposal pipeline in Cameron Parish, Louisiana. Based upon this review, the following has been determined:

It is anticipated that the proposed activity will have minimal or no long-term adverse impacts to wetland functions and, therefore, we have no objection provided that adequate erosion/sediment control measures are implemented to insure that no sediments or other activity related debris are allowed to enter adjacent wetlands or waters. Accepted measures include the proper use of silt fences, straw bales, seeding or sodding of exposed soils or other Environmental Protection Agency construction site storm water runoff control best management practices. These measures shall be installed before commencement of construction activities and maintained until the site is fully developed.

Ensure that the applicant provides adequate and appropriate mitigation for impacts to wetland functions.

The Louisiana Department of Wildlife and Fisheries submits these recommendations to the U.S. Army Corps of Engineers in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). Please do not hesitate to contact Habitat Section biologist Zachary Chain at 225-763-3587 should you need further assistance.

Sincerely,



Kyle F. Balkum  
Biologist Director

zc

**From:** [Phil Boggan](#)  
**To:** [Megan Kenny](#)  
**Subject:** FW: Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project  
**Date:** Wednesday, December 21, 2016 10:06:04 AM  
**Attachments:** [WestHackberry NoticeOfAvailability DraftEnvironmentalAssessment ToLADCRT PBoggan 121216 FINAL.pdf](#)

---

Phil Boggan  
Assistant Secretary &  
State Historic Preservation Officer  
Office of Cultural Development  
Department of Culture, Recreation & Tourism  
Post Office Box 44247, Baton Rouge, Louisiana 70804-4247  
P: 225.342.8200 / F: 225.219.9772 / [pboggan@crt.la.gov](mailto:pboggan@crt.la.gov)



---

**From:** Castille, Barbara [<mailto:blcastille@sbinfra.com>]  
**Sent:** Monday, December 12, 2016 2:30 PM  
**To:** Phil Boggan  
**Cc:** Adams, Gabriel ([Gabriel.Adams@spr.doe.gov](mailto:Gabriel.Adams@spr.doe.gov))  
**Subject:** Notice of Availability, Draft Environmental Assessment, SPR West Hackberry Brine Disposal Pipeline Replacement Project

Mr. Boggan—

The US Department of Energy (DOE) has prepared an Environmental Assessment (EA) for a project proposed to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana (please see attached Notice of Availability of an Environmental Assessment).

The draft EA document has been posted to the following websites:

- [energy.gov/node/2191870](http://energy.gov/node/2191870)
- <http://energy.gov/nepa/ea-2039-brine-disposal-pipeline-replacement-project-strategic-petroleum-reserve-west-hackberry>

- <http://www.spr.doe.gov/esh/default.html>
- <http://www.spr.doe.gov/NEPA/default.htm>

The draft EA review period will occur from Monday, December 12, 2016 through Friday, January 13, 2017.

Comments on the document should be sent by January 13, 2017 to Mr. Will Woods at [Will.woods@spr.doe.gov](mailto:Will.woods@spr.doe.gov), or by fax to (504) 818-5329, or by US Postal Service to Mr. Will Woods, Strategic Petroleum Reserve, FE-4441, 900 East Commerce Road, New Orleans, LA 70123.

Respectfully submitted,

Barbara

No known historic properties will be affected by this undertaking. Therefore, our office has no objection to the implementation of this project. This effect determination could change should new information come to our attention.

**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
Direct: (713) 845-5392  
Main: (713) 845-5401  
Cell: (281) 960-6421  
[bcastille@sbinfra.com](mailto:bcastille@sbinfra.com)



Phil Boggan  
State Historic Preservation Officer

Date

01/20/2017

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**Barbara Castille**

Manager, Environmental Planning

**S&B Infrastructure, Ltd.**

530 Wells Fargo Drive  
Houston, Texas 77090  
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UNITED STATES DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office

263 13th Avenue South

St. Petersburg, Florida 33701-5505

<http://sero.nmfs.noaa.gov>

January 20, 2017

F/SER46/BH:jk

225/389-0508

Mr. Will Woods, Project Manager  
Department of Energy  
900 Commerce East  
New Orleans, Louisiana 70123

Dear Mr. Woods:

NOAA's National Marine Fisheries Service (NMFS) has received the draft Environmental Assessment (EA) from the Department of Energy (DOE) for the proposed "**Brine Disposal Pipeline Project, West Hackberry Facility**" (DOE EA-2039) dated December 2016. The DOE proposes to replace an existing brine disposal pipeline between the Strategic Petroleum Reserve West Hackberry facility and associated brine injection well near Hackberry in Cameron Parish, Louisiana. Comments to the notice of intent to issue and EA were provided by letter dated September 12, 2016. The DOE is requesting comments on the draft EA for this proposed action.

Section 4.12 of the draft EA states EFH is not present at the project site, but acknowledges estuarine species are present in wetlands being impacted by the project. Wetlands potentially impacted by construction of the project consist of saline to brackish marsh vegetated with saltgrass, smooth cordgrass, and marshhay cordgrass. Tidally influenced wetlands connected to Black Lake and Browns Lake are designated as essential fish habitat (EFH) for postlarval and/or juvenile life stages of white shrimp, brown shrimp, gray snapper, lane snapper, and red drum. Specifically, the tidal creek connected to Black Lake between Johnson Road and Maggie Hebert Road, and the waterbody south of Maggie Hebert Road connected to Browns Lake where the project ends are EFH, as well as all wetlands tidally connected to them. Primary categories of EFH which may be in the project area include estuarine emergent wetlands, estuarine water column, and estuarine mud bottoms. We recommend the final EA fully describe the use of various habitats in the project area by these species.

The DOE is required to conduct EFH consultations under provisions of the Magnuson-Stevens Fishery Conservation and Management Act. To fully address EFH impacts and estuarine-dependent fisheries of the project area, we recommend the final EA expand Section 4.12 to include a complete EFH assessment. An EFH Assessment must include: (1) a description of the proposed action, (2) an analysis of the effects, including cumulative effects, of the action on EFH, the managed species, and associated species by life history stage, (3) the Federal agency's views regarding the effects of the action on EFH, and (4) proposed mitigation, if applicable. If appropriate, the assessment should also include the results of an on-site inspection, the views of recognized experts on the habitat or species affected, a literature review, an analysis of alternatives to the proposed action, and any other relevant information.

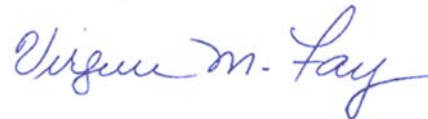
The NMFS recommends a section titled "Mitigation" be included in the final EA which discusses measures to avoid, minimize, and offset impacts to EFH and non-tidal wetlands. The final EA



should not assume all wetland areas disturbed “temporarily” by installation of the pipeline will return to pre-existing conditions. Rather, the final EA should include a monitoring plan to evaluate the degree to which areas impacted by project implementation recover from construction activities. Additionally, the EA should discuss compensatory mitigation alternatives for all wetland areas which do not fully recover from project implementation. Section 4.8.3 states mitigation plan finalization will take place during the permitting process with the U.S. Army Corps of Engineers. The final EA should acknowledge this mitigation plan will be coordinated with NMFS and EFH impacts will be mitigated in-kind.

We appreciate your consideration of our comments and request notification once the final EA is published. If you wish to discuss this project further or have questions concerning our recommendations, please contact Brandon Howard at (225) 389-0508, extension 207.

Sincerely,



Virginia M. Fay  
Assistant Regional Administrator  
Habitat Conservation Division

c:  
F/SER46, Swafford  
F/SER4, Dale, Sramek  
Files

## Geyer, Joshua

---

**From:** Castille, Barbara  
**Sent:** Monday, January 23, 2017 11:04 AM  
**To:** Geyer, Joshua  
**Subject:** FW: SOV response for US Department of Energy (MVN-2016-01237-SK)

Josh—

FYI.

Barbara

**Barbara Castille**  
**S&B Infrastructure, Ltd.**  
Direct: (713) 845-5392  
[blcastille@sbinfra.com](mailto:blcastille@sbinfra.com)

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---

**From:** Clement, Karen L CIV USARMY CEMVN (US) [<mailto:karen.l.Clement@usace.army.mil>]  
**Sent:** Monday, January 23, 2017 10:47 AM  
**To:** Castille, Barbara  
**Subject:** SOV response for US Department of Energy (MVN-2016-01237-SK)

Please take this email as our official Solicitation of Views response.

This is in response to the Solicitation of Views request dated December 12, 2016, from S&B Infrastructure, Ltd., on behalf of the US Department of Energy, concerning the SPR West Hackberry Brine Disposal Pipeline Replacement Project, in Cameron Parish, Louisiana.

We have reviewed your request for potential Department of the Army regulatory requirements and impacts on any Department of the Army projects.

We do not anticipate any adverse impacts to any Corps of Engineers projects.

Based on the information provided, we have determined that information and signatures obtained from recent maps, aerial photography, and local soil surveys concerning the proposed project are indicative of the occurrence of waters of the U.S., including wetlands. Department of the Army (DA) permits are required prior to the deposition and/ or redistribution of dredged or fill material into jurisdictional waters and wetlands.

This determination is advisory in nature. If an accurate delineation is needed, please furnish us with the field data concerning vegetation, soils, and hydrology that we require for all jurisdictional decisions. The fact that a field wetland delineation/ determination has not been completed does not alleviate your responsibility to obtain the proper DA permits prior to working in jurisdictional waters, including wetlands occurring within the project site.

Off-site locations of activities such as borrow, disposals, haul-and detour-roads and work mobilization site developments may be subject to Department of the Army regulatory requirements and may have an impact on a Department of the Army project.

You should apply for said permit well in advance of the work to be performed. The application should include sufficiently detailed maps, drawings, photographs, and descriptive text for accurate evaluation of the proposal.

Please contact Mr. Michael Windham, of our Regulatory Branch by telephone at (504) 862-1235, or by e-mail at [Michael.J.Windham@usace.army.mil](mailto:Michael.J.Windham@usace.army.mil) for questions concerning wetlands determinations or need for on-site evaluations. Questions concerning regulatory permit requirements may be addressed to Mr. Darrell Barbara by telephone at (504) 862-2260 or by email at [Darrell.Barbara@usace.army.mil](mailto:Darrell.Barbara@usace.army.mil).

Future correspondence concerning this matter should reference our account number MVN-2016-01237-SK. This will allow us to more easily locate records of previous correspondence, and thus provide a quicker response.

Thank you,  
Karen

Karen L. Clement  
Asst Operations Manager, Completed Works  
Operations Division  
New Orleans District Corps of Engineers  
CEMVN-OD-W  
7400 Leake Avenue  
New Orleans, LA 70118  
(504) 862-2313



## COMMENT/RESPONSE SUMMARY

<b>PROJECT:</b> Brine Disposal Pipeline Replacement Project associated with the Strategic Petroleum Reserve, West Hackberry Facility, Hackberry, Louisiana			<b>PROJECT NO.:</b> DOE/EA-2039	<b>DOCUMENT:</b> Environmental Assessment
COMMENTS	DOE RESPONSE	COMMENTS	DOE RESPONSE	
David Frank Bridge Administration	US Coast Guard	12/12/2016	Telephone communication with Barbara Castille, S&B Infrastructure. No comments on the proposed project.	Acknowledged.
Robert Houston, Chief, Special Projects Section	US EPA, Region 6	12/15/2016	The Environmental Protection Agency (EPA) has reviewed the Environmental Assessment for the Brine Disposal Pipeline Replacement Project associated with the Strategic Petroleum Reserve, West Hackberry Facility, Cameron Parish, Louisiana. Our review and comments are in accordance with Section 309 of the Clean Air Act and the National Environmental Policy Act (NEPA).  Based upon the environmental assessment information, EPA has no comments to offer on the proposed project. Thank you for the opportunity to comment. If you have any questions, please contact Eli Martinez of my staff at 214/655-2119 or at <a href="mailto:martinez.eli@epa.gov">martinez.eli@epa.gov</a> for assistance.	Acknowledged.
Darrell S. Barbara, Chief, Western Evaluation Section	U.S. Army Corps of Engineers, New Orleans District, Regulatory Branch	12/15/2016	Dear Mr. Woods, I have preliminarily reviewed the draft Environmental Assessment (EA) prepared by DOE, for a proposal to replace an existing, aging brine disposal pipeline with a new pipeline at the Strategic Petroleum Reserve (SPR), West Hackberry facility located in Cameron Parish, Louisiana. Based on my review, I would like to provide the following comments and initial observations:  1. Based on the location of the project site, as depicted within the draft EA and Site Location Maps, the proposed work is located within the LA Coastal Zone (see attached map), and submittal of a Joint Permit Application through the Dept. of Natural Resources, Office of Coastal Management will be required. A copy of the complete application will be forwarded to this office for our review and processing.  2. The proposed project is entirely located within the USACE, New Orleans District, and submittal to other USACE Districts will not be required. (see attached map)  3. As described within the Draft EA, it appears that the subject work will require authorization from this office under Section 10 of the River and Harbors Act and Section 404 of the Clean Water Act. Impacts to jurisdictional wetlands from the project show to be likely, therefore, as to clearly verify the extent of wetlands and waters of the U.S. to be affected, it is recommended that a Jurisdictional Determination (JD) be acquired from our Surveillance and Enforcement Section, prior to or at least	1. Acknowledged. See EA Section 4.8.  2. Acknowledged.  3. All wetland permitting and/or coordination including potential mitigation would be completed at a later date with the USACE. No work would be completed in waters of the US, including wetlands, until a permit from the USACE is received. The DOE would





## COMMENT/RESPONSE SUMMARY

<b>PROJECT:</b> Brine Disposal Pipeline Replacement Project associated with the Strategic Petroleum Reserve, West Hackberry Facility, Hackberry, Louisiana			<b>PROJECT NO.:</b> DOE/EA-2039	<b>DOCUMENT:</b> Environmental Assessment
COMMENTER'S NAME, TITLE	AGENCY	DATE RECEIVED	COMMENTS	DOE RESPONSE
Darrell S. Barbara, Chief, Western Evaluation Section	U.S. Army Corps of Engineers, New Orleans District, Regulatory Branch	12/15/2016	<p>concurrent with submittal of your Joint Permit application. An approved JD or Preliminary JD will be required from this office, so that we can properly determine whether the work will comply with our Programmatic General Permit or Standard Permit process. This information is also necessary for an assigned project manager to properly assess the project's potential impacts to jurisdictional wetlands. Your intended plans for mitigating any anticipated and unavoidable impacts to jurisdictional wetlands should be included within your joint permit application.</p> <p>4. According to the location of the proposed work, the activities may alter, occupy, or use areas known to have existing federally authorized civil works projects in the area. (see attached map). Hence, upon our receipt of your Joint Permit application from DNR, a copy will be forwarded by this office to the appropriate Operations Manager (OD-F) with this District, who has oversight of this area and will review your application as to the need for Section 408 Approval/Permission.</p> <p>5. It appears that your project involves the discharge of dredge or fill material into waters of the U.S., therefore a state Water Quality Certification may be required from the LA Department of Environmental Quality. If it is determined that an individual certification is required from DEQ for the proposed work, a copy of your Joint Permit application will be forwarded by us to that agency, for their review and processing.</p> <p>6. Our permit decision reflects the national concern for both protecting and utilizing important resources such as those potentially affected by the project. According to the Section 404(b)(1) Guidelines, a permit cannot be issued for a non-water dependent activity if there is a feasible less damaging alternative available. Since the proposed activity may be located within a wetland, it must comply with criteria outlined in our Guidelines for Specification of Disposal Sites for Dredge or Fill Material (40 CFR Part 230). Specifically, Section 230.10 (a) requires that no discharge of dredge or fill material shall be granted if there is a less damaging practicable alternative to the proposed discharge. Where the applicant can demonstrate a lack of practicable alternatives, reveal the public and/or private benefit of the proposed project, and the authorization is not contrary to the overall public interest, a permit can usually be issued. Prior to permit issuance, we must determine that impacts have been avoided to the maximum extent practicable, remaining unavoidable impacts are minimized, and a</p>	<p>comply with the wetland permit requirements, including mitigation, as issued by the USACE. A Joint Permit application will be used.</p> <p>4. Acknowledged. A Joint Permit application will be used.</p> <p>5. Acknowledged. During wetland permit activities, the DOE would acquire a Water Quality Certification from the LDEQ if deemed necessary. A Joint Permit application will be used.</p> <p>6. Acknowledged. An alternatives analysis would be submitted as part of the wetland permit application and would outline the proposed project alternatives reviewed for this project. The project alternatives included avoidance alternatives (i.e., horizontal directional drilling, etc.), alternatives which were evaluated and not advanced for further consideration, the alternative selected, and the No Build Alternative. The description of the alternative selected would include the rationale for the alignment chosen as well as construction methodologies. The alternatives</p>



## COMMENT/RESPONSE SUMMARY

<b>PROJECT:</b> Brine Disposal Pipeline Replacement Project associated with the Strategic Petroleum Reserve, West Hackberry Facility, Hackberry, Louisiana			<b>PROJECT NO.:</b> DOE/EA-2039	<b>DOCUMENT:</b> Environmental Assessment
COMMENTS	DOE RESPONSE	COMMENTS	DOE RESPONSE	
Darrell S. Barbara, Chief, Western Evaluation Section	U.S. Army Corps of Engineers, New Orleans District, Regulatory Branch	12/15/2016	mitigation plan is developed to compensate any unavoidable loss of aquatic resources.  Thank you, and feel free to contact me if you have any questions.	analysis would describe avoidance and/or minimization of impacts as well as any designated mitigation for unavoidable impacts resulting from the proposed project. The proposed project would comply with the Section 404(b)(1) Guidelines and 40 CFR 230.
Kyle F. Balkum, Biologist Director	Louisiana Department of Wildlife and Fisheries	12/19/2016	The professional staff of the Louisiana Department of Wildlife and Fisheries (LDWF) has reviewed the above referenced notice for the installation of 2.1-mile, 24-inch brine disposal pipeline in Cameron Parish, Louisiana. Based upon this review, the following has been determined:  1. It is anticipated that the proposed activity will have minimal or no long-term adverse impacts to wetland functions and, therefore, we have no objection provided that adequate erosion/sediment control measures are implemented to insure no sediments or other activity related debris are allowed to enter adjacent wetlands or waters. Accepted measures include the proper use of silt fences, straw bales, seeding or sodding of exposed soils or other Environmental Protection Agency construction site storm water runoff control best management practices. These measures shall be installed before commencement of construction activities and maintained until the site is fully developed.  2. Ensure that the applicant provides adequate and appropriate mitigation for impacts to wetland functions.  The Louisiana Department of Wildlife and Fisheries submits these recommendations to the U.S. Army Corps of Engineers in accordance with the provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). Please do not hesitate to contact Habitat Section biologist Zachary Chain at 225-763-3587 should you need further assistance.	1. Temporary and long-term water quality impacts are not anticipated as a result of the proposed project as the LDEQ's recommended BMPs or similar equivalent BMPs would be implemented to prevent any degradation to water quality as a result of this proposed project. BMPs consistent with the SPR Pollution Prevention Plan (Publication ASL5400.41), Version 10.0 (08-02-16), would address erosion control, sedimentation control, and post-construction total suspended solids. See EA Section 4.1.3.  2. All wetland permitting and/or coordination including potential mitigation would be completed at a later date with the US Army Corps of Engineers (USACE). No work would be completed in waters of the US, including wetlands, until a permit from the USACE was received. The DOE would comply with the wetland permit requirements, including mitigation, as issued by the USACE. See EA Section 4.8 & 4.12.



## COMMENT/RESPONSE SUMMARY

<b>PROJECT:</b> Brine Disposal Pipeline Replacement Project associated with the Strategic Petroleum Reserve, West Hackberry Facility, Hackberry, Louisiana			<b>PROJECT NO.:</b> DOE/EA-2039	<b>DOCUMENT:</b> Environmental Assessment
COMMENTS	DOE RESPONSE			
Phil Boggan, State Historic Preservation Officer	Office of Cultural Development	12/21/2016	No known historic properties will be affected by this undertaking. Therefore, our office has no objection to the implementation of this project. This effect determination could change should new information come to our attention.	Acknowledged.
Jeff Harris, Consistency Section	Louisiana Department of Natural Resources, Office of Coastal Management	12/22/2016	Thank you for forwarding the Notice of Availability for the referenced Draft Environmental Assessment. By letter of September 15, 2016, the Louisiana Department of Natural Resources, Office of Coastal Management (OCM) submitted preliminary comments regarding this project to Mr. William Gibson of the Department of Energy. We also discussed OCM’s concerns in a teleconference with Mr. Gibson and other DOE and contractor representatives on October 5, 2016.  As noted in those earlier communications, the Department of Energy must submit a consistency determination for the proposed activity. This determination should clearly describe the measures to be taken to avoid and minimize impacts to wetlands, and should specifically state that the existing pipeline and associated infrastructure will be removed upon the decommissioning of the Strategic Petroleum Reserve Hackberry facility, if not earlier. Because this project will also require review by the Army Corps of Engineers-New Orleans District, I recommend that your consistency determination be submitted using the online Joint Permit Application ( <a href="http://workflow.dnr.state.la.us/sundown/cart_prod/pkg_dnr_wf.initiate">http://workflow.dnr.state.la.us/sundown/cart_prod/pkg_dnr_wf.initiate</a> ).  We appreciate your efforts at early coordination. Please contact me if you have any questions.	Acknowledged.  The DOE will submit a consistency determination for the proposed activity. See EA Section 4.8 and 4.13. A Joint Permit application will be used.
Virginia F. Fay, Assistant Regional Administrator	National Marine Fisheries Administration, Habitat Conservation Division	1/20/2017	NOAA’S National Marine Fisheries Service (NMFS) has received the draft Environmental Assessment (EA) from the Department of Energy (DOE) for the proposed “Brine Disposal Pipeline Project, West Hackberry Facility” (DOE EA-2039) dated December 2016. The DOE proposes to replace an existing brine disposal pipeline between the Strategic Petroleum Reserve West Hackberry facility and associated brine injection wells near Hackberry in Cameron Parish, Louisiana.	Acknowledged.



## COMMENT/RESPONSE SUMMARY

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COMMENTS	AGENCY	DATE RECEIVED	COMMENTS	DOE RESPONSE
Virginia F. Fay, Assistant Regional Administrator	National Marine Fisheries Administration, Habitat Conservation Division	1/20/2017	<p>Comments to the notice of intent to issue an EA were provided by letter dated September 12, 2016. The DOE is requesting comments on the draft EA for this proposed action.</p> <p>Section 4.12 of the draft EA states EFH is not present at the project site, but acknowledges estuarine species are present in wetlands being impacted by the project. Wetlands potentially impacted by construction of the project consist of saline to brackish marsh vegetated with saltgrass, smooth cordgrass and marshhay cordgrass. Tidally influenced wetlands connected to Black Lake and Browns Lake are designated as essential fish habitat (EFH) for postlarval and/or juvenile life stages of white shrimp, brown shrimp, gray snapper, lane snapper, and red drum. Specifically, the tidal creek connected to Black Lake between Johnson Road and Maggie Hebert Road, and the waterbody south of Maggie Hebert Road connected to Browns Lake where the project ends are EFH, as well as all wetlands tidally connected to them. Primary categories of EFH which may be in the project include estuarine emergent wetlands, estuarine water column, and estuarine mud bottoms. We recommend the final EA fully describe the use of various habitats in the project area by these species.</p> <p>The DOE is required to conduct EFH consultations under provisions of the Magnuson-Stevens Fishery Conservation and Management Act. To fully address EFH impacts and estuarine-dependent fisheries of the project area, we recommend the final EA expand Section 4.12 to include a complete EFH assessment. An EFH Assessment must include: (1) a description of the proposed action, (2) an analysis of the effects, including cumulative effects, of the action of EFH, the managed species, and associated species by life history stage, (3) the Federal agency’s views regarding the effects of the action on EFH, and (4) proposed mitigation, if applicable. If appropriate, the assessment should also include the results of an on-site inspection, the views of recognized experts on the habitat or species affected, a literature review, an analysis of alternatives to the proposed action, and any other relevant information.</p> <p>The NMFS recommends a section titled “Mitigation” be included in the final EA which discusses measures to avoid, minimize, and offset impacts to EFH and non-tidal</p>	<p>According to the NMFS EFH Mapper no designated EFH, HAPC or EFHA were identified within the project limits; however, with the information provided from NMFS, the following fish and shrimp species and their habitat may be present in the project area during post-larval and/or juvenile life stages: white shrimp, brown shrimp, gray snapper, lane snapper and red drum. Although not listed on the EFH Mapper, EFH for these species may include: estuarine emergent wetlands, estuarine water column and estuarine mud bottoms. NMFS information was included in the EA Section 4.12.</p> <p>Comments are addressed as follows: NMFS information was included in the EA Section 4.12, (1) a description of proposed action is described in Section 3.0 of the EA document, (2) the effects of the proposed project on EFH was reviewed, (3) the DOE view is that no long-term impacts to EFH would result from the implementation of the proposed project as all areas would be returned to pre-construction grade after completion of the proposed project; impacted areas would be allowed to revegetate; additional efforts, such as supplemental plantings to be accomplished within a specified time frame following project completion, may be included in a mitigation plan for the project, and (4) mitigation for unavoidable impacts to EFH</p>



## COMMENT/RESPONSE SUMMARY

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COMMENTS	DOE RESPONSE			
COMMENTS	DOE RESPONSE			
wetlands. The final EA should not assume all wetland areas disturbed “temporarily” by installation of the pipeline will return to pre-existing conditions. Rather, the final EA should include a monitoring plan to evaluate the degree to which areas impacted by project implementation recover from construction activities. Additionally, the EA should discuss compensatory mitigation alternatives for all wetland areas which do not fully recover from project implementation. Section 4.8.3 states mitigation plan finalization will take place during the permitting process with the U.S. Army Corps of Engineers. The final EA should acknowledge this mitigation plan will be coordinated with NMFS and EFH impacts will be mitigated in-kind.  We appreciate your consideration of our comments and request notification once the final EA is published. If you wish to discuss this project further or have questions concerning our recommendations, please contact Brandon Howard at (225) 389-0508, extension 207.	and tidal/non-tidal wetlands would be included in the wetland permitting process with the USACE. A Joint Permit application will be used.  A “Mitigation” Section was not added to the EA as any potential mitigation is discussed in the Environmental Consequences section of each Section 4.0 Affected Environment area of the EA as appropriate.  Coordination with resource agencies, such as NMFS, USFWS, LDWF, etc., during the wetland permitting process would occur as a collaborative effort to review the wetland permit application for wetland functions/resources, EFH resources and other coastal resources as appropriate. A Joint Permit application will be used.			
Please take this email as our official Solicitation of Views response.  This is in response to the Solicitation of Views request dated December 12, 2016, from S&B Infrastructure, Ltd., on behalf of the US Department of Energy, concerning the SPR West Hackberry Brine Disposal Pipeline Replacement Project, in Cameron Parish, Louisiana.  We have reviewed your request for potential Department of the Army regulatory requirements and impacts on any Department of the Army projects. We do not anticipate any adverse impacts to any Corps of Engineers projects.  Based on the information provided, we have determined that information and signatures obtained from recent maps, aerial photography, and local soil surveys concerning the proposed project are indicative of the occurrence of waters of the U.S., including wetlands. Department of the Army (DA) permits are required prior to the deposition and/ or redistribution of dredged or fill material into jurisdictional waters and wetlands.	Acknowledged.  All wetland permitting and/or coordination including potential mitigation would be completed at a later date with the USACE. No work would be completed in waters of the US, including wetlands, until a permit from the USACE is received. The DOE would comply with the wetland permit requirements, including mitigation, as issued by the USACE. A Joint Permit application will be used.			





## COMMENT/RESPONSE SUMMARY

<b>PROJECT:</b> Brine Disposal Pipeline Replacement Project associated with the Strategic Petroleum Reserve, West Hackberry Facility, Hackberry, Louisiana			<b>PROJECT NO.:</b> DOE/EA-2039	<b>DOCUMENT:</b> Environmental Assessment
COMMENTS	AGENCY	DATE RECEIVED	COMMENTS	DOE RESPONSE
Karen L. Clement, Assistant Operation Manger, Completed Works	U.S. Army Corps of Engineers, New Orleans District, Operations Division	01/23/2017	<p>This determination is advisory in nature. If an accurate delineation is needed, please furnish us with the field data concerning vegetation, soils, and hydrology that we require for all jurisdictional decisions. The fact that a field wetland delineation/determination has not been completed does not alleviate your responsibility to obtain the proper DA permits prior to working in jurisdictional waters, including wetlands occurring within the project site.</p> <p>Off-site locations of activities such as borrow, disposals, haul- and detour-roads and work mobilization site developments may be subject to Department of the Army regulatory requirements and may have an impact on a Department of the Army project. You should apply for said permit well in advance of the work to be performed. The application should include sufficiently detailed maps, drawings, photographs, and descriptive text for accurate evaluation of the proposal.</p> <p>Please contact Mr. Michael Windham, of our Regulatory Branch by telephone at (504) 862-1235, or by e-mail at <a href="mailto:Michael.J.Windham@usace.army.mil">Michael.J.Windham@usace.army.mil</a> for questions concerning wetlands determinations or need for on-site evaluations. Questions concerning regulatory permit requirements may be addressed to Mr. Darrell Barbara by telephone at (504) 862-2260 or by email at <a href="mailto:Darrell.Barbara@usace.army.mil">Darrell.Barbara@usace.army.mil</a>.</p> <p>Future correspondence concerning this matter should reference our account number MVN-2016-01237-SK. This will allow us to more easily locate records of previous correspondence, and thus provide a quicker response.</p>	Acknowledged.

# **APPENDIX D**

## **SUPPORTING DOCUMENTATION**

**NRCS Web Soil Survey Custom Soil Resource Report**  
**NRCS Web Soil Prime Farmland**  
**GeoTechnical Report**  
**Floodplains Statement of Findings**  
**Final 2014 Integrated Report of Water Quality in Louisiana**  
**Wetlands Statement of Findings**  
**Ecoregions of Louisiana Map**  
**Plant Observed Within or Near the Proposed Brine Disposal Pipeline ROW**  
**U.S. Geological Service Louisiana Aquifer System Map**  
**USFWS Custom IPaC Trust Resources Report**  
**USFWS List of Threatened and Endangered Species**  
**Louisiana Department of Wildlife and Fisheries Rare Species List**  
**National Oceanic and Atmospheric Administration Essential Fish Habitat Mapper**  
**Department of Health and Human Services 2016 Poverty Guidelines**

**APPENDIX D**  
**SUPPORTING DOCUMENTATION**

**NRCS Web Soil Survey Custom Soil Resource Report**



United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for **Cameron Parish, Louisiana**

## **West Hackberry Brine Disposal Pipeline Replacement Project**



# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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# **How Soil Surveys Are Made**

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

## Custom Soil Resource Report

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

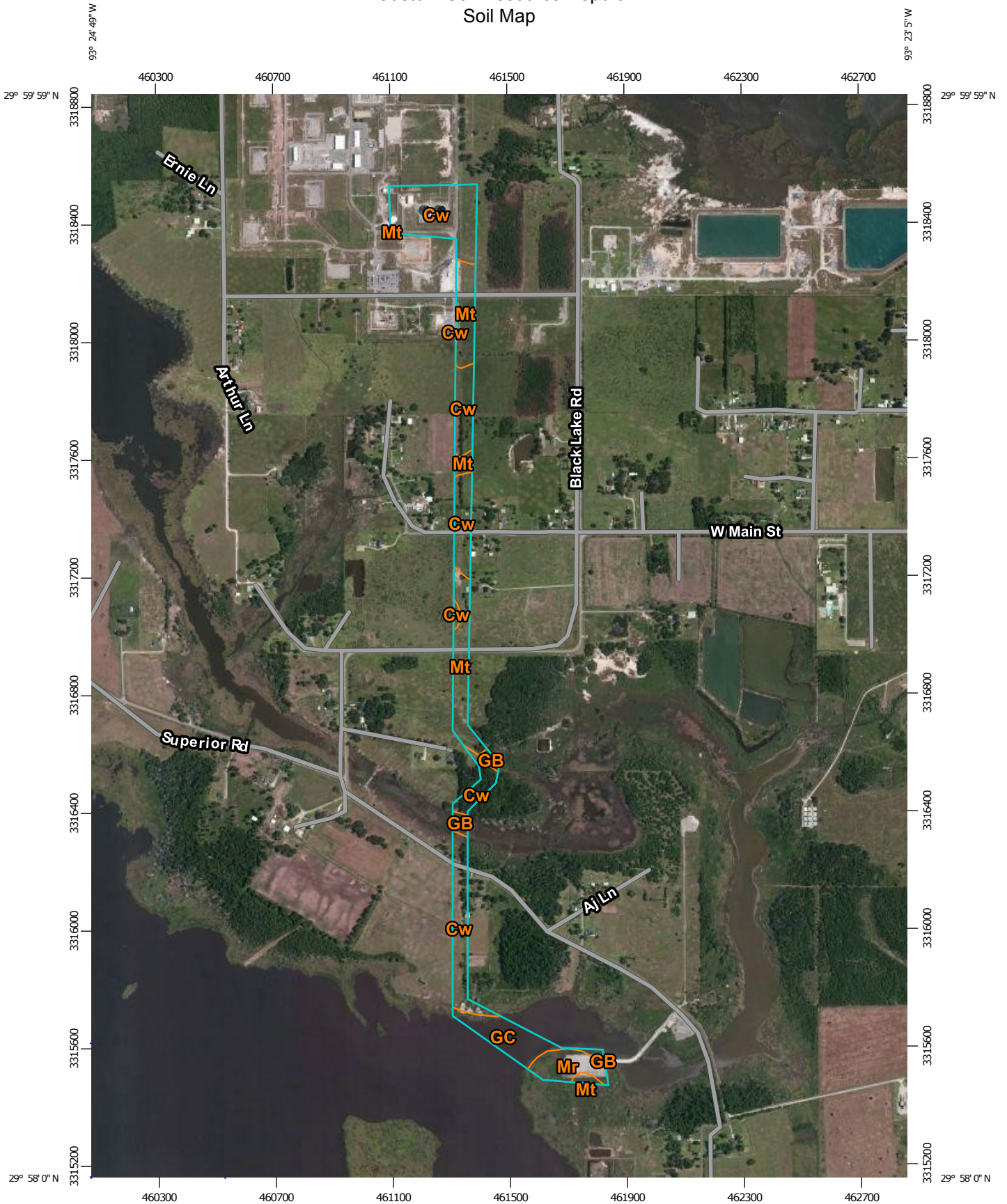
# Soil Map

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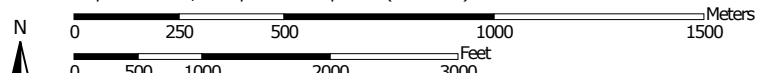
The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



# Custom Soil Resource Report Soil Map




Map Scale: 1:18,000 if printed on A portrait (8.5" x 11") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84


### MAP LEGEND


**Area of Interest (AOI)**

 Area of Interest (AOI)




















**Soils**






 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

**Special Point Features**






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cameron Parish, Louisiana  
 Survey Area Data: Version 13, Sep 28, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2011—May 26, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Cameron Parish, Louisiana (LA023)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cw	Crowley-Vidrine complex, 0 to 1 percent slopes	35.4	54.4%
GB	Ged mucky clay	1.6	2.4%
GC	Gentilly muck, 0 to 0.5 percent slopes, very frequently flooded	7.6	11.7%
Mr	Edgerly loam, 0 to 1 percent slopes	5.3	8.2%
Mt	Mowata-Vidrine complex, 0 to 1 percent slopes	15.2	23.3%
<b>Totals for Area of Interest</b>		<b>65.0</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

## Custom Soil Resource Report

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Cameron Parish, Louisiana

### Cw—Crowley-Vidrine complex, 0 to 1 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2thq2  
*Elevation:* 10 to 80 feet  
*Mean annual precipitation:* 59 to 65 inches  
*Mean annual air temperature:* 67 to 70 degrees F  
*Frost-free period:* 240 to 300 days  
*Farmland classification:* All areas are prime farmland

#### Map Unit Composition

*Crowley and similar soils:* 55 percent  
*Vidrine and similar soils:* 35 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Crowley

##### Setting

*Landform:* Terraces  
*Landform position (three-dimensional):* Riser  
*Microfeatures of landform position:* Bars  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Pleistocene age clayey fluviomarine deposits derived from igneous, metamorphic and sedimentary rock

##### Typical profile

*Ap - 0 to 7 inches:* silt loam  
*Eg - 7 to 17 inches:* silt loam  
*Btg1 - 17 to 40 inches:* silty clay  
*Btg2 - 40 to 80 inches:* clay loam

##### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Somewhat poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low (0.01 to 0.06 in/hr)  
*Depth to water table:* About 6 to 9 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 2 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 10.0  
*Available water storage in profile:* High (about 10.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* D



## Description of Vidrine

### Setting

*Landform:* Flats

*Landform position (three-dimensional):* Rise

*Microfeatures of landform position:* Mounds

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Loamy eolian deposits over clayey fluviomarine deposits of pleistocene age

### Typical profile

*A - 0 to 6 inches:* silt loam

*E - 6 to 14 inches:* silt loam

*Bt/E - 14 to 18 inches:* silty clay

*Btg - 18 to 65 inches:* silty clay

*BCtg - 65 to 80 inches:* silty clay loam

### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Somewhat poorly drained

*Runoff class:* Very high

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.01 in/hr)

*Depth to water table:* About 14 to 24 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Salinity, maximum in profile:* Nonsaline (0.0 to 1.0 mmhos/cm)

*Sodium adsorption ratio, maximum in profile:* 8.0

*Available water storage in profile:* High (about 9.9 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* D

## Minor Components

### Egerly

*Percent of map unit:* 3 percent

*Landform:* Flats

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Linear

*Across-slope shape:* Concave

### Acadiana

*Percent of map unit:* 3 percent

*Landform:* Stream terraces

*Landform position (three-dimensional):* Riser

*Down-slope shape:* Linear

*Across-slope shape:* Convex

### Frost

*Percent of map unit:* 2 percent

*Landform:* Depressions

*Landform position (three-dimensional):* Dip

## Custom Soil Resource Report

*Down-slope shape:* Concave  
*Across-slope shape:* Concave

### **Mowata**

*Percent of map unit:* 2 percent  
*Landform:* Depressions  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave

## **GB—Ged mucky clay**

### **Map Unit Setting**

*National map unit symbol:* 1vvgb  
*Mean annual precipitation:* 43 to 61 inches  
*Mean annual air temperature:* 59 to 77 degrees F  
*Frost-free period:* 259 to 313 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Ged and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Ged**

#### **Setting**

*Landform:* Marshes  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Fluid clayey alluvium

#### **Typical profile**

*H1 - 0 to 14 inches:* mucky clay  
*H2 - 14 to 44 inches:* clay  
*H3 - 44 to 60 inches:* clay

#### **Properties and qualities**

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Very poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* About 0 inches  
*Frequency of flooding:* Frequent  
*Frequency of ponding:* Frequent  
*Available water storage in profile:* High (about 9.6 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

## Custom Soil Resource Report

*Land capability classification (nonirrigated): 7w*  
*Hydrologic Soil Group: D*

### Minor Components

#### Minor components

*Percent of map unit: 20 percent*

## GC—Gentilly muck, 0 to 0.5 percent slopes, very frequently flooded

### Map Unit Setting

*National map unit symbol: 2tpnh*  
*Elevation: 0 feet*  
*Mean annual precipitation: 59 to 67 inches*  
*Mean annual air temperature: 63 to 79 degrees F*  
*Frost-free period: 219 to 365 days*  
*Farmland classification: Not prime farmland*

### Map Unit Composition

*Gentilly, very frequently flooded, and similar soils: 80 percent*  
*Minor components: 20 percent*  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Gentilly, Very Frequently Flooded

#### Setting

*Landform: Marshes*  
*Landform position (three-dimensional): Dip*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Parent material: Thin herbaceous organic material over semifluid clayey over consolidated clayey alluvium*

#### Typical profile

*Oa - 0 to 10 inches: muck*  
*Cg1 - 10 to 40 inches: clay*  
*Cg2 - 40 to 79 inches: clay*

#### Properties and qualities

*Slope: 0 to 1 percent*  
*Depth to restrictive feature: More than 80 inches*  
*Natural drainage class: Very poorly drained*  
*Runoff class: Negligible*  
*Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)*  
*Depth to water table: About 0 inches*  
*Frequency of flooding: Very frequent*  
*Frequency of ponding: Frequent*  
*Salinity, maximum in profile: Slightly saline to strongly saline (4.0 to 16.0 mmhos/cm)*  
*Sodium adsorption ratio, maximum in profile: 16.0*

## Custom Soil Resource Report

*Available water storage in profile:* High (about 10.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7w

*Hydrologic Soil Group:* D

### Minor Components

#### **Clovelly, very frequently flooded**

*Percent of map unit:* 15 percent

*Landform:* Marshes

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Linear

*Across-slope shape:* Linear

#### **Lafitte, very frequently flooded**

*Percent of map unit:* 5 percent

*Landform:* Marshes

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Linear

*Across-slope shape:* Linear

## **Mr—Edgerly loam, 0 to 1 percent slopes**

### Map Unit Setting

*National map unit symbol:* 2qrt8

*Elevation:* 0 to 20 feet

*Mean annual precipitation:* 52 to 66 inches

*Mean annual air temperature:* 57 to 79 degrees F

*Frost-free period:* 245 to 304 days

*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Edgerly and similar soils:* 82 percent

*Minor components:* 18 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Edgerly

#### Setting

*Landform:* Flats

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loamy fluviomarine deposits of pleistocene age

#### Typical profile

*Ap - 0 to 7 inches:* loam

*Bt - 7 to 31 inches:* loam

*Btg - 31 to 80 inches:* clay loam

## Custom Soil Resource Report

### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Poorly drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 18 to 30 inches  
*Frequency of flooding:* Rare  
*Frequency of ponding:* None  
*Salinity, maximum in profile:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 4.0  
*Available water storage in profile:* High (about 12.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* 3w  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* D

### Minor Components

#### Leton

*Percent of map unit:* 6 percent  
*Landform:* Flats, drainageways

#### Kaplan

*Percent of map unit:* 4 percent  
*Landform:* Ridges

#### Vidrine

*Percent of map unit:* 3 percent  
*Landform:* Ridges, flats  
*Microfeatures of landform position:* Mounds

#### Midland

*Percent of map unit:* 2 percent  
*Landform:* Flats, depressions

#### Crowley

*Percent of map unit:* 2 percent  
*Landform:* Ridges

#### Mowata

*Percent of map unit:* 1 percent  
*Landform:* Drainageways, flats

## Mt—Mowata-Vidrine complex, 0 to 1 percent slopes

### Map Unit Setting

*National map unit symbol:* 2thq6  
*Elevation:* 10 to 80 feet  
*Mean annual precipitation:* 59 to 66 inches



## Custom Soil Resource Report

*Mean annual air temperature:* 67 to 72 degrees F  
*Frost-free period:* 240 to 304 days  
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Mowata and similar soils:* 60 percent  
*Vidrine and similar soils:* 30 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Mowata

#### Setting

*Landform:* Drainageways  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Parent material:* Late pleistocene age loamy fluviomarine deposits derived from igneous, metamorphic and sedimentary rock

#### Typical profile

*Ap - 0 to 8 inches:* silt loam  
*Eg - 8 to 18 inches:* silt loam  
*Btg/E - 18 to 34 inches:* clay loam  
*Btg - 34 to 80 inches:* silty clay

#### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Poorly drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* About 0 to 24 inches  
*Frequency of flooding:* Rare  
*Frequency of ponding:* None  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* High (about 11.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* D

### Description of Vidrine

#### Setting

*Landform:* Flats  
*Landform position (three-dimensional):* Rise  
*Microfeatures of landform position:* Mounds  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Loamy eolian deposits over clayey fluviomarine deposits of pleistocene age

## Custom Soil Resource Report

### Typical profile

*A - 0 to 6 inches:* silt loam  
*E - 6 to 19 inches:* silt loam  
*Bt/E - 19 to 22 inches:* silt loam  
*Btg - 22 to 60 inches:* silty clay  
*BCtg - 60 to 80 inches:* silty clay loam

### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Somewhat poorly drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.01 in/hr)  
*Depth to water table:* About 14 to 24 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Salinity, maximum in profile:* Nonsaline (0.0 to 1.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 8.0  
*Available water storage in profile:* High (about 10.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* D

### Minor Components

#### Crowley

*Percent of map unit:* 3 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Riser  
*Microfeatures of landform position:* Bars  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear

#### Leton

*Percent of map unit:* 3 percent  
*Landform:* Depressions  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave

#### Elderly

*Percent of map unit:* 2 percent  
*Landform:* Flats  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave

#### Midland

*Percent of map unit:* 2 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Microfeatures of landform position:* Open depressions  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave

## Custom Soil Resource Report

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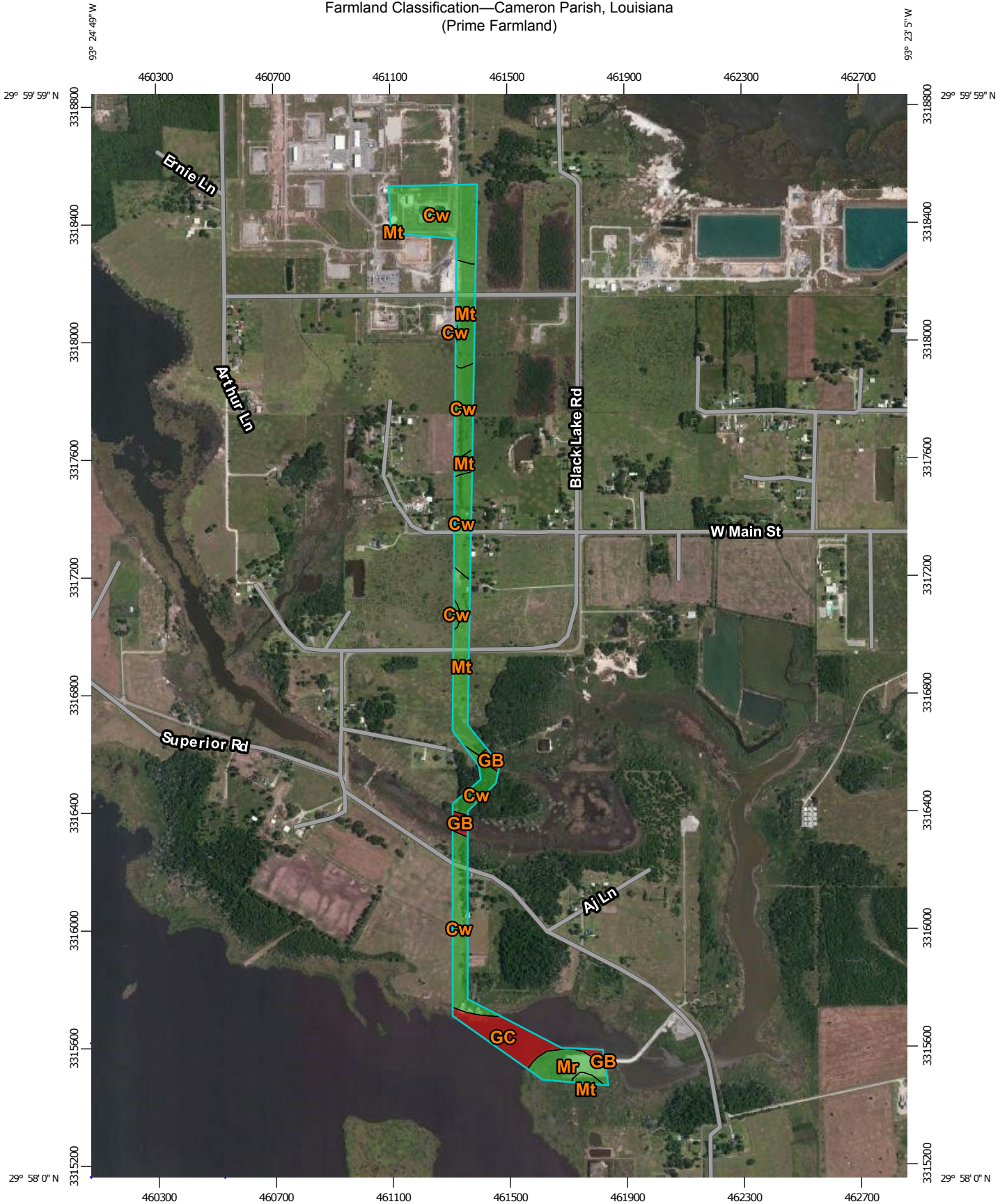
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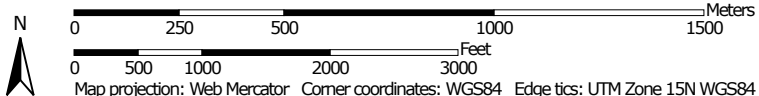
**APPENDIX D**  
**SUPPORTING DOCUMENTATION**

**NRCS Web Soil Prime Farmland**

Farmland Classification—Cameron Parish, Louisiana  
(Prime Farmland)



Map Scale: 1:18,000 if printed on A portrait (8.5" x 11") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84



Farmland Classification—Cameron Parish, Louisiana  
(Prime Farmland)









**MAP LEGEND**








**Area of Interest (AOI)**

 Area of Interest (AOI)




**Soils**








**Soil Rating Polygons**






-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available







**Soil Rating Lines**










-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained

-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

**Soil Rating Points**


-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available


**Water Features**

Farmland Classification—Cameron Parish, Louisiana  
(Prime Farmland)

## MAP INFORMATION

 Streams and Canals


### Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cameron Parish, Louisiana  
Survey Area Data: Version 13, Sep 28, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2011—May 26, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Farmland Classification

Farmland Classification— Summary by Map Unit — Cameron Parish, Louisiana (LA023)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Cw	Crowley-Vidrine complex, 0 to 1 percent slopes	All areas are prime farmland	35.4	54.4%
GB	Ged mucky clay	Not prime farmland	1.6	2.4%
GC	Gentilly muck, 0 to 0.5 percent slopes, very frequently flooded	Not prime farmland	7.6	11.7%
Mr	Edgerly loam, 0 to 1 percent slopes	All areas are prime farmland	5.3	8.2%
Mt	Mowata-Vidrine complex, 0 to 1 percent slopes	All areas are prime farmland	15.2	23.3%
<b>Totals for Area of Interest</b>			<b>65.0</b>	<b>100.0%</b>

### Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

### Rating Options

*Aggregation Method:* No Aggregation Necessary

*Tie-break Rule:* Lower

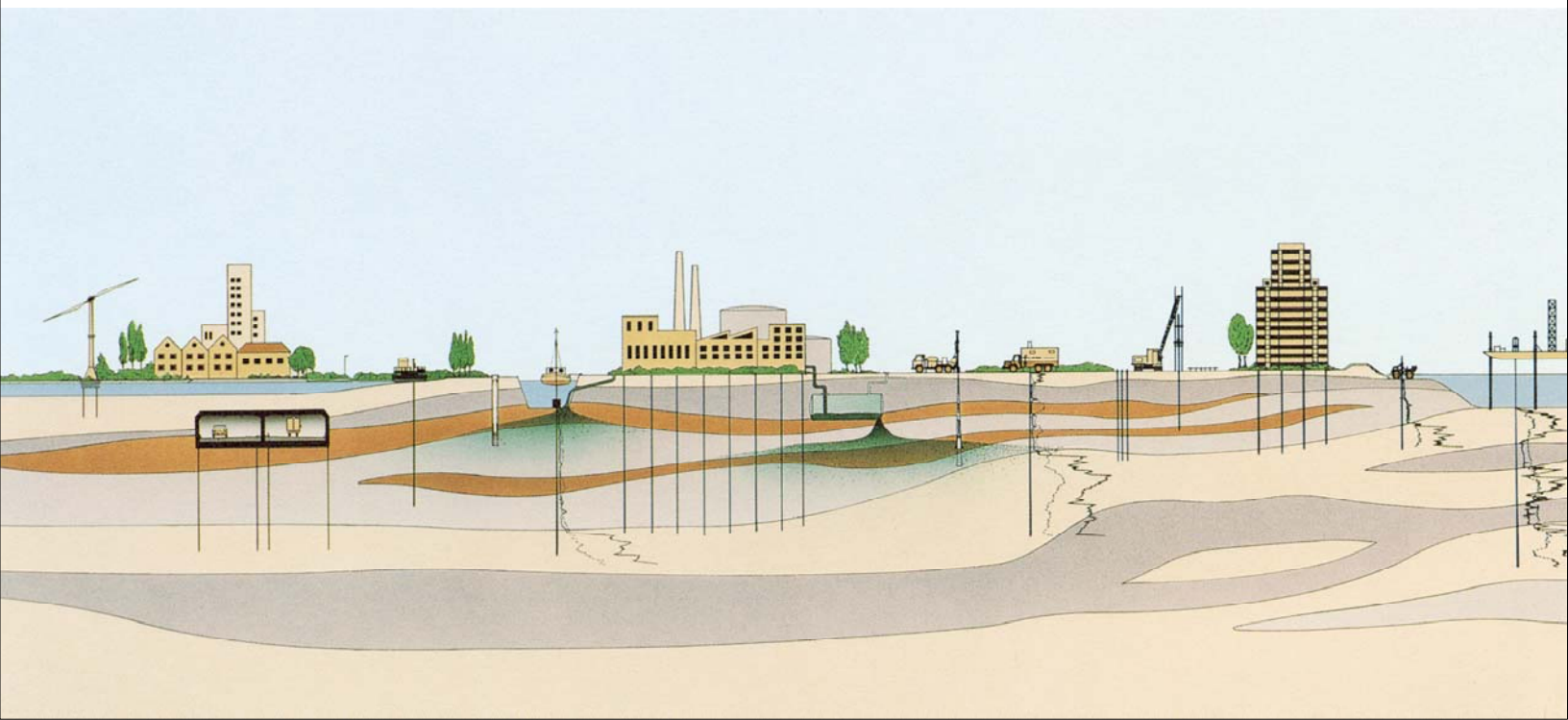


**APPENDIX D**  
**SUPPORTING DOCUMENTATION**

**GeoTechnical Report**

**GEOTECHNICAL STUDY  
24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT  
STRATEGIC PETROLEUM RESERVE  
HACKBERRY, LOUISIANA**

VALI COOPER INTERNATIONAL  
HARAHAN, LOUISIANA





Project No. 04.50160005  
July 8, 2016

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**VALI COOPER INTERNATIONAL**  
880 West Commerce Drive, Suite 402  
Harahan, Louisiana 70123

Attention: Mr. Laren M. Tushim, P.E.

**Geotechnical Study  
24-Inch Brine Disposal Pipeline Replacement  
Strategic Petroleum Reserve  
Hackberry, Louisiana**

**Introduction**

Fugro Consultants, Inc. (Fugro) is pleased to submit this report of our geotechnical services for the above referenced project. Authorization for these services was provided through the issuance of Vali Cooper International, LLC. (VCI) Task Order No. TO.004e.01. We performed this study in general accordance with our Proposal No. 04.50160005 (Rev. 1). This report contains discussions and results of our geotechnical field exploration and laboratory testing programs. This report also presents lateral earth pressure design parameters to guide in the design of temporary shoring and bracing or relatively shallow excavations.

**Project Description**

We understand that VCI is assisting with the design and installation of a 24-inch brine pipeline that will include horizontal directional drilling (HDD) methods beneath four roadway locations and possibly a segment of Black Lake. The proposed HDD locations are generally located along the pipeline replacement alignment that traverses a corridor from the eastern side of the existing West Hackberry Strategic Petroleum Reserve (SPR) facility on the north side of Black Lake Road in a southern direction for a distance of about 2.1-miles to the SPR brine disposal well area, south of Maggie Hebert Road in Hackberry, Louisiana. A *Site Vicinity Map*, showing the general project area, is provided on Plate 1 of this report.

## Purposes and Scope

The purposes of this study were to: 1) explore subsurface conditions at the project site, 2) present soil boring logs containing laboratory test results, and 3) prepare a geotechnical submittal that presents a summary of our services and lateral earth pressure design parameters. We accomplished these purposes by:

- drilling seven (7) exploratory soil borings (Borings B-1 thru B-7) to explore subsurface conditions and to obtain soil samples for field and laboratory testing (Note: The proposed boring south of Black Lake Road associated with the Targa Resources Inc. property was eliminated from the scope by VCI at the time of field exploration);
- performing field and laboratory tests on selected soil samples to assess pertinent geotechnical engineering properties; and
- preparing this report summarizing our findings and recommendations.

Environmental assessment, compliance with State and Federal Regulatory requirements, assessment of potential migration, and/or environmental analyses were beyond the scope of this geotechnical study. A geological fault study was also beyond the scope of our services.

## Applicability of Report

The explorations and analyses for this study, as well as the conclusions and recommendations in this report, were selected or developed based on our understanding of the project as described above and in later sections of this report. If pertinent details of the project differ from the descriptions provided in this report, we should be authorized to review the discrepancies and, if necessary, modify our conclusions and recommendations.

Fugro's scope of work does not include the investigation, detection, or design related to the presence of any biological pollutants. The term 'biological pollutants' includes, but is not limited to, mold, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

We have prepared this report exclusively for VCI. We have conducted this study using the standard level of care and diligence normally practiced by recognized engineering firms performing similar services under similar circumstances. We intend for this report, including all illustrations, to be used in its entirety. The observations, conclusions, and recommendations provided in this report may not be applicable at locations not explored by borings or in areas outside the project boundaries. This report should be made available for information only and not as a warranty of subsurface conditions.



## Field Exploration

Our field activities are discussed in this section. We have included a general discussion as well as discussions on drilling methods, sampling methods, and borehole completion.

**General.** Fugro explored subsurface conditions at the project area from May 31 thru June 2, 2016 as well as June 6 and June 7, 2016 by drilling six (6) soil borings (Borings B-1 thru B-6) to a depth of about 30 ft each below existing grade and one (1) soil boring (Boring B-7) to a depth of about 100 ft. The approximate locations of the borings performed for this project are shown on the *Plans of Borings* provided on Plates 2a, 2b, and 2c of this report. Representatives of VCI provided the proposed boring locations and boring depths. Representatives of VCI surveyed and staked the proposed pipeline right-of-way as well as the approximate locations of the borings completed for this project. Also, representatives of VCI eliminated the boring south of Black Lake Road associated with the Targa Resources Inc. property from the scope at the time of field exploration.

**Drilling Methods.** Borings B-1 thru B-5 were drilled with rubber-tired ATV-mounted drilling equipment using dry-auger and wet-rotary drilling techniques. We initially use dry-auger drilling methods in an effort to determine depth-to-water levels at borehole locations. Wet-rotary drilling techniques are used to efficiently remove cuttings, clean out borings, and prevent boreholes from caving. A discussion on the interpreted depth-to-water observations is provided later in this report.

Borings B-6 and B-7 were drilled with track-mounted marsh ATV equipment using wet-rotary drilling techniques. Since water was encountered at or above existing grade at Borings B-6 and B-7, dry-auger techniques were not applicable at these locations. A discussion on water depth observations is provided later in this report.

**Sampling Methods.** Soil sampling is conducted at about 2-ft intervals to a depth of 16 ft below existing grade and at 5-ft intervals thereafter to the completion depths. Detailed descriptions of the soils encountered in the borings drilled for this project are presented on the boring logs on Plates 3 thru 9 of this report. A key identifying the terms and symbols used on the boring logs is presented on Plates 10a and 10b herein.

Cohesionless soil samples and undisturbed samples of cohesive soils were obtained by hydraulically pushing a 3-inch diameter thin-walled tube sampler a distance of about 24 inches. Our field procedure for tube sampling was conducted in general accordance with ASTM D1587, "*Standard Practice for Thin-Walled Tube Sampling of Soils.*" The samples were extruded in the field and visually classified by our Professional Geologist. We obtained field estimates of the undrained shear strength of the recovered cohesive samples using a hand penetrometer or Torvane. Where applicable, our penetrometer readings were modified for overconsolidated, natural, cohesive soils as described on Plate 10b. Portions of each recovered soil sample were placed into appropriate containers for transportation to our laboratory.





Cohesionless soil samples and disturbed samples of cohesive soils were obtained using the Standard Penetration Test (SPT), as described on Plate 10b. Our field professionals recorded the hammer blows for each sample interval. The SPT N-values are recorded on the boring logs. The soil samples obtained from the split-barrel sampler were then visually classified and placed into appropriate containers for transportation to our laboratory. Our field procedure for split-barrel soil sampling was conducted in general accordance with ASTM D1586, “*Standard Method for Penetration Test and Split-Barrel Sampling of Soils.*”

**Borehole Completion.** The borings were backfilled with cement-bentonite grout from the bottom up using a tremie pipe upon completion of soil sampling.

### Laboratory Testing

The laboratory-testing program for this study was directed primarily toward evaluating the classification properties of the subsurface soils, undrained shear strength of the cohesive soils, and the pH, chloride ion concentration, sulfate ion concentration, and electrical resistivity of the soils. The laboratory tests were performed in general accordance with applicable American Society for Testing and Materials (ASTM) standards as tabulated at the end of this section.

**Classification Tests.** The classification tests included tests for moisture content, liquid and plastic limits (collectively termed Atterberg Limits), unit weight, material finer than the No. 200 sieve, and particle-size analyses. These tests aid in classifying the soils and are used to correlate the results of other tests performed on samples taken from different borings and/or depths. The results of the classification tests are presented on the boring logs on Plates 3 thru 9 of this report. The particle-size distribution curves are presented in Appendix A.

**Undrained Shear Strength Tests.** We measured the undrained shear strength of selected undisturbed samples of cohesive soils by performing unconfined compression tests and unconsolidated-undrained triaxial compression tests. The results of the undrained shear strength tests are presented on the boring logs on Plates 3 thru 9 herein.

**Soil Chemical Analyses and Electrical Resistivity Tests.** A series of laboratory tests consisting of soil pH, chloride ion concentration, sulfate ion concentration, and electrical resistivity tests were performed on soil samples from the borings drilled for this project. The results of the soil chemical analyses and the electrical resistivity tests are presented in Appendix B of this report. Discussions on soil corrosion potential based on the results of the soil pH, chloride ion concentration, sulfate ion concentration, and electrical resistivity tests are presented in the *Soil Corrosion Potential* section of this report.

**Summary of Laboratory Testing.** The laboratory-testing program performed for this study and the applicable ASTM standards are summarized in the following table:



Type of Test	Number of Tests	Test Designation
Moisture Content	27	ASTM D2216
Atterberg Limits	27	ASTM D4318
Percent Finer than a No. 200 sieve	24	ASTM D1140
Particle-Size Analysis	14	ASTM D6913
Unit Weight	26	ASTM D2937
Unconfined Compression Test	10	ASTM D2166
UU-Triaxial Compression	16	ASTM D2850
Soil pH	10	ASTM G51
Chloride Ion Concentration	10	ASTM D512
Sulfate Ion Concentration	10	ASTM D516
Electrical Resistivity	10	ASTM G57

### General Site Conditions

The interpreted site and subsurface soil conditions are discussed in this section. Our interpretation of the general site and subsurface conditions are based on the results of our field exploration and laboratory testing programs and our experience. This section also includes a discussion on the interpreted depth-to-water and water depth conditions at the time of our field exploration.

**Site Location and Description.** The project area is located near the Strategic Petroleum Reserve along the north side of Black Lake Road, and the proposed pipeline alignment traverses in a southern direction across four roadway locations and a portion of Black Lake to the Strategic Petroleum Reserve's brine disposal area in Hackberry, Louisiana. The *Site Vicinity Map*, provided on Plate 1 of this report, shows the approximate location of the project area. The *Plans of Borings*, provided on Plates 2a, 2b, and 2c show the approximate boring locations relative to existing features. Surficial conditions at the project site consisted of grassy, maintained vegetation at the locations of Borings B-1 thru B-6 and grassy marsh vegetation at the location of Boring B-7.

**Subsurface Conditions.** Subsurface conditions encountered within Boring B-1 generally consisted of natural, cohesionless soils to a depth of about 2 ft below existing grade. Below the surficial cohesionless soils, natural, firm to stiff cohesive soils were encountered to a depth of about 8 ft below existing grade. Beneath the cohesive soils, natural, medium-dense cohesionless/granular soils were encountered to a depth of about 30 ft below existing grade, the completion depth of Boring B-1.

The generalized subsurface conditions encountered within Borings B-2, B-3, B-4, and B-5 were somewhat similar and primarily consisted of natural, firm to stiff cohesive soils with intermittent



loose to medium-dense cohesionless/granular soil layers to a depth of about 30-ft, the completion depth of the borings.

Subsurface conditions encountered within Borings B-6 and B-7 primarily consisted of natural, firm to stiff cohesive soils to depths ranging from about 7 ft to 8 ft below the existing grade/mudline. Beneath the cohesive soils, natural, medium-dense cohesionless/granular soils were encountered to depths ranging from about 10 ft to 12 ft below the existing grade/mudline. Beneath the cohesionless/granular soils, natural, firm to stiff cohesive soils were encountered to a depth of about 100 ft below the existing grade/mudline, the completion depth of Boring B-7.

Based on our review of both the field observations and laboratory tests performed on the soils encountered in the borings drilled for this study and based on published correlations for similar soil types, we have generalized the subsurface conditions for each boring in Appendix C on Plates C-1 thru C-7. Material descriptions, approximate strata interfaces, total unit weight, buoyant unit weight, cohesion, friction angle, and shear modulus estimates are presented.

We have also provided a *Generalized Subsurface Profile*, representing the soil conditions of the proposed portion of the replacement pipeline crossing a portion of Black Lake, on Plate 11 of this report. This profile provides the general subsurface lithology for Borings B-6 and B-7, provides a distance scale on its horizontal axis representing the linear distance between each of the borings, and provides an elevation scale on its vertical axis relative to the borehole lithology. For the profile, we assumed elevations of 2-ft and 1-ft at the surface of Borings B-6 and B-7, respectively, based on topographic information from Google Earth.

**Interpreted Depth-to-Water and Water Depth Conditions.** Water was initially encountered within Borings B-1 thru B-5 at depths ranging from about 8 ft to 12 ft below existing grade at the boring locations. Subsurface water within Borings B-1 thru B-5 rose to depths ranging from about 2.5 ft to 8 ft below existing grade after a period of about 15 minutes. Water was encountered at the existing ground surface at the location of Boring B-6 and about 6-inches above the existing ground surface at the location of Boring B-7.

Short-term water levels recorded in the open boreholes should not be considered to represent a long-term condition because the water levels may not have had enough time to approach equilibrium. More accurate determinations of groundwater levels are usually made from long-term standpipe piezometer readings. It should be stated that groundwater levels will fluctuate with seasonal variations in rainfall and surface runoff, especially during extended periods of inclement weather.

**Variations in Subsurface Conditions.** Our interpretations of subsurface conditions, as described in this report, are based on data obtained from our visual observations, the sample borings, laboratory tests, and our experience. Although we have allowed for minor variations in the



subsurface conditions, our recommendations may not be appropriate for subsurface conditions other than those reported herein. It is likely that some variations in subsurface conditions may occur away from and between the boring locations, especially with respect to the depth, consistency, and lateral extent of the surficial soils and cohesionless layers. We recommend careful observations during construction to verify our interpretations. If variations in subsurface conditions are encountered during construction, we should be notified and authorized to evaluate what, if any, revisions should be made to our submittal.

### **Soil Corrosion Potential**

Steel and concrete elements in contact with soil are subject to degradation due to corrosion or chemical attack. Therefore, buried steel and concrete elements should be designed to resist corrosion and degradation based on accepted practices.

Soil pH, chloride ion concentration tests, sulfate ion concentration tests and electrical resistivity tests were performed on soil samples obtained from the borings drilled for this project. The laboratory tests results are presented in Appendix B on Plate B-1 of this report. The results of the pH, chloride ion concentration, sulfate ion concentration, and electrical resistivity tests were used to generally assess the potential of the onsite soils to corrode buried steel and degrade buried concrete based on a comparison of the laboratory tests results with published guidelines as discussed herein.

**Corrosion of Steel.** Corrosion is a major factor in the life of steel elements in contact with soil. Corrosion is caused by migration of electrons from the steel into the surrounding soil. Three commonly measured soil properties that indicate the corrosion potential for steel in contact with soil are: 1) pH, 2) chloride ion concentration, and 3) electrical resistivity. It is generally accepted that corrosion of steel is most likely in environments that have low pH, chloride ions (even in low concentrations), and/or low resistivity.

The following table presents some general guidelines concerning the corrosion potential of a soil as a function of pH, chloride ion concentration, and electrical resistivity<sup>1</sup>. Each of the columns in this table should be used independently of the others when evaluating soil corrosion potential. For example, it is not necessary to have a resistivity between 0 and 1,000 ohm-cm and a pH between 0 and 4.5 to indicate a very high potential for corrosion.

---

<sup>1</sup> Palmer, J. F., "Soil Resistivity Measurements and Analysis," *Materials Performance*, Vol. 13, January 1974.



Corrosion Potential of Soil on Steel			
pH	Chloride Content (ppm)	Resistivity (ohm-cm)	Corrosion Potential
0 - 4.5		0 - 1,000	Very High
4.5 - 5.5	> 500	1,000 - 2,000	High
5.5 - 6.5	< 500	2,000 - 5,000	Moderate
> 6.5		> 5,000	Mild

The results of the pH tests, chloride ion concentration, and electrical resistivity tests indicate that the corrosion potential of steel in contact with the soils tested at various depths ranges from moderate to very high at the site. Based on the results of these analyses, the soils tested will generally exhibit an aggressive tendency to corrode buried steel. Fugro recommends that a Corrosion Engineer review the test results discussed herein when designing appropriate methods of protecting buried steel.

**Degradation of Concrete.** The degradation of concrete is caused by chemical agents in the soil or groundwater that reacts with concrete to either dissolve the cement paste or precipitate larger compounds that cause cracking and flaking. The concentration of water-soluble sulfates in the soils is a good indicator of the potential for chemical attack of concrete. Sulfate concentrations in soil can be used to evaluate the need for protection of concrete based on the following table<sup>2</sup>

Sulfate Concentration (ppm)	Degradation Potential
> 20,000	Very Severe
2,000 - 20,000	High
1,000 - 2,000	Moderate
0 - 1,000	Low

The results of the sulfate ion concentration tests indicate that the potential for the degradation of concrete is generally low at the site. Although the results of the sulfate ion concentration analysis indicate the soils at the site appear to exhibit a non-aggressive tendency to degrade buried concrete, Fugro recommends that a Corrosion Engineer be consulted to determine if a sulfate resistant concrete is warranted.

### Shallow Excavations and Lateral Earth Pressure

This section presents discussions on shallow excavations and discussions on lateral earth pressures to aid in the design of temporary shoring.

The excavations should be designed in accordance with all applicable local, state, and federal trenching regulations, including the Federal Occupational Safety and Health Administration

<sup>2</sup> ACI Manual of Concrete Practice, Part 1, Section 201.2R-12, American Concrete Institute, 1992.





(OSHA) requirements for excavations presented in 29 CFR Part 1926, Subpart P, *Excavations*. Based on OSHA regulations, excavations deeper than 20 ft must be addressed individually and a qualified registered engineer will be required to design each excavation system. We would be pleased to review the proposed excavation system designs before construction.

Based on our interpretation of the regulations and the near-surface soil conditions encountered in the borings drilled for this study, the natural, firm to stiff cohesive soils may be classified as Type B and the natural, cohesionless (silty/sandy) soils may be classified as Type C. The OSHA regulations do not generally require shallow excavations to depths of 4 ft or less to be sloped back or shored/braced. However, if sloughing and caving is experienced, we recommend the slopes should be cut back or shored/braced. Excavations deeper than 4 ft are required to be braced or sloped back at 1-horizontal to 1-vertical for Type B soils and 1.5-horizontal to 1-vertical for Type C soils. Flatter slopes or bracing should be used if sloughing or raveling is observed.

Temporary shoring will experience lateral earth pressures resulting from a combination of soil pressure, hydrostatic water pressure, and any surcharge loads. Soil and hydrostatic water pressures behind the shoring walls will impose a triangular stress distribution on the walls while surcharge loads will impose a rectangular stress distribution. For this project, we have assumed that a braced shoring system will be utilized. If a cantilevered system is planned, we should be contacted for additional discussions and recommendations.

For the design of temporary shoring walls, we recommend a coefficient of active lateral earth pressure ( $k_a$ ) of 1.0 for the cohesive soils encountered onsite, 0.5 for the cohesionless/silty soils encountered onsite, and 0.35 for the granular/sandy soils encountered onsite.

For braced sheeting, the penetration of sheeting below the excavation bottom should be sufficient to provide moment equilibrium about the lowest bracing level, assuming a hinge in the wall at that level and applying the lateral pressures. In addition, the penetration of braced sheeting should be such that all vertical loads applied to the wall (e.g. dead weight of sheeting, vertical bracing components, wall weight) are supported by the embedded portion of the wall below excavation grade. Also, it may be beneficial to install the sheeting to a deeper penetration that will assist with any dewatering efforts.

\* \* \*



The following illustrations and appendices are attached and complete this report:

ILLUSTRATIONS

	<u>Plate</u>
Site Vicinity Map .....	1
Plan of Borings .....	2
Logs of Borings .....	3 thru 9
Terms and Symbols Used on Boring Logs .....	10a and 10b
Subsurface Profile – Black Lake Crossing (Borings B-6 and B-7) .....	11

APPENDICES

Particle-Size Analyses .....	Appendix A
Laboratory Soil Chemical Analyses and Electrical Resistivity Tests .....	Appendix B
Generalized Soil Parameters .....	Appendix C





**Closing**

Mr. Tushim, P.E., we appreciate the opportunity to be of service on this project. Please contact us if you have any questions concerning this report or when we may be of further service.

Sincerely,  
**FUGRO CONSULTANTS, INC.**

Michael P. Hollier, P.E.  
Activity Center Manager



7/8/2016

Trent Whitley, E.I.  
Project Professional

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                                  Hard Copies - U.S. Mail (3)

TW/MPH

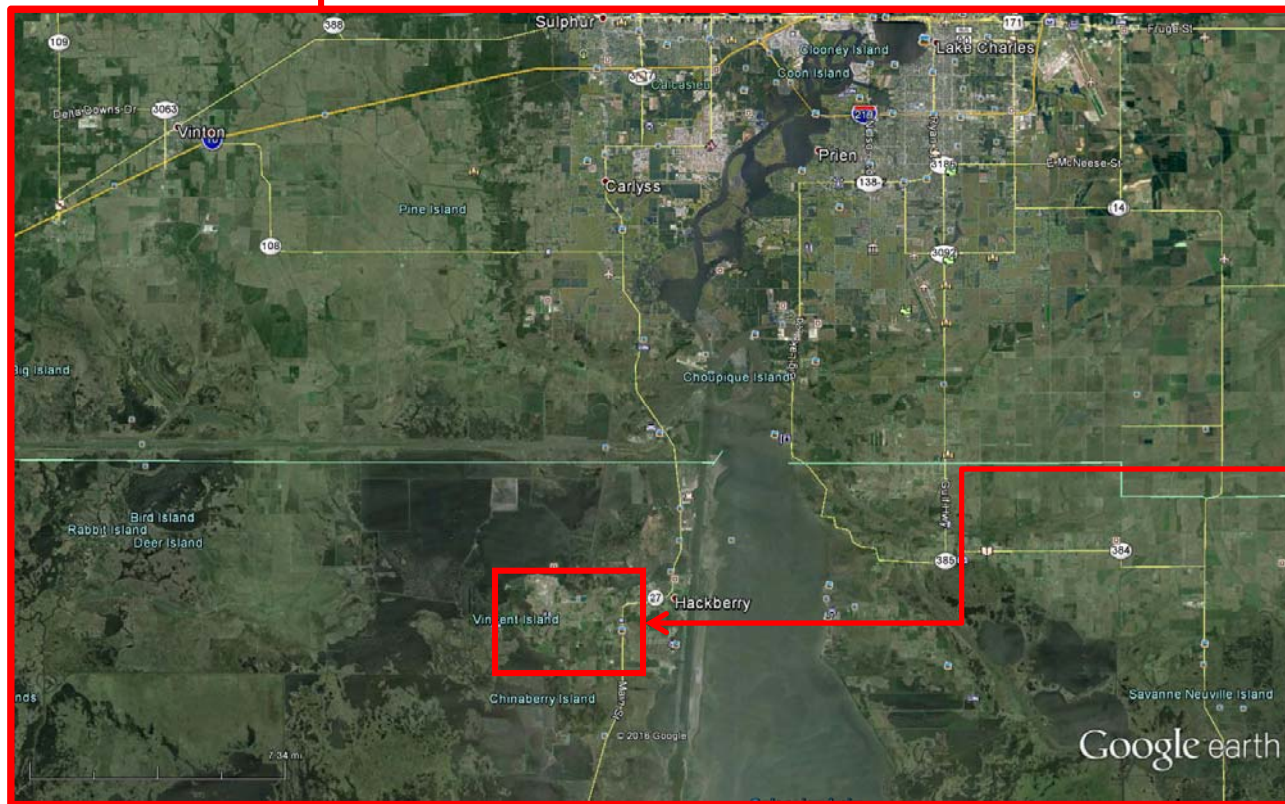
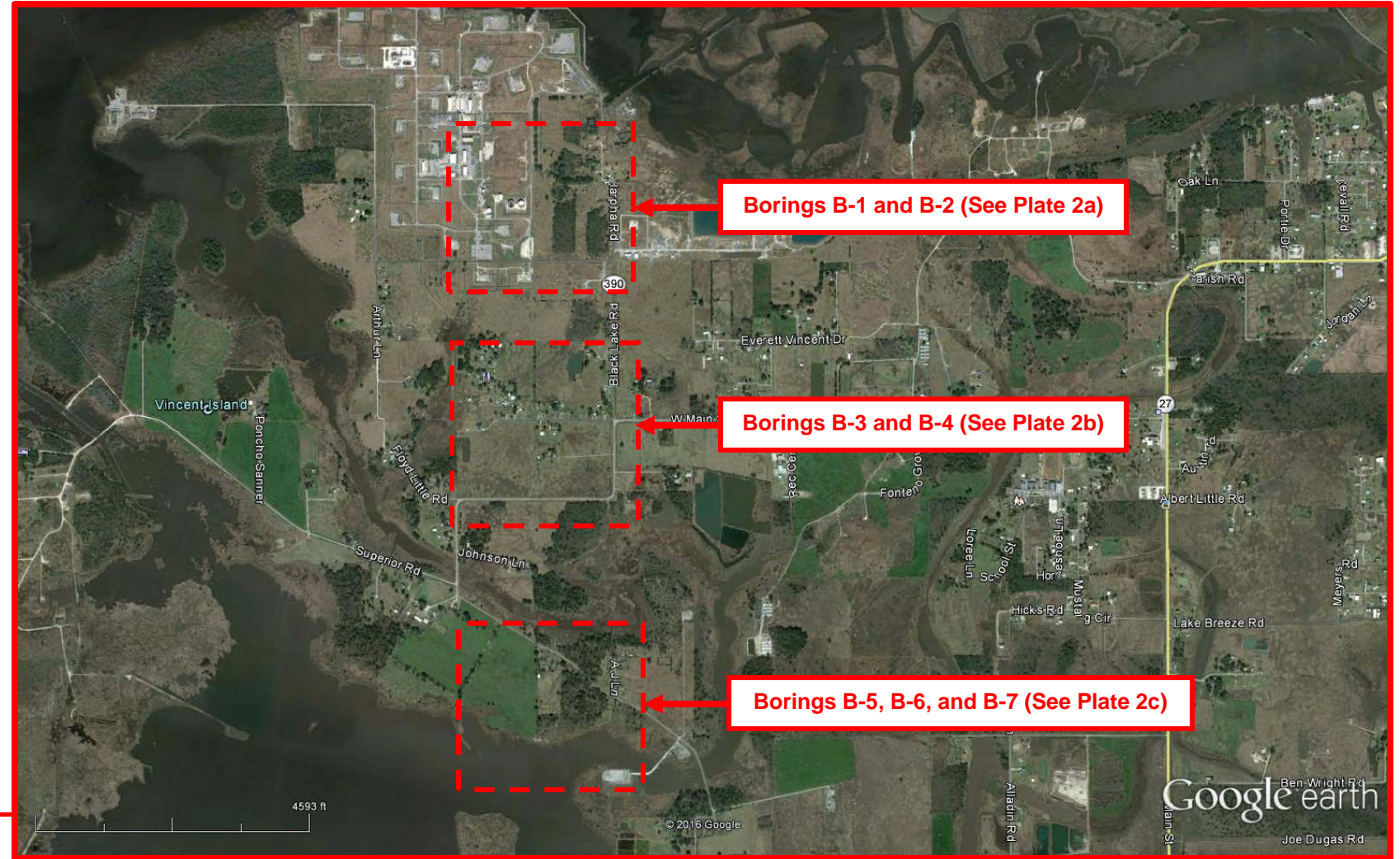
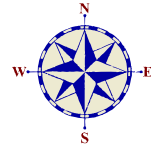
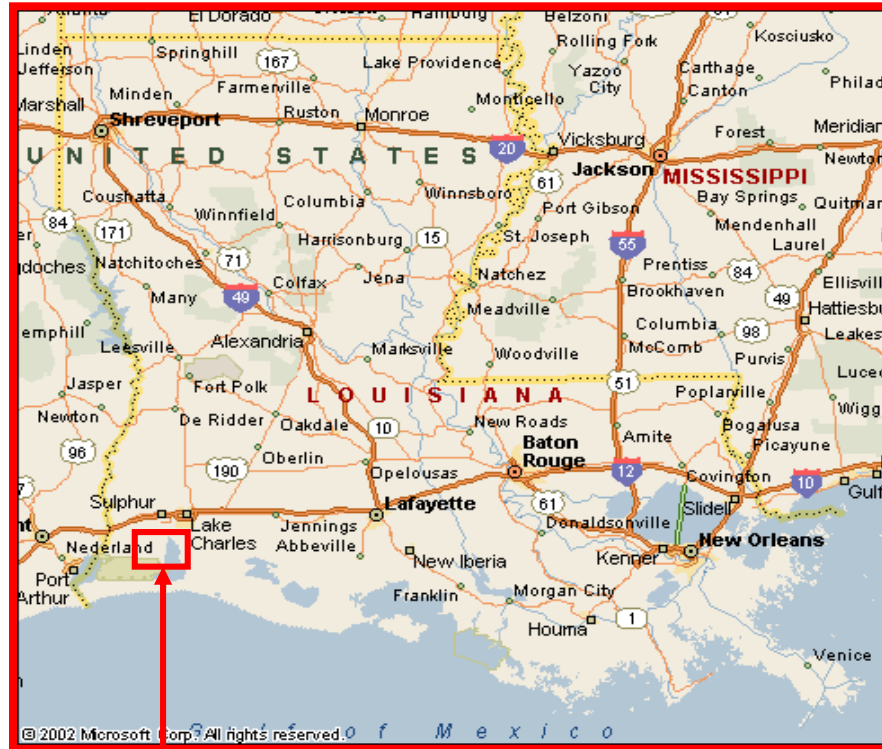
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## **ILLUSTRATIONS**







**SITE VICINITY MAP**  
24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT  
STRATEGIC PETROLEUM RESERVE  
HACKBERRY, LOUISIANA





Image obtained from Google Earth.  
Not-to-scale.  
Boring locations are approximate.

**PLAN OF BORINGS**  
24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT (BORINGS B-1 AND B-2 LOCATIONS)  
STRATEGIC PETROLEUM RESERVE  
HACKBERRY, LOUISIANA



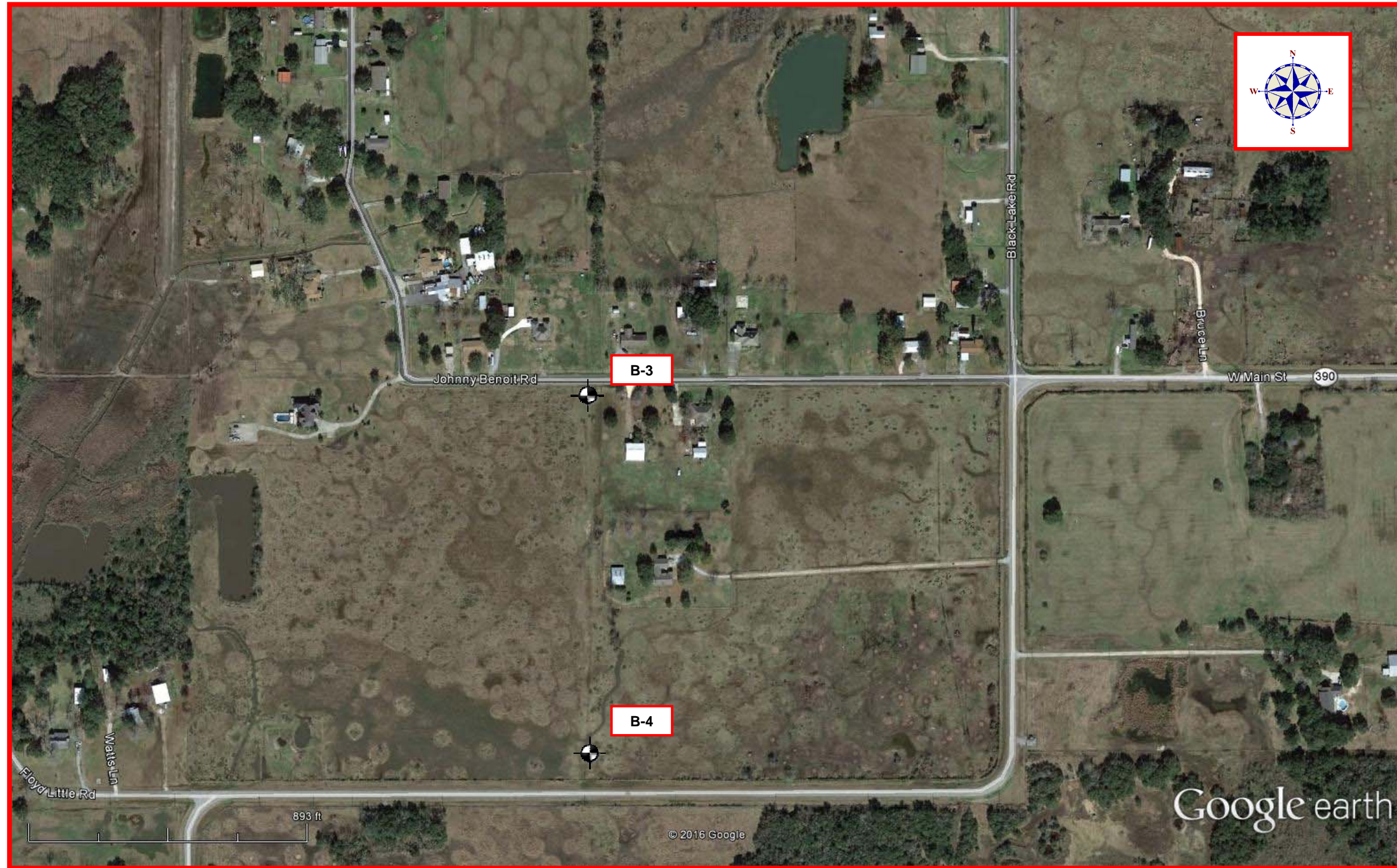


Image obtained from Google Earth.  
Not-to-scale.  
Boring locations are approximate.

**PLAN OF BORINGS**  
24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT (BORINGS B-3 AND B-4 LOCATIONS)  
STRATEGIC PETROLEUM RESERVE  
HACKBERRY, LOUISIANA





Image obtained from Google Earth.  
Not-to-scale.  
Boring locations are approximate.

**PLAN OF BORINGS**  
24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT (BORINGS B-5, B-6, AND B-7 LOCATIONS)  
STRATEGIC PETROLEUM RESERVE  
HACKBERRY, LOUISIANA

FCLC\_LOG (FINAL) REV01 04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT 7/7/16

DEPTH, FT	WATER LEVEL SYMBOL	SAMPLES	BLOWS PER FOOT	LOCATION: See Plate 2 COORDINATES: Not Available SURFACE EL.: Not Available	STRATUM DEPTH, FT	CLASSIFICATION						SHEAR STRENGTH				
						UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	KIPS PER SQ FT				
				STRATUM DESCRIPTION							0.5	1.0	1.5	2.0	2.5	
				SILT (ML), dark brown with rootlets												
				FAT CLAY with sand (CH), stiff, reddish-brown and gray - light brown with silt pockets below 4'	2.0	94	83	37 27	99	26	73					
				SANDY LEAN CLAY (CL), firm to stiff, light brown with silty sand pockets	6.0			17	24	14	10					
				SILTY CLAYEY SAND (SC-SM), medium-dense, light brown	8.0	115		17								
			N=12													
			N=15													
			N=18													
			N=24													
				SILT with sand (ML), loose, light brown with clay seams and pockets	17.0											
			N=7													
			N=9													
				SILTY SAND (SM), medium-dense, brown with shell fragments and clay seams	27.0											
			N=12													
					30.0											

**NOTES:**

- ∇: Water First Noticed. ▼: Depth To Water after 15 minutes.
- Terms and symbols defined on Plates 10a and 10b.

DATE: June 7, 2016

TOTAL DEPTH: 30'

CAVED DEPTH: Not Applicable

DRY AUGER: 0' to 10'

WET ROTARY: 10' to 30'

BACKFILL: Cement-Bentonite Grout

LOGGER: M. Allen



STRATEGIC PETROLEUM RESERVE

LOG OF BORING NO. B-1

24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT

HACKBERRY, LOUISIANA

Project No.

04.50160005

PLATE 3

FCLC\_LOG (FINAL) REV01 04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT 7/7/16

DEPTH, FT	WATER LEVEL SYMBOL	SAMPLES	BLOWS PER FOOT	LOCATION: See Plate 2 COORDINATES: Not Available SURFACE EL.: Not Available	STRATUM DEPTH, FT	CLASSIFICATION						SHEAR STRENGTH				
						UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	KIPS PER SQ FT				
												0.5	1.0	1.5	2.0	2.5
	▼			LEAN CLAY with sand (CL), firm, light gray - with rootlets to 2' - stiff below 2'	108	81	27	39	23	16						
5				- with silt pockets from 6' to 8' - with silty sand seams and pockets below 8'	107	83	22	41	17	24						
12.0				SILT (ML), light brown with clay seams	12.0	98										
14.0				SANDY LEAN CLAY (CL), firm to stiff, light brown with silty sand seams and pockets	14.0	67	36	28	19	9						
17.0				SILT (ML), light brown and light gray with clay seams and pockets	17.0	90										
22.0				FAT CLAY with sand (CH), stiff, light brown - with silt laminations to 24'	22.0											
30.0				- with silt seams and pockets below 28' - with shell fragments at 30'	30.0	75	27	50	20	30						

**NOTES:**

1. ▽: Water First Noticed. ▼: Depth To Water after 15 minutes.
2. Terms and symbols defined on Plates 10a and 10b.

DATE: June 7, 2016

TOTAL DEPTH: 30'

CAVED DEPTH: Not Applicable

DRY AUGER: 0' to 14'

WET ROTARY: 14' to 30'

BACKFILL: Cement-Bentonite Grout

LOGGER: M. Allen



STRATEGIC PETROLEUM RESERVE

LOG OF BORING NO. B-2

24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT

HACKBERRY, LOUISIANA

Project No.

04.50160005

PLATE 4



FCLC\_LOG (FINAL) REV01 04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT 7/7/16

DEPTH, FT	WATER LEVEL SYMBOL	SAMPLES	BLOWS PER FOOT	LOCATION: See Plate 2 COORDINATES: Not Available SURFACE EL.: Not Available	STRATUM DEPTH, FT	CLASSIFICATION					SHEAR STRENGTH					
						UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	KIPS PER SQ FT				
				STRATUM DESCRIPTION							0.5	1.0	1.5	2.0	2.5	
				SILT with sand (ML), light brown with rootlets	2.0		75									
				FAT CLAY with sand (CH), stiff, light gray and brown - light brown below 4' - with silt pockets below 6'	2.0		79	22	58	17	41					
5						106										
				SILTY SAND (SM), medium-dense, brown	8.0		61									
10			N=11													
			N=12													
			N=8	SANDY SILT (ML), loose, brown	12.0		59	29	NP	NP	NP					
15			N=14	SILTY SAND (SM), medium-dense, brown with sandy clay seams and pockets	14.0											
				FAT CLAY (CH), stiff, light brown - with silt seams and laminations from 18' to 20'  - light brown and gray, slickensided below 23'	17.0		94	38	90	29	61					
20																
25						93										
30					30.0											

**NOTES:**

- ▽: Water First Noticed. ▼: Depth To Water after 15 minutes.
- Terms and symbols defined on Plates 10a and 10b.

DATE: June 7, 2016

TOTAL DEPTH: 30'

CAVED DEPTH: Not Applicable

DRY AUGER: 0' to 10'

WET ROTARY: 10' to 30'

BACKFILL: Cement-Bentonite Grout

LOGGER: M. Allen



STRATEGIC PETROLEUM RESERVE

LOG OF BORING NO. B-3

24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT

HACKBERRY, LOUISIANA

Project No.

04.50160005

PLATE 5

DEPTH, FT	WATER LEVEL SYMBOL	SAMPLES	BLOWS PER FOOT	LOCATION: See Plate 2 COORDINATES: Not Available SURFACE EL.: Not Available	STRATUM DEPTH, FT	CLASSIFICATION						SHEAR STRENGTH				
						UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	KIPS PER SQ FT				
												0.5	1.0	1.5	2.0	2.5
					2.0		84	31	71	20	51					
5						100		26								
					6.0											
							52	23	28	16	12					
10					10.0	101		26								
			N=5		12.0		73									
15																
20						89	100	34	77	26	51					
								34								
25						84	96	35								
30					30.0	81	100	38	68	23	45					
								42								

**NOTES:**

- ▽: Water First Noticed. ▼: Depth To Water after 15 minutes.
- Terms and symbols defined on Plates 10a and 10b.

DATE: June 7, 2016

TOTAL DEPTH: 30'

CAVED DEPTH: Not Applicable

DRY AUGER: 0' to 12'

WET ROTARY: 12' to 30'

BACKFILL: Cement-Bentonite Grout

LOGGER: M. Allen



STRATEGIC PETROLEUM RESERVE

LOG OF BORING NO. B-4

24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT

HACKBERRY, LOUISIANA

Project No.  
04.50160005

PLATE 6

FCLC\_LOG (FINAL) REV01 04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT 7/7/16

DEPTH, FT	WATER LEVEL SYMBOL	SAMPLES	BLOWS PER FOOT	LOCATION: See Plate 2 COORDINATES: Not Available SURFACE EL.: Not Available	STRATUM DEPTH, FT	CLASSIFICATION					SHEAR STRENGTH						
						UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	KIPS PER SQ FT					
				STRATUM DESCRIPTION							0.5	1.0	1.5	2.0	2.5	3.8	
				SILT (ML), dark brown with rootlets, shell fragments, and clay pockets	2.0	86											
				FAT CLAY (CH), stiff, brown with sandy silt seams and pockets													
5				- stiff to very stiff at 6'													
				SANDY LEAN CLAY (CL), stiff, light brown - with silt pockets to 8'	6.0	104	90	24	62	21	41						
10																	
				FAT CLAY (CH), stiff, light brown	11.0												
				SANDY LEAN CLAY (CL), firm, light brown with silty sand seams and pockets	12.0												
15																	
				LEAN CLAY (CL), firm to stiff, light brown with silt seams and pockets	17.0												
20																	
				SANDY SILT (ML), light brown	23.0												
25																	
				LEAN CLAY (CL), stiff, gray with silt pockets	27.0												
30					30.0												

**NOTES:**

- ∇: Water First Noticed. ▼: Depth To Water after 15 minutes.
- Terms and symbols defined on Plates 10a and 10b.

DATE: June 1, 2016

TOTAL DEPTH: 30'

CAVED DEPTH: Not Applicable

DRY AUGER: 0' to 12'

WET ROTARY: 12' to 30'

BACKFILL: Cement-Bentonite Grout

LOGGER: M. Allen



STRATEGIC PETROLEUM RESERVE

LOG OF BORING NO. B-5

24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT

HACKBERRY, LOUISIANA

Project No.

04.50160005

PLATE 7

FCLC\_LOG (FINAL) REV01 04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT 7/7/16

DEPTH, FT	WATER LEVEL SYMBOL	SAMPLES	BLOWS PER FOOT	LOCATION: See Plate 2 COORDINATES: Not Available SURFACE EL.: Not Available	STRATUM DEPTH, FT	CLASSIFICATION						SHEAR STRENGTH					
						UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	KIPS PER SQ FT					
												0.5	1.0	1.5	2.0	2.5	
5				FAT CLAY (CH), firm, gray and brown - stiff, light brown and light gray with calcareous nodules below 2' - with organic nodules below 4'	101	90	27 26	61	17	44							
6.0				LEAN CLAY (CL), firm, light gray with silty sand seams and pockets	93		32 32	33	21	12							
8.0			N=12 N=10	SILTY SAND (SM), medium-dense, brown - loose, with sandy clay seams and pockets below 10'		21											
12.0				CLAYEY SAND (SC), brown and gray with silty sand seams and pockets		63											
14.0				LEAN CLAY (CL), firm to stiff, brown and gray - with silty sand seams and pockets to 16'  - brown with silt laminations below 18'	97	95	28 25	42	19	23							
22.0				SANDY LEAN CLAY (CL), firm to stiff, brown with silty sand pockets and shell fragments	95		25 28	31	18	13							
27.0				FAT CLAY (CH), stiff, brown with silt laminations													
30.0																	

**NOTES:**

- Terms and symbols defined on Plates 10a and 10b.
- Water was encountered at the surface of the boring at the time of field exploration.

DATE: June 1, 2016  
 TOTAL DEPTH: 30'  
 CAVED DEPTH: Not Applicable  
 DRY AUGER: Not Applicable  
 WET ROTARY: 0' to 30'  
 BACKFILL: Cement-Bentonite Grout  
 LOGGER: M. Allen



STRATEGIC PETROLEUM RESERVE

LOG OF BORING NO. B-6

24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT

HACKBERRY, LOUISIANA

Project No.  
04.50160005

PLATE 8

FCLC\_LOG (FINAL) REV01 04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT 7/7/16

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	LOCATION: See Plate 2 COORDINATES: Not Available SURFACE EL.: Not Available	STRATUM DEPTH, FT	CLASSIFICATION						SHEAR STRENGTH					
							UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	KIPS PER SQ FT					
												0.5	1.0	1.5	2.0	2.5		
					LEAN CLAY (CL), stiff to very stiff, gray - light gray and brown below 2'	101	88	27 26	42	16	26							
5					FAT CLAY (CH), stiff, light gray and brown - with silt pockets at 7'	95	94	29 29	54	17	37							
					SILT (ML), light gray and brown with clay seams and pockets	98												
10					FAT CLAY (CH), stiff, light gray and brown													
15					LEAN CLAY (CL), stiff, light gray and brown - with silt seams and pockets to 25'	103	98	24 23	40	17	23							
20																		
25																		
30																		
35					FAT CLAY (CH), stiff to very stiff, gray - with shell fragments from 33' to 38' - stiff to very stiff at 35' - stiff from 35' to 79'  - gray and brown from 38' to 48' - with silt laminations from 38' to 40'	105	86	34 22	54	22	32							3.1
						100												

**NOTES:**

- Terms and symbols defined on Plates 10a and 10b.
- The water depth encountered at the boring location was on the order of 0.5-ft above the existing mudline at the time of field exploration.

DATE: May 31, 2016  
TOTAL DEPTH: 100'  
CAVED DEPTH: Not Applicable  
DRY AUGER: Not Applicable  
WET ROTARY: 0' to 100'  
BACKFILL: Cement-Bentonite Grout  
LOGGER: M. Allen



STRATEGIC PETROLEUM RESERVE

LOG OF BORING NO. B-7

24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT

HACKBERRY, LOUISIANA

Project No.  
04.50160005

PLATE 9a



FCLC\_LOG (FINAL) REV01 04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT 7/7/16

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	LOCATION: See Plate 2 COORDINATES: Not Available SURFACE EL.: Not Available	STRATUM DEPTH, FT	CLASSIFICATION						SHEAR STRENGTH				
							UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	KIPS PER SQ FT				
					STRATUM DESCRIPTION							0.5	1.0	1.5	2.0	2.5	
					FAT CLAY (CH), stiff, gray and brown												
45					- light gray from 48' to 63'												
50																	
55							100	97	25	54	18	36					
60					- slickensided below 58'												
65					- light gray and light brown from 63' to 83'												
70																	
75																	
					- very stiff at 79' - stiff from 79' to 89'												

**NOTES:**

- Terms and symbols defined on Plates 10a and 10b.
- The water depth encountered at the boring location was on the order of 0.5-ft above the existing mudline at the time of field exploration.

DATE: May 31, 2016  
 TOTAL DEPTH: 100'  
 CAVED DEPTH: Not Applicable  
 DRY AUGER: Not Applicable  
 WET ROTARY: 0' to 100'  
 BACKFILL: Cement-Bentonite Grout  
 LOGGER: M. Allen



**STRATEGIC PETROLEUM RESERVE** **LOG OF BORING NO. B-7**

**24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT**

HACKBERRY, LOUISIANA Project No.  
**04.50160005** **PLATE 9b**

FCLC\_LOG (FINAL) REV01 04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT 7/7/16

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	LOCATION: See Plate 2 COORDINATES: Not Available SURFACE EL.: Not Available	STRATUM DEPTH, FT	CLASSIFICATION					SHEAR STRENGTH						
							UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	KIPS PER SQ FT					
					STRATUM DESCRIPTION							0.5	1.0	1.5	2.0	2.5		
85					FAT CLAY (CH), stiff, light gray and light brown  - gray and brown from 83' to 93'													
90					- stiff to very stiff at 90' - very stiff below 90'	82	99	36 40	77	27	50							
95					- gray below 93'													
100						100.0												

**NOTES:**

- Terms and symbols defined on Plates 10a and 10b.
- The water depth encountered at the boring location was on the order of 0.5-ft above the existing mudline at the time of field exploration.

DATE: May 31, 2016  
 TOTAL DEPTH: 100'  
 CAVED DEPTH: Not Applicable  
 DRY AUGER: Not Applicable  
 WET ROTARY: 0' to 100'  
 BACKFILL: Cement-Bentonite Grout  
 LOGGER: M. Allen

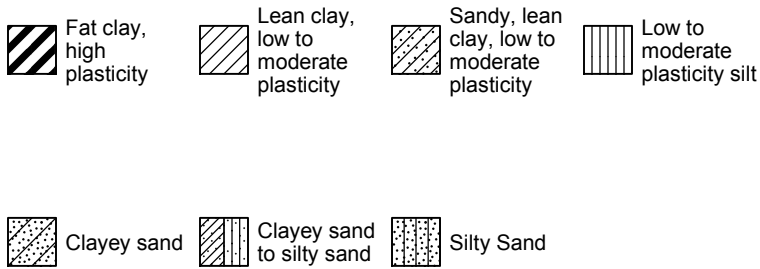


**STRATEGIC PETROLEUM RESERVE** **LOG OF BORING NO. B-7**

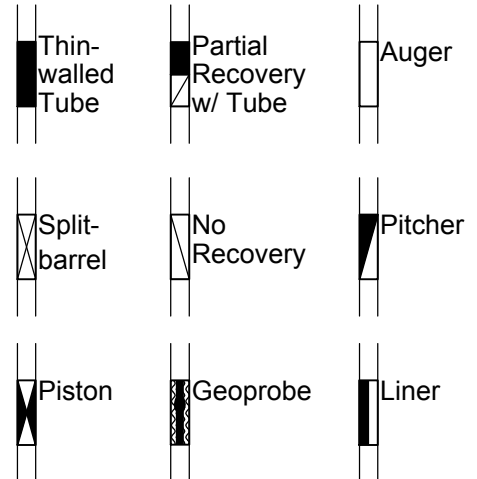
**24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT**

HACKBERRY, LOUISIANA Project No.  
**04.50160005** **PLATE 9c**

### SOIL TYPES

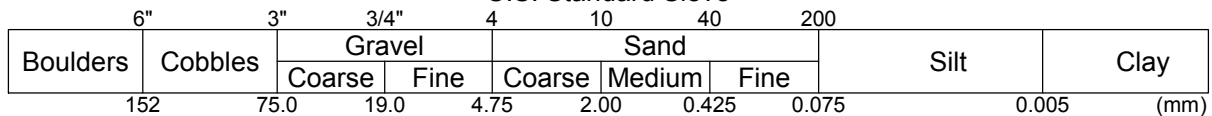


### SAMPLER TYPES

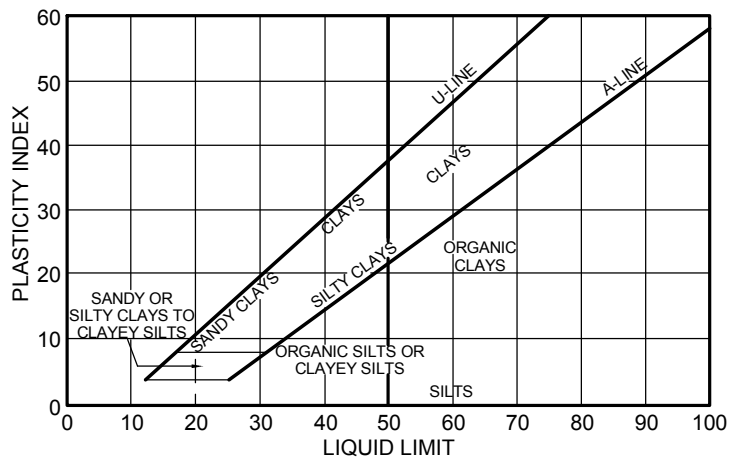


### SOIL GRAIN SIZE

U.S. Standard Sieve



### PLASTICITY CHART



### SOIL STRUCTURE

- Slickensided ..... Having planes of weakness that appear slick and glossy.
- Fissured ..... Containing shrinkage or relief cracks, often filled with fine sand or silt; usually more or less vertical.
- Pocket ..... Inclusion of material of different texture that is smaller than the diameter of the sample.
- Parting ..... Inclusion less than 1/8 inch thick extending through the sample.
- Seam ..... Inclusion 1/8 inch to 3 inches thick extending through the sample.
- Layer ..... Inclusion greater than 3 inches thick extending through the sample.
- Laminated ..... Soil sample composed of alternating partings or seams of different soil type.
- Interlayered ..... Soil sample composed of alternating layers of different soil type.
- Intermixed ..... Soil sample composed of pockets of different soil type and layered or laminated structure is not evident.
- Calcareous ..... Having appreciable quantities of carbonate.
- Carbonate ..... Having more than 50% carbonate content.



### TERMS AND SYMBOLS USED ON BORING LOGS

#### SOIL CLASSIFICATION (1 of 2)

Project No.  
04.50160005

PLATE 10a

## STANDARD PENETRATION TEST (SPT)

A 2-in.-OD, 1-3/8-ID split spoon sampler is driven 1.5 ft into undisturbed soil with a 140-pound hammer free falling 30 in. After the sampler is seated 6 in. into undisturbed soil, the number of blows required to drive the sampler the last 12 in. is the Standard Penetration Resistance or "N" value, which is recorded as blows per foot as described below.

## SPLIT-BARREL SAMPLER DRIVING RECORD

Blows Per Foot	Description
25 .....	25 blows drove sampler 12 inches, after initial 6 inches of seating.
50/7" .....	50 blows drove sampler 7 inches, after initial 6 inches of seating.
Ref/3" .....	50 blows drove sampler 3 inches during initial 6-inch seating interval.

NOTE: To avoid damage to sampling tools, driving is limited to 50 blows during or after seating interval.

### DENSITY OF GRANULAR SOILS

Descriptive Term	*Relative Density, %	**Blows Per Foot (SPT)
Very Loose .....	< 15 .....	0 to 4
Loose .....	15 to 35 .....	5 to 10
Medium Dense .....	35 to 65 .....	11 to 30
Dense .....	65 to 85 .....	31 to 50
Very Dense .....	> 85 .....	> 50

\*Estimated from sampler driving record.

\*\*Requires correction for depth, groundwater level, and grain size.

### STRENGTH OF COHESIVE SOILS

Term	Undrained Shear Strength, ksf	Blows Per Foot (SPT) (approximate)
Very Soft .....	< 0.25 .....	0 to 2
Soft .....	0.25 to 0.50 .....	2 to 4
Firm .....	0.50 to 1.00 .....	4 to 8
Stiff .....	1.00 to 2.00 .....	8 to 16
Very Stiff .....	2.00 to 4.00 .....	16 to 32
Hard .....	> 4.00 .....	> 32

## SHEAR STRENGTH TEST METHOD

U = Unconfined    Q = Unconsolidated - Undrained Triaxial

P = Pocket Penetrometer    T = Torvane    V = Miniature Vane    F = Field Vane

## HAND PENETROMETER CORRECTION

Our experience has shown that the hand penetrometer generally overestimates the in-situ undrained shear strength of over consolidated Pleistocene Gulf Coast clays. These strengths are partially controlled by the presence of macroscopic soil defects such as slickensides, which generally do not influence smaller scale tests like the hand penetrometer. Based on our experience, we have adjusted these field estimates of the undrained shear strength of natural, overconsolidated Pleistocene Gulf Coast soils by multiplying the measured penetrometer reading by a factor of 0.6. These adjusted strength estimates are recorded in the "Shear Strength" column on the boring logs. Except as described in the text, we have not adjusted estimates of the undrained shear strength for projects located outside of the Pleistocene Gulf Coast formations.

Information on each boring log is a compilation of subsurface conditions and soil or rock classifications obtained from the field as well as from laboratory testing of samples. Strata have been interpreted by commonly accepted procedures. The stratum lines on the logs may be transitional and approximate in nature. Water level measurements refer only to those observed at the time and places indicated, and can vary with time, geologic condition, or construction activity.



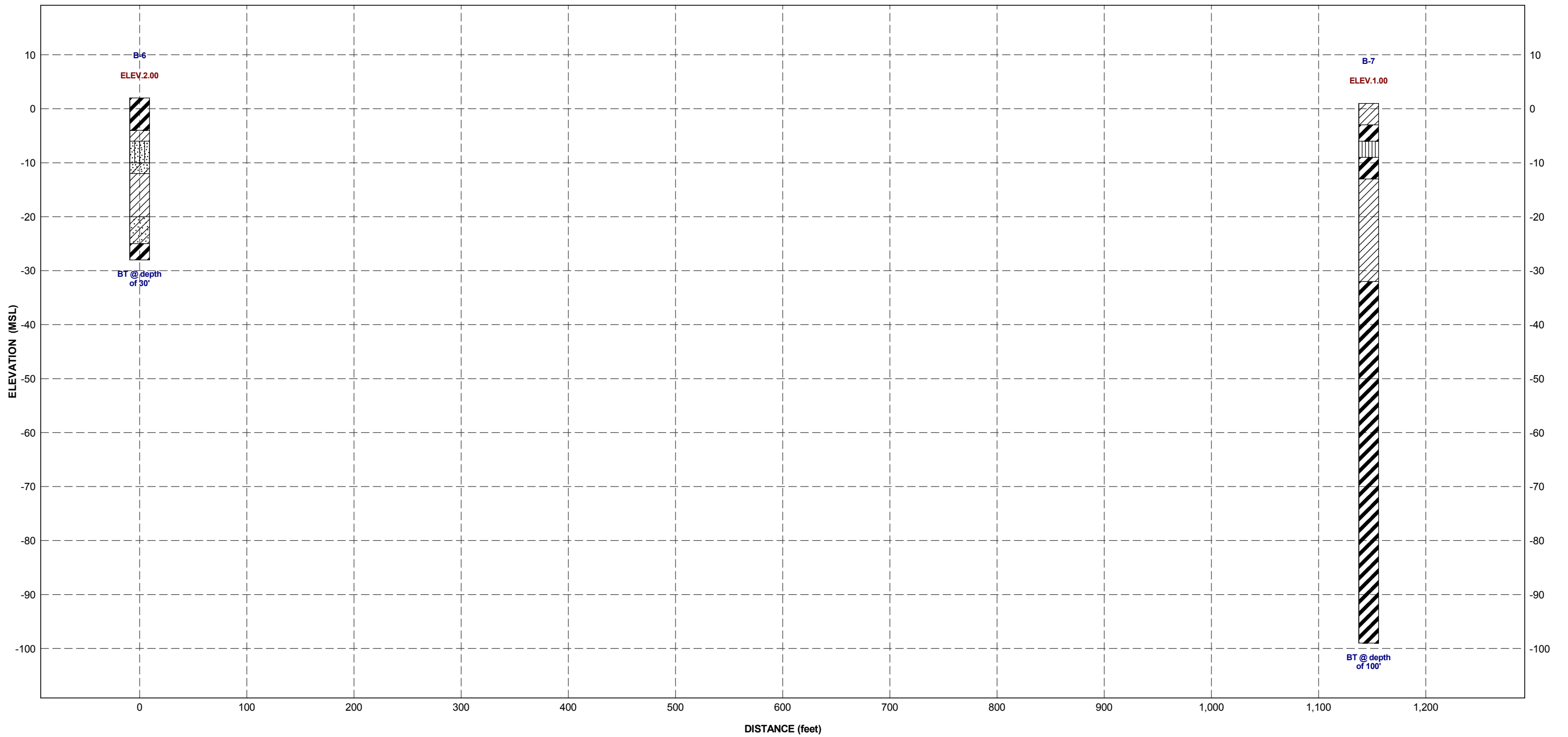
## TERMS AND SYMBOLS USED ON BORING LOGS

### SOIL CLASSIFICATION (2 of 2)

Project No.  
**04.50160005**

**PLATE 10b**

FCBR CPT AND BOREHOLE DATA 11X17 04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT 7/11/16



Note: Elevations estimated based on topographic information from Google Earth.

**LITHOLOGY GRAPHICS**

- Fat clay, high plasticity
- Lean clay, low to moderate plasticity
- Sandy, lean clay, low to moderate plasticity
- Low to moderate plasticity silt
- Clayey sand
- Clayey sand to silty sand
- Silty Sand

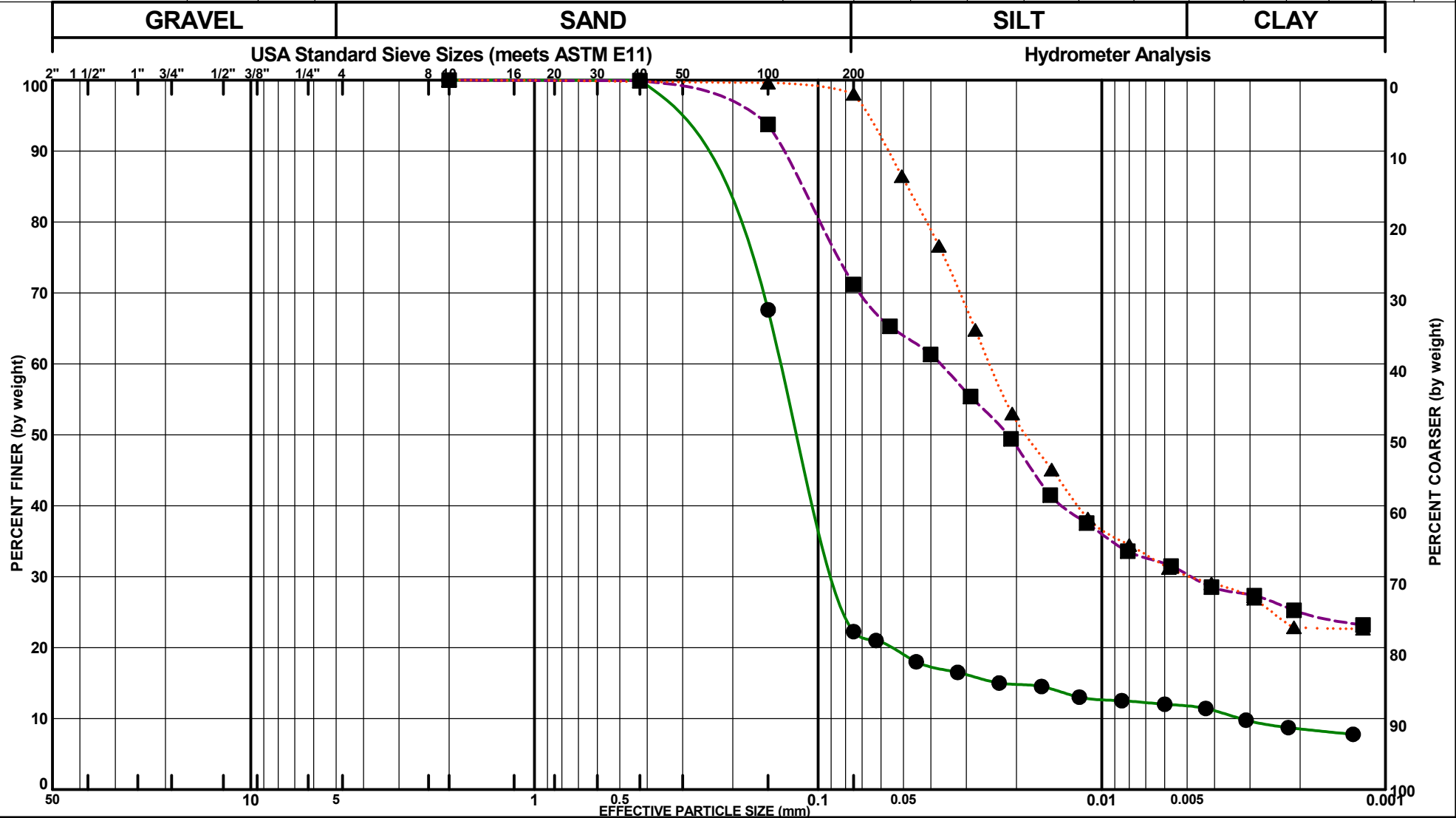
	<b>STRATEGIC PETROLEUM RESERVE</b> 24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT HACKBERRY, LOUISIANA			
<b>GENERALIZED SUBSURFACE PROFILE A-A</b> <b>(BORINGS B-6 AND B-7)</b>				
PROJECT NO. 04.50160005				
SCALE AS SHOWN	Drawn by: T. Whitley	Checked by: M. Hollier	Date: 7/1/2016	<b>PLATE 11</b>




**APPENDIX A**



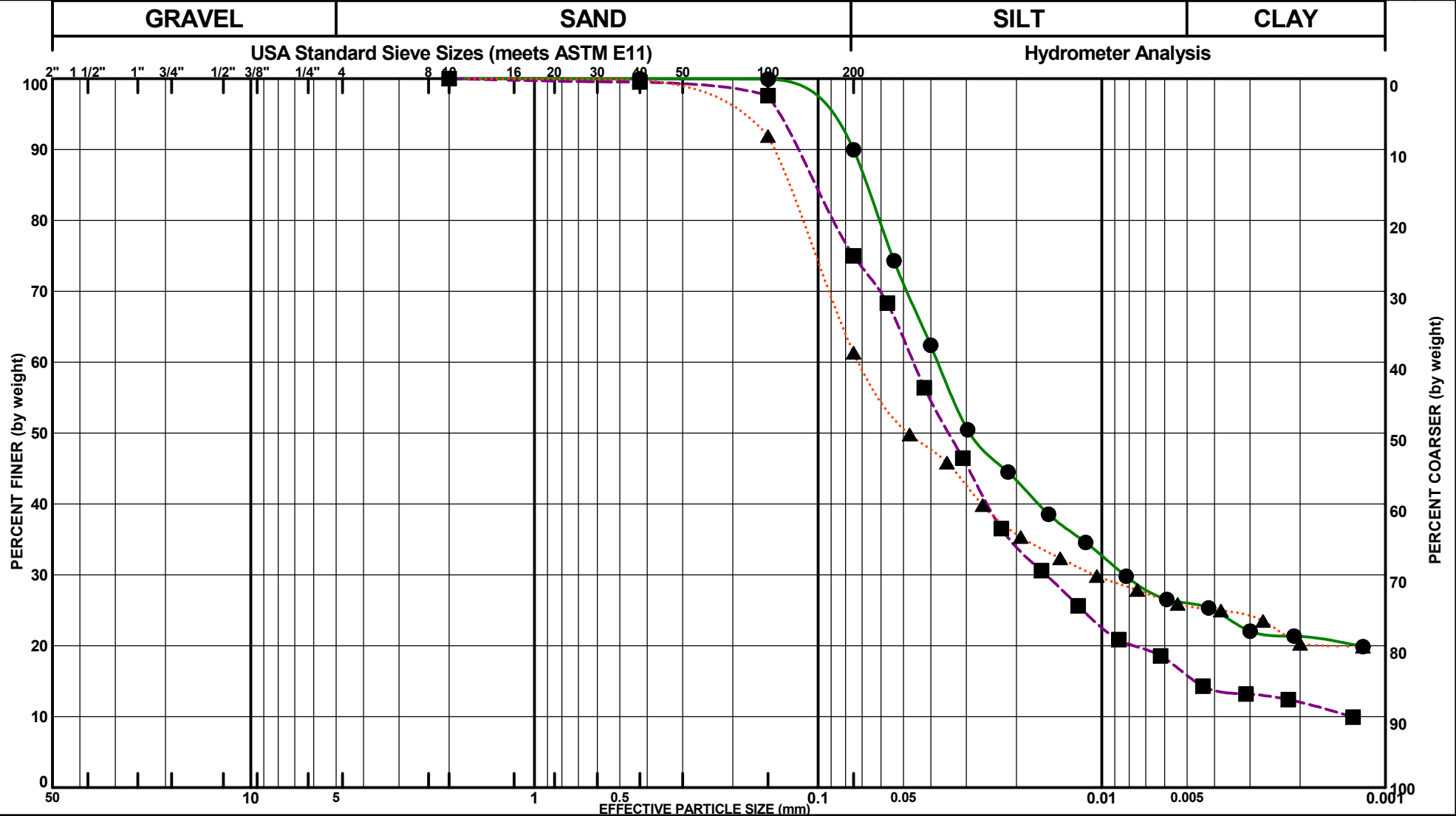
Boring Number	Sample Number	Depth (ft)	Material Description	%Gravel	%Sand	%Silt	%Clay	D100	D60	D30	D10	Cc	Cu	LL	PL	PI
● B-1	8	8.5-10	SILTY CLAYEY SAND (SC-SM), light brown	0.0	77.7	10.6	11.7	2	0.134	0.084	0.003	16.47	41.21			
■ B-1	12	18.5-20	SILT with sand (ML), light brown with clay seams and pockets	0.0	28.8	40.9	30.3	2	0.037	0.005						
▲ B-2	13	12-13	SILT (ML), light brown with clay seams	0.0	1.9	67.8	30.3	2	0.025	0.005						



FCBR CSA LANDSCAPE 04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT 7/1/16

 <p>Fugro Consultants, Inc</p>	STRATEGIC PETROLEUM RESERVE				<b>PARTICLE-SIZE ANALYSIS</b>			
	HACKBERRY, LOUISIANA				ASTM D422			
	Tested By: <b>Gene Lindsey</b>	Date Tested: <b>6/17/2016</b>	Reviewed By: <b>Gene Lindsey</b>	Date Reviewed: <b>6/23/2016</b>	Project No. <b>04.50160005</b>	PLATE A-1		

Boring Number	Sample Number	Depth (ft)	Material Description	%Gravel	%Sand	%Silt	%Clay	D100	D60	D30	D10	Cc	Cu	LL	PL	PI
● B-2	17	18-19	SILT (ML), light brown and light gray with clay seams and pockets	0.0	10.0	64.0	25.9	2	0.038	0.008						
■ B-3	1	0-1	SILT with sand (ML), light brown	0.0	25.0	59.1	15.9	2	0.046	0.016	0.001	4.06	35.02			
▲ B-3	9	8.5-10	SILTY SAND (SM), brown	0.0	38.7	35.6	25.7	2	0.071	0.011						



FCBR CSA LANDSCAPE\_04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT\_7/1/16



STRATEGIC PETROLEUM RESERVE

HACKBERRY, LOUISIANA

**PARTICLE-SIZE ANALYSIS**

ASTM D422

Tested By:  
**Judy Clayton**

Date Tested:  
**6/20/2016**

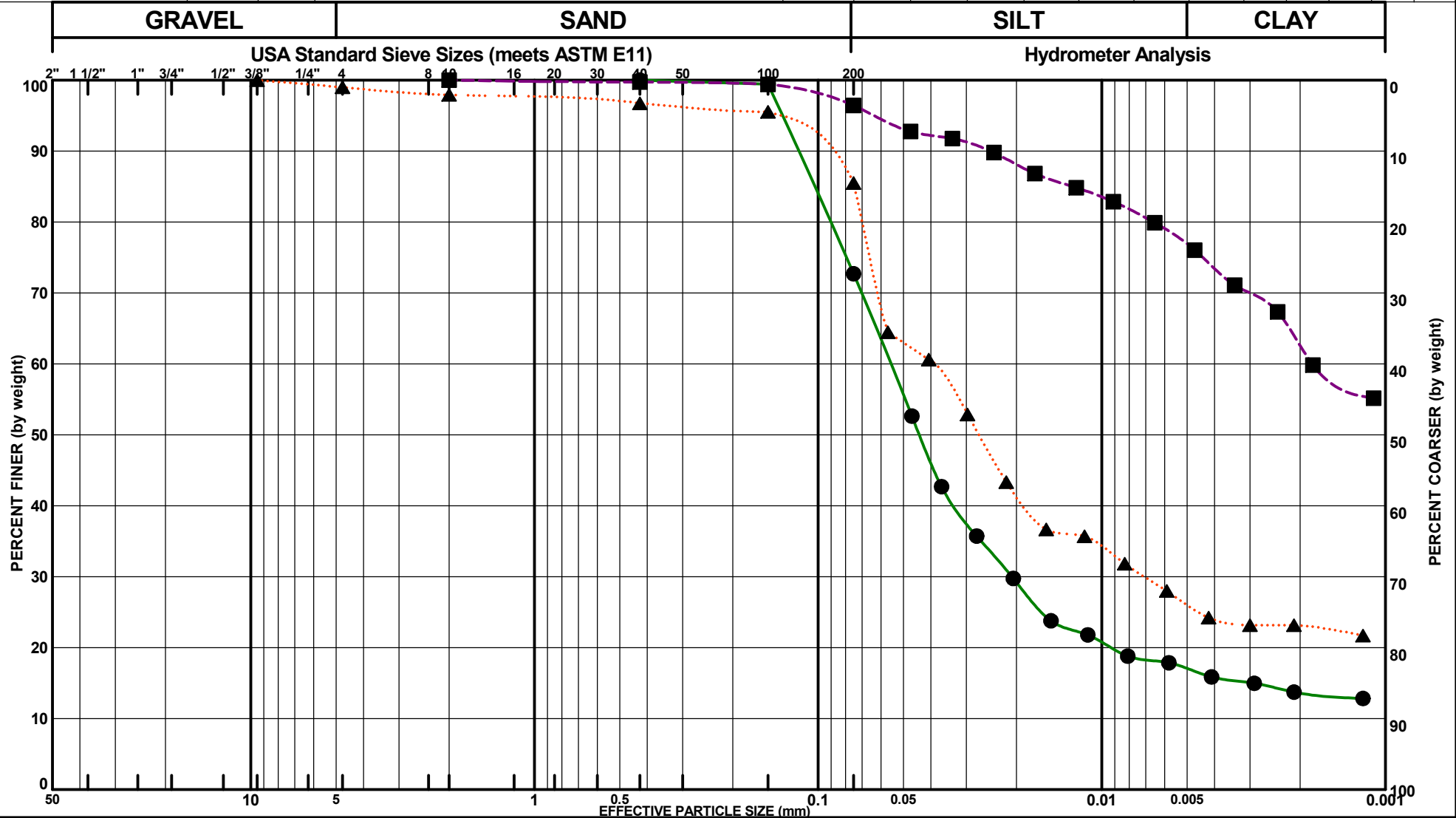
Reviewed By:  
**Gene Lindsey**

Date Reviewed:  
**6/23/2016**

Project No.  
**04.50160005**

**PLATE A-2**

Boring Number	Sample Number	Depth (ft)	Material Description	%Gravel	%Sand	%Silt	%Clay	D100	D60	D30	D10	Cc	Cu	LL	PL	PI
● B-4	10	10.5-12	SILT with sand (ML), light brown with sandy clay seams	0.0	27.3	55.7	17.0	0.425	0.056	0.021						
■ B-4	17	23-24	FAT CLAY (CH), brown	0.0	3.6	19.6	76.8	2	0.002							
▲ B-5	1	0-1	SILT (ML), dark brown with shell fragments and clay pockets	1.0	13.5	59.4	26.2	9.5	0.04	0.007						



FCBR CSA LANDSCAPE 04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT 7/1/16



STRATEGIC PETROLEUM RESERVE

HACKBERRY, LOUISIANA

**PARTICLE-SIZE ANALYSIS**

ASTM D422

Tested By:  
**Judy Clayton**

Date Tested:  
**6/22/2016**

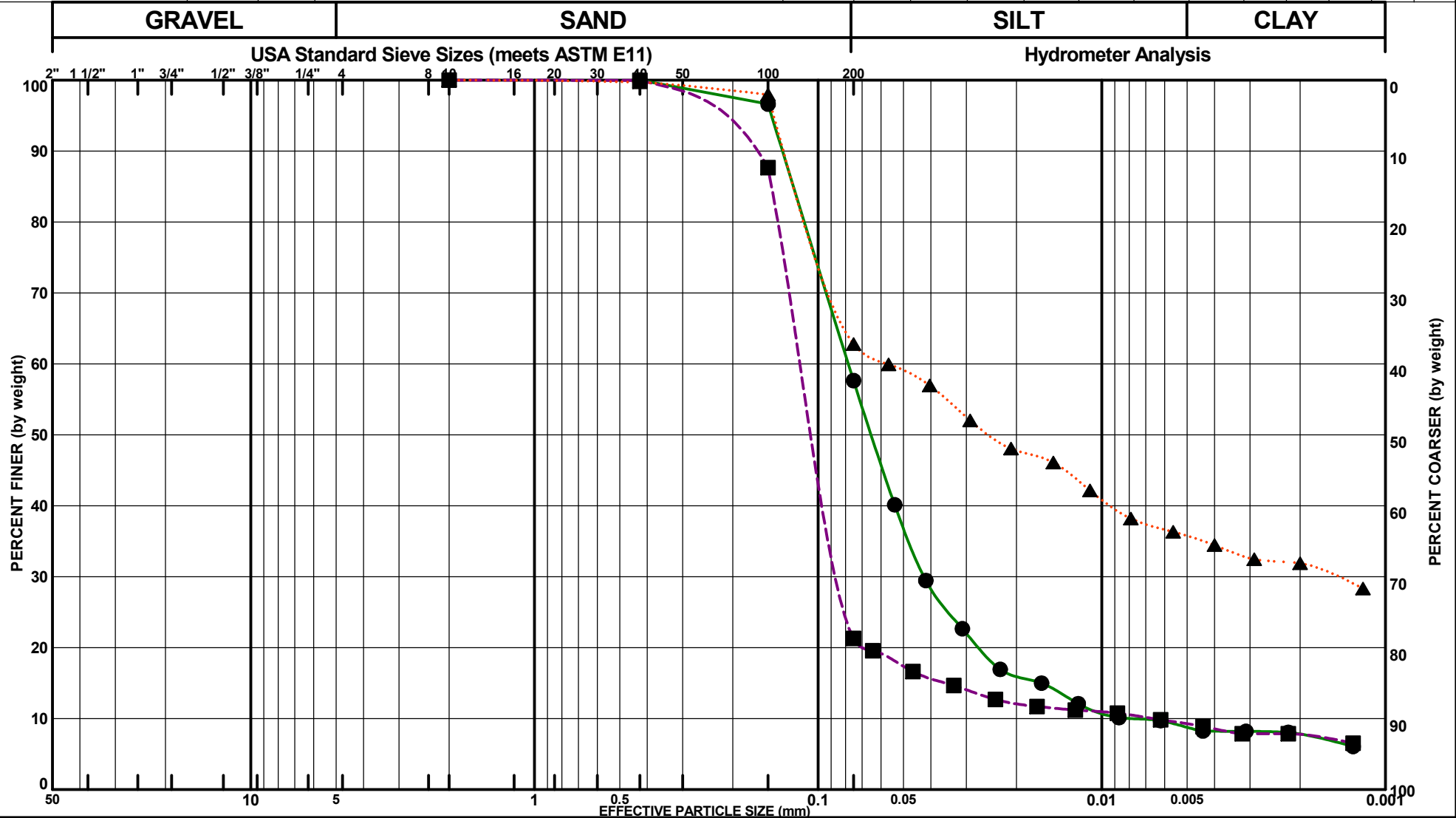
Reviewed By:  
**Gene Lindsey**

Date Reviewed:  
**6/23/2016**


Project No.  
**04.50160005**

**PLATE A-3**

Boring Number	Sample Number	Depth (ft)	Material Description	%Gravel	%Sand	%Silt	%Clay	D100	D60	D30	D10	Cc	Cu	LL	PL	PI
● B-5	18	24-25	SANDY SILT (ML), light brown	0.0	42.4	48.9	8.8	0.425	0.078	0.042	0.008	2.93	10.05	NP	NP	NP
■ B-6	9	8.5-10	SILTY SAND (SM), brown	0.0	78.7	12.1	9.2	2	0.112	0.082	0.007	9.11	17.04			
▲ B-6	11	12-13	CLAYEY SAND (SC), brown and gray	0.0	37.2	27.1	35.7	2	0.057	0.002						

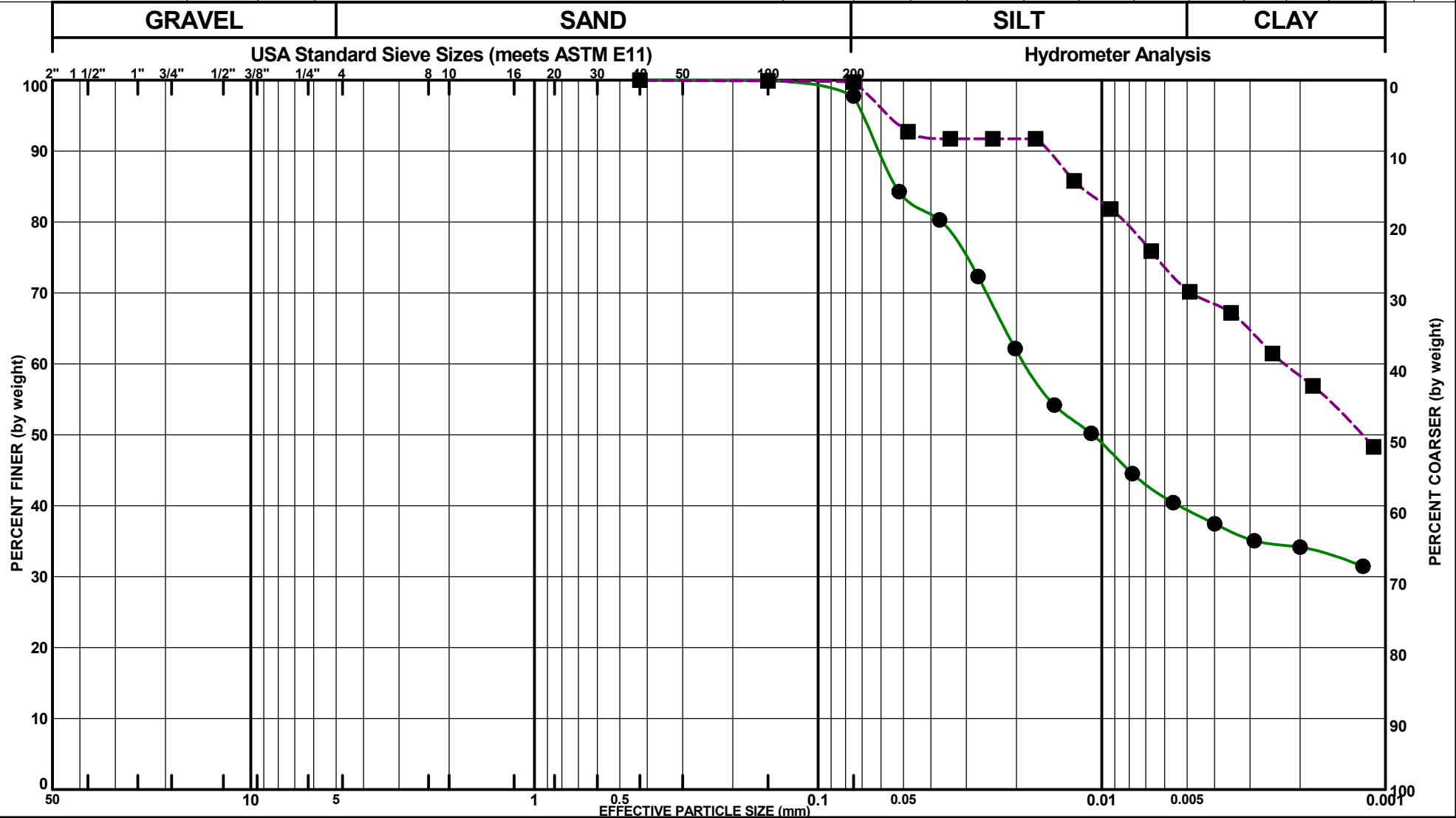


FCBR GSA LANDSCAPE 04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT 7/1/16


 <p>Fugro Consultants, Inc</p>	STRATEGIC PETROLEUM RESERVE				<b>PARTICLE-SIZE ANALYSIS</b>			
	HACKBERRY, LOUISIANA				ASTM D422			
	Tested By: <b>Judy Clayton</b>	Date Tested: <b>6/20/2016</b>	Reviewed By: <b>Gene Lindsey</b>	Date Reviewed: <b>6/23/2016</b>	Project No. <b>04.50160005</b>	PLATE A-4		



Boring Number	Sample Number	Depth (ft)	Material Description	%Gravel	%Sand	%Silt	%Clay	D100	D60	D30	D10	Cc	Cu	LL	PL	PI
● B-7	9	8-9	SILT (ML), light gray and brown with clay seams and pockets	0.0	2.2	58.3	39.4	0.425	0.019							
■ B-7	25	38-39	FAT CLAY (CH), gray and brown	0.0	0.3	29.2	70.5	0.425	0.002							
▲																



FCBR GSA LANDSCAPE 04.50160005 - WH BRINE.GPJ FUGRO DATA TEMPLATE 042610.GDT 7/1/16

 <p>Fugro Consultants, Inc</p>	STRATEGIC PETROLEUM RESERVE				<b>PARTICLE-SIZE ANALYSIS</b>			
	HACKBERRY, LOUISIANA				ASTM D422			
	Tested By: <b>Judy Clayton</b>	Date Tested: <b>6/20/2016</b>	Reviewed By: <b>Gene Lindsey</b>	Date Reviewed: <b>6/23/2016</b>	Project No. <b>04.50160005</b>	PLATE A-5		

**APPENDIX B**



Boring ID	Depth (ft)	Material Description	pH	Ion Concentration (ppm)		Electrical Resistivity (ohm-cm)
				Chloride	Sulfate	
B-1	5-6	Fat Clay with sand (CH)	5.5	< 100*	< 100*	2,676
B-2	3-4	Lean Clay with sand (CL)	7.3	230*	177*	825
B-3	19-20	Fat Clay (CH)	8.0	< 100*	112*	1,424
B-4	5-6	Fat Clay with sand (CH)	7.1	< 100*	< 100*	1,643
B-4	15-16	Fat Clay (CH)	7.9	< 100*	106*	1,424
B-5	1-2	Silt (ML)	6.6	< 100*	< 100*	2,599
B-5	29-30	Lean Clay (CL)	8.3	< 100*	< 100*	2,582
B-6	29-30	Fat Clay (CH)	7.8	< 100*	676*	651
B-7	3-4	Lean Clay (CL)	7.2	790*	786*	328
B-7	74-75	Fat Clay (CH)	7.7	149*	< 100*	925

\* Results based on dry weight.

**LABORATORY SOIL CHEMICAL ANALYSES AND ELECTRICAL RESISTIVITY TESTS**  
 24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT  
 STRATEGIC PETROLEUM RESERVE  
 HACKBERRY, LOUISIANA



**APPENDIX C**





<b>Generalized Soil Parameters (Boring B-1)</b>						
<b>Depth (ft)</b>	<b>Material Description</b>	<b>Unit Weight (pcf)</b>	<b>Buoyant Unit Weight (pcf)</b>	<b>Cohesion (psf)</b>	<b>Friction Angle (degrees)</b>	<b>Shear Modulus<sup>(1)</sup> (psf)</b>
0 to 2	Silt (ML)	120	58	-	20	437,900
2 to 6	Fat Clay with sand (CH)	119	57	1,200 to 1,500	-	400,000
6 to 8	Sandy Lean Clay (CL)	135	73	700 to 1,000	-	1,020,000
8 to 17	Silty Clayey Sand (SC-SM)	120	58	-	25	1,623,000
17 to 27	Silt with sand (ML)	120	58	-	20	1,557,000
27 to 30	Silty Sand (SM)	120	58	-	25	1,974,000

**Notes:**  
 1) In order to calculate estimated shear modulus values, we used Table 6-5 (P.234) and Table 6-6 (P. 235) from *Geotechnical Earthquake Engineering (Kramer, Steven L., 1996, Prentice-Hall, Inc.)*. For the clayey soils, we used an average cohesion based on our ranges of values, and we assumed an Overconsolidation Ratio (OCR) of about 1.0.

**GENERALIZED SOIL PARAMETERS (BORING B-1)**  
**24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT**  
**STRATEGIC PETROLEUM RESERVE**  
**HACKBERRY, LOUISIANA**





<b>Generalized Soil Parameters (Boring B-2)</b>						
<b>Depth (ft)</b>	<b>Material Description</b>	<b>Unit Weight (pcf)</b>	<b>Buoyant Unit Weight (pcf)</b>	<b>Cohesion (psf)</b>	<b>Friction Angle (degrees)</b>	<b>Shear Modulus<sup>(1)</sup> (psf)</b>
0 to 12	Lean Clay with sand (CL)	132	70	500 to 1,700	-	990,000
12 to 14	Silt (ML)	120	58	-	20	1,302,200
14 to 17	Sandy Lean Clay (CL)	124	62	500 to 1,500	-	1,125,000
17 to 22	Silt (ML)	120	58	-	20	1,498,800
22 to 30	Fat Clay with sand (CH)	120	58	1,200 to 1,500	-	776,250

**Notes:**  
 1) In order to calculate estimated shear modulus values, we used Table 6-5 (P.234) and Table 6-6 (P. 235) from *Geotechnical Earthquake Engineering (Kramer, Steven L., 1996, Prentice-Hall, Inc.)*. For the clayey soils, we used an average cohesion based on our ranges of values, and we assumed an Overconsolidation Ratio (OCR) of about 1.0.

**GENERALIZED SOIL PARAMETERS (BORING B-2)**  
 24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT  
 STRATEGIC PETROLEUM RESERVE  
 HACKBERRY, LOUISIANA



<b>Generalized Soil Parameters (Boring B-3)</b>						
<b>Depth (ft)</b>	<b>Material Description</b>	<b>Unit Weight (pcf)</b>	<b>Buoyant Unit Weight (pcf)</b>	<b>Cohesion (psf)</b>	<b>Friction Angle (degrees)</b>	<b>Shear Modulus<sup>(1)</sup> (psf)</b>
0 to 2	Silt with sand (ML)	120	58	-	20	437,900
2 to 8	Fat Clay with sand (CH)	130	68	1,200 to 1,700	-	652,500
8 to 12	Silty Sand (SM)	120	58	-	25	1,228,000
12 to 14	Sandy Silt (ML)	120	58	-	20	1,223,000
14 to 17	Silty Sand (SM)	120	58	-	25	1,561,400
17 to 30	Fat Clay (CH)	120	58	1,400 to 1,700	-	465,000

**Notes:**  
 1) In order to calculate estimated shear modulus values, we used Table 6-5 (P.234) and Table 6-6 (P. 235) from *Geotechnical Earthquake Engineering (Kramer, Steven L., 1996, Prentice-Hall, Inc.)*. For the clayey soils, we used an average cohesion based on our ranges of values, and we assumed an Overconsolidation Ratio (OCR) of about 1.0.

**GENERALIZED SOIL PARAMETERS (BORING B-3)**  
 24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT  
 STRATEGIC PETROLEUM RESERVE  
 HACKBERRY, LOUISIANA



<b>Generalized Soil Parameters (Boring B-4)</b>						
<b>Depth (ft)</b>	<b>Material Description</b>	<b>Unit Weight (pcf)</b>	<b>Buoyant Unit Weight (pcf)</b>	<b>Cohesion (psf)</b>	<b>Friction Angle (degrees)</b>	<b>Shear Modulus<sup>(1)</sup> (psf)</b>
0 to 2	Lean Clay (CL)	127	65	500 to 1,000	-	525,000
2 to 6	Fat Clay with sand (CH)	126	64	1,000 to 2,200	-	600,000
6 to 10	Sandy Lean Clay (CL)	127	65	500 to 1,200	-	935,000
10 to 12	Silt with sand (ML)	120	58	-	20	941,300
12 to 30	Fat Clay (CH)	116	54	1,000 to 2,100		697,500

**Notes:**  
 1) In order to calculate estimated shear modulus values, we used Table 6-5 (P.234) and Table 6-6 (P. 235) from *Geotechnical Earthquake Engineering (Kramer, Steven L., 1996, Prentice-Hall, Inc.)*. For the clayey soils, we used an average cohesion based on our ranges of values, and we assumed an Overconsolidation Ratio (OCR) of about 1.0.

**GENERALIZED SOIL PARAMETERS (BORING B-4)**  
 24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT  
 STRATEGIC PETROLEUM RESERVE  
 HACKBERRY, LOUISIANA



<b>Generalized Soil Parameters (Boring B-5)</b>						
<b>Depth (ft)</b>	<b>Material Description</b>	<b>Unit Weight (pcf)</b>	<b>Buoyant Unit Weight (pcf)</b>	<b>Cohesion (psf)</b>	<b>Friction Angle (degrees)</b>	<b>Shear Modulus<sup>(1)</sup> (psf)</b>
0 to 2	Silt (ML)	120	58	-	20	437,800
2 to 6	Fat Clay (CH)	129	67	1,200 to 2,100	-	742,500
6 to 11	Sandy Lean Clay (CL)	129	67	1,000 to 1,500	-	1,375,000
11 to 12	Fat Clay (CH)	129	67	1,000	-	450,000
12 to 23	Sandy Lean Clay (CL) and Lean Clay (CL)	122	60	500 to 1,500	-	1,100,000
23 to 27	Sandy Silt (ML)	120	58	-	20	1,760,000
27 to 30	Lean Clay (CL)	122	60	1,000	-	1,100,000

**Notes:**  
 1) In order to calculate estimated shear modulus values, we used Table 6-5 (P.234) and Table 6-6 (P. 235) from *Geotechnical Earthquake Engineering (Kramer, Steven L., 1996, Prentice-Hall, Inc.)*. For the clayey soils, we used an average cohesion based on our ranges of values, and we assumed an Overconsolidation Ratio (OCR) of about 1.0.

**GENERALIZED SOIL PARAMETERS (BORING B-5)**  
 24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT  
 STRATEGIC PETROLEUM RESERVE  
 HACKBERRY, LOUISIANA



<b>Generalized Soil Parameters (Boring B-6)</b>						
<b>Depth (ft)</b>	<b>Material Description</b>	<b>Unit Weight (pcf)</b>	<b>Buoyant Unit Weight (pcf)</b>	<b>Cohesion (psf)</b>	<b>Friction Angle (degrees)</b>	<b>Shear Modulus<sup>(1)</sup> (psf)</b>
0 to 6	Fat Clay (CH)	127	65	500 to 1,500	-	450,000
6 to 8	Lean Clay (CL)	123	61	500 to 900	-	715,000
8 to 14	Silty Sand (SM) and Clayey Sand (SC)	120	58	-	25	1,164,400
14 to 22	Lean Clay (CL)	121	59	1,000 to 1,600	-	910,000
22 to 27	Sandy Lean Clay (CL)	122	60	500 to 1,000	-	825,000
27 to 30	Fat Clay (CH)	120	58	1,500 to 1,600	-	697,500

**Notes:**  
 1) In order to calculate estimated shear modulus values, we used Table 6-5 (P.234) and Table 6-6 (P. 235) from *Geotechnical Earthquake Engineering (Kramer, Steven L., 1996, Prentice-Hall, Inc.)*. For the clayey soils, we used an average cohesion based on our ranges of values, and we assumed an Overconsolidation Ratio (OCR) of about 1.0.

**GENERALIZED SOIL PARAMETERS (BORING B-6)**  
 24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT  
 STRATEGIC PETROLEUM RESERVE  
 HACKBERRY, LOUISIANA





<b>Generalized Soil Parameters (Boring B-7)</b>						
<b>Depth (ft)</b>	<b>Material Description</b>	<b>Unit Weight (pcf)</b>	<b>Buoyant Unit Weight (pcf)</b>	<b>Cohesion (psf)</b>	<b>Friction Angle (degrees)</b>	<b>Shear Modulus<sup>(1)</sup> (psf)</b>
0 to 4	Lean Clay (CL)	127	65	1,200 to 2,000	-	1,120,000
4 to 7	Fat Clay (CH)	123	60	1,200 to 1,500	-	607,500
7 to 10	Silt (ML)	120	58	-	20	1,276,600
10 to 14	Fat Clay (CH)	123	58	1,200 to 1,500	-	607,500
14 to 33	Lean Clay (CL)	127	65	1,200 to 1,500	-	945,000
33 to 100	Fat Clay (CH)	122	60	1,200 to 2,200	-	510,000

**Notes:**

1) In order to calculate estimated shear modulus values, we used Table 6-5 (P.234) and Table 6-6 (P. 235) from *Geotechnical Earthquake Engineering (Kramer, Steven L., 1996, Prentice-Hall, Inc.)*. For the clayey soils, we used an average cohesion based on our ranges of values, and we assumed an Overconsolidation Ratio (OCR) of about 1.0.

**GENERALIZED SOIL PARAMETERS (BORING B-7)**  
 24-INCH BRINE DISPOSAL PIPELINE REPLACEMENT  
 STRATEGIC PETROLEUM RESERVE  
 HACKBERRY, LOUISIANA



**APPENDIX D**  
**SUPPORTING DOCUMENTATION**

**Floodplain Statement of Findings**

## **Floodplain Statement of Findings**

This Floodplain Statement of Findings summarizes the potential impacts of the proposed brine disposal pipeline replacement project on floodplains with the project area which were analyzed in accordance with 10 CFR 1022.13 and the steps to be taken to minimize potential harm to or within the associated floodplain areas.

According to the Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map, FIRM Panel Number 22023C0375H, dated 2012, all but six areas of the proposed brine disposal pipeline ROW are designated within the 1% Annual Chance Flood Hazard of the Gulf Intracoastal Waterway floodplain (see Appendix A, Exhibit 6 – Floodplain Map). Land within the 1% Annual Chance Flood Hazard refers to areas determined to be in special flood hazard inundated by the 100-year flood. Four areas are located in areas within the 0.2% Annual Chance Flood Hazard (500-year floodplain) and two areas are determined to be outside of the 500-year floodplain. Cameron Parish is a participant in the National Flood Insurance Program.

The majority of the proposed project area is located within the 100-year floodplain of the Gulf Intracoastal Waterway. The proposed brine disposal pipeline generally follows the alignment of the existing brine disposal pipeline. Avoidance of floodplain areas is not possible as areas of the existing pipeline alignment are located within the 100-year floodplain of the Gulf Intracoastal Waterway. The No Build Alternative would not impact floodplain areas beyond those areas which were impacted when the existing brine disposal pipeline was originally installed.

Construction in the floodplain would be limited to open trenching along the proposed alignment and jack and bore techniques beneath roadways. Side cast soils resulting from the trenching activities would be temporary, would be returned to pre-construction grade after construction activities, and would not permanently or significantly impact water flow, boat traffic or biological productivity. Construction activities would result in negative short-term impacts which may lead to increased erosion and sedimentation to nearby waterbodies; however, Best Manageable Practices (BMPs) for erosion and sedimentation would be in place to limit such occurrences. Construction areas would be returned to the pre-construction grade after the implementation of the proposed project; therefore, no long-term impacts to local drainage or the storage capacity within the floodplain would occur.

Two areas along the proposed brine disposal pipeline (one north of Black Lake Road and one south of Maggie Hebert Road) are classified as upland habitats and is utilized primarily as pastureland for cattle or developed properties (residential or light industrial). Since these areas are located outside of the 500-year floodplain, such areas will not be further assessed in this floodplain assessment.

The potential impacts to floodplains would result from the placement of the proposed brine disposal pipeline within the proposed pipeline ROW and potential construction equipment within the adjacent temporary construction easement to support the proposed pipeline installation activities. All effects on floodplains resulting from the implementation of the proposed action are expected to consist of short-term impacts without any irreversible effects. The proposed action is limited temporally and spatially; therefore, any effects would be limited to the area comprising

the perpetual pipeline ROW and temporary construction easement. The potential for any long-term, irreversible degradation of the floodplain during implementation of the proposed action is minimal.

The impacts to floodplains by the proposed project are summarized in the following table. Impacts are categorized as positive or negative, direct or indirect, and long-term or short-term as required by 10 CFR 1022.13 (a) (2).

**Floodplain Impacts – Build Alternative**

	Temporary (Short-Term)	Permanent (Long-Term)
Positive	None	None
Negative (Direct)	Yes – Construction Activities	None
Negative (Indirect)	Yes – Construction Activities	None
Negative (Cumulative)	None	None

**Floodplain Impacts – No Build Alternative**

	Temporary (Short-Term)	Permanent (Long-Term)
Positive	Yes – Avoids Construction Impacts	None
Negative (Direct)	None	None
Negative (Indirect)	None	Negative Impact to SPR Mission
Negative (Cumulative)	None	None

**Attachments**

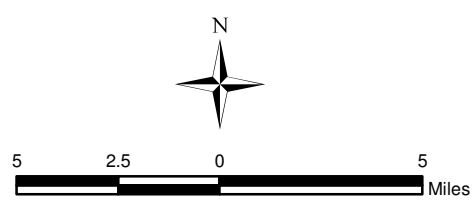
Exhibit 1 – Vicinity Map

Exhibit 2 – Floodplain Map



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SOURCE: ESRI StreetMap USA



## EXHIBIT 1 VICINITY MAP

Brine Disposal Pipeline Replacement Project  
 West Hackberry, Strategic Petroleum Reserve  
 Cameron Parish, Louisiana





**LEGEND**

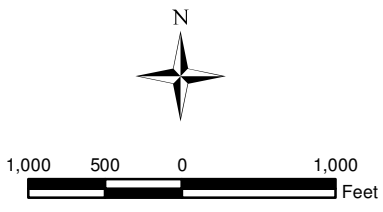
- Proposed Project

**Flood Hazard Zones**

- 1% Annual Chance Flood Hazard
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard

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SOURCE: FEMA 11/16/2012, Panel No. 22023C0375H, USDA-NAIP, 2013



## EXHIBIT 2 FLOODPLAIN MAP

Brine Disposal Pipeline Replacement Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana



**APPENDIX D**

**SUPPORTING DOCUMENTATION**

**Final 2014 Integrated Report of Water Quality in Louisiana**

### Appendix A:

#### Final 2014 Integrated Report of Water Quality in Louisiana

**Description of Codes and Acronyms:**

**Water Body Types:** R = Rivers; L = Lakes; E = Estuaries; W = Wetlands

**Water Body Sizes:** R = Miles; L = Acres; E = Square Miles; W = Acres

**Designated Use** PCR = PCR (swimming)

**Descriptions:** SCR = SCR (boating)

FWP = FWP (fishing)

DWS = DWS

ONR = Outstanding Natural Resource

OYS = OYS

AGR = Agriculture

LAL = Limited Aquatic Life and Wildlife

**Use Support Codes for Designated Uses:** F = Fully supporting designated use

N = Not supporting designated use

I = Insufficient data to make reliable determination

X = No data

**Follow-up Data Comments:** CTM Full: Lead = Follow-up ultra-clean metals

DOCM Full = Follow-up dissolved oxygen continuous monitoring data indicates full support.

**IR Category for Suspected Causes:** IRC 5=303(d) List

IRC 5RC=303(d) List but criteria revisions (Revise Criteria (RC)) are planned

IRC 4a=TMDL completed

IRC 4b=Other corrective actions in place

IRC 3=Insufficient data to make a reliable determination

IRC 1 (No code)=No impairment, fully supporting all uses

Subsegment Number	Subsegment Description	Water Body Type	Size	Designated Water Body Uses								Follow-up Data Comments	Impaired Use for Suspected Cause	Suspected Causes of Impairment	IR Category for Suspected Causes	TMDL Priority	Suspected Sources of Impairment
				PCR	SCR	FWP	DWS	ONR	OYS	AGR	LAL						
LA010101_00	Atchafalaya River Headwaters and Floodplain-From Old River Control Structure to Simmesport; includes Old River Diversion Channel, Lower Red River, Lower Old River	W	86,400	F	F	F											
LA010201_00	Atchafalaya River Mainstem-From Simmesport to Whiskey Bay Pilot Channel at mile 54	R	51	F	F	F											
LA010301_00	West Atchafalaya Basin Floodway-From Simmesport to Butte LaRose Bay and Henderson Lake	W	199,040	F	F	N						FWP	Mercury in Fish Tissue	IRC 4a		Atmospheric Deposition - Toxics	
LA010301_00	West Atchafalaya Basin Floodway-From Simmesport to Butte LaRose Bay and Henderson Lake	W	199,040	F	F	N						FWP	Mercury in Fish Tissue	IRC 4a		Source Unknown	
LA010301_00	West Atchafalaya Basin Floodway-From Simmesport to Butte LaRose Bay and Henderson Lake	W	199,040	F	F	N						FWP	Oxygen, Dissolved	IRC 4a		Source Unknown	

Subsegment Number	Subsegment Description	Water Body Type	Size	Designated Water Body Uses								Follow-up Data Comments	Impaired Use for Suspected Cause	Suspected Causes of Impairment	IR Category for Suspected Causes	TMDL Priority	Suspected Sources of Impairment
				PCR	SCR	FWP	DWS	ONR	OYS	AGR	LAL						
LA030306_00	Bayou Verdine--south of the Houston River Canal to the Calcasieu River (Estuarine)	R	8	N	N	N							FWP	Oxygen, Dissolved	IRC 5	L	Discharges from Municipal Separate Storm Sewer Systems (MS4)
LA030306_00	Bayou Verdine--south of the Houston River Canal to the Calcasieu River (Estuarine)	R	8	N	N	N							FWP	Oxygen, Dissolved	IRC 5	L	Sewage Discharges in Unsewered Areas
LA030306_00	Bayou Verdine--south of the Houston River Canal to the Calcasieu River (Estuarine)	R	8	N	N	N							FWP	Phenols	IRC 4a		Industrial Point Source Discharge
LA030306_00	Bayou Verdine--south of the Houston River Canal to the Calcasieu River (Estuarine)	R	8	N	N	N							FWP	Polychlorinated biphenyls	IRC 4a		Industrial Point Source Discharge
LA030306_00	Bayou Verdine--south of the Houston River Canal to the Calcasieu River (Estuarine)	R	8	N	N	N							FWP	Polychlorinated biphenyls	IRC 4a		Source Unknown
LA030306_00	Bayou Verdine--south of the Houston River Canal to the Calcasieu River (Estuarine)	R	8	N	N	N							FWP	Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems)	IRC 4a		Industrial Point Source Discharge
LA030306_00	Bayou Verdine--south of the Houston River Canal to the Calcasieu River (Estuarine)	R	8	N	N	N							FWP	Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems)	IRC 4a		Source Unknown
LA030306_00	Bayou Verdine--south of the Houston River Canal to the Calcasieu River (Estuarine)	R	8	N	N	N							PCR	1,2-Dichloroethane	IRC 4a		Industrial Point Source Discharge
LA030306_00	Bayou Verdine--south of the Houston River Canal to the Calcasieu River (Estuarine)	R	8	N	N	N							SCR	1,2-Dichloroethane	IRC 4a		Industrial Point Source Discharge
LA030401_00	Calcasieu River-From below Moss Lake to the Gulf of Mexico; includes Ship Channel and Monkey Island Loop (Estuarine)	R	26	F	F	F				F							
LA030402_00	Calcasieu Lake	E	67	F	F	F				F							
LA030403_00	Black Lake (Estuarine)	E	3	F	F	F											
LA030501_00	Whiskey Chitto Creek-From headwaters to southern boundary of Fort Polk Military Reservation	R	17	N	N	F							PCR	Fecal Coliform	IRC 4a		Wildlife Other than Waterfowl
LA030501_00	Whiskey Chitto Creek-From headwaters to southern boundary of Fort Polk Military Reservation	R	17	N	N	F							SCR	Fecal Coliform	IRC 4a		Wildlife Other than Waterfowl
LA030502_00	Whiskey Chitto Creek-From the southern boundary of Fort Polk Military Reservation to the Calcasieu River (Scenic)	R	70	F	F	F			F								
LA030503_00	Six Mile Creek-East and West Forks from headwaters to the southern boundary of Fort Polk Military Reservation	R	16	N	N	N							FWP	pH, Low	IRC 5	L	Naturally Occurring Organic Acids

**APPENDIX D**  
**SUPPORTING DOCUMENTATION**

**Wetland Statement of Findings**



## **Wetland Statement of Findings**

This Wetland Statement of Findings summarizes the potential impacts of the proposed brine disposal pipeline replacement project on waters of the U.S., including wetlands, with the project area which were analyzed in accordance with 10 CFR 1022.13 and the steps to be taken to minimize potential harm to or within the associated waters of the U.S., including wetlands.

Two areas of waters of the U.S., including wetlands, would be affected by the activities included in this Wetland Statement of Findings; however, all impacts would be temporary (see Exhibit 1 – Vicinity Map and Exhibit 2 – National Wetland Inventory Map). The first area, a wetland area, is located within pastureland immediately north of Maggie Hebert Road. The pipeline would be installed utilizing open cut trenching in this area which would be returned to preconstruction grades following construction activities.

The second area, a waters of the U.S., consists of Browns Lake and two adjacent fringe wetlands located north of the brine injections wells near the southern project limits. The pipeline would be installed utilizing open cut trenching which would be returned to preconstruction grades following construction activities and would not permanently or significantly impact water flow, boat traffic (if any) or biological productivity. The water depth is approximately 1.5 feet in this area. Mobile aquatic organisms would return to the area upon completion of construction activities. Construction activities would result in negative direct and indirect, short-term impacts. After completion of the construction activity there would be no negative long-term impacts to the wetlands, primary and secondary contact recreation, and/or fish and wildlife propagation in Browns Lake.

The potential for impacts to functional waters of the U.S., including wetlands, would result from the placement of the proposed brine disposal pipeline within the proposed pipeline ROW and potential construction equipment within the temporary construction easement to support the proposed pipeline installation. This area consists of both upland habitat and wetland habitat. Acreage calculations of potential impacts to these areas would be identified during the wetland delineation activity at a later date. All permanent and temporary impacts could be calculated by utilizing the U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps/data. The NWI is a geospatial database which depicts potential wetland and open water habitats and was developed by the USFWS to be used for management, research, policy development, education and planning activities.

All effects on wetlands resulting from the implementation of the proposed action are expected to be negative, short-term and without any irreversible effects. The proposed action is limited temporally and spatially; therefore, any effects would be limited to the area comprising the permanent and temporary construction easement. The potential for any long-term, irreversible degradation of aquatic resources during implementation of the proposed action is minimal.

The impacts to waters of the U.S., including wetlands, by the proposed project are summarized in the following tables. Impacts are categorized as positive or negative, direct or indirect, and long-term or short-term as required by 10 CFR 1022.13 (a) (2).

**Wetland Impacts – Build Alternative**

	Temporary (Short-Term)	Permanent (Long-Term)
Positive	None	None
Negative (Direct)	Yes – Construction Activities	None
Negative (Indirect)	Yes – Construction Activities	None
Negative (Cumulative)	None	None

**Wetland Impacts – No Build Alternative**

	Temporary (Short-Term)	Permanent (Long-Term)
Positive	Yes – Avoids Construction Impacts	None
Negative (Direct)	None	None
Negative (Indirect)	None	Negative Impact to SPR Mission
Negative (Cumulative)	None	None

**Attachments**

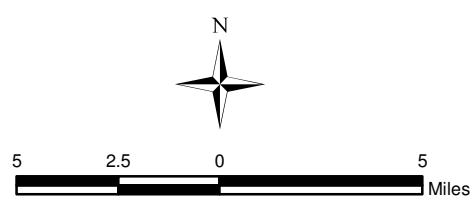
Exhibit 1 – Vicinity Map

Exhibit 2 – National Wetland Inventory Map



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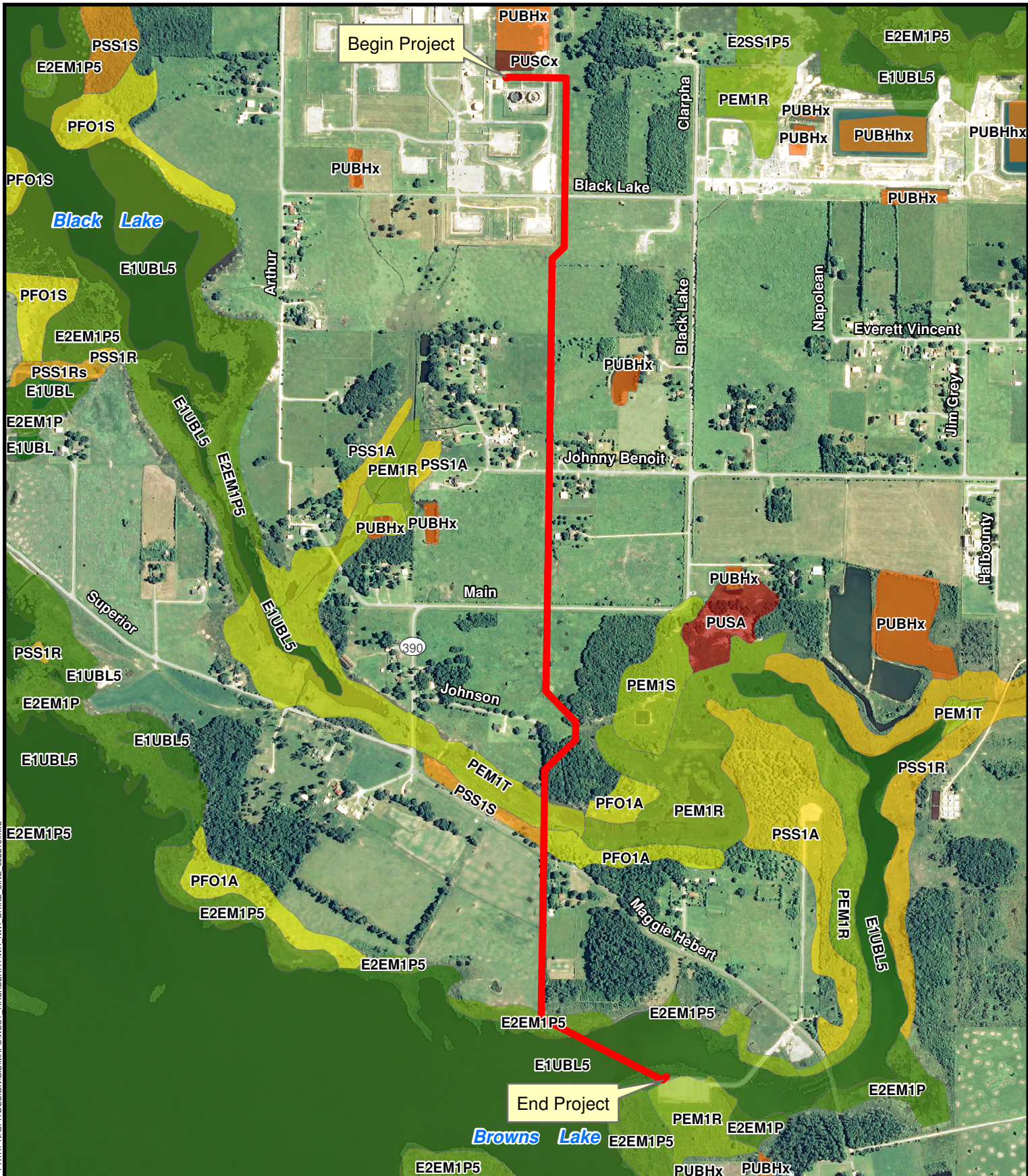
SOURCE: ESRI StreetMap USA



## EXHIBIT 1 VICINITY MAP

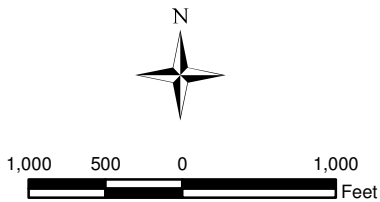
Brine Disposal Pipeline Replacement Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana





PATH: N:\SPR\DESIGN\GIS\MAPS\WEST HACKBERRY\NW1 BRINE LINE 092216.mxd

SOURCE: National Wetlands Inventory (NWI), 11-1988  
USDA-NAIP, 2013



## EXHIBIT 2 NATIONAL WETLANDS INVENTORY

Brine Disposal Pipeline Replacement Project  
West Hackberry, Strategic Petroleum Reserve  
Cameron Parish, Louisiana



**APPENDIX D**  
**SUPPORTING DOCUMENTATION**

**Ecoregions of Louisiana Map**



# Ecoregions of Louisiana

- 34 Western Gulf Coastal Plain**
  - 34a Northern Humid Gulf Coastal Prairies
  - 34c Floodplains and Low Terraces
  - 34g Texas-Louisiana Coastal Marshes
  - 34j Lafayette Loess Plains
- 35 South Central Plains**
  - 35a Tertiary Uplands
  - 35b Floodplains and Low Terraces
  - 35c Pleistocene Fluvial Terraces
  - 35e Southern Tertiary Uplands
  - 35f Flatwoods
  - 35g Red River Bottomlands
- 65 Southeastern Plains**
  - 65f Southern Pine Plains and Hills
  - 65p Southeastern Floodplains and Low Terraces
- 73 Mississippi Alluvial Plain**
  - 73a Northern Holocene Meander Belts
  - 73d Northern Backswamps
  - 73h Arkansas/Ouachita River Holocene Meander Belts
  - 73i Arkansas/Ouachita River Backswamps
  - 73j Macon Ridge
  - 73k Southern Holocene Meander Belts
  - 73l Southern Pleistocene Valley Trains
  - 73m Southern Backswamps
  - 73n Inland Swamps
  - 73o Deltaic Coastal Marshes and Barrier Islands
- 74 Mississippi Valley Loess Plains**
  - 74a Bluff Hills
  - 74c Southern Rolling Plains
  - 74d Baton Rouge Terrace
- 75 Southern Coastal Plain**
  - 75a Gulf Coast Flatwoods
  - 75i Floodplains and Low Terraces
  - 75k Gulf Barrier Islands and Coastal Marshes

Ecoregions denote areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources. They are designed to serve as a spatial framework for the research, assessment, management, and monitoring of ecosystems and ecosystem components. Ecoregions are general purpose regions that are critical for structuring and implementing ecosystem management strategies across federal agencies, state agencies, and nongovernment organizations responsible for different types of resources in the same geographical areas.

The approach used to compile the ecoregion map is based on the premise that ecological regions can be identified through analysis of the spatial patterns and the composition of biotic and abiotic characteristics that affect or reflect differences in ecosystem quality and integrity. These characteristics include geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology. The relative importance of each characteristic varies from one ecological region to another regardless of ecoregion hierarchical level.

This ecoregion map was compiled at a scale of 1:250,000, and depicts revisions and subdivisions of level III ecoregions that were originally compiled at a smaller scale. It is part of a collaborative project primarily between USEPA-National Health and Environmental Effects Research Laboratory (Corvallis, Oregon), U.S. Geological Survey (USGS), U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS), Louisiana Natural Heritage Program (LNHP) within the Louisiana Department of Wildlife and Fisheries (LDWF), Louisiana Geological Survey (LGS), and Louisiana Department of Environmental Quality (LDEQ). Collaboration and consultation also occurred with the Louisiana Department of Agriculture and Forestry (LDAF), Louisiana Department of Natural Resources, U.S. Department of Agriculture-Forest Service (USFS), U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), and USGS-Center for Earth Resources Observation and Science. This project is associated with an interagency effort to develop a common framework of ecological regions. Reaching that objective requires recognition of the differences in the conceptual approaches and mapping methodologies applied to develop the most common ecoregion-type frameworks, including those developed by the USFS, the USEPA, and the NRCS. As each of these frameworks is further refined, their differences are becoming less discernible. Each collaborative ecoregion project, such as this one in Louisiana, is a step toward attaining consensus and consistency in ecoregion frameworks for the entire nation.

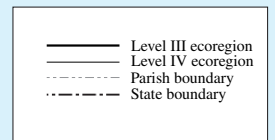
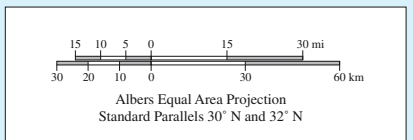
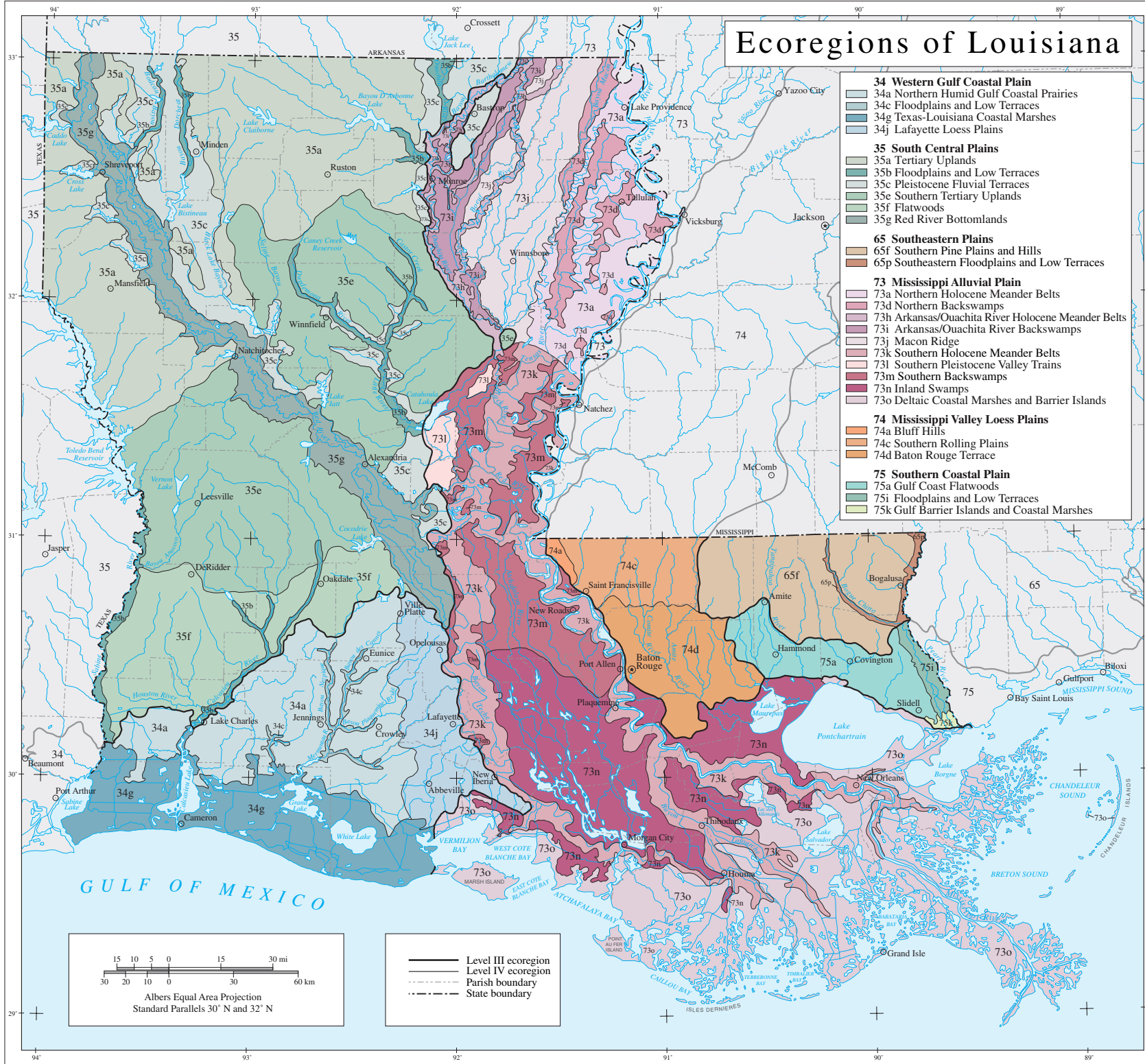
**PRINCIPAL AUTHORS:** Jerry J. Daigle (NRCS), Glenn E. Griffith (Dynamac Corporation), James M. Omernik (USGS), Patricia L. Faulkner (LNHP-LDWF), Richard P. McCulloh (LGS), Lawrence R. Handley (USGS-NWRC), Latimore M. Smith (The Nature Conservancy), and Shannen S. Chapman (Dynamac Corporation).

**COLLABORATORS AND CONTRIBUTORS:** Bradley Spicer (LDAF), Sue Smith (LDEQ), Paul Heinrich (LGS), John Novosad (USFS), Bill Vermillion (USFWS), Charles Demas (USGS), Dennis Demcheck (USGS), C. Edward Proffitt (USGS-NWRC), Philip Crocker (USEPA), Barbara Kleiss (USACE, ERDC-Waterways Experiment Station), Jan Boydston (LDEQ), Alan Woods (Oregon State University), Pat O'Neil (USGS), Brian Moran (Indus Corporation), John Hutchinson (Science Applications International Corporation), Jack Wittmann (USGS), and Tom Loveland (USGS).

**REVIEWERS:** Martin Floyd (NRCS), Anthony Lewis (Louisiana State University), and Chris Reid (LNHP-LDWF).

**CITING THIS MAP:** Daigle, J.J., Griffith, G.E., Omernik, J.M., Faulkner, P.L., McCulloh, R.P., Handley, L.R., Smith, L.M., and Chapman, S.S., 2006. Ecoregions of Louisiana (color poster with map, descriptive text, summary tables, and photographs); Reston, Virginia, U.S. Geological Survey (map scale 1:1,000,000).

Electronic files of ecoregion maps are available at <http://www.epa.gov/wed/pages/ecoregions.htm>.



**APPENDIX D**  
**SUPPORTING DOCUMENTATION**

**Plants Observed Within or Near the Proposed Brine Disposal Pipeline ROW**

## Plants Observed Within or Near the Proposed Brine Disposal Pipeline ROW

Scientific Name	Common Name	Wetland Indicator Status
<i>Croton capitatus</i>	Hogwort	UPL
<i>Lepidium virginicum</i>	Virginia Pepperweed	UPL
<i>Medicago lupulina</i>	Black Medick	UPL
<i>Oenothera speciosa</i>	Pinkladies	UPL
<i>Rosa bracteata</i>	Macartney Rose	UPL
<i>Verbena brasiliensis</i>	Brazilian Vervain	UPL
<i>Anagallis arvensis</i>	Scarlet Pimpernel	FACU
<i>Cynodon dactylon</i>	Bermudagrass	FACU
<i>Lolium perenne</i>	Perennial Ryegrass	FACU
<i>Nothoscordum bivalve</i>	Crowpoison	FACU
<i>Quercus virginiana</i>	Live Oak	FACU
<i>Rubus trivialis</i>	Southern Dewberry	FACU
<i>Solidago altissima</i>	Canada Goldenrod	FACU
<i>Trifolium repens</i>	White Clover	FACU
<i>Vachellia farnesiana</i>	Sweet Acacia	FACU
<i>Ambrosia psilostachya</i>	Cuman Ragweed	FAC
<i>Baccharis halimifolia</i>	Eastern Baccharis	FAC
<i>Cirsium horridulum</i>	Yellow Thistle	FAC
<i>Ilex vomitoria</i>	Yaupon	FAC
<i>Juncus tenuis</i>	Poverty Rush	FAC
<i>Morella cerifera</i>	Wax Myrtle	FAC
<i>Nekemias arborea</i>	Peppervine	FAC
<i>Rumex crispus</i>	Curly Dock	FAC
<i>Triadica sebifera</i>	Chinese Tallow	FAC
<i>Vitis rotundifolia</i>	Muscadine	FAC
<i>Andropogon glomeratus</i>	Bushy Bluestem	FACW
<i>Axonopus fissifolius</i>	Common Carpetgrass	FACW
<i>Celtis laevigata</i>	Sugarberry	FACW
<i>Hydrocotyle bonariensis</i>	Largeleaf Pennywort	FACW
<i>Iva frutescens</i>	Jesuit's Bark	FACW
<i>Juncus brachycarpus</i>	Whiteroot Rush	FACW
<i>Limnoscadium pinnatum</i>	Tansy Dogshade	FACW
<i>Phragmites australis</i>	Common Reed	FACW
<i>Pluchea camphorata</i>	Camphor Pluchea	FACW
<i>Sesbania drummondii</i>	Poisonbean	FACW
<i>Sesuvium portulacastrum</i>	Shoreline Seapurslane	FACW
<i>Setaria parviflora</i>	Marsh Bristlegrass	FACW
<i>Solidago sempervirens</i>	Seaside Goldenrod	FACW
<i>Spartina patens</i>	Saltmeadow cordgrass	FACW

Scientific Name	Common Name	Wetland Indicator Status
<i>Solidago sempervirens</i>	Seaside Goldenrod	FACW
<i>Batis maritime</i>	Turtleweed	OBL
<i>Bolboschoenus robustus</i>	Sturdy Bulrush	OBL
<i>Borrchia frutescens</i>	Bushy Seaside Tansy	OBL
<i>Cyperus</i> sp.	Flatsedge	OBL/FACW
<i>Cyperus articulatus</i>	Jointed Flatsedge	OBL
<i>Distichlis spicata</i>	Saltgrass	OBL
<i>Eleocharis</i> sp.	Spikerush	OBL
<i>Eleocharis quadrangulata</i>	Squarestem Spikerush	OBL
<i>Kosteletzkya virginica</i>	Virginia Saltmarsh Mallow	OBL
<i>Ludwigia peploides</i>	Floating Primrose-willow	OBL
<i>Paspalum denticulatum</i>	Longtom/Pull-and-be-Damned	OBL
<i>Polygonum/Persicaria</i> sp.	Smartweed	OBL
<i>Schoenoplectus</i> sp.	Bulrush	OBL
<i>Schoenoplectus californicus</i>	California Bulrush	OBL
<i>Typha</i> sp.	Cattail	OBL

### Wetland Indicator Status

On June 1, 2012, the 2012 National Wetland Plant List replaced the 1988 U.S. Fish and Wildlife Service's *National list of plant species that occur in wetlands* (U.S. Fish & Wildlife Service Biological Report 88 (24)) for all wetland determinations and delineations performed for Section 404 of the Clean Water Act, the Swampbuster provisions of the Food Security Act, and the National Wetland Inventory. This list was developed by the U.S. Army Corps of Engineers, the Fish and Wildlife Service (FWS), the Environmental Protection Agency, and the Natural Resources Conservation Service using taxonomic and distribution data from the Biota of North America program (BONAP) and legacy information from the FWS, and is directed by the Corps of Engineers. The 2012 list included changes in the names of species, the recognition of new species, changes in wetland regions, and changes in the wetland indicator statuses of species. This list was updated again on July 11, 2013, and April 3, 2014. These updates included more changes in the names of species, the addition of new species, and the removal of species that were listed as Upland in all regions.

### Indicator categories

Indicator Code	Indicator Status	Designation	Comment
OBL	Obligate Wetland	Hydrophyte	Almost always occur in wetlands
FACW	Facultative Wetland	Hydrophyte	Usually occur in wetlands, but may occur in non-wetlands
FAC	Facultative	Hydrophyte	Occur in wetlands and non-wetlands
FACU	Facultative Upland	Nonhydrophyte	Usually occur in non-wetlands, but may occur in wetlands
UPL	Obligate Upland	Nonhydrophyte	Almost never occur in wetlands

These indicator statuses are used to designate a plant species' preference for occurrence in a wetland or upland. The information supporting the indicator status assignments for the 1988 wetland list was qualitative, not quantitative. To better reflect the supporting information, the new category definitions are based on qualitative descriptions.

### **Regions and subregions**

The wetland regions, the states wholly or partly in each region, and the definition of each region are listed below. Most of the regions are now defined by the boundaries of Land Resource Regions (LRRs) and Major Land Resource Areas (MLRAs) recognized by the Natural Resources Conservation Service. LRRs are groups of MLRAs.

<b>Region</b>	<b>Geographic areas in region</b>	<b>Definition of region</b>
Atlantic and Gulf Coastal Plain	AL, AR, DC, DE, FL, GA, IL, KY, LA, MD, MS, MO, NC, NJ, OK, PA, SC, TN, TX, VA	LRR O, LRR P except MLRA 136, MLRA 149A of LRR S, LRRs T, U

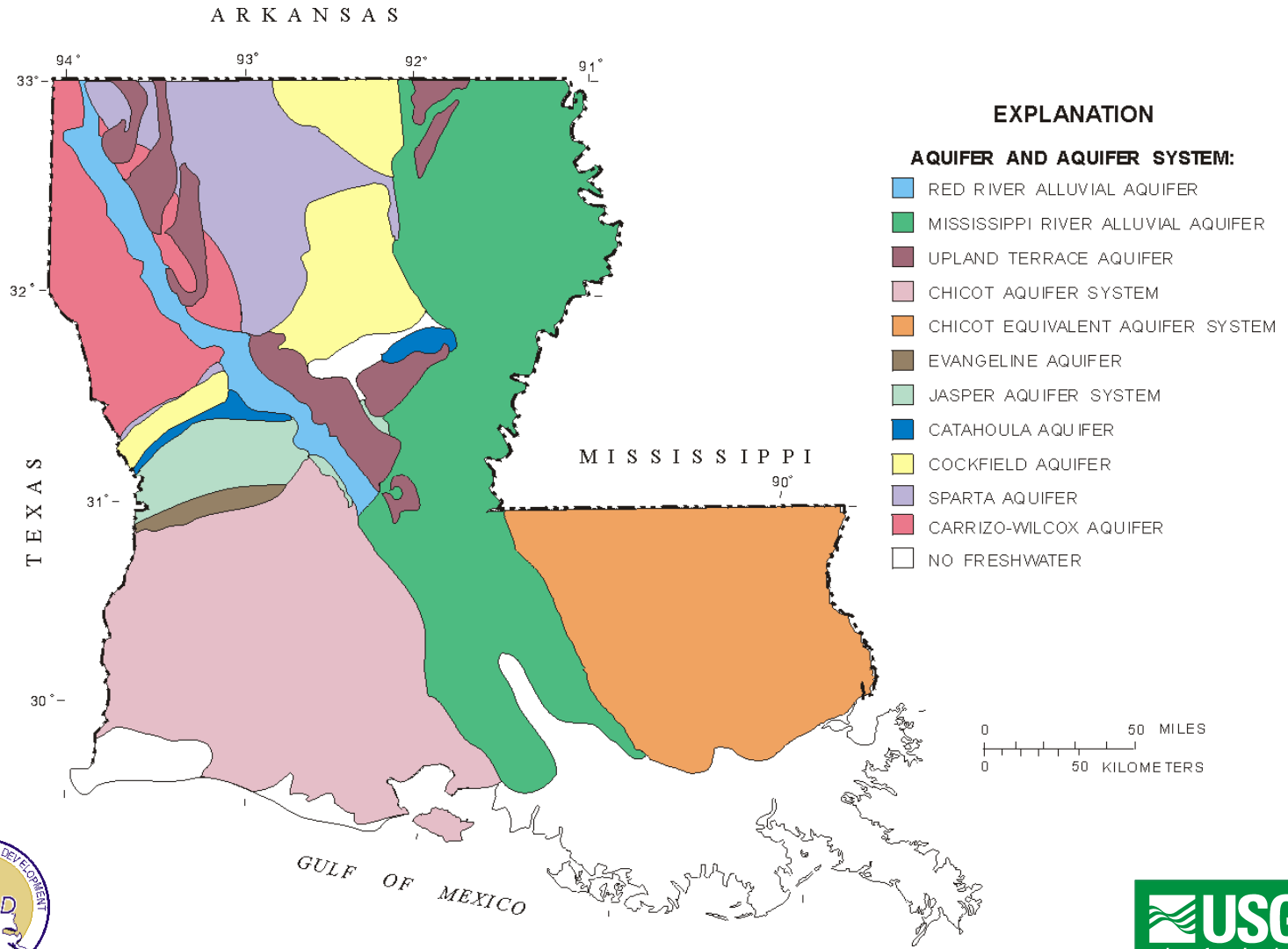


**APPENDIX D**

**SUPPORTING DOCUMENTATION**

**U.S. Geological Service Louisiana Aquifer System Map**

# Surface extent of Louisiana's aquifers and aquifer systems



**APPENDIX D**  
**SUPPORTING DOCUMENTATION**

**USFWS Custom IPaC Trust Resources Report**

# West Hackberry Brine Disposal Pipeline Replacement Project

## *IPaC Trust Resources Report*

Generated November 18, 2016 09:50 AM MST, IPaC v3.0.9

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



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Migratory Birds .....	<a href="#">4</a>
Refuges & Hatcheries .....	<a href="#">7</a>
Wetlands .....	<a href="#">8</a>



# IPaC Trust Resources Report



NAME

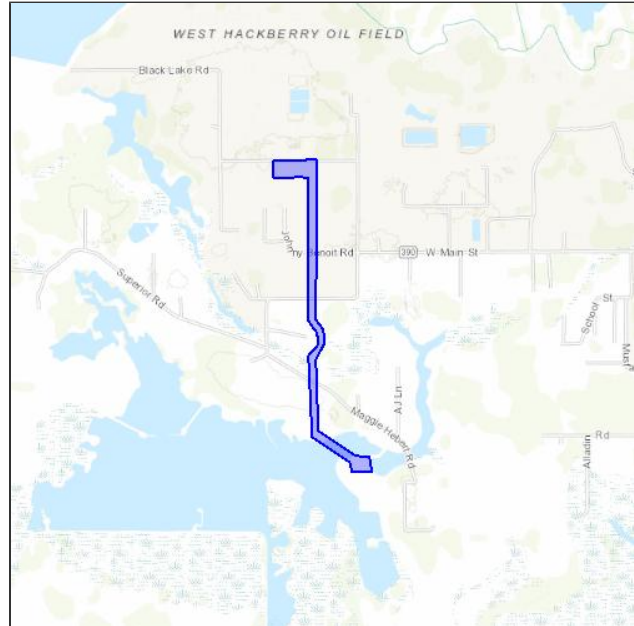
West Hackberry Brine Disposal Pipeline Replacement Project

LOCATION

Cameron County, Louisiana

DESCRIPTION

The purpose of the project is to replace an existing brine disposal pipeline which is functionally obsolete. The proposed project would involve the installation of approximately 2.1 miles of 24-inch pipeline by open cut trench and jack and bore to replace the existing pipeline which would be



removed from service but remain in place. The brine disposal pipeline would support the activities associated with the Strategic Petroleum Reserve (SPR) West Hackberry (WH) facility located near Hackberry, Cameron Parish, Louisiana.

IPAC LINK

<https://ecos.fws.gov/ipac/project/S3MTR-5GJQR-HL5JI-VEKEA-4KXEFE>

## U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

**Louisiana Ecological Services Field Office**

646 Cajundome Boulevard, Suite 400

Lafayette, LA 70506-4290

(337) 291-3100

## Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the [Endangered Species Program](#) of the U.S. Fish & Wildlife Service.

**This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.**

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

[Section 7](#) of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

**A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.**

The list of species below are those that may occur or could potentially be affected by activities in this location:

### Birds

**Piping Plover** *Charadrius melodus* Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

[http://ecos.fws.gov/tess\\_public/profile/speciesProfile.action?sPCODE=B079](http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B079)

**Red Knot** *Calidris canutus rufa* Threatened

CRITICAL HABITAT

**No critical habitat** has been designated for this species.

[http://ecos.fws.gov/tess\\_public/profile/speciesProfile.action?sPCODE=B0DM](http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0DM)

### Fishes

**Atlantic Sturgeon (gulf Subspecies)** *Acipenser oxyrinchus* Threatened  
(=*oxyrinchus*) *desotoi*

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

[http://ecos.fws.gov/tess\\_public/profile/speciesProfile.action?sPCODE=E04W](http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=E04W)

## Mammals

**West Indian Manatee** *Trichechus manatus* Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

[http://ecos.fws.gov/tess\\_public/profile/speciesProfile.action?spcode=A007](http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A007)

## Reptiles

**Green Sea Turtle** *Chelonia mydas* Resolved Taxon

CRITICAL HABITAT

**No critical habitat** has been designated for this species.

**Hawksbill Sea Turtle** *Eretmochelys imbricata* Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

[http://ecos.fws.gov/tess\\_public/profile/speciesProfile.action?spcode=C00E](http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=C00E)

**Kemp's Ridley Sea Turtle** *Lepidochelys kempii* Endangered

CRITICAL HABITAT

**No critical habitat** has been designated for this species.

[http://ecos.fws.gov/tess\\_public/profile/speciesProfile.action?spcode=C00O](http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=C00O)

**Leatherback Sea Turtle** *Dermochelys coriacea* Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

[http://ecos.fws.gov/tess\\_public/profile/speciesProfile.action?spcode=C00F](http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=C00F)

**Loggerhead Sea Turtle** *Caretta caretta* Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

[http://ecos.fws.gov/tess\\_public/profile/speciesProfile.action?spcode=C00U](http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=C00U)

## Critical Habitats

**There are no critical habitats in this location**

## Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the [Bald and Golden Eagle Protection Act](#).

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.<sup>[1]</sup> There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

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1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern  
<http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Conservation measures for birds  
<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Year-round bird occurrence data  
<http://www.birdscanada.org/birdmon/default/datasummaries.jsp>

The following species of migratory birds could potentially be affected by activities in this location:

<b>American Oystercatcher</b> <i>Haematopus palliatus</i>	Bird of conservation concern
Season: Year-round <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0G8">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0G8</a>	
<b>American Bittern</b> <i>Botaurus lentiginosus</i>	Bird of conservation concern
Season: Wintering <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0F3">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0F3</a>	
<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i>	Bird of conservation concern
Season: Year-round <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B008">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B008</a>	
<b>Black Rail</b> <i>Laterallus jamaicensis</i>	Bird of conservation concern
Season: Year-round <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B09A">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B09A</a>	

<b>Black Skimmer</b> <i>Rynchops niger</i> Season: Year-round <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EO">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EO</a>	Bird of conservation concern
<b>Brown-headed Nuthatch</b> <i>Sitta pusilla</i> Season: Year-round	Bird of conservation concern
<b>Dickcissel</b> <i>Spiza americana</i> Season: Breeding	Bird of conservation concern
<b>Fox Sparrow</b> <i>Passerella iliaca</i> Season: Wintering	Bird of conservation concern
<b>Gull-billed Tern</b> <i>Gelochelidon nilotica</i> Season: Year-round <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JV">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JV</a>	Bird of conservation concern
<b>Henslow's Sparrow</b> <i>Ammodramus henslowii</i> Season: Wintering <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B09D">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B09D</a>	Bird of conservation concern
<b>Hudsonian Godwit</b> <i>Limosa haemastica</i> Season: Migrating	Bird of conservation concern
<b>Le Conte's Sparrow</b> <i>Ammodramus leconteii</i> Season: Wintering	Bird of conservation concern
<b>Least Bittern</b> <i>Ixobrychus exilis</i> Season: Breeding <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B092">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B092</a>	
<b>Lesser Yellowlegs</b> <i>Tringa flavipes</i> Season: Wintering <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MD">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MD</a>	Bird of conservation concern
<b>Loggerhead Shrike</b> <i>Lanius ludovicianus</i> Season: Year-round <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FY">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FY</a>	Bird of conservation concern
<b>Long-billed Curlew</b> <i>Numenius americanus</i> Season: Wintering <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06S">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06S</a>	Bird of conservation concern
<b>Marbled Godwit</b> <i>Limosa fedoa</i> Season: Wintering <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JL">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JL</a>	Bird of conservation concern
<b>Mississippi Kite</b> <i>Ictinia mississippiensis</i> Season: Breeding	Bird of conservation concern
<b>Nelson's Sparrow</b> <i>Ammodramus nelsoni</i> Season: Wintering	Bird of conservation concern
<b>Painted Bunting</b> <i>Passerina ciris</i> Season: Breeding	Bird of conservation concern



<b>Peregrine Falcon</b> <i>Falco peregrinus</i> Season: Wintering <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0FU">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0FU</a>	Bird of conservation concern
<b>Prothonotary Warbler</b> <i>Protonotaria citrea</i> Season: Breeding	Bird of conservation concern
<b>Red Knot</b> <i>Calidris canutus rufa</i> Season: Wintering <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0DM">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0DM</a>	Bird of conservation concern
<b>Red-headed Woodpecker</b> <i>Melanerpes erythrocephalus</i> Season: Wintering	Bird of conservation concern
<b>Reddish Egret</b> <i>Egretta rufescens</i> Season: Year-round <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B06U">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B06U</a>	Bird of conservation concern
<b>Rusty Blackbird</b> <i>Euphagus carolinus</i> Season: Wintering	Bird of conservation concern
<b>Sedge Wren</b> <i>Cistothorus platensis</i> Season: Wintering	Bird of conservation concern
<b>Short-billed Dowitcher</b> <i>Limnodromus griseus</i> Season: Wintering <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0JK">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0JK</a>	Bird of conservation concern
<b>Short-eared Owl</b> <i>Asio flammeus</i> Season: Wintering <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0HD">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0HD</a>	Bird of conservation concern
<b>Snowy Plover</b> <i>Charadrius alexandrinus</i> Season: Wintering	Bird of conservation concern
<b>Swainson's Warbler</b> <i>Limnithlypis swainsonii</i> Season: Breeding	Bird of conservation concern
<b>Whimbrel</b> <i>Numenius phaeopus</i> Season: Wintering <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0JN">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0JN</a>	Bird of conservation concern
<b>Wilson's Plover</b> <i>Charadrius wilsonia</i> Season: Year-round	Bird of conservation concern
<b>Worm Eating Warbler</b> <i>Helmitheros vermivorum</i> Season: Migrating	Bird of conservation concern
<b>Yellow Rail</b> <i>Coturnicops noveboracensis</i> Season: Wintering <a href="http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0JG">http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0JG</a>	Bird of conservation concern

## Wildlife refuges and fish hatcheries

**There are no refuges or fish hatcheries in this location**

# Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

## DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

## DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

## DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

This location overlaps all or part of the following wetlands:

## Estuarine And Marine Deepwater

[E1UBL5](#)

## Estuarine And Marine Wetland

[E2EM1P5](#)

## Freshwater Emergent Wetland

[PEM1R](#)

[PEM1T](#)

## Freshwater Forested/shrub Wetland

[PFO1A](#)

[PSS1S](#)

A full description for each wetland code can be found at the National Wetlands Inventory website: <http://107.20.228.18/decoders/wetlands.aspx>

**APPENDIX D**  
**SUPPORTING DOCUMENTATION**

**USFWS List of Threatened and Endangered Species**



**USFWS THREATENED/ENDANGERED SPECIES TABLE FOR CAMERON PARISH (as of 05-04-2016)**

Group	Name	Population	Status	Lead Office	Recovery Plan Name	Recovery Plan Stage
Birds	Brown Pelican ( <i>Pelecanus occidentalis</i> )	except U.S. Atlantic coast, FL, AL	Recovery	Ventura Fish and Wildlife Office	---	---
Birds	Piping Plover ( <i>Charadrius melodus</i> )	except Great Lakes watershed	Threatened	Office of the Regional Director	Piping Plover Atlantic Coast Population Revised Recovery Plan	Final Revision 1
Birds	Piping Plover ( <i>Charadrius melodus</i> )	except Great Lakes watershed	Threatened	Office of the Regional Director	Volume I: Draft Revised Recovery Plan for the Northern Great Plains Piping Plover ( <i>Charadrius melodus</i> )	Draft Revision 1
Birds	Red Knot ( <i>Calidris canutus rufa</i> )	---	Threatened	New Jersey Ecological Services Field Office	---	---
Fish	Atlantic Sturgeon – Gulf Subspecies ( <i>Acipenser oxyrinchus – oxyrynchus desotoi</i> )	Entire	Threatened	Panama City Ecological Services Field Office	Gulf Sturgeon	Final
Mammals	West Indian Manatee ( <i>Trichechus manatus</i> )	Entire	Endangered	North Florida Ecological Services Field Office	Florida Manatee Recovery Plan, Third Revision	Final Revision 3
Mammals	West Indian Manatee ( <i>Trichechus manatus</i> )	Entire	Endangered	North Florida Ecological Services Field Office	Recovery Plan Puerto Rican Population of the West Indian ( <i>Antillean</i> ) Manatee	Final
Mammals	Louisiana Black Bear ( <i>Ursus americanus luteolus</i> )	Entire	Recovery	Louisiana Ecological Services Field Office	Louisiana Black Bear	Final
Reptiles	Hawksbill Sea Turtle ( <i>Eretmochelys imbricata</i> )	Entire	Endangered	North Florida Ecological Services Field Office	Recovery Plan for U.S. Pacific Populations of the Hawksbill Turtle	Final Revision 1
Reptiles	Hawksbill Sea Turtle ( <i>Eretmochelys imbricata</i> )	Entire	Endangered	North Florida Ecological Services Field Office	Recovery Plan for the Hawksbill Turtle in the U.S. Caribbean, Atlantic and Gulf of Mexico	Final Revision 1
Reptiles	Leatherback Sea Turtle ( <i>Dermochelys coriacea</i> )	Entire	Endangered	North Florida Ecological Services Field Office	Recovery Plan for Leatherback Turtles in the U.S. Caribbean, Atlantic, and Gulf of Mexico	Final Revision 1

Group	Name	Population	Status	Lead Office	Recovery Plan Name	Recovery Plan Stage
Reptiles	Leatherback Sea Turtle ( <i>Dermochelys coriacea</i> )	Entire	Endangered	North Florida Ecological Services Field Office	Recovery Plan for U.S. Pacific Populations of the Leatherback Turtle	Final Revision 1
Reptiles	Kemp's Ridley Sea Turtle ( <i>Lepidochelys kempii</i> )	Entire	Endangered	Texas Coastal Ecological Services Field Office	Bi-National Recovery Plan for the Kemp's Ridley Sea Turtle ( <i>Lepidochelys kempii</i> ); Second Revision	Final Revision 2
Reptiles	Green Sea Turtle ( <i>Chelonia mydas</i> )	Except where endangered	Threatened	North Florida Ecological Services Field Office	Recovery Plan for U.S. Pacific Populations of the Green Turtle	Final Revision 1
Reptiles	Green Sea Turtle ( <i>Chelonia mydas</i> )	Except where endangered	Threatened	North Florida Ecological Services Field Office	Recovery Plan for U.S. Population of Atlantic Green Turtle	Final Revision 1
Reptiles	Loggerhead Sea Turtle ( <i>Caretta caretta</i> )	Northwest Atlantic Ocean DPS	Threatened	North Florida Ecological Services Field Office	Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle ( <i>Caretta caretta</i> ); Second Revision	Final Revision 2

**APPENDIX D**

**SUPPORTING DOCUMENTATION**

**Louisiana Department of Wildlife and Fisheries Rare Species List**

Published on *Louisiana Department of Wildlife and Fisheries* (<http://www.wlf.louisiana.gov>)

[Home](#) > Species by Parish List

# Species by Parish List

 [Tweet](#) [1]  [Printable Version](#) [2]

## Explanation of Ranking Categories Employed by Natural Heritage Programs Nationwide

### Federal Ranks (USESA FIELD):

### Global Element Ranks:

### State Element Ranks:

### State Protection Status:






#### Filter By Parish













Cameron ▼

#### Filter by Type








<Any> ▼

Apply


<b>Scientific Name</b> [3]	<b>Common Name</b> [4]	Rare Plant Species				<b>Fact Sheet</b>	<b>Parishes</b>
		<b>State Rank</b> [5]	<b>Global Rank</b> [6]	<b>State Status</b> [7]	<b>Federal Status</b> [8]		
<a href="#">Amaranthus greggii</a> [9]	Gregg's Amaranth	S3	G4?			 <a href="#">Amaranthus greggii</a> [10]	Cameron, Jefferson, Lafourche
<a href="#">Astragalus nuttallianus</a> [11]	A Milk-vetch	S2S3	G5			 <a href="#">Astragalus nuttallianus</a> [12]	Cameron
<a href="#">Canna flaccida</a> [13]	Golden Canna	S4?	G4?			 <a href="#">Canna flaccida</a> [14]	Cameron, Jefferson, Lafourche, Plaquemines, St. Charles, St. Mary, Vermilion
<a href="#">Cenchrus tribuloides</a> [15]	Dune Sandbur	S2	G5			 <a href="#">Cenchrus tribuloides</a> [16]	Cameron, Jefferson, Lafourche, Plaquemines, St. Bernard, Terrebonne
<a href="#">Chamaesyce bombensis</a> [17]	Sand Dune Spurge	S1	G4G5			 <a href="#">Chamaesyce bombensis</a> [18]	Cameron, Jefferson, Plaquemines, St. Bernard,





<u><a href="#">Dalea emarginata</a></u> <sup>[19]</sup>	Wedge-leaf Prairie-clover	S2	G5	 <u><a href="#">Dalea emarginata</a></u> <sup>[20]</sup>	Cameron
<u><a href="#">Draba cuneifolia</a></u> <sup>[21]</sup>	Wedge-leaf Whitlow-grass	S1	G5	 <u><a href="#">Draba cuneifolia</a></u> <sup>[22]</sup>	Caddo, Cameron, Winn
<u><a href="#">Eleocharis elongata</a></u> <sup>[23]</sup>	Slim Spike- rush	S3	G5?	 <u><a href="#">Eleocharis elongata</a></u> <sup>[24]</sup>	Cameron, St. Tammany, Vermilion
<u><a href="#">Eriochloa punctata</a></u> <sup>[25]</sup>	Punctate Cupgrass	S2	G5	 <u><a href="#">Eriochloa punctata</a></u> <sup>[26]</sup>	Cameron, Plaquemines, Vermilion
<u><a href="#">Lithospermum incisum</a></u> <sup>[27]</sup>	Narrow- leaved Puccoon	S1	G5	 <u><a href="#">Lithospermum incisum</a></u> <sup>[28]</sup>	Cameron, Natchitoches
<u><a href="#">Ludwigia sphaerocarpa</a></u> <sup>[29]</sup>	Grapefruit Primrosewillow	S2	G5	 <u><a href="#">Ludwigia sphaerocarpa</a></u> <sup>[30]</sup>	Calcasieu, Cameron, Vermilion
<u><a href="#">Monanthochloe littoralis</a></u> <sup>[31]</sup>	Saltflat-grass	S1	G4G5	 <u><a href="#">Monanthochloe littoralis</a></u> <sup>[32]</sup>	Cameron
<u><a href="#">Nymphaea elegans</a></u> <sup>[33]</sup>	Blue Water Lily	S2S4	G4?	 <u><a href="#">Nymphaea elegans</a></u> <sup>[34]</sup>	Calcasieu, Cameron, Vermilion
<u><a href="#">Pediomelum rhombifolium</a></u> <sup>[35]</sup>	Roundleaf Scarf-pea	S2S3	G5	 <u><a href="#">Pediomelum rhombifolium</a></u> <sup>[36]</sup>	Cameron
<u><a href="#">Physostegia correllii</a></u> <sup>[37]</sup>	Correll's False Dragon-head	S1	G2	 <u><a href="#">Physostegia correllii</a></u> <sup>[38]</sup>	Cameron, St. Charles, St. James, St. Tammany
<u><a href="#">Pterocaulon virgatum</a></u> <sup>[39]</sup>	Wand Blackroot	S2	G5	 <u><a href="#">Pterocaulon virgatum</a></u> <sup>[40]</sup>	Acadia, Beauregard, Calcasieu, Cameron, DeSoto, Evangeline
<u><a href="#">Ratibida peduncularis</a></u> <sup>[41]</sup>	Mexican Hat	S2S3	G4G5	 <u><a href="#">Ratibida peduncularis</a></u> <sup>[42]</sup>	Cameron, Vermilion
<u><a href="#">Rhynchospora globularis var. pinetorum</a></u> <sup>[43]</sup>	Small's Beaksedge	S1	G5? T3?		Acadia, Calcasieu, Cameron
<u><a href="#">Rhynchospora microcarpa</a></u> <sup>[44]</sup>	Southern Beaksedge	S3	G5		Cameron, Vermilion






<u><a href="#">Sabatia arenicola</a></u> <sup>[45]</sup>	Sand Rose-gentian	S1	G3G5	 <u><a href="#">Sabatia arenicola</a></u> <sup>[46]</sup>	Cameron, Jefferson, Lafourche, Orleans, Plaquemines, St. Bernard, St. Tammany, Terrebonne
<u><a href="#">Samolus ebracteatus</a></u> <sup>[47]</sup>	Brookweed	S1	G4G5	 <u><a href="#">Samolus ebracteatus</a></u> <sup>[48]</sup>	Calcasieu, Cameron
<u><a href="#">Sida elliotii</a></u> <sup>[49]</sup>	Elliott Sida	SH	G4G5	 <u><a href="#">Sida elliotii</a></u> <sup>[50]</sup>	Cameron, East Baton Rouge, East Feliciana, St. Tammany
<u><a href="#">Sideroxylon reclinatum</a></u> <sup>[51]</sup>	Florida bully	S1	G4G5	 <u><a href="#">Sideroxylon reclinatum</a></u> <sup>[52]</sup>	Cameron
<u><a href="#">Thalia dealbata</a></u> <sup>[53]</sup>	Powdery Thalia	S2S3	G4	 <u><a href="#">Thalia dealbata</a></u> <sup>[54]</sup>	Acadia, Cameron, East Baton Rouge, East Feliciana, Iberia, Iberville, Jefferson Davis, Lafayette, Morehouse, St. Landry, St. Martin, Vermilion, Vernon
<u><a href="#">Tidestromia lanuginosa</a></u> <sup>[55]</sup>	Woolly Honeysweet	S1	G5	 <u><a href="#">Tidestromia lanuginosa</a></u> <sup>[56]</sup>	Cameron
<u><a href="#">Uniola paniculata</a></u> <sup>[57]</sup>	Sea Oats	S2	G5	 <u><a href="#">Uniola paniculata</a></u> <sup>[58]</sup>	Cameron, Jefferson, Lafourche, Plaquemines, St. Bernard, St. Tammany, Terrebonne








## Natural Communities




<u><a href="#">Scientific Name</a></u> <sup>[3]</sup>	<u><a href="#">Common Name</a></u> <sup>[4]</sup>	<u><a href="#">State Rank</a></u> <sup>[5]</sup>	<u><a href="#">Global Rank</a></u> <sup>[6]</sup>	<u><a href="#">State Status</a></u> <sup>[7]</sup>	<u><a href="#">Federal Status</a></u> <sup>[8]</sup>	<b>Fact Sheet</b>	<b>Parishes</b>
<u><a href="#">Brackish Marsh</a></u> <sup>[59]</sup>		S3	G4?			 <u><a href="#">Brackish Marsh</a></u> <sup>[60]</sup>	Calcasieu, Cameron, Lafourche, Plaquemines, St.

<u>Coastal Dune Grassland</u> [61]	S1	G2G3	 <u>Coastal Dune Grassland</u> [62]	Bernard, St. Charles, Vermilion Cameron, Plaquemines, St. Bernard, Terrebonne
<u>Coastal Live Oak-Hackberry Forest</u> [63]	S1	G2	 <u>Coastal Live Oak-Hackberry Forest</u> [64]	Cameron, Iberia, Jefferson, Lafourche, Orleans, Plaquemines, St. Bernard, St. Tammany, Terrebonne, Vermilion
<u>Coastal Prairie</u> [65]	S1	G2Q	 <u>Coastal Prairie</u> [66]	Acadia, Allen, Calcasieu, Cameron, Jefferson Davis, Vermilion
<u>Freshwater Marsh</u> [67]	S2	G3G4	 <u>Freshwater Marsh</u> [68]	Cameron, Lafourche, Plaquemines, St. Charles, St. Mary, St. Tammany, Tangipahoa, Terrebonne, Vermilion



## Rare Animal Species

<u>Scientific Name</u> [3]	<u>Common Name</u> [4]	<u>State Rank</u> [5]	<u>Global Rank</u> [6]	<u>State Status</u> [7]	<u>Federal Status</u> [8]	<u>Fact Sheet</u>	<u>Parishes</u>
<u>Canis rufus</u> [69]	Red Wolf	SX	G1Q			 <u>Canis rufus</u> [70]	Calcasieu, Cameron, Grant, Lafourche, LaSalle, Madison, Natchitoches, Terrebonne, Vermilion, Winn
<u>Caracara cheriway</u> [71]	Crested Caracara	S1	G5			 <u>Caracara cheriway</u> [72]	Calcasieu, Cameron
<u>Charadrius alexandrinus</u> [73]	Snowy Plover	S1B,S2N	G4			 <u>Charadrius alexandrinus</u> [74]	Cameron, Jefferson, Lafourche, Plaquemines, St. Bernard, St. Mary, Terrebonne, Vermilion  Cameron, Jefferson

<u>Charadrius melodus</u> [75]	Piping Plover	S2N	G3	T/E	T	 <u>Charadrius melodus</u> [76]	Jefferson, Lafourche, Plaquemines, St. Bernard, St. Mary, Terrebonne, Vermilion
<u>Charadrius wilsonia</u> [77]	Wilson's Plover	S2B, S1N	G5			 <u>Charadrius wilsonia</u> [78]	Cameron, Lafourche, Plaquemines, Terrebonne
<u>Columbina passerina</u> [79]	Common Ground-Dove	S1B, S2N	G5			 <u>Columbina passerina</u> [80]	Cameron, Iberia
<u>Grus canadensis</u> [81]	Sandhill Crane	S2N	G5			 <u>Grus canadensis</u> [82]	Calcasieu, Cameron, Franklin, Madison, Morehouse, Rapides, Vermilion
<u>Malaclemys terrapin</u> [83]	Diamondback Terrapin	S3	G4	Restricted Harvest		 <u>Malaclemys terrapin</u> [84]	Cameron, Jefferson, Jefferson Davis, Lafourche, Orleans, St. Bernard, St. Tammany, Terrebonne, Vermilion
<u>Pelecanus occidentalis</u> [85]	Brown Pelican	S3	G4	E	Delisted	 <u>Pelecanus occidentalis</u> [86]	Cameron, Jefferson, Lafourche, Plaquemines, St. Bernard, Terrebonne
<u>Platalea ajaja</u> [87]	Roseate Spoonbill	S3	G5			 <u>Platalea ajaja</u> [88]	Calcasieu, Cameron, Evangeline, Iberia, Jefferson Davis, Lafourche, Plaquemines, St. Bernard, St. Martin, St. Mary, Terrebonne, Vermilion

<u>Plegadis falcinellus</u> <sup>[89]</sup>	Glossy Ibis	S2	G5	 <u>Plegadis falcinellus</u> <sup>[90]</sup>	Cameron, Orleans
					Acadia, Avoyelles, Caddo, Calcasieu, Cameron, Catahoula, Concordia, Evangeline, Franklin, Iberia, Jefferson Davis, LaSalle, Orleans, Ouachita, Rapides, Sabine, St. Bernard, St. Charles, St. John the Baptist, St. Martin, St. Mary, St. Tammany, Tangipahoa, Tensas, Union
<u>Polyodon spathula</u> <sup>[91]</sup>	Paddlefish	S4	G4	 <u>Polyodon spathula</u> <sup>[92]</sup>	
					Ascension, Calcasieu, Cameron, Livingston, Tangipahoa, Washington, West Feliciana
<u>Spilogale putorius</u> <sup>[93]</sup>	Eastern Spotted Skunk	S1	G5	 <u>Spilogale putorius</u> <sup>[94]</sup>	
					Avoyelles, Bossier, Caddo, Cameron, Concordia, East Baton Rouge, East Carroll, East Feliciana, Grant, Iberville, Madison, Natchitoches,
<u>Sternula antillarum athalassos</u> <sup>[95]</sup>	Interior Least Tern	S4BT1	G4T2Q	E	E
					Pointe Coupee

Coupar, Rapides, Red River, Tensas, West Baton Rouge, West Feliciana, Winn

<a href="#"><u>Terrapene ornata</u></a> <sup>[96]</sup>	Ornate Box Turtle	S1	G5	Restricted Harvest		 <a href="#"><u>Terrapene ornata</u></a> <sup>[97]</sup>	Calcasieu, Cameron
							Ascension, Cameron, East Baton Rouge, East Feliciana, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John the Baptist, St. Tammany, Tangipahoa, Terrebonne
<a href="#"><u>Trichechus manatus</u></a> <sup>[98]</sup>	Manatee	S1N	G2	E	E	 <a href="#"><u>Trichechus manatus</u></a> <sup>[99]</sup>	

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- [3] [http://www.wlf.louisiana.gov/print/33310?order=title&sort=asc&tid=218&type\\_1=All](http://www.wlf.louisiana.gov/print/33310?order=title&sort=asc&tid=218&type_1=All)
- [4] [http://www.wlf.louisiana.gov/print/33310?order=field\\_com\\_name\\_value&sort=asc&tid=218&type\\_1=All](http://www.wlf.louisiana.gov/print/33310?order=field_com_name_value&sort=asc&tid=218&type_1=All)
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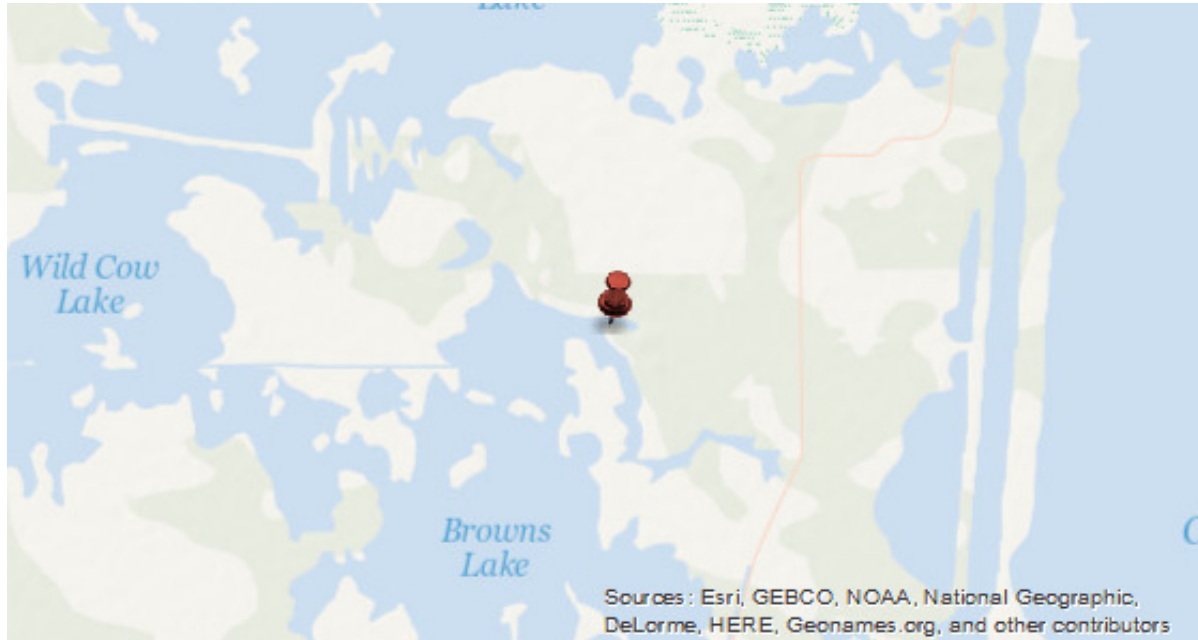
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**APPENDIX D**

**SUPPORTING DOCUMENTATION**

**National Oceanic and Atmospheric Administration Essential Fish Habitat Mapper**

**EFH Data Notice:** Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional Fishery Management Councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.



### Query Results

Map Scale = 1:144,448

Degrees, Minutes, Seconds: Latitude = 29°58'13" N, Longitude = 94°36'6" W

Decimal Degrees: Latitude = 29.97, Longitude = -93.40

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

### EFH

No Essential Fish Habitats (EFH) were identified at the report location.

### HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

### EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

**APPENDIX D**

**SUPPORTING DOCUMENTATION**

**Department of Health and Human Services 2016 Poverty Guidelines**

are working to improve language accessibility within their states; and

- Recommendations for state-specific capacity building for the 20 states intended to enhance statewide language access, which will include the development of language access plans.

An objective review of was conducted that assessed the grantee's application using criteria related to the project's approach, the organization's capacity, and the development of costs for the project's budget.

**Statutory Authority:** Section 310 of the Family Violence Prevention and Services Act, as amended by Section 201 of the CAPTA Reauthorization Act of 2010, Pub. L. 111-320.

**Christopher Beach,**

Senior Grants Policy Specialist, Division of Grants Policy, Office of Administration.

[FR Doc. 2016-01329 Filed 1-22-16; 8:45 am]

BILLING CODE 4184-32-P

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**Office of the Secretary**

**Annual Update of the HHS Poverty Guidelines**

**AGENCY:** Department of Health and Human Services.

**ACTION:** Notice.

**SUMMARY:** This notice provides an update of the Department of Health and Human Services (HHS) poverty guidelines to account for last calendar year's increase in prices as measured by the Consumer Price Index.

**DATES:** *Effective Date:* January 25, 2016, unless an office administering a program using the guidelines specifies a different effective date for that particular program.

**ADDRESSES:** Office of the Assistant Secretary for Planning and Evaluation, Room 404E, Humphrey Building, Department of Health and Human Services, Washington, DC 20201.

**FOR FURTHER INFORMATION CONTACT:** For information about how the guidelines are used or how income is defined in a particular program, contact the Federal, state, or local office that is responsible for that program. For information about poverty figures for immigration forms, the Hill-Burton Uncompensated Services Program, and the number of people in poverty, use the specific telephone numbers and addresses given below.

For general questions about the poverty guidelines themselves, contact Kendall Swenson, Office of the Assistant Secretary for Planning and

Evaluation, Room 422F.5, Humphrey Building, Department of Health and Human Services, Washington, DC 20201—telephone: (202) 690-7507—or visit <http://aspe.hhs.gov/poverty/>.

For information about the percentage multiple of the poverty guidelines to be used on immigration forms such as USCIS Form I-864, Affidavit of Support, contact U.S. Citizenship and Immigration Services at 1-800-375-5283.

For information about the Hill-Burton Uncompensated Services Program (free or reduced-fee health care services at certain hospitals and other facilities for persons meeting eligibility criteria involving the poverty guidelines), contact the Health Resources and Services Administration Information Center at 1-800-275-4772. You also may visit <http://www.hrsa.gov/gethealthcare/affordable/hillburton/>.

For information about the number of people in poverty, visit the Poverty section of the Census Bureau's Web site at <http://www.census.gov/hhes/www/poverty/poverty.html> or contact the Census Bureau's Customer Service Center at 1-800-923-8282 (toll-free) and <https://ask.census.gov> for further information.

**SUPPLEMENTARY INFORMATION:**

**Background**

Section 673(2) of the Omnibus Budget Reconciliation Act (OBRA) of 1981 (42 U.S.C. 9902(2)) requires the Secretary of the Department of Health and Human Services to update the poverty guidelines at least annually, adjusting them on the basis of the Consumer Price Index for All Urban Consumers (CPI-U). The poverty guidelines are used as an eligibility criterion by the Community Services Block Grant program and a number of other Federal programs. The *poverty guidelines* issued here are a simplified version of the *poverty thresholds* that the Census Bureau uses to prepare its estimates of the number of individuals and families in poverty.

As required by law, this update is accomplished by increasing the latest published Census Bureau poverty thresholds by the relevant percentage change in the Consumer Price Index for All Urban Consumers (CPI-U). The guidelines in this 2016 notice reflect the 0.1 percent price increase between calendar years 2014 and 2015. After this inflation adjustment, the guidelines are rounded and adjusted to standardize the differences between family sizes. In rare circumstances, the rounding and standardizing adjustments in the formula result in small decreases in the poverty guidelines for some household

sizes even when the inflation factor is not negative. In order to prevent a reduction in the guidelines in these rare circumstances, a minor adjustment was implemented to the formula beginning this year. In cases where the year-to-year change in inflation is not negative and the rounding and standardizing adjustments in the formula result in reductions to the guidelines from the previous year for some household sizes, the guidelines for the affected household sizes are fixed at the prior year's guidelines. As in prior years, these 2016 guidelines are roughly equal to the poverty thresholds for calendar year 2015 which the Census Bureau expects to publish in final form in September 2016.

The poverty guidelines continue to be derived from the Census Bureau's current official poverty thresholds; they are not derived from the Census Bureau's new Supplemental Poverty Measure (SPM).

The following guideline figures represent annual income.

**2016 POVERTY GUIDELINES FOR THE 48 CONTIGUOUS STATES AND THE DISTRICT OF COLUMBIA**

Persons in family/household	Poverty guideline
1 .....	\$11,880
2 .....	16,020
3 .....	20,160
4 .....	24,300
5 .....	28,440
6 .....	32,580
7 .....	36,730
8 .....	40,890

For families/households with more than 8 persons, add \$4,160 for each additional person.

**2016 POVERTY GUIDELINES FOR ALASKA**

Persons in family/household	Poverty guideline
1 .....	\$14,840
2 .....	20,020
3 .....	25,200
4 .....	30,380
5 .....	35,560
6 .....	40,740
7 .....	45,920
8 .....	51,120

For families/households with more than 8 persons, add \$5,200 for each additional person.



2016 POVERTY GUIDELINES FOR HAWAII

Persons in family/household	Poverty guideline
1 .....	\$13,670
2 .....	18,430
3 .....	23,190
4 .....	27,950
5 .....	32,710
6 .....	37,470
7 .....	42,230
8 .....	47,010

For families/households with more than 8 persons, add \$4,780 for each additional person.

Separate poverty guideline figures for Alaska and Hawaii reflect Office of Economic Opportunity administrative practice beginning in the 1966–1970 period. (Note that the Census Bureau poverty thresholds—the version of the poverty measure used for statistical purposes—have never had separate figures for Alaska and Hawaii.) The poverty guidelines are not defined for Puerto Rico or other outlying jurisdictions. In cases in which a Federal program using the poverty guidelines serves any of those jurisdictions, the Federal office that administers the program is generally responsible for deciding whether to use the contiguous-states-and-DC guidelines for those jurisdictions or to follow some other procedure.

Due to confusing legislative language dating back to 1972, the poverty guidelines sometimes have been mistakenly referred to as the “OMB” (Office of Management and Budget) poverty guidelines or poverty line. In fact, OMB has never issued the guidelines; the guidelines are issued each year by the Department of Health and Human Services. The poverty guidelines may be formally referenced as “the poverty guidelines updated periodically in the **Federal Register** by the U.S. Department of Health and Human Services under the authority of 42 U.S.C. 9902(2).”

Some federal programs use a percentage multiple of the guidelines (for example, 125 percent or 185 percent of the guidelines), as noted in relevant authorizing legislation or program regulations. Non-Federal organizations that use the poverty guidelines under their own authority in non-Federally-funded activities also may choose to use a percentage multiple of the guidelines.

The poverty guidelines do not make a distinction between farm and non-farm families, or between aged and non-aged units. (Only the Census Bureau poverty thresholds have separate figures for aged

and non-aged one-person and two-person units.)

Note that this notice does not provide definitions of such terms as “income” or “family,” because there is considerable variation in defining these terms among the different programs that use the guidelines. These variations are traceable to the different laws and regulations that govern the various programs. This means that questions such as “Is income counted before or after taxes?”, “Should a particular type of income be counted?”, and “Should a particular person be counted as a member of the family/household?” are actually questions about how a specific program applies the poverty guidelines. All such questions about how a specific program applies the guidelines should be directed to the entity that administers or funds the program, since that entity has the responsibility for defining such terms as “income” or “family,” to the extent that these terms are not already defined for the program in legislation or regulations.

Dated: January 21, 2016.

**Sylvia M. Burwell,**

*Secretary of Health and Human Services.*

[FR Doc. 2016–01450 Filed 1–22–16; 8:45 am]

**BILLING CODE 4150–05–P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**National Institutes of Health**

**National Institute of Allergy and Infectious Diseases; Notice of Closed Meetings**

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

*Name of Committee:* Microbiology, Infectious Diseases and AIDS Initial Review Group; Microbiology and Infectious Diseases Research Committee.

*Date:* February 18–19, 2016.

*Time:* 8:00 a.m. to 5:00 p.m.

*Agenda:* To review and evaluate grant applications.

*Place:* The Ritz-Carlton Hotel, Plaza II, 1150 22nd Street NW., Washington, DC 20037.

*Contact Person:* Frank S. De Silva, Ph.D., Scientific Review Officer, Scientific Review Program, Division of Extramural Activities, Room #3E72A, National Institutes of Health/NIAID, 5601 Fishers Lane, MSC 9834, Bethesda, MD 20892934, (240) 669–5023, *fdesilva@niaid.nih.gov*.

*Name of Committee:* National Institute of Allergy and Infectious Diseases Special Emphasis Panel; “Comprehensive Resources for HIV Microbicides and Biomedical Prevention (N01)”.

*Date:* February 18, 2016.

*Time:* 10:30 a.m. to 5:00 p.m.

*Agenda:* To review and evaluate contract proposals.

*Place:* National Institutes of Health Room 3F100, 5601 Fishers Lane, Rockville, MD 20892 (Telephone Conference Call).

*Contact Person:* Jay R. Radke, Ph.D., AIDS Review Branch, Scientific Review Program, Division of Extramural Activities, Room #3G11B, National Institutes of Health, NIAID, 5601 Fishers Lane, MSC–9823, Bethesda, MD 20892–9823, (240) 669–5046, *jay.radke@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.855, Allergy, Immunology, and Transplantation Research; 93.856, Microbiology and Infectious Diseases Research, National Institutes of Health, HHS)

Dated: January 19, 2016.

**Natasha M. Copeland,**

*Program Analyst, Office of Federal Advisory Committee Policy.*

[FR Doc. 2016–01313 Filed 1–22–16; 8:45 am]

**BILLING CODE 4140–01–P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**National Institutes of Health**

**Submission for OMB Review; 30-Day Comment Request; Media-Smart Youth Leaders Program**

**SUMMARY:** Under the provisions of section 3507(a)(1)(D) of the Paperwork Reduction Act of 1995, the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, National Institutes of Health (NIH) has submitted to the Office of Management and Budget (OMB) a request for review and approval of the information collection listed below. This proposed information collection was previously published in the **Federal Register** on October 16, 2015, pages 62541–62542, and allowed 60 days for public comment. One public comment was received. The purpose of this notice is to allow an additional 30 days for public comment. The *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, National Institutes of Health, may not conduct or

**APPENDIX E**

**REGULATORY DATABASE SEARCH RESULTS  
AND HISTORIC DOCUMENTS**

**GeoSearch Radius Report**

**GeoSearch Fire Insurance Maps**

**GeoSearch GeoPlus Oil and Gas Report**

**GeoSearch GeoPlus Water Well Report**

**GeoSearch Historical Aerial Photographs Package**

**GeoSearch Historic Topographic Maps Package**



On time. On target. In touch.™

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## **Radius Report**

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[Satellite view](#)

*Target Property:*

**2.1 Mile Corridor**

**Hackberry, Cameron Parish, Louisiana 70645**

*Prepared For:*

**S&B Infrastructure-Houston**

**Order #: 67530**

**Job #: 146779**

**Date: 05/24/2016**

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## Disclaimer

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*This report was designed by GeoSearch to meet or exceed the records search requirements of the All Appropriate Inquiries Rule (40 CFR §312.26) and the current version of the ASTM International E1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process or, if applicable, the custom requirements requested by the entity that ordered this report. The records and databases of records used to compile this report were collected from various federal, state and local governmental entities. It is the goal of GeoSearch to meet or exceed the 40 CFR §312.26 and E1527 requirements for updating records by using the best available technology. GeoSearch contacts the appropriate governmental entities on a recurring basis. Depending on the frequency with which a record source or database of records is updated by the governmental entity, the data used to prepare this report may be updated monthly, quarterly, semi-annually, or annually.*

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## Target Property Summary

### **Target Property Information**

2.1 Mile Corridor

Hackberry, Louisiana 70645

#### **Coordinates**

Corridor

#### **USGS Quadrangle**

Browns Lake, LA

### **Geographic Coverage Information**

**County/Parish:** Cameron (LA)

**ZipCode(s):**

Hackberry LA: 70645

#### **Radon**

\* Target property is located in Radon Zone .



## Database Summary

### **FEDERAL LISTING**

#### **Standard Environmental Records**

<b>Database</b>	<b>Acronym</b>	<b>Locatable</b>	<b>Unlocatable</b>	<b>Search Radius (miles)</b>
EMERGENCY RESPONSE NOTIFICATION SYSTEM	<a href="#">ERNSLA</a>	0	0	TP/AP
FEDERAL ENGINEERING INSTITUTIONAL CONTROL SITES	<a href="#">EC</a>	0	0	TP/AP
LAND USE CONTROL INFORMATION SYSTEM	<a href="#">LUCIS</a>	0	0	TP/AP
RCRA SITES WITH CONTROLS	<a href="#">RCRASC</a>	0	0	TP/AP
NO LONGER REGULATED RCRA GENERATOR FACILITIES	<a href="#">NLRRCRAG</a>	0	0	0.1250
RESOURCE CONSERVATION & RECOVERY ACT - GENERATOR FACILITIES	<a href="#">RCRAGR06</a>	1	1	0.1250
RESOURCE CONSERVATION & RECOVERY ACT - NON-GENERATOR FACILITIES	<a href="#">RCRANGR06</a>	0	1	0.1250
BROWNFIELDS MANAGEMENT SYSTEM	<a href="#">BF</a>	0	0	0.5000
DELISTED NATIONAL PRIORITIES LIST	<a href="#">DNPL</a>	0	0	0.5000
NO LONGER REGULATED RCRA NON-CORRACTS TSD FACILITIES	<a href="#">NLRRCRAT</a>	0	0	0.5000
RESOURCE CONSERVATION & RECOVERY ACT - NON-CORRACTS TREATMENT, STORAGE & DISPOSAL FACILITIES	<a href="#">RCRAT</a>	0	0	0.5000
SUPERFUND ENTERPRISE MANAGEMENT SYSTEM	<a href="#">SEMS</a>	0	0	0.5000
SUPERFUND ENTERPRISE MANAGEMENT SYSTEM ARCHIVED SITE INVENTORY	<a href="#">SEMSARCH</a>	1	0	0.5000
NATIONAL PRIORITIES LIST	<a href="#">NPL</a>	0	0	1.0000
NO LONGER REGULATED RCRA CORRECTIVE ACTION FACILITIES	<a href="#">NLRRCRAC</a>	0	0	1.0000
PROPOSED NATIONAL PRIORITIES LIST	<a href="#">PNPL</a>	0	0	1.0000
RESOURCE CONSERVATION & RECOVERY ACT - CORRECTIVE ACTION FACILITIES	<a href="#">RCRAC</a>	0	0	1.0000
RESOURCE CONSERVATION & RECOVERY ACT - SUBJECT TO CORRECTIVE ACTION FACILITIES	<a href="#">RCRASUBC</a>	0	0	1.0000
<b>SUB-TOTAL</b>		<b>2</b>	<b>2</b>	

#### **Additional Environmental Records**

<b>Database</b>	<b>Acronym</b>	<b>Locatable</b>	<b>Unlocatable</b>	<b>Search Radius (miles)</b>
AEROMETRIC INFORMATION RETRIEVAL SYSTEM / AIR FACILITY SUBSYSTEM	<a href="#">AIRSAFS</a>	0	0	TP/AP
BIENNIAL REPORTING SYSTEM	<a href="#">BRS</a>	0	0	TP/AP
CERCLIS LIENS	<a href="#">SFLIENS</a>	0	0	TP/AP
CLANDESTINE DRUG LABORATORY LOCATIONS	<a href="#">CDL</a>	0	0	TP/AP
EPA DOCKET DATA	<a href="#">DOCKETS</a>	0	0	TP/AP
FACILITY REGISTRY SYSTEM	<a href="#">FRSLA</a>	0	0	TP/AP

## Database Summary

<b>Database</b>	<b>Acronym</b>	<b>Locatable</b>	<b>Unlocatable</b>	<b>Search Radius (miles)</b>
HAZARDOUS MATERIALS INCIDENT REPORTING SYSTEM	<a href="#">HMIRSR06</a>	0	0	TP/AP
INTEGRATED COMPLIANCE INFORMATION SYSTEM (FORMERLY DOCKETS)	<a href="#">ICIS</a>	0	0	TP/AP
INTEGRATED COMPLIANCE INFORMATION SYSTEM NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	<a href="#">ICISNPDES</a>	0	0	TP/AP
MATERIAL LICENSING TRACKING SYSTEM	<a href="#">MLTS</a>	0	0	TP/AP
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	<a href="#">NPDESR06</a>	0	0	TP/AP
PCB ACTIVITY DATABASE SYSTEM	<a href="#">PADS</a>	0	0	TP/AP
PERMIT COMPLIANCE SYSTEM	<a href="#">PCSR06</a>	0	0	TP/AP
SECTION SEVEN TRACKING SYSTEM	<a href="#">SSTS</a>	0	0	TP/AP
TOXIC SUBSTANCE CONTROL ACT INVENTORY	<a href="#">TSCA</a>	0	0	TP/AP
TOXICS RELEASE INVENTORY	<a href="#">TRI</a>	0	0	TP/AP
HISTORICAL GAS STATIONS	<a href="#">HISTPST</a>	0	0	0.2500
OPEN DUMP INVENTORY	<a href="#">ODI</a>	0	0	0.5000
DEPARTMENT OF DEFENSE SITES	<a href="#">DOD</a>	0	0	1.0000
FORMERLY USED DEFENSE SITES	<a href="#">FUDS</a>	0	0	1.0000
RECORD OF DECISION SYSTEM	<a href="#">RODS</a>	0	0	1.0000
<b>SUB-TOTAL</b>		0	0	

## Database Summary

### STATE (LA) LISTING

#### Standard Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
SITES WITH CONTROLS	<a href="#">IC</a>	0	0	TP/AP
NO LONGER REPORTED UNDERGROUND STORAGE TANKS	<a href="#">NLRUST</a>	1	0	0.2500
UNDERGROUND STORAGE TANKS	<a href="#">UST</a>	0	0	0.2500
APPROVED HURRICANE DEBRIS DUMP SITES	<a href="#">ADS</a>	1	0	0.5000
HISTORICAL LEAKING UNDERGROUND STORAGE TANKS	<a href="#">HLUST</a>	0	0	0.5000
LEAKING UNDERGROUND STORAGE TANKS	<a href="#">LUST</a>	0	0	0.5000
SOLID WASTE LANDFILLS	<a href="#">SWLF</a>	0	0	0.5000
VOLUNTARY REMEDIATION PROGRAM SITES	<a href="#">VRP</a>	0	0	0.5000
CONFIRMED AND POTENTIAL SITES INVENTORY	<a href="#">CPI</a>	0	0	1.0000
<b>SUB-TOTAL</b>		<b>2</b>	<b>0</b>	

#### Additional Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
ASBESTOS DEMOLITION AND RENOVATION NOTIFICATION PROJECTS	<a href="#">ASBESTOS</a>	0	0	TP/AP
CLANDESTINE DRUG LABORATORY LOCATIONS	<a href="#">CDL</a>	0	0	TP/AP
LISTING OF LOUISIANA DEQ LIENS	<a href="#">LIENS</a>	0	0	TP/AP
SPILLS LISTING	<a href="#">SPILLS</a>	0	0	TP/AP
WASTE TIRE GENERATOR LIST	<a href="#">WASTETIRE</a>	0	0	TP/AP
DRYCLEANING FACILITIES	<a href="#">DCR</a>	0	0	0.2500
RECYCLING FACILITIES	<a href="#">RCY</a>	1	0	0.5000
WASTE PITS	<a href="#">WP</a>	44	0	0.5000
<b>SUB-TOTAL</b>		<b>45</b>	<b>0</b>	

## Database Summary

### LOCAL LISTING

#### Additional Environmental Records

<b>Database</b>	<b>Acronym</b>	<b>Locatable</b>	<b>Unlocatable</b>	<b>Search Radius (miles)</b>
CITY OF NEW ORLEANS MARKETABLE BROWNFIELD PROPERTIES	<a href="#">MBF</a>	0	0	0.5000
CITY OF NEW ORLEANS POTENTIAL BROWNFIELD PROPERTIES	<a href="#">PBF</a>	0	0	0.5000
CITY OF WESTWEGO BROWNFIELD RENEWAL PROJECTS	<a href="#">WBF</a>	0	0	0.5000
<b>SUB-TOTAL</b>		0	0	

## Database Summary

### **TRIBAL LISTING**

#### **Standard Environmental Records**

<b>Database</b>	<b>Acronym</b>	<b>Locatable</b>	<b>Unlocatable</b>	<b>Search Radius (miles)</b>
UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	<a href="#">USTR06</a>	0	0	0.2500
LEAKING UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	<a href="#">LUSTR06</a>	0	0	0.5000
OPEN DUMP INVENTORY ON TRIBAL LANDS	<a href="#">ODINDIAN</a>	0	0	0.5000
<b>SUB-TOTAL</b>		<b>0</b>	<b>0</b>	

#### **Additional Environmental Records**

<b>Database</b>	<b>Acronym</b>	<b>Locatable</b>	<b>Unlocatable</b>	<b>Search Radius (miles)</b>
INDIAN RESERVATIONS	<a href="#">INDIANRES</a>	0	0	1.0000
<b>SUB-TOTAL</b>		<b>0</b>	<b>0</b>	
<b>TOTAL</b>		<b>49</b>	<b>2</b>	

## Database Radius Summary

### FEDERAL LISTING

Standard environmental records are displayed in **bold**.

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
AIRSAFS	0.0200	0	NS	NS	NS	NS	NS	0
BRS	0.0200	0	NS	NS	NS	NS	NS	0
CDL	0.0200	0	NS	NS	NS	NS	NS	0
DOCKETS	0.0200	0	NS	NS	NS	NS	NS	0
<b>EC</b>	<b>0.0200</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>ERNSLA</b>	<b>0.0200</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
FRSLA	0.0200	0	NS	NS	NS	NS	NS	0
HMIRSR06	0.0200	0	NS	NS	NS	NS	NS	0
ICIS	0.0200	0	NS	NS	NS	NS	NS	0
ICISNPDES	0.0200	0	NS	NS	NS	NS	NS	0
<b>LUCIS</b>	<b>0.0200</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
MLTS	0.0200	0	NS	NS	NS	NS	NS	0
NPDES06	0.0200	0	NS	NS	NS	NS	NS	0
PADS	0.0200	0	NS	NS	NS	NS	NS	0
PCSR06	0.0200	0	NS	NS	NS	NS	NS	0
<b>RCRASC</b>	<b>0.0200</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
SFLIENS	0.0200	0	NS	NS	NS	NS	NS	0
SSTS	0.0200	0	NS	NS	NS	NS	NS	0
TRI	0.0200	0	NS	NS	NS	NS	NS	0
TSCA	0.0200	0	NS	NS	NS	NS	NS	0
<b>NLRRCRAG</b>	<b>0.1250</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>RCRAGR06</b>	<b>0.1250</b>	<b>0</b>	<b>1</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>1</b>
<b>RCRANGR06</b>	<b>0.1250</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
HISTPST	0.2500	0	0	0	NS	NS	NS	0
<b>BF</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>DNPL</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>NLRRCRAT</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
ODI	0.5000	0	0	0	0	NS	NS	0
<b>RCRAT</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>SEMS</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>SEMSARCH</b>	<b>0.5000</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>1</b>
DOD	1.0000	0	0	0	0	0	NS	0
FUDS	1.0000	0	0	0	0	0	NS	0
<b>NLRRCRAC</b>	<b>1.0000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>0</b>
<b>NPL</b>	<b>1.0000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>0</b>



## Database Radius Summary

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
PNPL	1.0000	0	0	0	0	0	NS	0
RCRAC	1.0000	0	0	0	0	0	NS	0
RCRASUBC	1.0000	0	0	0	0	0	NS	0
RODS	1.0000	0	0	0	0	0	NS	0
SUB-TOTAL		0	2	0	0	0	0	2

## Database Radius Summary

### STATE (LA) LISTING

Standard environmental records are displayed in **bold**.

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
ASBESTOS	0.0200	0	NS	NS	NS	NS	NS	0
CDL	0.0200	0	NS	NS	NS	NS	NS	0
<b>IC</b>	<b>0.0200</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
LIENS	0.0200	0	NS	NS	NS	NS	NS	0
SPILLS	0.0200	0	NS	NS	NS	NS	NS	0
WASTETIRE	0.0200	0	NS	NS	NS	NS	NS	0
DCR	0.2500	0	0	0	NS	NS	NS	0
<b>NLRUST</b>	<b>0.2500</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>1</b>
<b>UST</b>	<b>0.2500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>ADS</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>NS</b>	<b>NS</b>	<b>1</b>
<b>HLUST</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>LUST</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
RCY	0.5000	0	0	0	1	NS	NS	1
<b>SWLF</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>VRP</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
WP	0.5000	1	10	7	26	NS	NS	44
<b>CPI</b>	<b>1.0000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>0</b>
<b>SUB-TOTAL</b>		<b>1</b>	<b>11</b>	<b>7</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>47</b>

## Database Radius Summary

### **LOCAL LISTING**

Standard environmental records are displayed in **bold**.

<b>Acronym</b>	<b>Search Radius (miles)</b>	<b>TP/AP (0 - 0.02)</b>	<b>1/8 Mile (&gt; TP/AP)</b>	<b>1/4 Mile (&gt; 1/8)</b>	<b>1/2 Mile (&gt; 1/4)</b>	<b>1 Mile (&gt; 1/2)</b>	<b>&gt; 1 Mile</b>	<b>Total</b>
MBF	0.5000	0	0	0	0	NS	NS	0
PBF	0.5000	0	0	0	0	NS	NS	0
WBF	0.5000	0	0	0	0	NS	NS	0
<b>SUB-TOTAL</b>		0	0	0	0	0	0	0

## Database Radius Summary

### **TRIBAL LISTING**

Standard environmental records are displayed in **bold**.

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
<b>USTR06</b>	<b>0.2500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>LUSTR06</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>ODINDIAN</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>INDIANRES</b>	<b>1.0000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>0</b>

<b>SUB-TOTAL</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
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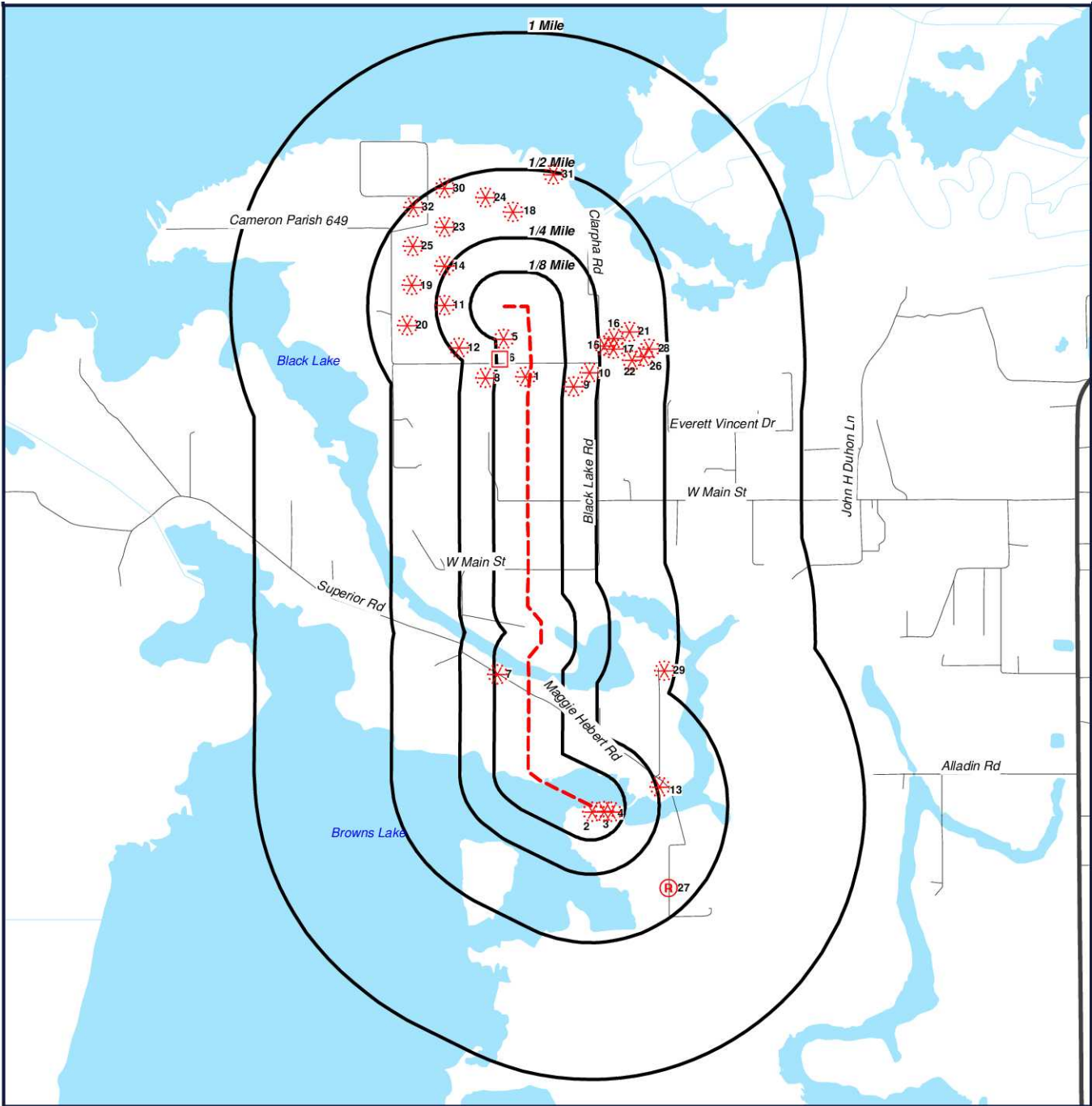
<b>TOTAL</b>		<b>1</b>	<b>13</b>	<b>7</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>49</b>
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**NOTES:**

**NS = NOT SEARCHED**

**TP/AP = TARGET PROPERTY/ADJACENT PROPERTY**

# Radius Map 1



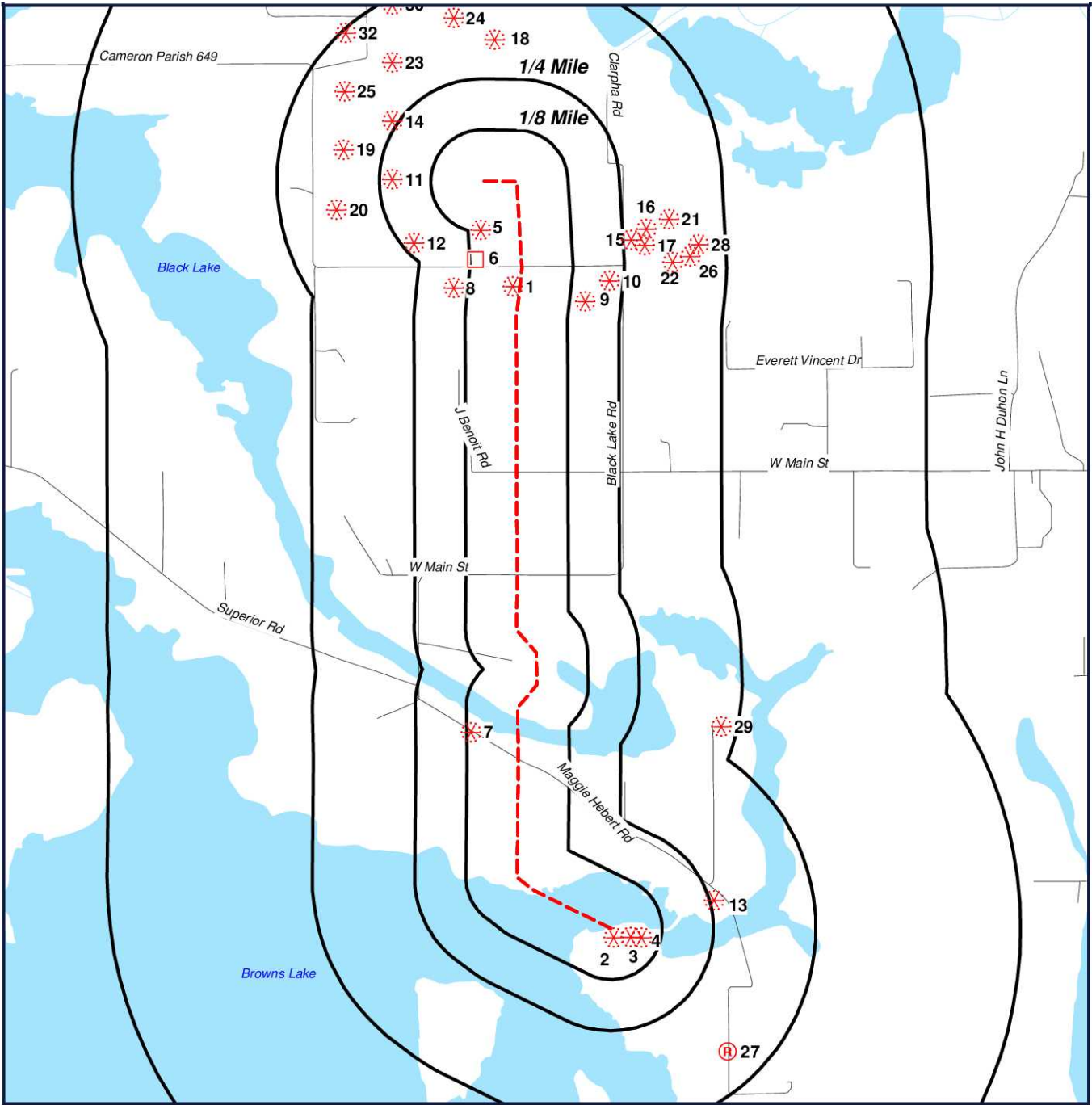
- Target Property (TP)
- WP
- RCRAGR06
- RCY

**2.1 Mile Corridor  
Hackberry, Louisiana  
70645**



[Click here to access Satellite view](#)

# Radius Map 2



- Target Property (TP)
- WP
- RCRAGR06
- RCY

**2.1 Mile Corridor  
Hackberry, Louisiana  
70645**



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# Ortho Map



Image courtesy of USGS Earthstar Geographics SIO © 2016 Microsoft Corporation

- - - Target Property (TP)
- ✕ WP
- RCRAGR06
- Ⓜ RCY

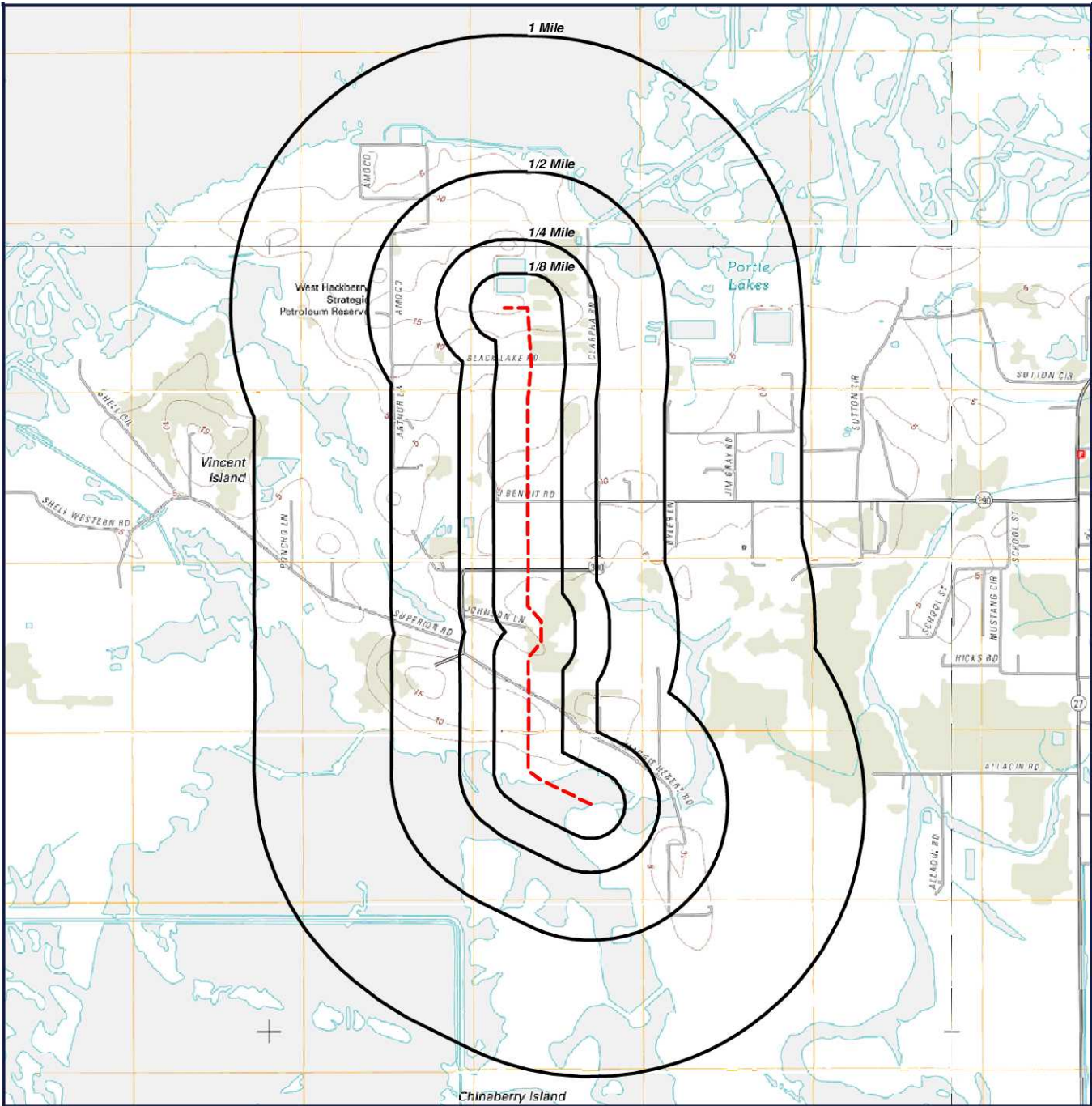
**Quadrangle(s): Browns Lake  
2.1 Mile Corridor  
Hackberry, Louisiana  
70645**



0' 1000' 2000' 3000'  
SCALE: 1" = 2000'

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# Topographic Map



--- Target Property (TP)

**Quadrangle(s): Browns Lake**  
**Source: USGS, 03/29/2012**  
**2.1 Mile Corridor**  
**Hackberry, Louisiana**  
**70645**



0' 1500' 3000' 4500'  
SCALE: 1" = 3000'

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## Located Sites Summary

NOTE: Standard environmental records are displayed in **bold**.

Map ID#	Database Name	Site ID#	Distance From Site	Site Name	Address	PAGE #
<a href="#">1</a>	WP	12_w_18795	0.02 mi. SW (106 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">19</a>
<a href="#">2</a>	WP	12_w_18757	0.04 mi. SE (211 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">20</a>
<a href="#">2</a>	WP	12_w_18756	0.03 mi. SE (158 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">21</a>
<a href="#">3</a>	WP	12_w_18758	0.06 mi. SE (317 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">22</a>
<a href="#">4</a>	WP	12_w_18760	0.09 mi. E (475 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">23</a>
<a href="#">4</a>	WP	12_w_18761	0.08 mi. E (422 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">24</a>
<a href="#">4</a>	WP	12_w_18759	0.07 mi. E (370 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">25</a>
<a href="#">5</a>	WP	12_w_18792	0.1 mi. W (528 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">26</a>
<a href="#">5</a>	WP	12_w_18793	0.1 mi. W (528 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">27</a>
<a href="#">5</a>	WP	12_w_18791	0.1 mi. W (528 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">28</a>
<a href="#">6</a>	<b>RCRAGR06</b>	<b>LA2890032582</b>	<b>0.11 mi. W (581 ft.)</b>	<b>US DOE SPR W HACKBERRY</b>	<b>1450 BLACK LAKE RD, HACKBERRY, LA 70645</b>	<a href="#">29</a>
<a href="#">6</a>	<b>SEMSARCH</b>	<b>LA2890032582</b>	<b>0.11 mi. W (581 ft.)</b>	<b>WEST HACKBERRY SPRING</b>	<b>3.8 MI W OF HACKBERRY, HWY 390, HACKBERRY, LA 70645</b>	<a href="#">32</a>
<a href="#">6</a>	<b>NLRUST</b>	<b>12-009739</b>	<b>0.11 mi. W (581 ft.)</b>	<b>WEST HACKBERRY STRATEGIC PETR. R</b>	<b>BLACK LAKE ROAD, OFF HWY 390, HACKBERRY, LA 70645</b>	<a href="#">33</a>
<a href="#">7</a>	WP	12_mh_18487	0.12 mi. W (634 ft.)	WARREN PETROLEUM COMPANY	HACKBERRY, LA 70645	<a href="#">35</a>
<a href="#">8</a>	WP	12_w_18794	0.17 mi. W (898 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">36</a>
<a href="#">9</a>	WP	12_mh_18450	0.17 mi. E (898 ft.)	WARREN PETROLEUM COMPANY	HACKBERRY, LA 70645	<a href="#">37</a>
<a href="#">9</a>	WP	12_f_18451	0.17 mi. E (898 ft.)	WARREN PETROLEUM COMPANY	HACKBERRY, LA 70645	<a href="#">38</a>
<a href="#">10</a>	WP	12_mh_18449	0.22 mi. E (1162 ft.)	WARREN PETROLEUM COMPANY	HACKBERRY, LA 70645	<a href="#">39</a>
<a href="#">11</a>	WP	12_w_18787	0.22 mi. W (1162 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">40</a>
<a href="#">12</a>	WP	12_w_18790	0.24 mi. SW (1267 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">41</a>
<a href="#">12</a>	WP	12_w_18789	0.23 mi. SW (1214 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">42</a>
<a href="#">13</a>	WP	12_w_18754	0.27 mi. E (1426 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">43</a>
<a href="#">13</a>	WP	12_w_18755	0.27 mi. E (1426 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">44</a>
<a href="#">13</a>	WP	12_w_18616	0.27 mi. E (1426 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">45</a>

## Located Sites Summary

<a href="#">14</a>	WP	12_w_18785	0.27 mi. NW (1426 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">46</a>
<a href="#">15</a>	WP	12_tb_18467	0.28 mi. E (1478 ft.)	WARREN PETROLEUM COMPANY	HACKBERRY, LA 70645	<a href="#">47</a>
<a href="#">16</a>	WP	12_f_18468	0.31 mi. E (1637 ft.)	WARREN PETROLEUM COMPANY	HACKBERRY, LA 70645	<a href="#">48</a>
<a href="#">17</a>	WP	12_w_18469	0.31 mi. E (1637 ft.)	WARREN PETROLEUM COMPANY	HACKBERRY, LA 70645	<a href="#">49</a>
<a href="#">18</a>	WP	12_w_18766	0.35 mi. N (1848 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">50</a>
<a href="#">18</a>	WP	12_w_18767	0.35 mi. N (1848 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">51</a>
<a href="#">18</a>	WP	12_w_18765	0.36 mi. N (1901 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">52</a>
<a href="#">19</a>	WP	12_w_18786	0.35 mi. W (1848 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">53</a>
<a href="#">20</a>	WP	12_w_18788	0.37 mi. W (1954 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">54</a>
<a href="#">21</a>	WP	12_w_18471	0.37 mi. E (1954 ft.)	WARREN PETROLEUM COMPANY	HACKBERRY, LA 70645	<a href="#">55</a>
<a href="#">22</a>	WP	12_mh_18470	0.37 mi. E (1954 ft.)	WARREN PETROLEUM COMPANY	HACKBERRY, LA 70645	<a href="#">56</a>
<a href="#">23</a>	WP	12_w_18783	0.37 mi. NW (1954 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">57</a>
<a href="#">24</a>	WP	12_w_18763	0.43 mi. N (2270 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">58</a>
<a href="#">24</a>	WP	12_w_18764	0.41 mi. N (2165 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">59</a>
<a href="#">24</a>	WP	12_w_18762	0.43 mi. N (2270 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">60</a>
<a href="#">25</a>	WP	12_w_18784	0.41 mi. NW (2165 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">61</a>
<a href="#">26</a>	WP	12_f_18473	0.42 mi. E (2218 ft.)	WARREN PETROLEUM COMPANY	HACKBERRY, LA 70645	<a href="#">62</a>
<a href="#">27</a>	RCY	15430	0.43 mi. SE (2270 ft.)	CAMERON PARISH POLICE JURY - HACKBERRY DUMP	495 MAGGIE HEBERT RD, HACKBERRY, LA 70645	<a href="#">63</a>
<a href="#">27</a>	<b>ADS</b>	<b>15430</b>	<b>0.43 mi. SE (2270 ft.)</b>	<b>CAMERON PARISH POLICE JURY- MAGGIE HEBERT RD.</b>	<b>MAGGIE HEBERT RD, HACKBERRY, LA 70645</b>	<a href="#">64</a>
<a href="#">28</a>	WP	12_w_18472	0.44 mi. E (2323 ft.)	WARREN PETROLEUM COMPANY	HACKBERRY, LA 70645	<a href="#">65</a>
<a href="#">29</a>	WP	12_w_18485	0.47 mi. E (2482 ft.)	WARREN PETROLEUM COMPANY	HACKBERRY, LA 70645	<a href="#">66</a>
<a href="#">30</a>	WP	12_w_18775	0.49 mi. NW (2587 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">67</a>

## **Located Sites Summary**

<a href="#">31</a>	WP	12_w_18770	0.5 mi. N (2640 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">68</a>
<a href="#">31</a>	WP	12_w_18769	0.5 mi. N (2640 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">69</a>
<a href="#">32</a>	WP	12_w_18782	0.5 mi. NW (2640 ft.)	U. S. DEPARTMENT OF ENERGY	HACKBERRY, LA 70645	<a href="#">70</a>

## Waste Pits (WP)

**MAP ID# 1**

Distance from Property: 0.02 mi. (106 ft.) SW

### **SITE INFORMATION**

ID#: 12\_w\_18795

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: WRT ENERGY CORPORATION

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971303, WELL #112

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 11:03

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 7'X7' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971303, WELL #112

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 50

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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[Back to Report Summary](#)



## Waste Pits (WP)

**MAP ID# 2**

Distance from Property: 0.04 mi. (211 ft.) SE

### **SITE INFORMATION**

ID#: 12\_w\_18757

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U. S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971144, WELL #2C

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 8:42

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: NONE

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971144, WELL #2C

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 55

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 2**

Distance from Property: 0.03 mi. (158 ft.) SE

### **SITE INFORMATION**

ID#: 12\_w\_18756

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U. S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971159, WELL #2-E

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 8:40

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: NONE

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971159, WELL #2-E

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 55

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 3**

Distance from Property: 0.06 mi. (317 ft.) SE

### **SITE INFORMATION**

ID#: 12\_w\_18758

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U. S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971308, WELL #2

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 8:44

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: NONE

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971308, WELL #2

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 55

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 4**

Distance from Property: 0.09 mi. (475 ft.) E

### **SITE INFORMATION**

ID#: 12\_w\_18760

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U. S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971143, WELL #2B

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 8:47

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: NONE

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971143, WELL #2B

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 55

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 4**

Distance from Property: 0.08 mi. (422 ft.) E

### **SITE INFORMATION**

ID#: 12\_w\_18761

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U. S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971145, WELL #2D

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 8:48

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: NONE

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971145, WELL #2D

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 55

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 4**

Distance from Property: 0.07 mi. (370 ft.) E

### **SITE INFORMATION**

ID#: 12\_w\_18759

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U. S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971142, WELL #2A

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 8:45

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: NONE

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971142, WELL #2A

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 55

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 5**

Distance from Property: 0.1 mi. (528 ft.) W

### **SITE INFORMATION**

ID#: 12\_w\_18792

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 086594, WELL #11

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 10:50

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 8'X8' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 086594, WELL #11

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 50

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 5**

Distance from Property: 0.1 mi. (528 ft.) W

### **SITE INFORMATION**

ID#: 12\_w\_18793

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971321, WELL #11B

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 10:53

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 8'X8' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971321, WELL #11B

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 50

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 5**

Distance from Property: 0.1 mi. (528 ft.) W

### **SITE INFORMATION**

ID#: 12\_w\_18791

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 086594, WELL #11A

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 10:48

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 6'X7' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 086594, WELL #11A

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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# Resource Conservation & Recovery Act - Generator Facilities (RCRAGR06)

MAP ID# 6

Distance from Property: 0.11 mi. (581 ft.) W

## FACILITY INFORMATION

EPA ID#: LA2890032582

NAME: US DOE SPR W HACKBERRY

ADDRESS: 1450 BLACK LAKE RD  
HACKBERRY, LA 70645

OWNER TYPE: FEDERAL

OWNER NAME: US DEPT OF ENERGY

OPERATOR TYPE: FEDERAL

OPERATOR NAME: DRAVO UTILITY CONSTRUCTORS  
INC

CONTACT NAME: LEVI GABRE

CONTACT ADDRESS: 1450 BLACK LAKE RD  
HACKBERRY LA 70645

CONTACT PHONE: 3375583201

NON-NOTIFIER: NOT A NON-NOTIFIER

DATE RECEIVED BY AGENCY: 06/18/2014

## CERTIFICATION

CERTIFICATION NAME:

CERTIFICATION TITLE:

CERTIFICATION SIGNED DATE:

JAMES E LEEMANN

ENV DIR

06/18/2014

WILLIAM E BOZZO

MGR, ENV. DEPT.

02/26/1996

## INDUSTRY CLASSIFICATION (NAICS)

42271 - PETROLEUM BULK STATIONS AND TERMINALS

42471 - PETROLEUM BULK STATIONS AND TERMINALS

## SITE HISTORY (INCLUDES GENERATORS AND NON-GENERATORS)

DATE RECEIVED BY AGENCY: 06/18/2014

NAME: US DOE SPR W HACKBERRY

GENERATOR CLASSIFICATION: LARGE QUANTITY GENERATOR

DATE RECEIVED BY AGENCY: 02/26/1996

NAME: U.S.DEPT.OF ENERGY WEST HACKBERRY SITE

GENERATOR CLASSIFICATION: CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR

DATE RECEIVED BY AGENCY: 03/21/1991

NAME: US DOE SPR W HACKBERRY

GENERATOR CLASSIFICATION: LARGE QUANTITY GENERATOR

## CURRENT ACTIVITY INFORMATION

GENERATOR STATUS: **CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR** LAST UPDATED DATE: **04/14/2015**

SUBJECT TO CORRECTIVE ACTION UNIVERSE: **NO**

TDSFs POTENTIALLY SUBJECT TO CORRECTIVE ACTION UNDER 3004 (u)/(v) UNIVERSE: **NO**

TDSFs ONLY SUBJECT TO CORRECTIVE ACTION UNDER DISCRETIONARY AUTHORITIES UNIVERSE: **NO**

NON TDSFs WHERE RCRA CORRECTIVE ACTION HAS BEEN IMPOSED UNIVERSE: **NO**

CORRECTIVE ACTION WORKLOAD UNIVERSE: **NO**

IMPORTER: **NO**

UNDERGROUND INJECTION: **NO**

MIXED WASTE GENERATOR: **NO**

UNIVERSAL WASTE DESTINATION FACILITY: **NO**

RECYCLER: **NO**

TRANSFER FACILITY: **NO**

TRANSPORTER: **NO**

USED OIL FUEL BURNER: **NO**

ONSITE BURNER EXEMPTION: **NO**

USED OIL PROCESSOR: **NO**

FURNACE EXEMPTION: **NO**

USED OIL FUEL MARKETER TO BURNER: **NO**

USED OIL REFINER: **NO**

SPECIFICATION USED OIL MARKETER: **NO**

# Resource Conservation & Recovery Act - Generator Facilities (RCRAGR06)

USED OIL TRANSFER FACILITY: NO

USED OIL TRANSPORTER: NO

## COMPLIANCE, MONITORING AND ENFORCEMENT INFORMATION

EVALUATIONS - NO EVALUATIONS REPORTED -

VIOLATIONS - NO VIOLATIONS REPORTED -

ENFORCEMENTS - NO ENFORCEMENTS REPORTED -

## HAZARDOUS WASTE

- D001** IGNITABLE WASTE
- D002** CORROSIVE WASTE
- D003** REACTIVE WASTE
- D004** ARSENIC
- D005** BARIUM
- D007** CHROMIUM
- D008** LEAD
- D009** MERCURY
- D011** SILVER
- D018** BENZENE
- D022** CHLOROFORM
- D027** 1,4-DICHLOROBENZENE
- D028** 1,2-DICHLOROETHANE
- D030** 2,4-DINITROTOLUENE
- D032** HEXACHLOROBENZENE
- D033** HEXACHLOROBUTADIENE
- D034** HEXACHLOROETHANE
- D036** NITROBENZENE
- D038** PYRIDINE
- D039** TETRACHLOROETHYLENE
- D042** 2,4,6-TRICHLOROPHENOL
- F001** THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
- F002** THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
- F003** THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

**Resource Conservation & Recovery Act - Generator Facilities  
(RCRAGR06)**

F005 THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

F006 WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

P105 SODIUM AZIDE

U080 METHANE, DICHLORO-

U080 METHYLENE CHLORIDE

U122 FORMALDEHYDE

U220 BENZENE, METHYL-

U220 TOLUENE

U226 ETHANE, 1,1,1-TRICHLORO-

U226 METHYL CHLOROFORM

U239 BENZENE, DIMETHYL- (I,T)

U239 XYLENE (I)

UNIVERSAL WASTE - NO UNIVERSAL WASTE REPORTED -

CORRECTIVE ACTION AREA - NO CORRECTIVE ACTION AREA INFORMATION REPORTED -

CORRECTIVE ACTION EVENT - NO CORRECTIVE ACTION EVENT REPORTED -

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# Superfund Enterprise Management System Archived Site Inventory (SEMSARCH)

**MAP ID# 6**

Distance from Property: 0.11 mi. (581 ft.) W

## **FACILITY INFORMATION**

EPA ID#: LA2890032582

SITE ID#: 0600775

NAME: WEST HACKBERRY SPRING

ADDRESS: 3.8 MI W OF HACKBERRY, HWY 390  
HACKBERRY, LA 70645

COUNTY: CAMERON

FEDERAL FACILITY: FEDERAL FACILITY

NPL: NOT ON THE NPL

NON NPL STATUS: NFRAP-SITE DOES NOT QUALIFY FOR THE NPL BASED ON EXISTING INFORMATION

Below information was gathered from the prior NFRAP update completed in 10/2013 update:

<u>ACTION</u>	<u>START DATE</u>	<u>COMPLETION DATE</u>	<u>RESPONSIBILITY</u>
PA - PRELIMINARY ASSESSMENT	10/1/1985	10/1/1985	FED FAC
SI - SITE INSPECTION	8/1/1985	8/1/1985	FED FAC
DS - DISCOVERY	NOT REPORTED	11/1/1984	EPA FUND
VS - ARCHIVE SITE	NOT REPORTED	10/1/1985	EPA IN-HOUSE

## ACTION DESCRIPTIONS

PA - (PRELIMINARY ASSESSMENT) - COLLECTION OF DIVERSE EXISTING INFORMATION ABOUT THE SOURCE AND NATURE OF THE SITE HAZARD. IT IS EPA POLICY TO COMPLETE THE PRELIMINARY ASSESSMENT WITHIN ONE YEAR OF SITE DISCOVERY.

SI - (SITE INSPECTION) - THE PROCESS OF COLLECTING SITE DATA AND SAMPLES TO CHARACTERIZE THE SEVERITY OF THE HAZARD FOR THE HAZARD RANKING SCORE AND/OR ENFORCEMENT SUPPORT.

DS - (DISCOVERY) - THE PROCESS BY WHICH A POTENTIAL HAZARDOUS WASTE SITE IS BROUGHT TO THE ATTENTION OF THE EPA. THE PROCESS CAN OCCUR THROUGH THE USE OF SEVERAL MECHANISMS SUCH AS A PHONE CALL OR REFERRAL BY ANOTHER GOVERNMENT AGENCY.

VS - (ARCHIVE SITE) - THE DECISION IS MADE THAT NO FURTHER ACTIVITY IS PLANNED AT THE SITE.

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# No Longer Reported Underground Storage Tanks (NLRUST)

MAP ID# 6

Distance from Property: 0.11 mi. (581 ft.) W

\* DATA USED IN THIS REPORT ORIGINATES FROM A NO LONGER ACTIVE FILING SYSTEM OF THE LOUISIANA DEQ. THIS DATA WAS LAST UPDATED IN FEBRUARY OF 2004.

## FACILITY INFORMATION

ID#: 12-009739  
NAME: WEST HACKBERRY STRATEGIC PETR. R  
ADDRESS: BLACK LAKE ROAD, OFF HWY 390  
HACKBERRY, LA 70645  
PARISH: CAMERON  
REGION: 5  
FACILITY OPERATING STATUS: (E)  
# OF TANKS: 3  
INDIAN LAND: (.) NOT ON INDIAN LAND  
MANAGER NAME: ALLEN FRUGE  
MANAGER TITLE: SR. SITE REP.  
MANAGER PHONE: (318) 762-4406  
FORM AMENDED: X  
FORM SIGNED BY: DWAYNE GRAY  
TITLE SIGNED BY: ASSIS. PROJECT  
FROM SIGNED DATE: 03-27-90

## OWNER INFORMATION

OWNER ID #: 00300500  
NAME: U.S. DEPARTMENT OF ENERGY SPR  
ADDRESS: 900 EAST COMMERCE ROAD  
, LA, 70123  
PHONE: 504 734-4353  
OWNER OPERATING STATUS: (A) ACTIVE

## TANK INFORMATION

TANK ID#: 26087 CAPACITY (GAL): 6006  
USE: IN USE CONTENTS:  
INSTALLED: 80/05/05 REPLACEMENT: (N) NOT A REPLACEMENT  
OPERATING STATUS: NOT REPORTED  
EMPTY STATUS: (.) NOT EMPTY  
LEAKING: (N) NO  
TANK MATERIAL: STEEL  
INTERIOR PROTECTION: LINED  
EXTERIOR PROTECTION: CATHODIC  
PIPING NETWORK: CATHODICALLY PROTECTED

## TANK INFORMATION

TANK ID#: 26088 CAPACITY (GAL): 1008  
USE: IN USE CONTENTS:  
INSTALLED: 80/05/05 REPLACEMENT: Y  
OPERATING STATUS: NOT REPORTED  
EMPTY STATUS: (.) NOT EMPTY  
LEAKING: (N) NO  
TANK MATERIAL: STEEL  
INTERIOR PROTECTION: LINED  
EXTERIOR PROTECTION: CATHODIC  
PIPING NETWORK: CATHODICALLY PROTECTED

## TANK INFORMATION

TANK ID#: 26089 CAPACITY (GAL): 793  
USE: IN USE CONTENTS:

## No Longer Reported Underground Storage Tanks (NLRUST)

INSTALLED: 80/05/05

REPLACEMENT: (N) NOT A REPLACEMENT

OPERATING STATUS: NOT REPORTED

EMPTY STATUS: (.) NOT EMPTY

LEAKING: (N) NO

TANK MATERIAL: STEEL

INTERIOR PROTECTION: NONE

EXTERIOR PROTECTION: PAINTED

PIPING NETWORK: NOT REPORTED

### **REPLACEMENT INFORMATION**

REPLACEMENT DATE: NOT REPORTED

REPLACEMENT AGE: NOT REPORTED

REPLACEMENT LEAK: (.) NO LEAK WHEN REPLACED

SOIL CONTAMINATION: (.) NO LEAK WHEN REPLACED

### **REPLACEMENT INFORMATION**

REPLACEMENT DATE: NOT REPORTED

REPLACEMENT AGE: NOT REPORTED

REPLACEMENT LEAK: (.) NO LEAK WHEN REPLACED

SOIL CONTAMINATION: (.) NO LEAK WHEN REPLACED

### **REPLACEMENT INFORMATION**

REPLACEMENT DATE: NOT REPORTED

REPLACEMENT AGE: NOT REPORTED

REPLACEMENT LEAK: (.) NO LEAK WHEN REPLACED

SOIL CONTAMINATION: (.) NO LEAK WHEN REPLACED

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## Waste Pits (WP)

**MAP ID# 7**

Distance from Property: 0.12 mi. (634 ft.) W

### **SITE INFORMATION**

ID#: 12\_mh\_18487

OPERATOR: WARREN PETROLEUM COMPANY

LAND OWNER: VINCENT HEIRS INC.

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: **MANIFOLD HEADER - A DEVICE (USUALLY A PIPE OR PIPE SEGMENTS) THAT SERVES AS A MOUNTING POINT FOR VALVES LEADING TO CONNECTING PIPELINES**

PIT DESCRIPTION: **NOT REPORTED**

COMMENTS: **NOT REPORTED**

INSPECTION DATE: **09/09/1997** INSPECTION TIME: **10:12**

STATUS: **ACTIVE**

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: **YES**

IS THERE A SITE PLAN FOR THE FACILITY?: **YES**

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: **NO**

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: **NO**

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: **2**

GENERAL DESCRIPTION OF CONTAINMENT: **BARRIER, CHAIN LINK FENCE**

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: **NONE**

CONDITION OF CONTAINMENT: **ADEQUATE**

CONTAINMENT BREACHED?: **NO**

GENERAL COMMENTS ABOUT SITE: **NOT REPORTED**

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): **45**

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 8**

Distance from Property: 0.17 mi. (898 ft.) W

### **SITE INFORMATION**

ID#: 12\_w\_18794

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: WRT ENERGY CORPORATION

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971299, WELL #108

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 10:58

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 6'X8' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971299, WELL #108

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 9**

Distance from Property: 0.17 mi. (898 ft.) E

### **SITE INFORMATION**

ID#: 12\_mh\_18450

OPERATOR: WARREN PETROLEUM COMPANY

LAND OWNER: TRIDENT NGL, INC.

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: **MANIFOLD HEADER - A DEVICE (USUALLY A PIPE OR PIPE SEGMENTS) THAT SERVES AS A MOUNTING POINT FOR VALVES LEADING TO CONNECTING PIPELINES**

PIT DESCRIPTION: **NOT REPORTED**

COMMENTS: **NOT REPORTED**

INSPECTION DATE: **09/05/1997** INSPECTION TIME: **14:33**

STATUS: **ACTIVE**

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: **YES**

IS THERE A SITE PLAN FOR THE FACILITY?: **YES**

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: **NO**

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: **NO**

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: **2**

GENERAL DESCRIPTION OF CONTAINMENT: **BARRIER, BARBED WIRE FENCE**

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: **NONE**

CONDITION OF CONTAINMENT: **ADEQUATE**

CONTAINMENT BREACHED?: **NO**

GENERAL COMMENTS ABOUT SITE: **NOT REPORTED**

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): **55**

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 9**

Distance from Property: 0.17 mi. (898 ft.) E

### **SITE INFORMATION**

ID#: 12\_f\_18451

OPERATOR: WARREN PETROLEUM COMPANY

LAND OWNER: TRIDENT NGL, INC.

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: FACILITY - A PLACE WHERE PETROLEUM IS PROCESSED AND/OR SEPARATED PRIOR TO DISTRIBUTION AND/OR TRANSPORTATION BY PIPELINES OR BARGES

PIT DESCRIPTION: SEE COMMENTS

COMMENTS: WELL #5, PROPANE WELL AND PIPELINE HEADER

INSPECTION DATE: 09/05/1997 INSPECTION TIME: 14:43

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: YES

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, PIPE RAIL

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: WELL #5, PROPANE WELL AND PIPELINE HEADER

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 50

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 10**

Distance from Property: 0.22 mi. (1,162 ft.) E

### **SITE INFORMATION**

ID#: 12\_mh\_18449

OPERATOR: WARREN PETROLEUM COMPANY

LAND OWNER: TRIDENT NGL, INC.

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: **MANIFOLD HEADER - A DEVICE (USUALLY A PIPE OR PIPE SEGMENTS) THAT SERVES AS A MOUNTING POINT FOR VALVES LEADING TO CONNECTING PIPELINES**

PIT DESCRIPTION: **NOT REPORTED**

COMMENTS: **NOT REPORTED**

INSPECTION DATE: **09/05/1997** INSPECTION TIME: **14:22**

STATUS: **ACTIVE**

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: **YES**

IS THERE A SITE PLAN FOR THE FACILITY?: **YES**

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: **NO**

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: **NO**

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: **2**

GENERAL DESCRIPTION OF CONTAINMENT: **BARRIER, PIPE RAIL**

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: **NONE**

CONDITION OF CONTAINMENT: **ADEQUATE**

CONTAINMENT BREACHED?: **NO**

GENERAL COMMENTS ABOUT SITE: **NOT REPORTED**

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): **50**

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 11**

Distance from Property: 0.22 mi. (1,162 ft.) W

### **SITE INFORMATION**

ID#: 12\_w\_18787

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971296, WELL #105

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 10:31

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 7'X7' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971296, WELL #105

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 12**

Distance from Property: 0.24 mi. (1,267 ft.) SW

### **SITE INFORMATION**

ID#: 12\_w\_18790

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971198, WELL #117A

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 10:43

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 7'X7' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971198, WELL #117A

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 12**

Distance from Property: 0.23 mi. (1,214 ft.) SW

### **SITE INFORMATION**

ID#: 12\_w\_18789

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971199, WELL #117B

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 10:40

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 7'X7' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971199, WELL #117B

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 13**

Distance from Property: 0.27 mi. (1,426 ft.) E

### **SITE INFORMATION**

ID#: 12\_w\_18754

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U. S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971141, WELL #1-C

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 8:14

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: NONE

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971141, WELL #1-C

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 55

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 13**

Distance from Property: 0.27 mi. (1,426 ft.) E

### **SITE INFORMATION**

ID#: 12\_w\_18755

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U. S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971140, WELL #1-B

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 8:17

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: NONE

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971140, WELL #1-B

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 55

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 13**

Distance from Property: 0.27 mi. (1,426 ft.) E

### **SITE INFORMATION**

ID#: 12\_w\_18616

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971139, WELL #1-A

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 8:09

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: NONE

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971139, WELL #1-A

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 55

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 14**

Distance from Property: 0.27 mi. (1,426 ft.) NW

### **SITE INFORMATION**

ID#: 12\_w\_18785

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971292, WELL #101

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 10:24

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 8'X8' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971292, WELL #101

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 15**

Distance from Property: 0.28 mi. (1,478 ft.) E

### **SITE INFORMATION**

ID#: 12\_tb\_18467

OPERATOR: WARREN PETROLEUM COMPANY

LAND OWNER: TRIDENT NGL, INC.

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: TANK BATTERY - A GROUP OF OIL STORAGE TANKS

PIT DESCRIPTION: NOT REPORTED

COMMENTS: 1 TANK

INSPECTION DATE: 09/08/1997      INSPECTION TIME: 13:05

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: YES

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: LEVEE

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: 42"

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: 1 TANK

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 16**

Distance from Property: 0.31 mi. (1,637 ft.) E

### **SITE INFORMATION**

ID#: 12\_f\_18468

OPERATOR: WARREN PETROLEUM COMPANY

LAND OWNER: TRIDENT NGL, INC.

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: FACILITY - A PLACE WHERE PETROLEUM IS PROCESSED AND/OR SEPARATED PRIOR TO DISTRIBUTION AND/OR TRANSPORTATION BY PIPELINES OR BARGES

PIT DESCRIPTION: 1 SEPARATOR, 1 FLARE

COMMENTS: NOT REPORTED

INSPECTION DATE: 09/08/1997 INSPECTION TIME: 1:11

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: YES

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: NONE

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: NOT REPORTED

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 50

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 17**

Distance from Property: 0.31 mi. (1,637 ft.) E

### **SITE INFORMATION**

ID#: 12\_w\_18469

OPERATOR: WARREN PETROLEUM COMPANY

LAND OWNER: TRIDENT NGL, INC.

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: WELL #3 (BUTANE), FAXYWC, FAPRMA, FAHIST, FASTRD, SURVEY PLAT, AND P AND A REPORT WAS RESEARCHED AND IS ATTACHED IN THE FINAL REPORT.

INSPECTION DATE: 09/08/1997 INSPECTION TIME: 13:15

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, PIPE RAIL

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: WELL #3 (BUTANE), FAXYWC, FAPRMA, FAHIST, FASTRD, SURVEY PLAT, AND P AND A REPORT WAS RESEARCHED AND IS ATTACHED IN THE FINAL REPORT.

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 55

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 18**

Distance from Property: 0.35 mi. (1,848 ft.) N

### **SITE INFORMATION**

ID#: 12\_w\_18766

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 032032, WELL #8

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 9:20

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 8'X8' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 032032, WELL #8

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 18**

Distance from Property: 0.35 mi. (1,848 ft.) N

### **SITE INFORMATION**

ID#: 12\_w\_18767

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971316, WELL #8A

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 9:23

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 8'X10' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971316, WELL #8A

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 18**

Distance from Property: 0.36 mi. (1,901 ft.) N

### **SITE INFORMATION**

ID#: 12\_w\_18765

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971317, WELL #8B

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 9:18

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 8'X8' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971317, WELL #8B

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 19**

Distance from Property: 0.35 mi. (1,848 ft.) W

### **SITE INFORMATION**

ID#: 12\_w\_18786

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971295, WELL #104

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 10:27

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 7'X8' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971295, WELL #104

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 20**

Distance from Property: 0.37 mi. (1,954 ft.) W

### **SITE INFORMATION**

ID#: 12\_w\_18788

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971297, WELL #106

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 10:36

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 6'X6' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971297, WELL #106

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 21**

Distance from Property: 0.37 mi. (1,954 ft.) E

### **SITE INFORMATION**

ID#: 12\_w\_18471

OPERATOR: WARREN PETROLEUM COMPANY

LAND OWNER: TRIDENT NGL, INC.

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 972315, WELL #12, BRINE WELL

INSPECTION DATE: 09/08/1997 INSPECTION TIME: 13:29

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, PIPE RAIL

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 972315, WELL #12, BRINE WELL

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 50

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 22**

Distance from Property: 0.37 mi. (1,954 ft.) E

### **SITE INFORMATION**

ID#: 12\_mh\_18470

OPERATOR: WARREN PETROLEUM COMPANY

LAND OWNER: TRIDENT NGL, INC.

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: **MANIFOLD HEADER - A DEVICE (USUALLY A PIPE OR PIPE SEGMENTS) THAT SERVES AS A MOUNTING POINT FOR VALVES LEADING TO CONNECTING PIPELINES**

PIT DESCRIPTION: **NOT REPORTED**

COMMENTS: **4" ASSEMBLY**

INSPECTION DATE: **09/08/1997** INSPECTION TIME: **13:20**

STATUS: **ACTIVE**

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: **YES**

IS THERE A SITE PLAN FOR THE FACILITY?: **YES**

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: **NO**

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: **NO**

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: **2**

GENERAL DESCRIPTION OF CONTAINMENT: **NONE**

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: **NONE**

CONDITION OF CONTAINMENT: **ADEQUATE**

CONTAINMENT BREACHED?: **NO**

GENERAL COMMENTS ABOUT SITE: **4" ASSEMBLY**

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): **45**

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 23**

Distance from Property: 0.37 mi. (1,954 ft.) NW

### **SITE INFORMATION**

ID#: 12\_w\_18783

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971294, WELL #103

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 10:17

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 6'X6' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971294, WELL #103

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 24**

Distance from Property: 0.43 mi. (2,270 ft.) N

### **SITE INFORMATION**

ID#: 12\_w\_18763

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U. S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971318, WELL #9A, NO SIGN; FAXYWC, FAPRMA, FAHIST, FASTRD, SURVEY PLAT, AND P AND A REPORT WAS RESEARCHED AND IS ATTACHED IN THE FINAL REPORT.

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 9:11

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 8'X8' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971318, WELL #9A, NO SIGN; FAXYWC, FAPRMA, FAHIST, FASTRD, SURVEY PLAT, AND P AND A REPORT WAS RESEARCHED AND IS ATTACHED IN THE FINAL REPORT.

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 24**

Distance from Property: 0.41 mi. (2,165 ft.) N

### **SITE INFORMATION**

ID#: 12\_w\_18764

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 032661, WELL #9

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 9:13

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 6'X8' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 032661, WELL #9

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 24**

Distance from Property: 0.43 mi. (2,270 ft.) N

### **SITE INFORMATION**

ID#: 12\_w\_18762

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U. S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971319, WELL #9B

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 9:08

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 6'X8' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971319, WELL #9B

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 25**

Distance from Property: 0.41 mi. (2,165 ft.) NW

### **SITE INFORMATION**

ID#: 12\_w\_18784

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971293, WELL #102

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 10:20

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 7'X7' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971293, WELL #102

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 26**

Distance from Property: 0.42 mi. (2,218 ft.) E

### **SITE INFORMATION**

ID#: 12\_f\_18473

OPERATOR: WARREN PETROLEUM COMPANY

LAND OWNER: TRIDENT NGL, INC.

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: FACILITY - A PLACE WHERE PETROLEUM IS PROCESSED AND/OR SEPARATED PRIOR TO DISTRIBUTION AND/OR TRANSPORTATION BY PIPELINES OR BARGES

PIT DESCRIPTION: SEE COMMENTS

COMMENTS: 3 SEPARATORS, 4 PUMPS

INSPECTION DATE: 09/08/1997 INSPECTION TIME: 13:38

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: YES

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: CONCRETE CURB

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: 6"

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: 3 SEPARATORS, 4 PUMPS

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Recycling Facilities (RCY)

**MAP ID# 27**

Distance from Property: 0.43 mi. (2,270 ft.) SE

### **SITE INFORMATION**

GEOSEARCH ID: 15430

AI: 15430

NAME: CAMERON PARISH POLICE JURY - HACKBERRY DUMP

ADDRESS: 495 MAGGIE HEBERT RD  
HACKBERRY, LA 70645

### **SITE DETAILS**

ACT NUMBER: PER19990001

SIC CODE: 4953

PERMIT: 0560-00160-00

START DATE: 9/23/1999

END DATE: 4/19/2016

PROGRAM: AIR

REGION: SOUTHWEST

MAIL ADDRESS: PO BOX 1280  
CAMERON, LA 70631

DESCRIPTION: STATE PERMIT (UNSPECIFIED)

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## Approved Hurricane Debris Dump Sites (ADS)

**MAP ID# 27**

Distance from Property: 0.43 mi. (2,270 ft.) SE

### **SITE INFORMATION**

ID#: 15430

NAME: CAMERON PARISH POLICE JURY-MAGGIE HEBERT RD.

ADDRESS: MAGGIE HEBERT RD  
HACKBERRY, LA 70645

PARISH: CAMERON

### **SITE DETAILS**

CATEGORY: NEW TEMPORARY SITE

PERMIT NUMBER: NOT REPORTED

REQUESTED ACTIVITY: STAGE, BURN (ACD)

SITE OPERATOR: CAMERON PARISH POLICE JURY

SITE OWNER: CAMERON PARISH POLICE JURY

SITE OWNER ADDRESS: P. O. BOX 1280, CAMERON, LA 70631

SITE OWNER PHONE: 337-249-9695

CONTACT NAME: NOT REPORTED

CONTACT PHONE: NOT REPORTED

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## Waste Pits (WP)

**MAP ID# 28**

Distance from Property: 0.44 mi. (2,323 ft.) E

### **SITE INFORMATION**

ID#: 12\_w\_18472

OPERATOR: WARREN PETROLEUM COMPANY

LAND OWNER: TRIDENT NGL, INC.

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 972086 WELL #1, RAW PRODUCT, FAXYWC, FAPRMA, FAHIST, FASTRD, SURVEY PLAT, AND P AND A REPORT WAS RESEARCHED AND IS ATTACHED IN THE FINAL REPORT.

INSPECTION DATE: 09/08/1997 INSPECTION TIME: 13:35

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 972086 WELL #1, RAW PRODUCT, FAXYWC, FAPRMA, FAHIST, FASTRD, SURVEY PLAT, AND P AND A REPORT WAS RESEARCHED AND IS ATTACHED IN THE FINAL REPORT.

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 55

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 29**

Distance from Property: 0.47 mi. (2,482 ft.) E

### **SITE INFORMATION**

ID#: 12\_w\_18485

OPERATOR: WARREN PETROLEUM COMPANY

LAND OWNER: HELEN NOBLES SAUCIER

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 972463, WELL #1

INSPECTION DATE: 09/09/1997 INSPECTION TIME: 10:00

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: OTHER, PIPE RAIL

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 972463, WELL #1

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 50

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 30**

Distance from Property: 0.49 mi. (2,587 ft.) NW

### **SITE INFORMATION**

ID#: 12\_w\_18775

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971300, WELL #109

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 9:49

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 6'X6' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971300, WELL #109

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 31**

Distance from Property: 0.5 mi. (2,640 ft.) N

### **SITE INFORMATION**

ID#: 12\_w\_18770

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971315, WELL #7B

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 9:32

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 8'X10' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971315, WELL #7B

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

---

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## Waste Pits (WP)

**MAP ID# 31**

Distance from Property: 0.5 mi. (2,640 ft.) N

### **SITE INFORMATION**

ID#: 12\_w\_18769

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 031739, WELL #7

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 9:30

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 8'X8' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 031739, WELL #7

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Waste Pits (WP)

**MAP ID# 32**

Distance from Property: 0.5 mi. (2,640 ft.) NW

### **SITE INFORMATION**

ID#: 12\_w\_18782

OPERATOR: U. S. DEPARTMENT OF ENERGY

LAND OWNER: U.S. DEPARTMENT OF ENERGY

PARISH: CAMERON

OIL FIELD NAME: W. HACKBERRY

PIT TYPE: WELL - AN OIL AND/OR GAS WELL

PIT DESCRIPTION: NOT REPORTED

COMMENTS: S.N. 971298, WELL #107

INSPECTION DATE: 09/25/1997 INSPECTION TIME: 10:13

STATUS: ACTIVE

IS PIT PROPERLY MARKED WITH AN ID SIGN OR PLAQUE?: YES

IS THERE A SITE PLAN FOR THE FACILITY?: NO

IS THE AREAS AFFECTED BY SPILLS MAPPED ON THE SITE PLAN?: NO

HAVE THE ENVIRONMENTALLY SENSITIVE AREAS (E.G. WETLAND) NEAR THE FACILITY BEEN MAPPED?: NO

NUMBER OF PHOTOS TAKEN OF FACILITY/SITE: 2

GENERAL DESCRIPTION OF CONTAINMENT: BARRIER, 6'X8' CONCRETE SUMP

DEPTH OF FLUID NECESSARY TO OVERFLOW COTAINMENT: NONE

CONDITION OF CONTAINMENT: ADEQUATE

CONTAINMENT BREACHED?: NO

GENERAL COMMENTS ABOUT SITE: S.N. 971298, WELL #107

HAZARD / CLEANUP RANKING (RANGE OF VALUES 0 - 90): 45

### **REMEDIAL ACTION INFORMATION**

NO DATA REPORTED

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## Unlocated Sites Summary

This list contains sites that could not be mapped due to limited or incomplete address information.

<b>Database Name</b>	<b>Site ID#</b>	<b>Site Name</b>	<b>Address</b>	<b>City/State/Zip/County</b>
RCRAGR06	LAR000068759*G	USEPA HURRICANE IKE 2ND BAYOU STAGING AREA	WEST END OF 2ND BAYOU RD	HACKBERRY 70645 Cameron
RCRANGR06	LAD980745160*NG	SHELL OIL CO CRUDE OIL TERMINAL	CHALKLEY TERMINAL	HACKBERRY 70645 Cameron

## ***Environmental Records Definitions - FEDERAL***

**AIRSAFS** Aerometric Information Retrieval System / Air Facility Subsystem

VERSION DATE: 10/20/14

The United States Environmental Protection Agency (EPA) modified the Aerometric Information Retrieval System (AIRS) to a database that exclusively tracks the compliance of stationary sources of air pollution with EPA regulations: the Air Facility Subsystem (AFS). Since this change in 2001, the management of the AIRS/AFS database was assigned to EPA's Office of Enforcement and Compliance Assurance.

**BRS** Biennial Reporting System

VERSION DATE: 12/31/11

The United States Environmental Protection Agency (EPA), in cooperation with the States, biennially collects information regarding the generation, management, and final disposition of hazardous wastes regulated under the Resource Conservation and Recovery Act of 1976 (RCRA), as amended. The Biennial Report captures detailed data on the generation of hazardous waste from large quantity generators and data on waste management practices from treatment, storage and disposal facilities. Currently, the EPA states that data collected between 1991 and 1997 was originally a part of the defunct Biennial Reporting System and is now incorporated into the RCRAInfo data system.

**CDL** Clandestine Drug Laboratory Locations

VERSION DATE: 01/20/16

The U.S. Department of Justice ("the Department") provides this information as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments. The Department does not establish, implement, enforce, or certify compliance with clean-up or remediation standards for contaminated sites; the public should contact a state or local health department or environmental protection agency for that information.

**DOCKETS** EPA Docket Data

VERSION DATE: 12/22/05

The United States Environmental Protection Agency Docket data lists Civil Case Defendants, filing dates as far back as 1971, laws broken including section, violations that occurred, pollutants involved, penalties assessed and superfund awards by facility and location. Please refer to ICIS database as source of current data.

**EC** Federal Engineering Institutional Control Sites

VERSION DATE: 08/03/15

This database includes site locations where Engineering and/or Institutional Controls have been identified as part

## ***Environmental Records Definitions - FEDERAL***

of a selected remedy for the site as defined by United States Environmental Protection Agency official remedy decision documents. A site listing does not indicate that the institutional and engineering controls are currently in place nor will be in place once the remedy is complete; it only indicates that the decision to include either of them in the remedy is documented as of the completed date of the document. Institutional controls are actions, such as legal controls, that help minimize the potential for human exposure to contamination by ensuring appropriate land or resource use. Engineering controls include caps, barriers, or other device engineering to prevent access, exposure, or continued migration of contamination.

**ERNSLA** Emergency Response Notification System

VERSION DATE: 02/21/16

This National Response Center database contains data on reported releases of oil, chemical, radiological, biological, and/or etiological discharges into the environment anywhere in the United States and its territories. The data comes from spill reports made to the U.S. Environmental Protection Agency, U.S. Coast Guard, the National Response Center and/or the U.S. Department of Transportation.

**FRSLA** Facility Registry System

VERSION DATE: 02/03/16

The United States Environmental Protection Agency's Office of Environmental Information (OEI) developed the Facility Registry System (FRS) as the centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest. The Facility Registry System replaced the Facility Index System or FINDS database.

**HMIRSR06** Hazardous Materials Incident Reporting System

VERSION DATE: 11/08/15

The HMIRS database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation located in EPA Region 6. This region includes the following states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

**ICIS** Integrated Compliance Information System (formerly DOCKETS)

VERSION DATE: 12/06/15

ICIS is a case activity tracking and management system for civil, judicial, and administrative federal Environmental Protection Agency enforcement cases. ICIS contains information on federal administrative and federal judicial cases under the following environmental statutes: the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, the Emergency Planning and Community Right-to-Know Act - Section 313, the Toxic Substances Control Act, the Federal Insecticide, Fungicide, and Rodenticide Act, the Comprehensive Environmental Response, Compensation, and Liability Act, the Safe Drinking Water Act, and the Marine Protection, Research, and Sanctuaries Act.



## Environmental Records Definitions - FEDERAL

**ICISNPDES** Integrated Compliance Information System National Pollutant Discharge Elimination System

VERSION DATE: 12/20/15

In 2006, the Integrated Compliance Information System (ICIS) - National Pollutant Discharge Elimination System (NPDES) became the NPDES national system of record for select states, tribes and territories. ICIS-NPDES is an information management system maintained by the United States Environmental Protection Agency's Office of Compliance to track permit compliance and enforcement status of facilities regulated by the NPDES under the Clean Water Act. ICIS-NPDES is designed to support the NPDES program at the state, regional, and national levels.

**LUCIS** Land Use Control Information System

VERSION DATE: 09/01/06

The LUCIS database is maintained by the U.S. Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

**MLTS** Material Licensing Tracking System

VERSION DATE: 02/12/16

MLTS is a list of approximately 8,100 sites which have or use radioactive materials subject to the United States Nuclear Regulatory Commission (NRC) licensing requirements.

**NPDES06** National Pollutant Discharge Elimination System

VERSION DATE: 04/01/07

Information in this database is extracted from the Water Permit Compliance System (PCS) database which is used by United States Environmental Protection Agency to track surface water permits issued under the Clean Water Act. This database includes permitted facilities located in EPA Region 6. This region includes the following states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. The NPDES database was collected from December 2002 until April 2007. Refer to the PCS and/or ICIS-NPDES database as source of current data.

**PADS** PCB Activity Database System

VERSION DATE: 07/01/14

The PCB Activity Database System (PADS) is used by the United States Environmental Protection Agency to monitor the activities of polychlorinated biphenyls (PCB) handlers.

**PCSR06** Permit Compliance System

VERSION DATE: 08/01/12

## ***Environmental Records Definitions - FEDERAL***

The Permit Compliance System is used in tracking enforcement status and permit compliance of facilities controlled by the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act and is maintained by the United States Environmental Protection Agency's Office of Compliance. PCS is designed to support the NPDES program at the state, regional, and national levels. This database includes permitted facilities located in EPA Region 6. This region includes the following states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. PCS has been modernized, and no longer exists. National Pollutant Discharge Elimination System (ICIS-NPDES) data can now be found in Integrated Compliance Information System (ICIS).

**RCRASC** RCRA Sites with Controls

VERSION DATE: 02/23/16

This list of Resource Conservation and Recovery Act sites with institutional controls in place is provided by the U.S. Environmental Protection Agency.

**SFLIENS** CERCLIS Liens

VERSION DATE: 06/08/12

A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which United States Environmental Protection Agency has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties. This database contains those CERCLIS sites where the Lien on Property action is complete.

**SSTS** Section Seven Tracking System

VERSION DATE: 12/08/14

The United States Environmental Protection Agency tracks information on pesticide establishments through the Section Seven Tracking System (SSTS). SSTS records the registration of new establishments and records pesticide production at each establishment. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) requires that production of pesticides or devices be conducted in a registered pesticide-producing or device-producing establishment. ("Production" includes formulation, packaging, repackaging, and relabeling.)

**TRI** Toxics Release Inventory

VERSION DATE: 12/31/14

The Toxics Release Inventory, provided by the United States Environmental Protection Agency, includes data on toxic chemical releases and waste management activities from certain industries as well as federal and tribal facilities. This inventory contains information about the types and amounts of toxic chemicals that are released each year to the air, water, and land as well as information on the quantities of toxic chemicals sent to other facilities for further waste management.

## Environmental Records Definitions - FEDERAL

**TSCA** Toxic Substance Control Act Inventory

VERSION DATE: 12/31/06

The Toxic Substances Control Act (TSCA) was enacted in 1976 to ensure that chemicals manufactured, imported, processed, or distributed in commerce, or used or disposed of in the United States do not pose any unreasonable risks to human health or the environment. TSCA section 8(b) provides the United States Environmental Protection Agency authority to "compile, keep current, and publish a list of each chemical substance that is manufactured or processed in the United States." This TSCA Chemical Substance Inventory contains non-confidential information on the production amount of toxic chemicals from each manufacturer and importer site.

**NLRRCRAG** No Longer Regulated RCRA Generator Facilities

VERSION DATE: 02/09/16

This database includes RCRA Generator facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements. This listing includes facilities that formerly generated hazardous waste.

Large Quantity Generators: Generate 1,000 kg or more of hazardous waste during any calendar month; or Generate more than 1 kg of acutely hazardous waste during any calendar month; or Generate more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or acutely hazardous waste during any calendar month; or Generate 1 kg or less of acutely hazardous waste during any calendar month, and accumulate more than 1kg of acutely hazardous waste at any time; or Generate 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulated more than 100 kg of that material at any time.

Small Quantity Generators: Generate more than 100 and less than 1000 kilograms of hazardous waste during any calendar month and accumulate less than 6000 kg of hazardous waste at any time; or Generate 100 kg or less of hazardous waste during any calendar month, and accumulate more than 1000 kg of hazardous waste at any time.

Conditionally Exempt Small Quantity Generators: Generate 100 kilograms or less of hazardous waste per calendar month, and accumulate 1000 kg or less of hazardous waste at any time; or Generate one kilogram or less of acutely hazardous waste per calendar month, and accumulate at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or acutely hazardous waste; or Generate 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or acutely hazardous waste during any calendar month, and accumulate at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste.

**RCRAGR06** Resource Conservation & Recovery Act - Generator Facilities

VERSION DATE: 02/09/16

This database includes sites listed as generators of hazardous waste (large, small, and exempt) in the RCRAInfo

## ***Environmental Records Definitions - FEDERAL***

system. The United States Environmental Protection Agency defines RCRAInfo as the comprehensive information system which provides access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). This database includes sites located in EPA Region 6. This region includes the following states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

**Large Quantity Generators:** Generate 1,000 kg or more of hazardous waste during any calendar month; or Generate more than 1 kg of acutely hazardous waste during any calendar month; or Generate more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or acutely hazardous waste during any calendar month; or Generate 1 kg or less of acutely hazardous waste during any calendar month, and accumulate more than 1kg of acutely hazardous waste at any time; or Generate 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulated more than 100 kg of that material at any time.

**Small Quantity Generators:** Generate more than 100 and less than 1000 kilograms of hazardous waste during any calendar month and accumulate less than 6000 kg of hazardous waste at any time; or Generate 100 kg or less of hazardous waste during any calendar month, and accumulate more than 1000 kg of hazardous waste at any time.

**Conditionally Exempt Small Quantity Generators:** Generate 100 kilograms or less of hazardous waste per calendar month, and accumulate 1000 kg or less of hazardous waste at any time; or Generate one kilogram or less of acutely hazardous waste per calendar month, and accumulate at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or acutely hazardous waste; or Generate 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or acutely hazardous waste during any calendar month, and accumulate at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste.

### **RCRANGR06**

Resource Conservation & Recovery Act - Non-Generator Facilities

VERSION DATE: 02/09/16

This database identifies RCRAInfo system sites that only handle hazardous waste, such as transporters, without generating any amount hazardous waste. The United States Environmental Protection Agency defines RCRAInfo as the comprehensive information system which provides access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). This database includes sites located in EPA Region 6. This region includes the following states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

### **HISTPST**

Historical Gas Stations

VERSION DATE: NR

This historic directory of service stations is provided by the Cities Service Company. The directory includes

## Environmental Records Definitions - FEDERAL

Cities Service filling stations that were located throughout the United States in 1930.

**BF** Brownfields Management System

VERSION DATE: 01/28/16

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. The United States Environmental Protection Agency maintains this database to track activities in the various brown field grant programs including grantee assessment, site cleanup and site redevelopment. This database included tribal brownfield sites.

**DNPL** Delisted National Priorities List

VERSION DATE: 03/07/16

This database includes sites from the United States Environmental Protection Agency's Final National Priorities List (NPL) where remedies have proven to be satisfactory or sites where the original analyses were inaccurate, and the site is no longer appropriate for inclusion on the NPL, and final publication in the Federal Register has occurred.

**NLRRCRAT** No Longer Regulated RCRA Non-CORRACTS TSD Facilities

VERSION DATE: 02/09/16

This database includes RCRA Non-Corrective Action TSD facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements. This listing includes facilities that formerly treated, stored or disposed of hazardous waste.

**ODI** Open Dump Inventory

VERSION DATE: 06/01/85

The open dump inventory was published by the United States Environmental Protection Agency. An "open dump" is defined as a facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section 4004 of the Solid Waste Disposal Act (42 U.S.C. 6944) and which is not a facility for disposal of hazardous waste. This inventory has not been updated since June 1985.

**RCRAT** Resource Conservation & Recovery Act - Non-CORRACTS Treatment, Storage & Disposal Facilities

VERSION DATE: 02/09/16

This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste in the RCRAInfo system. The United States Environmental Protection Agency defines RCRAInfo as the comprehensive information system which provides access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of

## ***Environmental Records Definitions - FEDERAL***

1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS).

**SEMS** Superfund Enterprise Management System

VERSION DATE: 03/07/16

The U.S. Environmental Protection Agency's (EPA) Office of Solid Waste and Emergency Response, Office of Superfund Remediation and Technology Innovation (OSRTI), has implemented The Superfund Enterprise Management System (SEMS), formerly known as CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) to track and report on clean-up and enforcement activities taking place at Superfund sites. SEMS represents a joint development and ongoing collaboration between Superfund's Remedial, Removal, Federal Facilities, Enforcement and Emergency Response programs.

**SEMSARCH** Superfund Enterprise Management System Archived Site Inventory

VERSION DATE: 03/16/16

The Superfund Enterprise Management System Archive listing (SEMS-ARCHIVE) has replaced the CERCLIS NFRAP reporting system in 2015. This listing reflect sites that have been assessed and no further remediation is planned and is of no further interest under the Superfund program.

**DOD** Department of Defense Sites

VERSION DATE: 06/21/10

This information originates from the National Atlas of the United States Federal Lands data, which includes lands owned or administered by the Federal government. Army DOD, Army Corps of Engineers DOD, Air Force DOD, Navy DOD and Marine DOD areas of 640 acres or more are included.

**FUDS** Formerly Used Defense Sites

VERSION DATE: 06/01/15

The Formerly Used Defense Sites (FUDS) inventory includes properties previously owned by or leased to the United States and under Secretary of Defense Jurisdiction, as well as Munitions Response Areas (MRAs). The remediation of these properties is the responsibility of the Department of Defense. This data is provided by the U.S. Army Corps of Engineers (USACE), the boundaries/polygon data are based on preliminary findings and not all properties currently have polygon data available. **DISCLAIMER:** This data represents the results of data collection/processing for a specific USACE activity and is in no way to be considered comprehensive or to be used in any legal or official capacity as presented on this site. While the USACE has made a reasonable effort to insure the accuracy of the maps and associated data, it should be explicitly noted that USACE makes no warranty, representation or guaranty, either expressed or implied, as to the content, sequence, accuracy, timeliness or completeness of any of the data provided herein. For additional information on Formerly Used Defense Sites please contact the USACE Public Affairs Office at (202) 528-4285.



## ***Environmental Records Definitions - FEDERAL***

**NLRRCRAC** No Longer Regulated RCRA Corrective Action Facilities

VERSION DATE: 02/09/16

This database includes RCRA Corrective Action facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements.

**NPL** National Priorities List

VERSION DATE: 03/07/16

This database includes United States Environmental Protection Agency (EPA) National Priorities List sites that fall under the EPA's Superfund program, established to fund the cleanup of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action.

**PNPL** Proposed National Priorities List

VERSION DATE: 03/07/16

This database contains sites proposed to be included on the National Priorities List (NPL) in the Federal Register. The United States Environmental Protection Agency investigates these sites to determine if they may present long-term threats to public health or the environment.

**RCRAC** Resource Conservation & Recovery Act - Corrective Action Facilities

VERSION DATE: 02/09/16

This database includes all hazardous waste sites with ongoing corrective action activity and where corrective action is statutorily required to be address but have not had corrective action imposed in the RCRAInfo system. The Corrective Action Program requires owners or operators of RCRA facilities (or treatment, storage, and disposal facilities) to investigate and cleanup contamination in order to protect human health and the environment. The United States Environmental Protection Agency defines RCRAInfo as the comprehensive information system which provides access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS).

**RCRASUBC** Resource Conservation & Recovery Act - Subject to Corrective Action Facilities

VERSION DATE: 02/09/16

This database includes hazardous waste sites which are potentially subject to corrective action regardless of whether they have correction action underway, plus any sites showing a corrective action event of RFI or beyond in the RCRAInfo system. Sites conducting corrective action under analogous state authorities are also included. The United States Environmental Protection Agency defines RCRAInfo as the comprehensive information system which provides access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and

## ***Environmental Records Definitions - FEDERAL***

reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS).

**RODS** Record of Decision System

VERSION DATE: 07/01/13

These decision documents maintained by the United States Environmental Protection Agency describe the chosen remedy for NPL (Superfund) site remediation. They also include site history, site description, site characteristics, community participation, enforcement activities, past and present activities, contaminated media, the contaminants present, and scope and role of response action.

## **Environmental Records Definitions - STATE (LA)**

### **ASBESTOS**

Asbestos Demolition and Renovation Notification Projects

VERSION DATE: 02/10/16

This listing of Asbestos Demolition and Renovation Projects is provided by the Louisiana Department of Environmental Quality (DEQ). In accordance with the DEQ Air Quality Regulations, LAC 33:III.5151.F.1.f, any contractor performing removal of asbestos containing material that involves Regulated Asbestos Containing Material (see definition in LAC 33:III.5151.B) must become licensed by the Louisiana State Licensing Board for Contractors.

### **CDL**

Clandestine Drug Laboratory Locations

VERSION DATE: 02/13/16

This list of Clandestine Methamphetamine Labs is provided by the Louisiana Department of Environmental Quality. These residential real properties have been reported as potentially contaminated:

### **IC**

Sites With Controls

VERSION DATE: 12/15/15

This site listing is maintained by the Louisiana Department of Environmental Quality's Remediation Division. Institutional controls (IC) are administrative and/or legal measures in place to safeguard the public and the environment from potential contamination. In certain circumstances, local zoning or ordinances can serve as an IC. This listing may also include locations where Engineering Controls are in effect, such as a cap, barrier, or other engineering device to prevent access, exposure, or continued migration of contamination.

### **LIENS**

Listing of Louisiana DEQ Liens

VERSION DATE: 08/25/15

A listing of liens filed against properties by the Remediation Services Division of the Louisiana Department of Environmental Quality.

### **SPILLS**

Spills Listing

VERSION DATE: 03/23/16

The Louisiana Department of Environmental Quality provides this database. Information includes releases of hazardous or potential hazardous chemical/materials into the environment.

### **WASTETIRE**

Waste Tire Generator List

VERSION DATE: 03/16/16

This listing of registered waste tire generators is maintained by the Louisiana Department of Environmental Quality.

## ***Environmental Records Definitions - STATE (LA)***

**DCR** Drycleaning Facilities

VERSION DATE: 04/18/16

This listing of drycleaning facilities was provided by the Louisiana Department of Environmental Quality.

**NLRUST** No Longer Reported Underground Storage Tanks

VERSION DATE: 02/01/04

This Underground Storage Tank listing originates from the no longer active PEL filing system of the Louisiana Department of Environmental Quality.

**UST** Underground Storage Tanks

VERSION DATE: 03/03/16

The Underground Storage Tank database includes a listing of registered underground storage tanks maintained by the Louisiana Department of Environmental Quality.

**ADS** Approved Hurricane Debris Dump Sites

VERSION DATE: 02/24/16

This Louisiana Department of Environmental Quality listing of hurricane debris sites contains the temporary and the permitted landfills in the state that can currently accept hurricane debris (C&D, chipping, grinding, burning, staging, woodwaste). These landfills include Type I (Non-hazardous Industrial), Type II (Municipal) and Type III (Construction and Demolition Debris and Wood Waste).

**HLUST** Historical Leaking Underground Storage Tanks

VERSION DATE: 03/26/99

The Historical Leaking Underground Storage Tank database provides descriptive leaking facility reports from the Louisiana Department of Environmental Quality's Underground Storage Tanks Case History System. This database has not been updated since 1999. Please refer to LUST database as source of current data.

**LUST** Leaking Underground Storage Tanks

VERSION DATE: 03/02/16

This database contains facilities with reported leaking underground storage tanks and is maintained by the by the Louisiana Department of Environmental Quality.

**RCY** Recycling Facilities

VERSION DATE: 04/01/16

## **Environmental Records Definitions - STATE (LA)**

This listing of recycling facilities is maintained by the Louisiana Department of Environmental Quality.

**SWLF** Solid Waste Landfills

VERSION DATE: 05/11/16

This Louisiana Department of Environmental Quality solid waste facility listing includes type I, II, and III landfills. A type I facility is used for the disposal of industrial solid waste. A type II facility is used for the disposal of residential or commercial solid waste. A type III facility is defined in LAC 33:VII.115 as a facility used for disposing or processing of construction/demolition debris or wood waste, composting organic waste to produce a usable material, or separating recyclable wastes. Residential, commercial, or industrial solid waste must not be disposed in a type III facility.

**VRP** Voluntary Remediation Program Sites

VERSION DATE: 12/15/15

The Louisiana Department of Environmental Quality's Voluntary Remediation Program (VRP) provides a mechanism by which property owners (or potential owners) or others can clean up contaminated properties and receive a release of liability for further cleanup of historical contamination at a site. This release of liability flows to future owners of the property as well.

**WP** Waste Pits

VERSION DATE: 01/01/99

This listing is from a 1999 Louisiana Oil Spill Coordinator's Office (LOSCO) study, which identified statewide abandoned non-hazardous waste pits and facilities that have the potential to initiate an oil spill.

**CPI** Confirmed and Potential Sites Inventory

VERSION DATE: 04/25/16

The Inactive and Abandoned Sites Division of the Louisiana Department of Environmental Quality maintains the confirmed and potential sites inventory. This listing contains state-equivalent CERCLIS hazardous wastes sites.

## ***Environmental Records Definitions - LOCAL***

**MBF** City of New Orleans Marketable Brownfield Properties

VERSION DATE: 03/15/07

This listing of marketable brownfield properties is maintained by the City of New Orleans Office of Environmental Affairs. All properties included on this listing are or are alleged to be closed service stations.

**PBF** City of New Orleans Potential Brownfield Properties

VERSION DATE: NR

The Brownfields database is maintained by the City of New Orleans Office of Environmental Affairs. This listing of potential brownfields includes abandoned or underused industrial or commercial properties with possible environmental contamination. The Louisiana Department of Environmental Quality and the United States Environmental Protection Agency provide support to the City of New Orleans for the redevelopment of these properties. The information contained within this listing was compiled sometime between 2002 and 2003.

**WBF** City of Westwego Brownfield Renewal Projects

VERSION DATE: 10/01/08

The Westwego Brownfields Renewal Project was started in October 2000, funded by a \$200,000 EPA Grant from Region VI. Mayor Robert Billiot and the Westwego City Council are committed to identifying and restoring the brownfield sites in Westwego. This is being done in conjunction with the redevelopment of the City's historic Salaville area.



## ***Environmental Records Definitions - TRIBAL***

**USTR06**                      Underground Storage Tanks On Tribal Lands

VERSION DATE: 05/13/15

This database, provided by the United States Environmental Protection Agency (EPA), contains underground storage tanks on Tribal lands located in EPA Region 6. This region includes the following states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

**LUSTR06**                      Leaking Underground Storage Tanks On Tribal Lands

VERSION DATE: 04/01/15

This database, provided by the United States Environmental Protection Agency (EPA), contains leaking underground storage tanks on Tribal lands located in EPA Region 6. This region includes the following states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

**ODINDIAN**                      Open Dump Inventory on Tribal Lands

VERSION DATE: 11/08/06

This Indian Health Service database contains information about facilities and sites on tribal lands where solid waste is disposed of, which are not sanitary landfills or hazardous waste disposal facilities, and which meet the criteria promulgated under section 4004 of the Solid Waste Disposal Act (42 U.S.C. 6944).

**INDIANRES**                      Indian Reservations

VERSION DATE: 01/01/00

The Department of Interior and Bureau of Indian Affairs maintains this database that includes American Indian Reservations, off-reservation trust lands, public domain allotments, Alaska Native Regional Corporations and Recognized State Reservations.



**Date:** 05/23/16

**GS Job Number:** 67530

**Company Name:** S&B Infrastructure-Houston

**Project Number:**

**Site Information:** 2.1 Mile Corridor  
Cameron Parish, Hackberry, Louisiana, 70645

The collections of fire insurance maps listed below were reviewed according to the site information supplied by client. Based on the information provided, no coverage is available.

Library of Congress  
University Publications of America  
Other Libraries (universities, state, local, etc.).

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## **GeoPlus Oil & Gas Report**

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[Satellite view](#)

*Target Property:*

**2.1 Mile Corridor**

**Hackberry, Cameron Parish, Louisiana 70645**

*Prepared For:*

**S&B Infrastructure-Houston**

**Order #: 67530**

**Job #: 146783**

**Date: 05/24/2016**

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## Target Property Summary

### **Target Property Information**

2.1 Mile Corridor

Hackberry, Louisiana 70645

#### **Coordinates**

Corridor

#### **USGS Quadrangle**

Browns Lake, LA

### **Geographic Coverage Information**

**County/Parish:** Cameron (LA)

**ZipCode(s):**

Hackberry LA: 70645

#### **Radon**

\* Target property is located in Radon Zone .



## Database Radius Summary

### STATE (LA) LISTING

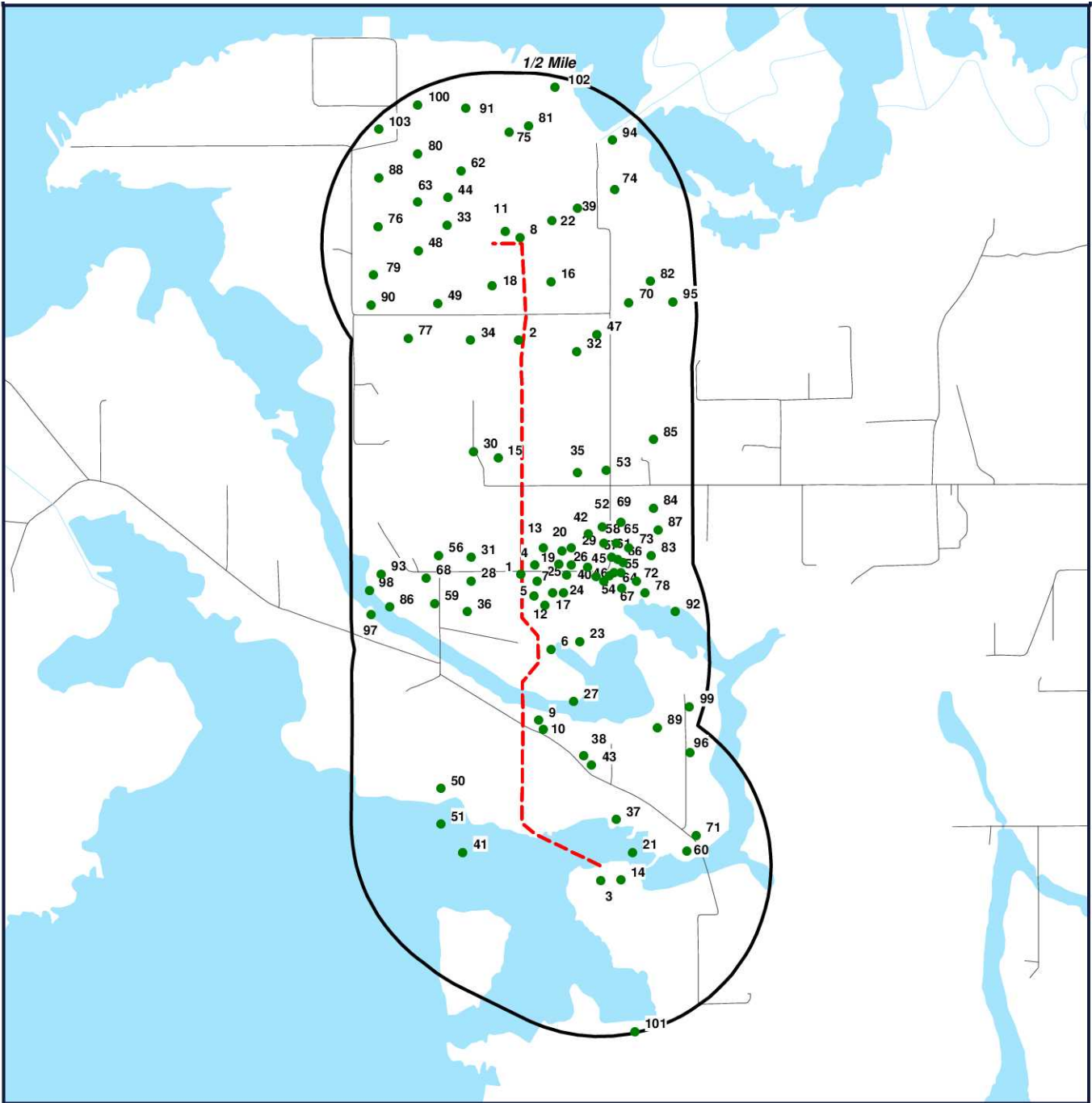
Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
OG	0.5000	2	26	45	65	NS	NS	138
<b>SUB-TOTAL</b>		2	26	45	65	0	0	138
<b>TOTAL</b>		2	26	45	65	0	0	138

**NOTES:**

NS = NOT SEARCHED

TP/AP = TARGET PROPERTY/ADJACENT PROPERTY

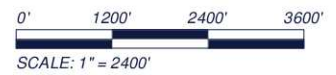
# OIL & GAS MAP



- - - Target Property (TP)

● Well Location

**2.1 Mile Corridor  
Hackberry, Louisiana  
70645**



[Click here to access Satellite view](#)

## Located Sites Summary

Map ID#	Database Name	Site ID#	Distance From Site	Site Name	Address
1	OG	21241	0.01 mi. N (53 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
2	OG	971303	0.02 mi. SW (106 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
3	OG	971144	0.03 mi. SE (158 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
3	OG	971159	0.03 mi. SE (158 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
4	OG	66625	0.04 mi. E (211 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
5	OG	12453	0.04 mi. SE (211 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
5	OG	12246	0.04 mi. SE (211 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
6	OG	12118	0.04 mi. NE (211 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
7	OG	53386	0.05 mi. SE (264 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
8	OG	16616	0.04 mi. N (211 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
9	OG	19373	0.05 mi. E (264 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
10	OG	140752	0.06 mi. E (317 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
11	OG	16617	0.06 mi. N (317 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
12	OG	12832	0.07 mi. E (370 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
13	OG	16964	0.07 mi. NE (370 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
14	OG	971143	0.08 mi. SE (422 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
14	OG	971142	0.07 mi. E (370 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
14	OG	971145	0.08 mi. E (422 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
15	OG	127227	0.07 mi. W (370 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
16	OG	126782	0.09 mi. NE (475 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
17	OG	131098	0.1 mi. SE (528 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
18	OG	86594	0.1 mi. W (528 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
18	OG	971320	0.1 mi. W (528 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
18	OG	973120	0.1 mi. W (528 ft.)		ASSUMPTION COUNTY, BELLE ROSE, LA 70341
18	OG	971321	0.1 mi. W (528 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645
19	OG	12621	0.13 mi. E (686 ft.)		CAMERON COUNTY, HACKBERRY, LA 70645

## Located Sites Summary

19	OG	12537	0.11 mi. E (581 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
20	OG	13701	0.12 mi. E (634 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
21	OG	28238	0.12 mi. NE (634 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
22	OG	29320	0.13 mi. NE (686 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
23	OG	12540	0.13 mi. E (686 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
24	OG	12605	0.13 mi. E (686 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
25	OG	65591	0.14 mi. E (739 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
25	OG	12569	0.13 mi. E (686 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
25	OG	12542	0.16 mi. E (845 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
26	OG	12622	0.15 mi. E (792 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
27	OG	14536	0.14 mi. SE (739 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
28	OG	74240	0.15 mi. W (792 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
29	OG	21727	0.15 mi. E (792 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
30	OG	10657	0.17 mi. W (898 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
30	OG	69827	0.15 mi. W (792 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
31	OG	89355	0.15 mi. W (792 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
32	OG	972090	0.16 mi. E (845 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
33	OG	10492	0.16 mi. NW (845 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
34	OG	971299	0.16 mi. W (845 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
35	OG	53342	0.17 mi. E (898 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
36	OG	18984	0.17 mi. W (898 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
37	OG	114659	0.17 mi. NE (898 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
38	OG	19565	0.18 mi. E (950 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
39	OG	29540	0.19 mi. NE (1003 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
39	OG	29532	0.21 mi. NE (1109 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
40	OG	12488	0.19 mi. E (1003 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645

## Located Sites Summary

40	OG	21281	0.2 mi. E (1056 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
40	OG	12518	0.22 mi. E (1162 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
41	OG	75405	0.19 mi. W (1003 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
42	OG	66987	0.2 mi. E (1056 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
43	OG	13867	0.21 mi. E (1109 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
44	OG	67841	0.21 mi. NW (1109 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
45	OG	12519	0.22 mi. E (1162 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
46	OG	68425	0.25 mi. E (1320 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
47	OG	972089	0.22 mi. E (1162 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
48	OG	971296	0.22 mi. W (1162 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
49	OG	971198	0.24 mi. SW (1267 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
49	OG	971199	0.23 mi. SW (1214 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
50	OG	46275	0.24 mi. W (1267 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
51	OG	73947	0.24 mi. W (1267 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
52	OG	64719	0.24 mi. E (1267 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
53	OG	12570	0.25 mi. E (1320 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
53	OG	57177	0.25 mi. E (1320 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
54	OG	12484	0.26 mi. E (1373 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
55	OG	12485	0.25 mi. E (1320 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
55	OG	12464	0.27 mi. E (1426 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
55	OG	12487	0.25 mi. E (1320 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
55	OG	12486	0.26 mi. E (1373 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
56	OG	93878	0.25 mi. W (1320 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
57	OG	12460	0.27 mi. E (1426 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
58	OG	52059	0.25 mi. E (1320 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
59	OG	12319	0.26 mi. W (1373 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645

## Located Sites Summary

60	OG	971139	0.27 mi. E (1426 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
60	OG	971140	0.27 mi. E (1426 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
60	OG	971141	0.26 mi. E (1373 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
60	OG	971138	0.26 mi. E (1373 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
61	OG	12360	0.28 mi. E (1478 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
62	OG	126845	0.26 mi. NW (1373 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
63	OG	10491	0.27 mi. NW (1426 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
63	OG	971292	0.27 mi. NW (1426 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
64	OG	12562	0.29 mi. E (1531 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
64	OG	12495	0.29 mi. E (1531 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
65	OG	51100	0.28 mi. E (1478 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
66	OG	12529	0.3 mi. E (1584 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
67	OG	21481	0.3 mi. E (1584 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
68	OG	12676	0.29 mi. W (1531 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
69	OG	66402	0.29 mi. E (1531 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
70	OG	972088	0.31 mi. E (1637 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
71	OG	971308	0.31 mi. E (1637 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
72	OG	40861	0.34 mi. E (1795 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
72	OG	41028	0.34 mi. E (1795 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
72	OG	12489	0.32 mi. E (1690 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
73	OG	12845	0.32 mi. E (1690 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
74	OG	16287	0.33 mi. NE (1742 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
74	OG	16618	0.33 mi. NE (1742 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
75	OG	971316	0.35 mi. N (1848 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
75	OG	971317	0.35 mi. N (1848 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
75	OG	32032	0.35 mi. N (1848 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645



## Located Sites Summary

76	OG	971295	0.35 mi. W (1848 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
77	OG	29372	0.35 mi. W (1848 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
78	OG	12375	0.36 mi. NE (1901 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
79	OG	971297	0.36 mi. W (1901 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
79	OG	971661	0.37 mi. W (1954 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
80	OG	971294	0.36 mi. NW (1901 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
81	OG	54573	0.37 mi. N (1954 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
82	OG	972315	0.38 mi. E (2006 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
83	OG	15295	0.38 mi. E (2006 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
84	OG	85808	0.39 mi. E (2059 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
84	OG	68852	0.39 mi. E (2059 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
85	OG	126995	0.39 mi. E (2059 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
86	OG	92057	0.39 mi. W (2059 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
87	OG	21379	0.4 mi. E (2112 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
88	OG	971293	0.4 mi. NW (2112 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
89	OG	84389	0.4 mi. E (2112 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
90	OG	22151	0.4 mi. SW (2112 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
91	OG	32661	0.43 mi. N (2270 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
91	OG	971319	0.44 mi. N (2323 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
91	OG	971318	0.41 mi. N (2165 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
92	OG	12346	0.42 mi. E (2218 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
93	OG	112805	0.42 mi. W (2218 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
94	OG	10611	0.43 mi. NE (2270 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
95	OG	972086	0.44 mi. E (2323 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
96	OG	85306	0.44 mi. NE (2323 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
96	OG	972464	0.45 mi. NE (2376 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645

## Located Sites Summary

97	OG	74362	0.45 mi. W (2376 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
98	OG	54439	0.45 mi. W (2376 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
99	OG	972463	0.46 mi. E (2429 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
100	OG	971300	0.49 mi. NW (2587 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
101	OG	95510	0.49 mi. S (2587 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
102	OG	971315	0.5 mi. N (2640 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
102	OG	31739	0.5 mi. N (2640 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645
103	OG	971298	0.5 mi. NW (2640 ft.)	CAMERON COUNTY, HACKBERRY, LA 70645

# Oil & Gas Well Report

MAP ID	API #	WELL NAME AND NUMBER	WELL TYPE	PERMIT DATE	SPUD DATE	COMP. DATE	T.D.	STR	LATITUDE	LONGITUDE
1	00000000000000	LUDGER DUHON	NO PRODUCT SPECIFIED	05/07/38	NR	NR	0	T12S S29 R10	29.9830	-93.4009
2	17023880810000	DOE SPR	NO PRODUCT SPECIFIED	10/16/79	11/22/80	02/28/81	5050	T12S S20 R10	29.9929	-93.4010
3	17023880550000	DOE SWD	NO PRODUCT SPECIFIED	05/22/79	05/16/78	10/21/78	6284	T12S S33 R10	29.9700	-93.3967
3	17023880570000	DOE SWD	NO PRODUCT SPECIFIED	08/11/78	08/11/78	NR	6718	T12S S33 R10	29.9700	-93.3970
4	17023015870000	VERNIE H SUDUWISCHER	OIL	06/24/57	06/24/57	07/24/57	3058	T12S S28 R10	29.9834	-93.4002
5	17023015840000	LUDGER DUHON	NO PRODUCT SPECIFIED	02/06/29	NR	NR	0	T12S S28 R10	29.9823	-93.4002
5	17023015850000	LUDGER DUHON	OIL	11/05/28	11/02/28	NR	3168	T12S S28 R10	29.9820	-93.4003
6	17023015880000	LUDGER DUHON	NO PRODUCT SPECIFIED	08/25/28	08/21/28	NR	4017	T12S S28 R10	29.9798	-93.3994
7	17023015830000	LUDGER DUHON ET AL	NO PRODUCT SPECIFIED	08/26/54	NR	NR	0	T12S S28 R10	29.9827	-93.4001
8	00000000000000	J C ELENDRER	NO PRODUCT SPECIFIED	01/10/34	03/30/34	04/29/34	2655	T12S S20 R10	29.9972	-93.4009
9	17023015550000	DROZAN HEBERT	NO PRODUCT SPECIFIED	10/14/36	10/24/36	12/12/36	6026	T12S S33 R10	29.9768	-93.4000
10	17023206870000	HEBERT ESTATE	NO PRODUCT SPECIFIED	09/01/72	09/06/72	09/16/72	6260	T12S S33 R10	29.9764	-93.3998
11	00000000000000	CLARA NELLENDER	NO PRODUCT SPECIFIED	01/10/34	05/01/34	06/04/34	0	T12S S20 R10	29.9975	-93.4016
12	00000000000000	LUDGER DUHON	NO PRODUCT SPECIFIED	07/06/29	07/15/29	NR	3424	T12S S28 R10	29.9816	-93.3997
13	17023015860000	KAOUGH	NO PRODUCT SPECIFIED	05/24/34	07/07/34	11/13/35	3172	T12S S28 R10	29.9841	-93.3998
14	17023880540000	DOE SWD	NO PRODUCT SPECIFIED	05/22/79	09/03/78	10/20/78	5837	T12S S33 R10	29.9699	-93.3958
14	17023880530000	DOE SWD	NO PRODUCT SPECIFIED	05/22/79	07/02/78	09/27/78	7684	T12S S33 R10	29.9700	-93.3960
14	17023880560000	DOE SWD	NO PRODUCT SPECIFIED	05/22/79	08/07/78	10/20/78	6239	T12S S33 R10	29.9699	-93.3958
15	17023202800000	LENARD HUGHES	NO PRODUCT SPECIFIED	12/13/68	NR	NR	0	T12S S29 R10	29.9879	-93.4020
16	17023202650000	B LYONS PALMER	NO PRODUCT SPECIFIED	11/13/68	11/30/68	12/27/68	1630	T12S S21 R10	29.9954	-93.3994
17	17023204260000	LUDGER DUHON	NO PRODUCT SPECIFIED	11/12/69	11/12/69	11/21/69	3968	T12S S28 R10	29.9822	-93.3993
18	17023014720000	DOE SPR	NO PRODUCT SPECIFIED	09/12/61	10/07/61	01/18/62	4000	T12S S20 R10	29.9951	-93.4023
18	17023880960000	DOE SPR	NO PRODUCT SPECIFIED	06/09/78	08/25/78	11/04/78	3744	T12S S20 R10	29.9952	-93.4023
18	17007880600000	DOW BRINE	NO PRODUCT SPECIFIED	05/08/02	NR	NR	4000	T12S S42 R13	29.9952	-93.4023
18	17023880970000	DOE SPR	NO PRODUCT SPECIFIED	06/09/78	11/13/78	01/09/79	3760	T12S S20 R10	29.9949	-93.4023
19	17023015920000	KAOUGH	NO PRODUCT SPECIFIED	04/23/29	04/22/29	NR	3293	T12S S28 R10	29.9834	-93.3988
19	17023015930000	KAOUGH	OIL	03/14/29	03/19/29	NR	3029	T12S S28 R10	29.9834	-93.3990
20	00000000000000	SANNER	OIL	04/21/30	NR	NR	0	T12S S28 R10	29.9839	-93.3989
21	17023015570000	JOHN D HEBERT	NO PRODUCT SPECIFIED	03/26/43	04/04/43	05/22/43	9710	T12S S33 R10	29.9712	-93.3954
22	00000000000000	J C ELENDRER	NO PRODUCT SPECIFIED	04/27/44	NR	NR	0	T12S S21 R10	29.9980	-93.3994
23	17023025080000	LUGER DUHON	OIL	03/18/29	03/19/29	NR	3197	T12S S28 R10	29.9801	-93.3980
24	00000000000000	LUDGER DUHON	NO PRODUCT SPECIFIED	04/13/29	NR	NR	0	T12S S28 R10	29.9822	-93.3988
25	17023015950000	VERNIE H SUBWISCHER	NO PRODUCT SPECIFIED	04/03/57	03/30/57	04/10/57	3030	T12S S28 R10	29.9829	-93.3985
25	17023015940000	LUDGER DUHON	OIL	04/03/29	04/19/29	NR	3170	T12S S28 R10	29.9829	-93.3987
25	17023015960000	LUGER DUHON	OIL	03/19/29	03/02/29	NR	3140	T12S S28 R10	29.9828	-93.3983
26	17023015910000	KAOUGH	OIL	04/23/29	04/24/29	NR	3152	T12S S28 R10	29.9834	-93.3984

# Oil & Gas Well Report

27	17023015530000	C HEBERT EST	NO PRODUCT SPECIFIED	03/06/31	NR	NR	0	T12S S33 R10	29.9776	-93.3983
28	17023015340000	BEULAH DUHON DUGAS	NO PRODUCT SPECIFIED	03/17/59	03/16/59	03/21/59	3150	T12S S29 R10	29.9827	-93.4033
29	17023015970000	DORISSE KAOUGH	OIL	09/27/38	10/12/38	11/14/38	3040	T12S S28 R10	29.9841	-93.3984
30	17023015400000	LITTLE	NO PRODUCT SPECIFIED	02/12/27	02/25/27	NR	1838	T12S S29 R10	29.9884	-93.4036
30	17023015270000	JASPER LITTLE ET AL	NO PRODUCT SPECIFIED	03/18/58	03/20/58	04/01/58	1833	T12S S29 R10	29.9882	-93.4032
31	17023015450000	DUGAS, ET AL	OIL	03/22/62	03/26/62	04/08/62	3353	T12S S29 R10	29.9837	-93.4033
32	17023881250000	LPG STORAGE	NO PRODUCT SPECIFIED	03/14/59	03/29/59	04/24/59	3344	T12S S28 R10	29.9924	-93.3981
33	17023014710000	CLARA ELLENDER	NO PRODUCT SPECIFIED	12/10/26	12/17/26	NR	1639	T12S S20 R10	29.9978	-93.4045
34	17023880770000	DOE SPR	NO PRODUCT SPECIFIED	09/11/79	03/15/80	05/29/80	5060	T12S S29 R10	29.9929	-93.4033
35	17023016210000	BLAKE OIL-BENOIT	NO PRODUCT SPECIFIED	08/20/54	08/10/54	08/14/54	2002	T12S S28 R10	29.9873	-93.3981
36	17023015410000	L DUHON A	NO PRODUCT SPECIFIED	06/08/36	06/28/36	08/06/36	5378	T12S S29 R10	29.9814	-93.4035
37	17023024650000	ARMOGENE HEBERT	NO PRODUCT SPECIFIED	04/13/66	05/04/66	05/11/66	7501	T12S S33 R10	29.9726	-93.3962
38	17023015540000	CHRISTINE-HEBERT	NO PRODUCT SPECIFIED	01/02/37	01/17/37	02/26/37	6553	T12S S33 R10	29.9753	-93.3978
39	00000000000000	J C ELLENDER	NO PRODUCT SPECIFIED	07/17/44	NR	NR	0	T12S S21 R10	29.9982	-93.3984
39	17023014790000	CLARA N ELLENDER	NO PRODUCT SPECIFIED	07/14/44	07/13/44	07/20/44	1645	T12S S21 R10	29.9985	-93.3981
40	00000000000000	KAOUGH	OIL	02/25/29	03/10/29	NR	3251	T12S S28 R10	29.9830	-93.3977
40	17023016010000	DORISSE KAOUGH	OIL	05/18/38	07/23/38	08/17/38	3060	T12S S28 R10	29.9833	-93.3976
40	17023016020000	MRS DORIS KAOUGH	NO PRODUCT SPECIFIED	03/10/29	NR	NR	0	T12S S28 R10	29.9833	-93.3973
41	17023015480000	ARMOGEN HERBERT	NO PRODUCT SPECIFIED	06/11/59	06/30/59	08/25/59	7360	T12S S32 R10	29.9712	-93.4037
42	17023016220000	VERNIE HEBERT SUDWISCHER	OIL	07/18/57	07/14/57	08/26/57	3055	T12S S28 R10	29.9847	-93.3976
43	17023015520000	HEBERT	NO PRODUCT SPECIFIED	06/05/30	06/06/30	NR	7834	T12S S33 R10	29.9749	-93.3974
44	00000000000000	CLARE N ELLENDER	NO PRODUCT SPECIFIED	09/18/57	10/14/57	07/01/58	1525	T12S S20 R10	29.9989	-93.4045
45	17023016030000	LUDGER DUHON	OIL	03/10/29	NR	NR	3209	T12S S28 R10	29.9829	-93.3972
46	17023016040000	LUDGER DUHON	NO PRODUCT SPECIFIED	11/05/57	11/13/57	01/04/58	3451	T12S S28 R10	29.9827	-93.3968
47	17023881240000	LPG STORAGE	NO PRODUCT SPECIFIED	03/03/58	02/20/58	03/12/58	3200	T12S S28 R10	29.9931	-93.3972
48	17023880740000	DOE SPR	NO PRODUCT SPECIFIED	09/11/79	05/04/80	07/15/80	4594	T12S S20 R10	29.9967	-93.4059
49	17023880610000	DOE STORAGE	NO PRODUCT SPECIFIED	09/26/83	10/21/83	12/27/83	5050	T12S S20 R10	29.9943	-93.4050
49	17023880620000	DOE STORAGE	NO PRODUCT SPECIFIED	09/26/83	01/05/84	03/08/84	4592	T12S S20 R10	29.9944	-93.4050
50	17023015500000	BENSON VINCENT C	NO PRODUCT SPECIFIED	07/08/52	07/26/52	08/19/52	6624	T12S S32 R10	29.9739	-93.4048
51	17023015490000	FLAVIA REEDS	NO PRODUCT SPECIFIED	02/20/59	04/12/59	04/27/59	6456	T12S S32 R10	29.9724	-93.4048
52	17023016250000	VERNIE HEBERT SUDWISER	OIL	01/16/57	01/16/57	01/31/57	3283	T12S S28 R10	29.9850	-93.3969
53	17023016270000	JOHNIE BENOIT	NO PRODUCT SPECIFIED	04/03/29	04/08/29	04/18/29	2147	T12S S28 R10	29.9871	-93.3967
53	17023016280000	V H SUDWISCHER	NO PRODUCT SPECIFIED	06/22/55	06/21/55	06/19/57	3088	T12S S28 R10	29.9874	-93.3967
54	17023016050000	LUGER DUHON	OIL	02/25/29	02/25/29	NR	3273	T12S S28 R10	29.9829	-93.3965
55	17023016060000	MRS DORIS KAOUGH	OIL	02/25/29	02/28/29	NR	3214	T12S S28 R10	29.9832	-93.3966
55	00000000000000	R VINCENT	OIL	02/16/29	NR	NR	0	T12S S28 R10	29.9830	-93.3963
55	00000000000000	MRS DORIS KAOUGH	OIL	02/25/29	02/26/29	NR	3597	T12S S28 R10	29.9836	-93.3968
55	17023016200000	MRS DORIS KAOUGH	OIL	02/25/29	02/24/29	NR	3280	T12S S28 R10	29.9835	-93.3966

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56	17023015460000	E L WATTS, ET AL	OIL	12/21/62	12/24/62	01/24/63	2830	T12S S29 R10	29.9838	-93.4049
57	00000000000000	SANNER	OIL	02/14/29	NR	NR	0	T12S S28 R10	29.9837	-93.3965
58	17023016240000	VERNIE HEBERT SUDWISCHER	OIL	04/27/54	04/20/54	06/11/54	3125	T12S S28 R10	29.9843	-93.3968
59	17023015250000	BENSON VINCENT	NO PRODUCT SPECIFIED	12/08/28	12/19/28	NR	3825	T12S S29 R10	29.9817	-93.4051
60	17023880500000	DOE SWD	NO PRODUCT SPECIFIED	05/22/79	04/17/78	10/17/78	8141	T12S S33 R10	29.9711	-93.3927
60	17023880510000	DOE SWD	NO PRODUCT SPECIFIED	05/22/79	11/07/78	02/21/79	7013	T12S S33 R10	29.9712	-93.3928
60	17023880520000	DOE SWD	NO PRODUCT SPECIFIED	05/22/79	07/24/78	10/26/78	7445	T12S S33 R10	29.9711	-93.3928
60	00000000000000	DOE SWD	NO PRODUCT SPECIFIED	05/22/79	06/27/77	08/13/77	6285	T12S S33 R10	29.9709	-93.3929
61	17023016180000	R SAUNER	OIL	01/04/29	01/04/29	NR	3159	T12S S28 R10	29.9836	-93.3962
62	17023202680000	AGNES E LOWREY	NO PRODUCT SPECIFIED	11/15/68	11/29/68	12/27/68	1595	T12S S20 R10	30.0001	-93.4038
63	17023022330000	A M BARBE	NO PRODUCT SPECIFIED	12/10/26	12/18/26	NR	1645	T12S S20 R10	29.9991	-93.4056
63	17023880700000	DOE SPR	NO PRODUCT SPECIFIED	09/11/79	04/10/80	06/21/80	5045	T12S S20 R10	29.9987	-93.4059
64	00000000000000	NOBLE	OIL	03/28/29	03/29/29	NR	3289	T12S S28 R10	29.9827	-93.3961
64	00000000000000	VINCENT	OIL	02/27/29	03/05/29	04/08/29	3437	T12S S28 R10	29.9830	-93.3960
65	17023016330000	RAYMOND SANNER ET AL	NO PRODUCT SPECIFIED	01/26/54	01/22/54	01/22/54	3300	T12S S28 R10	29.9843	-93.3962
66	17023016130000	RAYMOND SAUNER	OIL	03/12/29	03/12/29	04/10/29	3237	T12S S28 R10	29.9835	-93.3959
67	17023016400000	CORA E LYONS ET AL	NO PRODUCT SPECIFIED	07/13/38	NR	NR	0	T12S S28 R10	29.9824	-93.3960
68	17023015260000	BENSON VINCENT	NO PRODUCT SPECIFIED	05/18/29	05/22/29	NR	3455	T12S S29 R10	29.9828	-93.4055
69	17023016310000	NATALIE VICENT ET AL B	OIL	06/05/57	07/16/57	08/15/57	3129	T12S S28 R10	29.9852	-93.3960
70	17023881230000	LPG STORAGE	NO PRODUCT SPECIFIED	03/14/57	05/22/57	06/23/57	3050	T12S S21 R10	29.9945	-93.3956
71	17023880860000	DOE SWD	NO PRODUCT SPECIFIED	07/27/77	07/29/77	08/23/77	7011	T12S S33 R10	29.9719	-93.3923
72	17023016120000	RAYMOND VINCENT	NO PRODUCT SPECIFIED	05/29/50	06/07/50	07/27/50	3822	T12S S28 R10	29.9833	-93.3953
72	17023016090000	RAYMOND VINCENT	OIL	06/21/50	06/21/50	06/27/50	3572	T12S S28 R10	29.9827	-93.3952
72	17023016100000	R VINCENT	OIL	02/25/29	03/08/29	NR	3308	T12S S28 R10	29.9830	-93.3955
73	17023016170000	R SAUNER	OIL	07/10/29	07/12/29	NR	3087	T12S S28 R10	29.9841	-93.3956
74	00000000000000	ARCHIE LITTLE	NO PRODUCT SPECIFIED	08/12/33	09/02/33	09/30/33	3003	T12S S21 R10	29.9994	-93.3964
74	17023025150000	GRANGER	NO PRODUCT SPECIFIED	01/10/34	02/03/34	03/07/34	0	T12S S21 R10	29.9993	-93.3963
75	17023880920000	DOE SPR	NO PRODUCT SPECIFIED	02/03/78	04/29/78	06/01/78	3459	T12S S20 R10	30.0016	-93.4017
75	17023880930000	DOE SPR	NO PRODUCT SPECIFIED	06/01/78	06/01/78	06/22/78	3456	T12S S20 R10	30.0017	-93.4014
75	00000000000000	DOE SPR	NO PRODUCT SPECIFIED	07/16/46	NR	NR	3447	T12S S20 R10	30.0017	-93.4016
76	17023880730000	DOE SPR	NO PRODUCT SPECIFIED	09/11/79	04/10/80	08/28/80	5060	T12S S20 R10	29.9977	-93.4079
77	17023015300000	ARCHIE LITTLE	NO PRODUCT SPECIFIED	05/16/44	05/24/44	05/30/44	1777	T12S S29 R10	29.9930	-93.4064
78	17023015980000	R VINCENT	NO PRODUCT SPECIFIED	01/09/29	01/22/29	NR	4142	T12S S28 R10	29.9822	-93.3948
79	17023880750000	DOE SPR	NO PRODUCT SPECIFIED	09/11/79	03/15/80	09/07/80	2250	T12S S20 R10	29.9956	-93.4080
79	17023881080000	DOE SPR	NO PRODUCT SPECIFIED	09/13/80	09/13/80	NR	4336	T12S S20 R10	29.9956	-93.4081
80	17023880720000	DOE SPR	NO PRODUCT SPECIFIED	09/11/79	06/08/80	08/07/80	5079	T12S S20 R10	30.0008	-93.4059
81	17023007840000	J C ELLENDER	NO PRODUCT SPECIFIED	11/24/54	12/01/54	12/06/54	1550	T12S S21 R10	30.0020	-93.4005

# Oil & Gas Well Report

82	17023881380000	TARGA LPG STORAGE	NO PRODUCT SPECIFIED	09/19/91	10/08/91	11/03/91	3900	T12S S21 R10	29.9954	-93.3945
83	17023025090000	SANNER	NO PRODUCT SPECIFIED	06/28/32	NR	NR	0	T12S S28 R10	29.9838	-93.3945
84	17023016290000	NATALIE VINCENT ET AL	NO PRODUCT SPECIFIED	07/28/61	08/02/61	02/16/62	3209	T12S S28 R10	29.9858	-93.3944
84	17023016290000	NATALIE VINCENT ET AL B	OIL	12/10/57	12/17/57	12/29/57	3315	T12S S28 R10	29.9858	-93.3944
85	17023202760000	GLADYS TRAHAN	NO PRODUCT SPECIFIED	11/25/68	NR	12/27/68	1933	T12S S28 R10	29.9887	-93.3944
86	17023015470000	VINCENT EST A	OIL	09/04/62	10/16/62	02/15/63	3000	T12S S29 R10	29.9816	-93.4073
87	00000000000000	R VINCENT	OIL	06/14/38	06/20/38	07/14/38	3159	T12S S28 R10	29.9848	-93.3942
88	17023880710000	DOE SPR	NO PRODUCT SPECIFIED	09/11/79	05/01/80	08/28/80	5060	T12S S20 R10	29.9998	-93.4078
89	17023015560000	MAGGIE HEBERT ET AL	NO PRODUCT SPECIFIED	04/28/61	05/21/61	06/03/61	6789	T12S S33 R10	29.9765	-93.3942
90	17023014730000	D KAOUGH C	NO PRODUCT SPECIFIED	02/11/39	02/16/39	04/04/39	7313	T12S S30 R10	29.9944	-93.4082
91	00000000000000	DOE SPR	NO PRODUCT SPECIFIED	11/19/46	NR	NR	3578	T12S S20 R10	30.0028	-93.4032
91	17023880950000	DOE SPR	NO PRODUCT SPECIFIED	03/29/78	03/21/78	04/28/78	0	T12S S20 R10	30.0027	-93.4036
91	17023880940000	DOE SPR	NO PRODUCT SPECIFIED	02/03/78	02/01/78	03/19/78	3548	T12S S20 R10	30.0024	-93.4034
92	17023015890000	PERKINS	NO PRODUCT SPECIFIED	12/27/28	01/06/29	NR	4585	T12S S28 R10	29.9814	-93.3933
93	17023024340000	ARTHUR LITTLE ET AL	NO PRODUCT SPECIFIED	11/30/65	11/26/65	12/02/65	3500	T12S S29 R10	29.9830	-93.4077
94	17023007870000	U A BELL	NO PRODUCT SPECIFIED	01/22/27	01/28/27	NR	1605	T12S S21 R10	30.0014	-93.3964
95	17023881210000	LPG STORAGE	NO PRODUCT SPECIFIED	03/14/57	04/08/57	05/20/57	3000	T12S S21 R10	29.9945	-93.3934
96	17023015510000	MAGGIE HEBERT ET AL	NO PRODUCT SPECIFIED	06/27/61	07/02/61	07/13/61	6802	T12S S33 R10	29.9755	-93.3929
96	17023881450000	TRIDENT SWD	NO PRODUCT SPECIFIED	09/02/93	NR	NR	0	T12S S33 R10	29.9754	-93.3926
97	17023015390000	BENSON VINCENT HEIRS	NO PRODUCT SPECIFIED	03/26/59	03/30/59	04/10/59	2937	T12S S29 R10	29.9813	-93.4082
98	17023015280000	BENSON VINCENT ETAL	OIL	11/15/54	11/14/54	02/14/55	2983	T12S S29 R10	29.9823	-93.4083
99	17023881440000	TARGA SWD	NO PRODUCT SPECIFIED	09/02/93	11/03/93	12/15/93	6000	T12S S33 R10	29.9773	-93.3926
100	17023880780000	DOE SPR	NO PRODUCT SPECIFIED	10/16/79	09/05/80	11/23/80	5090	T12S S20 R10	30.0028	-93.4059
101	17023015590000	WM T BURTON IND INC	NO PRODUCT SPECIFIED	04/10/63	04/18/63	11/18/63	13520	T13S S4 R10	29.9636	-93.3953
102	17023880910000	DOE SPR	NO PRODUCT SPECIFIED	01/17/78	12/31/77	01/31/78	0	T12S S21 R10	30.0036	-93.3991
102	00000000000000	DOE SPR	NO PRODUCT SPECIFIED	05/07/46	NR	NR	10196	T12S S21 R10	30.0036	-93.3992
103	17023880760000	DOE SPR	NO PRODUCT SPECIFIED	09/11/79	07/26/80	11/12/80	5059	T12S S20 R10	30.0018	-93.4078



## ***Environmental Records Definitions - STATE (LA)***

**OG**

Oil and Gas Wells

VERSION DATE: 03/05/16

This database contains over 230,000 permitted oil and gas wells and is maintained by the Louisiana Department of Natural Resources, Office of Conservation. The information has been carefully prepared from the best available sources of data. It is intended for general informational purposes only and should not be considered authoritative for navigational, engineering, other site-specific uses, or any other uses. The Louisiana Department of Natural Resources (DNR) does not warrant or guarantee its accuracy, nor does DNR assume any responsibility or liability for any reliance thereon.



On time. On target. In touch.™

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## **GeoPlus Water Well Report**

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[Satellite view](#)

*Target Property:*

**2.1 Mile Corridor**

**Hackberry, Cameron Parish, Louisiana 70645**

*Prepared For:*

**S&B Infrastructure-Houston**

**Order #: 67530**

**Job #: 146782**

**Date: 05/24/2016**

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## Disclaimer

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## Target Property Summary

### **Target Property Information**

2.1 Mile Corridor

Hackberry, Louisiana 70645

#### **Coordinates**

Corridor

#### **USGS Quadrangle**

Browns Lake, LA

### **Geographic Coverage Information**

**County/Parish:** Cameron (LA)

**ZipCode(s):**

Hackberry LA: 70645

#### **Radon**

\* Target property is located in Radon Zone .

## Database Radius Summary

### **FEDERAL LISTING**

<b>Acronym</b>	<b>Search Radius (miles)</b>	<b>TP/AP (0 - 0.02)</b>	<b>1/8 Mile (&gt; TP/AP)</b>	<b>1/4 Mile (&gt; 1/8)</b>	<b>1/2 Mile (&gt; 1/4)</b>	<b>1 Mile (&gt; 1/2)</b>	<b>&gt; 1 Mile</b>	<b>Total</b>
NWIS	0.5000	0	2	0	3	NS	NS	5
<b>SUB-TOTAL</b>		0	2	0	3	0	0	5



## Database Radius Summary

### STATE (LA) LISTING

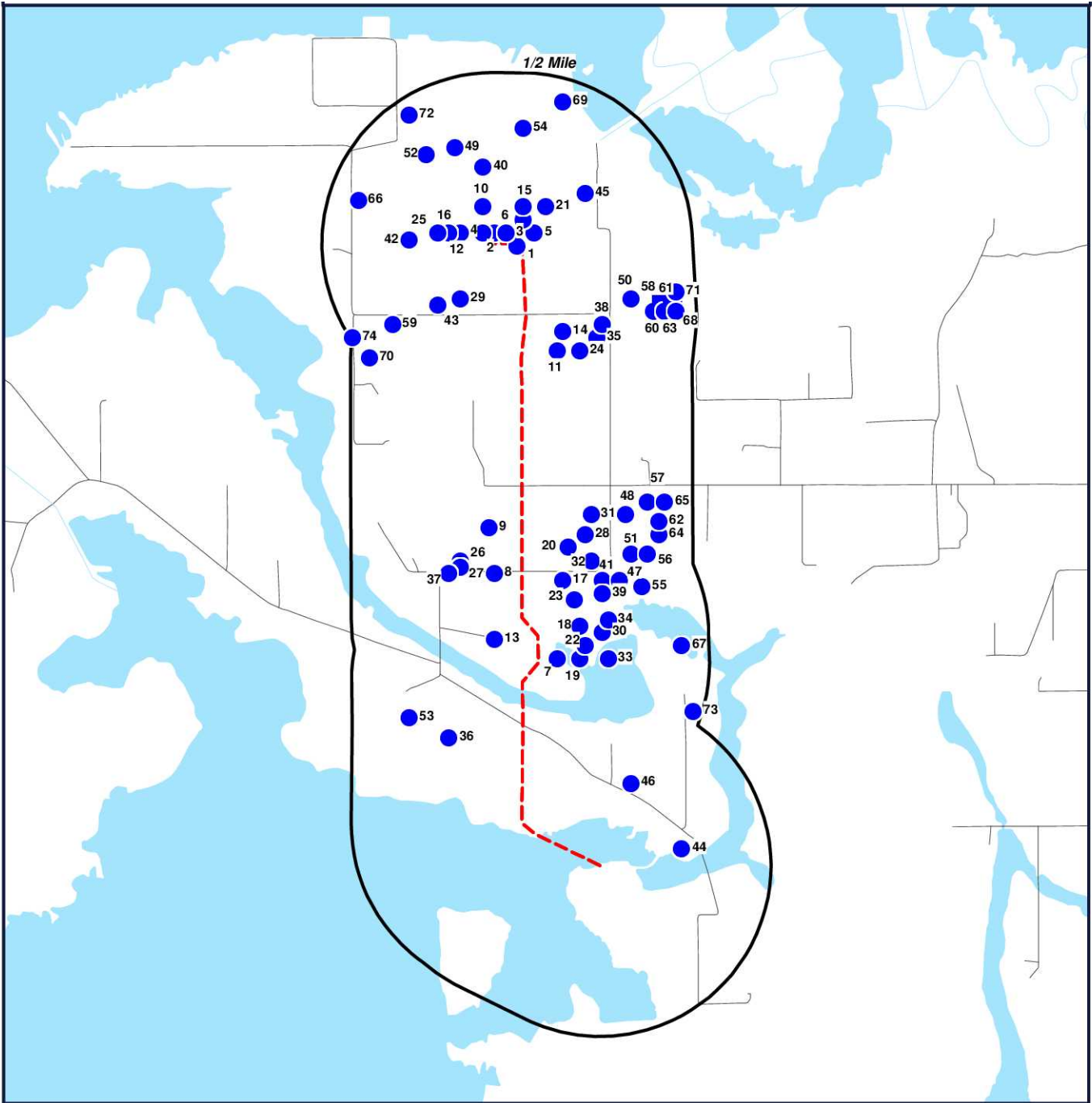
Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
WW	0.5000	1	23	50	37	NS	NS	111
<b>SUB-TOTAL</b>		1	23	50	37	0	0	111
<b>TOTAL</b>		1	25	50	40	0	0	116

**NOTES:**

NS = NOT SEARCHED

TP/AP = TARGET PROPERTY/ADJACENT PROPERTY

# Waterwell Map



- - - Target Property (TP)

- WW
- NWIS

**2.1 Mile Corridor  
Hackberry, Louisiana  
70645**

CONTOUR LINES REPRESENTED IN FEET



[Click here to access Satellite view](#)

## Located Sites Summary

Map ID#	Database Name	Site ID#	Distance From Site	Site Name	Address	PAGE #
<a href="#">1</a>	WW	295948093240401	0.01 mi. W (53 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">10</a>
<a href="#">2</a>	WW	295950093240801	0.04 mi. NW (211 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">11</a>
<a href="#">2</a>	WW	295950093240802	0.04 mi. NW (211 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">12</a>
<a href="#">3</a>	WW	295950093240602	0.04 mi. NW (211 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">13</a>
<a href="#">3</a>	WW	295950093240601	0.04 mi. NW (211 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">14</a>
<a href="#">4</a>	WW	295950093241002	0.05 mi. NW (264 ft.)	BOEING PETRO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">15</a>
<a href="#">4</a>	WW	295950093241001	0.05 mi. NW (264 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">16</a>
<a href="#">5</a>	WW	295950093240001	0.07 mi. NE (370 ft.)	DOMINION GAS	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">17</a>
<a href="#">5</a>	NWIS	00774852	0.07 mi. NE (370 ft.)	CN- 69		<a href="#">18</a>
<a href="#">5</a>	WW	295950093240101	0.06 mi. NE (317 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">19</a>
<a href="#">6</a>	WW	295951093240301	0.06 mi. N (317 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">20</a>
<a href="#">6</a>	WW	295952093240301	0.08 mi. N (422 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">21</a>
<a href="#">7</a>	WW	295845093235701	0.06 mi. SE (317 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">22</a>
<a href="#">8</a>	WW	295858093240801	0.09 mi. SW (475 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">23</a>
<a href="#">9</a>	WW	295905093240901	0.1 mi. W (528 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">24</a>
<a href="#">10</a>	WW	295954093241002	0.12 mi. N (634 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">25</a>
<a href="#">10</a>	WW	295954093241001	0.12 mi. N (634 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">26</a>
<a href="#">10</a>	WW	295953093241101	0.11 mi. NW (581 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">27</a>
<a href="#">11</a>	WW	295932093235701	0.11 mi. SE (581 ft.)	WARREN PETRO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">28</a>
<a href="#">12</a>	NWIS	00774853	0.12 mi. NW (634 ft.)	CN- 192		<a href="#">29</a>
<a href="#">12</a>	WW	295950093241401	0.11 mi. W (581 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">30</a>
<a href="#">13</a>	WW	295848093240801	0.11 mi. W (581 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">31</a>
<a href="#">14</a>	WW	295934093235601	0.12 mi. SE (634 ft.)	WARREN PETRO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">32</a>
<a href="#">14</a>	WW	295935093235601	0.12 mi. SE (634 ft.)	WARREN PETRO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">33</a>

## Located Sites Summary

<a href="#">15</a>	WW	2959540932403 01	0.12 mi. N (634 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">34</a>
<a href="#">16</a>	WW	2959500932416 01	0.14 mi. W (739 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">35</a>
<a href="#">17</a>	WW	2958570932356 01	0.12 mi. E (634 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">36</a>
<a href="#">18</a>	WW	2958500932353 01	0.13 mi. E (686 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">37</a>
<a href="#">18</a>	WW	2958500932353 01	0.13 mi. E (686 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">38</a>
<a href="#">18</a>	WW	2958500932353 01	0.13 mi. E (686 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">39</a>
<a href="#">18</a>	WW	2958500932353 01	0.13 mi. E (686 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">40</a>
<a href="#">19</a>	WW	2958450932353 01	0.13 mi. E (686 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">41</a>
<a href="#">20</a>	WW	2959020932355 01	0.14 mi. E (739 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">42</a>
<a href="#">20</a>	WW	2959020932355 01	0.14 mi. E (739 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">43</a>
<a href="#">20</a>	WW	2959020932355 01	0.14 mi. E (739 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">44</a>
<a href="#">21</a>	WW	2959540932359 02	0.14 mi. NE (739 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">45</a>
<a href="#">21</a>	WW	2959540932359 01	0.14 mi. NE (739 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">46</a>
<a href="#">22</a>	WW	2958470932352 01	0.14 mi. E (739 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">47</a>
<a href="#">23</a>	WW	2958540932354 01	0.16 mi. E (845 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">48</a>
<a href="#">24</a>	WW	2959330932353 01	0.17 mi. E (898 ft.)	WARREN PETRO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">49</a>
<a href="#">24</a>	WW	2959320932353 01	0.17 mi. E (898 ft.)	WARREN PETRO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">50</a>
<a href="#">25</a>	WW	2959500932418 01	0.17 mi. W (898 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">51</a>
<a href="#">26</a>	WW	2959010932414 01	0.19 mi. W (1003 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">52</a>
<a href="#">26</a>	WW	2959000932414 01	0.19 mi. W (1003 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">53</a>
<a href="#">26</a>	WW	2959010932414 01	0.19 mi. W (1003 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">54</a>
<a href="#">26</a>	WW	2959010932414 01	0.19 mi. W (1003 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">55</a>

## Located Sites Summary

<a href="#">27</a>	WW	2958590932414 01	0.19 mi. W (1003 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">56</a>
<a href="#">27</a>	WW	2958590932414 01	0.19 mi. W (1003 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">57</a>
<a href="#">27</a>	WW	2958590932414 01	0.19 mi. W (1003 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">58</a>
<a href="#">27</a>	WW	2958590932414 01	0.19 mi. W (1003 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">59</a>
<a href="#">28</a>	WW	2959040932352 01	0.19 mi. E (1003 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">60</a>
<a href="#">28</a>	WW	2959040932352 01	0.19 mi. E (1003 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">61</a>
<a href="#">28</a>	WW	2959040932352 01	0.19 mi. E (1003 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">62</a>
<a href="#">29</a>	WW	2959400932414 01	0.19 mi. W (1003 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">63</a>
<a href="#">30</a>	WW	2958490932349 01	0.2 mi. E (1056 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">64</a>
<a href="#">31</a>	WW	2959070932351 01	0.21 mi. E (1109 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">65</a>
<a href="#">32</a>	WW	2959000932351 01	0.21 mi. E (1109 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">66</a>
<a href="#">32</a>	WW	2959000932351 01	0.21 mi. E (1109 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">67</a>
<a href="#">32</a>	WW	2959000932351 01	0.21 mi. E (1109 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">68</a>
<a href="#">32</a>	WW	2959010932350 01	0.22 mi. E (1162 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">69</a>
<a href="#">33</a>	WW	2958450932348 01	0.21 mi. E (1109 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">70</a>
<a href="#">34</a>	WW	2958510932348 01	0.22 mi. E (1162 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">71</a>
<a href="#">35</a>	WW	2959340932350 01	0.22 mi. E (1162 ft.)	WARREN PETRO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">72</a>
<a href="#">36</a>	WW	2958330932416 01	0.22 mi. W (1162 ft.)	TALBOT	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">73</a>
<a href="#">36</a>	WW	2958330932416 00	0.22 mi. W (1162 ft.)	TALBOT	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">74</a>
<a href="#">37</a>	WW	2958580932416 01	0.22 mi. W (1162 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">75</a>
<a href="#">37</a>	WW	2958580932416 01	0.22 mi. W (1162 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">76</a>
<a href="#">38</a>	WW	2959360932349 01	0.23 mi. E (1214 ft.)	WARREN PETRO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">77</a>

## Located Sites Summary

<a href="#">39</a>	WW	2958550932349 01	0.23 mi. NE (1214 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">78</a>
<a href="#">40</a>	WW	3000000932410 02	0.24 mi. N (1267 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">79</a>
<a href="#">40</a>	WW	3000000932410 01	0.24 mi. N (1267 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">80</a>
<a href="#">41</a>	WW	2958570932349 01	0.24 mi. E (1267 ft.)	TALBOT CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">81</a>
<a href="#">42</a>	WW	2959490932423 01	0.25 mi. W (1320 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">82</a>
<a href="#">43</a>	WW	2959390932418 01	0.25 mi. SW (1320 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">83</a>
<a href="#">44</a>	WW	2958160932335 01	0.25 mi. E (1320 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">84</a>
<a href="#">45</a>	WW	2959560932352 01	0.25 mi. NE (1320 ft.)	DOMINION GAS	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">85</a>
<a href="#">46</a>	WW	2958260932344 01	0.27 mi. NE (1426 ft.)	BROWN, KENNY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">86</a>
<a href="#">47</a>	WW	2958560932346 01	0.29 mi. E (1531 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">87</a>
<a href="#">47</a>	WW	2958570932346 01	0.29 mi. E (1531 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">88</a>
<a href="#">48</a>	WW	2959070932345 01	0.31 mi. E (1637 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">89</a>
<a href="#">48</a>	WW	2959070932345 01	0.31 mi. E (1637 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">90</a>
<a href="#">48</a>	WW	2959070932345 01	0.31 mi. E (1637 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">91</a>
<a href="#">49</a>	WW	3000030932415 01	0.31 mi. NW (1637 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">92</a>
<a href="#">50</a>	WW	2959400932343 01	0.33 mi. E (1742 ft.)	WARREN PETRO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">93</a>
<a href="#">50</a>	WW	2959400932344 01	0.32 mi. E (1690 ft.)	WARREN PETRO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">94</a>
<a href="#">51</a>	WW	2959010932344 01	0.32 mi. E (1690 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">95</a>
<a href="#">52</a>	WW	3000020932420 01	0.33 mi. NW (1742 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">96</a>
<a href="#">53</a>	WW	2958360932423 01	0.34 mi. W (1795 ft.)	TALBOT	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">97</a>
<a href="#">53</a>	WW	2958360932423 00	0.34 mi. W (1795 ft.)	TALBOT	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">98</a>
<a href="#">54</a>	WW	3000060932403 01	0.35 mi. N (1848 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">99</a>
<a href="#">55</a>	WW	2958560932342 01	0.35 mi. NE (1848 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">100</a>
<a href="#">56</a>	WW	2959000932341 01	0.37 mi. E (1954 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">101</a>
<a href="#">56</a>	WW	2959010932341 01	0.37 mi. E (1954 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">102</a>
<a href="#">57</a>	WW	2959090932341 01	0.37 mi. E (1954 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">103</a>



## Located Sites Summary

<a href="#">58</a>	NWIS	00774806	0.37 mi. E (1954 ft.)	CN- 65		<a href="#">104</a>
<a href="#">58</a>	WW	2959380932340 01	0.38 mi. E (2006 ft.)	OXY USA	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">105</a>
<a href="#">59</a>	WW	2959360932426 01	0.38 mi. SW (2006 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">106</a>
<a href="#">60</a>	NWIS	00774805	0.4 mi. E (2112 ft.)	CN- 64		<a href="#">107</a>
<a href="#">61</a>	WW	2959380932338 01	0.41 mi. E (2165 ft.)	TRIDENT NGL	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">108</a>
<a href="#">62</a>	WW	2959060932339 01	0.41 mi. E (2165 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">109</a>
<a href="#">63</a>	NWIS	00774804	0.44 mi. E (2323 ft.)	CN- 66		<a href="#">110</a>
<a href="#">64</a>	WW	2959030932338 01	0.42 mi. E (2218 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">111</a>
<a href="#">64</a>	WW	2959040932339 01	0.41 mi. E (2165 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">112</a>
<a href="#">65</a>	WW	2959090932338 01	0.42 mi. E (2218 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">113</a>
<a href="#">65</a>	WW	2959090932338 01	0.42 mi. E (2218 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">114</a>
<a href="#">65</a>	WW	2959090932338 01	0.42 mi. E (2218 ft.)	DAVID V CURRIE	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">115</a>
<a href="#">66</a>	WW	2959550932432 01	0.42 mi. W (2218 ft.)	LA STORAGE, LLC	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">116</a>
<a href="#">67</a>	WW	2958470932335 01	0.43 mi. E (2270 ft.)	TALBOT, CARMOUCHE & MARCELLO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">117</a>
<a href="#">68</a>	WW	2959380932336 01	0.45 mi. E (2376 ft.)	TRIDENT NGL	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">118</a>
<a href="#">69</a>	WW	3000100932356 01	0.44 mi. N (2323 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">119</a>
<a href="#">70</a>	WW	2959310932430 01	0.45 mi. W (2376 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">120</a>
<a href="#">71</a>	WW	2959400932335 01	0.46 mi. E (2429 ft.)	WARREN PETRO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">121</a>
<a href="#">71</a>	WW	2959410932336 01	0.45 mi. E (2376 ft.)	WARREN PETRO	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">122</a>
<a href="#">72</a>	WW	3000080932423 01	0.46 mi. NW (2429 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">123</a>
<a href="#">73</a>	WW	2958370932333 01	0.48 mi. E (2534 ft.)	TRIDENT NGL	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">124</a>
<a href="#">74</a>	WW	2959340932433 01	0.5 mi. SW (2640 ft.)	U S DEPT ENERGY	CAMERON COUNTY, HACKBERRY, LA 70645	<a href="#">125</a>

## Louisiana Water Well Registry (WW)

[MAP ID# 1](#)

Distance from Property: 0.01 mi. (53 ft.) W

ID NUMBER: 295948093240401  
LOCAL WELL: 5641Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: RECOVERY  
USE DESCRIPTION: ENVIRONMENTAL RECOVERY  
DRILLER NAME: GRIFFIN  
WELL STATUS: ACTIVE  
WELL DEPTH: 50  
WATER LEVEL: 15.50  
YIELD: NOT REPORTED  
HOLE DEPTH: 54  
ELEVATION: 17  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 11/91  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 40-50  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.996666670 LONGITUDE: -93.401111110

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## Louisiana Water Well Registry (WW)

**MAP ID# 2**

Distance from Property: 0.04 mi. (211 ft.) NW

ID NUMBER: 295950093240801  
LOCAL WELL: 5635Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: RECOVERY  
USE DESCRIPTION: PLUGGED AND ABANDONED RECOVERY  
DRILLER NAME: GRIFFIN  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 31  
WATER LEVEL: 17.31  
YIELD: NOT REPORTED  
HOLE DEPTH: 32  
ELEVATION: 23  
PLUGGED BY: FUGRO (GS)  
DATE PLUGGED: 11/06  
DATE COMPLETED: 11/91  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 20-30  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.997222220 LONGITUDE: -93.402222220

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## Louisiana Water Well Registry (WW)

**MAP ID# 2**

Distance from Property: 0.04 mi. (211 ft.) NW

ID NUMBER: 295950093240802  
LOCAL WELL: 5636Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: RECOVERY  
USE DESCRIPTION: PLUGGED AND ABANDONED RECOVERY  
DRILLER NAME: GRIFFIN  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 57  
WATER LEVEL: 25.70  
YIELD: NOT REPORTED  
HOLE DEPTH: 61  
ELEVATION: 23  
PLUGGED BY: FUGRO (GS)  
DATE PLUGGED: 11/06  
DATE COMPLETED: 11/91  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 47-57  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.997222220 LONGITUDE: -93.402222220

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## Louisiana Water Well Registry (WW)

**MAP ID# 3**

Distance from Property: 0.04 mi. (211 ft.) NW

ID NUMBER: 295950093240602  
LOCAL WELL: 5638Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: RECOVERY  
USE DESCRIPTION: PLUGGED AND ABANDONED RECOVERY  
DRILLER NAME: GRIFFIN  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 55  
WATER LEVEL: 25.50  
YIELD: NOT REPORTED  
HOLE DEPTH: 59  
ELEVATION: 23  
PLUGGED BY: FUGRO (GS)  
DATE PLUGGED: 11/06  
DATE COMPLETED: 11/91  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 45-55  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.997222220 LONGITUDE: -93.401666670

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## Louisiana Water Well Registry (WW)

**MAP ID# 3**

Distance from Property: 0.04 mi. (211 ft.) NW

ID NUMBER: 295950093240601  
LOCAL WELL: 5637Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: RECOVERY  
USE DESCRIPTION: ENVIRONMENTAL RECOVERY  
DRILLER NAME: GRIFFIN  
WELL STATUS: ACTIVE  
WELL DEPTH: 43  
WATER LEVEL: 18.32  
YIELD: NOT REPORTED  
HOLE DEPTH: 44  
ELEVATION: 23  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 11/91  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 33-43  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.997222220 LONGITUDE: -93.401666670

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## Louisiana Water Well Registry (WW)

**MAP ID# 4**

Distance from Property: 0.05 mi. (264 ft.) NW

ID NUMBER: 295950093241002  
LOCAL WELL: 5455Z  
PARISH NUM: 023  
OWNER NAME: BOEING PETRO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: STAMM-SCHEELE  
WELL STATUS: ACTIVE  
WELL DEPTH: 50  
WATER LEVEL: 10.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 50  
ELEVATION: NOT REPORTED  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/88  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 40-50  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.997222220 LONGITUDE: -93.402777780

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## Louisiana Water Well Registry (WW)

**MAP ID# 4**

Distance from Property: 0.05 mi. (264 ft.) NW

ID NUMBER: 295950093241001  
LOCAL WELL: 5454Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: STAMM-SCHEELE  
WELL STATUS: ACTIVE  
WELL DEPTH: 30  
WATER LEVEL: 6.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 30  
ELEVATION: NOT REPORTED  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/88  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 20-30  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.997222220 LONGITUDE: -93.402777780

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## Louisiana Water Well Registry (WW)

**MAP ID# 5**

Distance from Property: 0.07 mi. (370 ft.) NE

ID NUMBER: 295950093240001  
LOCAL WELL: 69  
PARISH NUM: 023  
OWNER NAME: DOMINION GAS  
WELL USE: INDUSTRIAL  
USE DESCRIPTION: INDUSTRIAL  
DRILLER NAME: LAYNE (LA)  
WELL STATUS: ACTIVE  
WELL DEPTH: 479  
WATER LEVEL: 46.97  
YIELD: 1000  
HOLE DEPTH: 505  
ELEVATION: NOT REPORTED  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 09/59  
DRAWDOWN: 16.6  
CASING DIAMETER: 16X8X8  
CASING MATERIAL: METAL  
SCREEN DIAMETER: 8  
SCREEN INTERVAL: 399-479  
GEOLOGIC UNIT: 11205LC  
QUAD NUM: NOT REPORTED  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.997222220 LONGITUDE: -93.400000000

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**United States Geological Survey National Water Information System  
(NWIS)**

**MAP ID# 5**

Distance from Property: 0.07 mi. (370 ft.) NE

REPORTING AGENCY: **US GEOLOGICAL SURVEY**

SITE NUMBER: **295950093240001**

STATION NAME: **CN- 69**

SITE TYPE: **WELL**

LATITUDE: **29.997435200**                      LONGITUDE: **-93.400156300**

DATE DRILLED: **1959-09-01**

WELL DEPTH: **479 FEET**

HOLE DEPTH: **505 FEET**

LOCAL AQUIFER: **200-FOOT SAND OF LAKE CHARLES AREA**

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## Louisiana Water Well Registry (WW)

**MAP ID# 5**

Distance from Property: 0.06 mi. (317 ft.) NE

ID NUMBER: 295950093240101  
LOCAL WELL: 5642Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: GRIFFIN  
WELL STATUS: ACTIVE  
WELL DEPTH: 49  
WATER LEVEL: 17.50  
YIELD: NOT REPORTED  
HOLE DEPTH: 54  
ELEVATION: 15  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 11/91  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 38-49  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.997222220 LONGITUDE: -93.400277780

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## Louisiana Water Well Registry (WW)

**MAP ID# 6**

Distance from Property: 0.06 mi. (317 ft.) N

ID NUMBER: 295951093240301  
LOCAL WELL: 5640Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: RECOVERY  
USE DESCRIPTION: ENVIRONMENTAL RECOVERY  
DRILLER NAME: GRIFFIN  
WELL STATUS: ACTIVE  
WELL DEPTH: 52  
WATER LEVEL: 19.95  
YIELD: NOT REPORTED  
HOLE DEPTH: 54  
ELEVATION: 17  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 11/91  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 42-52  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.997500000 LONGITUDE: -93.400833330

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## Louisiana Water Well Registry (WW)

**MAP ID# 6**

Distance from Property: 0.08 mi. (422 ft.) N

ID NUMBER: 295952093240301  
LOCAL WELL: 5639Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: RECOVERY  
USE DESCRIPTION: ENVIRONMENTAL RECOVERY  
DRILLER NAME: GRIFFIN  
WELL STATUS: ACTIVE  
WELL DEPTH: 51  
WATER LEVEL: 34.40  
YIELD: NOT REPORTED  
HOLE DEPTH: 55  
ELEVATION: 16  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 11/91  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 40-51  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.997777780 LONGITUDE: -93.400833330

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## Louisiana Water Well Registry (WW)

**MAP ID# 7**

Distance from Property: 0.06 mi. (317 ft.) SE

ID NUMBER: 295845093235701  
LOCAL WELL: 6618Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 33  
WATER LEVEL: 5.57  
YIELD: NOT REPORTED  
HOLE DEPTH: 48  
ELEVATION: 0001  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/12/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.979166670 LONGITUDE: -93.399166670

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## Louisiana Water Well Registry (WW)

**MAP ID# 8**

Distance from Property: 0.09 mi. (475 ft.) SW

ID NUMBER: 295858093240801  
LOCAL WELL: 6617Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 36  
WATER LEVEL: 7.07  
YIELD: NOT REPORTED  
HOLE DEPTH: 36  
ELEVATION: 0005  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/06/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.982777780 LONGITUDE: -93.402222220

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## Louisiana Water Well Registry (WW)

**MAP ID# 9**

Distance from Property: 0.1 mi. (528 ft.) W

ID NUMBER: 295905093240901  
LOCAL WELL: 7157Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 17  
WATER LEVEL: .75  
YIELD: NOT REPORTED  
HOLE DEPTH: 28  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.984722220 LONGITUDE: -93.402500000

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## Louisiana Water Well Registry (WW)

**MAP ID# 10**

Distance from Property: 0.12 mi. (634 ft.) N

ID NUMBER: 295954093241002  
LOCAL WELL: 5453Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: STAMM-SCHEELE  
WELL STATUS: ACTIVE  
WELL DEPTH: 48  
WATER LEVEL: 15.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 50  
ELEVATION: NOT REPORTED  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/88  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 38-48  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.998333330 LONGITUDE: -93.402777780

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## Louisiana Water Well Registry (WW)

**MAP ID# 10**

Distance from Property: 0.12 mi. (634 ft.) N

ID NUMBER: 295954093241001  
LOCAL WELL: 5452Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: STAMM-SCHEELE  
WELL STATUS: ACTIVE  
WELL DEPTH: 30  
WATER LEVEL: 6.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 30  
ELEVATION: NOT REPORTED  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/88  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 20-30  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.998333330 LONGITUDE: -93.402777780

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## Louisiana Water Well Registry (WW)

**MAP ID# 10**

Distance from Property: 0.11 mi. (581 ft.) NW

ID NUMBER: 295953093241101  
LOCAL WELL: 5500Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: GUICHARD  
WELL STATUS: ACTIVE  
WELL DEPTH: 25  
WATER LEVEL: 13.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 26  
ELEVATION: NOT REPORTED  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 03/89  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 5  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 5  
SCREEN INTERVAL: 15-25  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.998055560 LONGITUDE: -93.403055560

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## Louisiana Water Well Registry (WW)

**MAP ID# 11**

Distance from Property: 0.11 mi. (581 ft.) SE

ID NUMBER: 295932093235701  
LOCAL WELL: 5807Z  
PARISH NUM: 023  
OWNER NAME: WARREN PETRO  
WELL USE: PIEZOMETER  
USE DESCRIPTION: PIEZOMETER  
DRILLER NAME: PROFESSIONAL-  
WELL STATUS: ACTIVE  
WELL DEPTH: 15  
WATER LEVEL: 2.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 15  
ELEVATION: 12  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 08/97  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 0.50  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 1.50  
SCREEN INTERVAL: 12-15  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.992222220 LONGITUDE: -93.399166670

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**United States Geological Survey National Water Information System  
(NWIS)**

**MAP ID# 12**

Distance from Property: 0.12 mi. (634 ft.) NW

REPORTING AGENCY: **US GEOLOGICAL SURVEY**

SITE NUMBER: **295950093241401**

STATION NAME: **CN- 192**

SITE TYPE: **WELL**

LATITUDE: **29.997435200**                      LONGITUDE: **-93.404045200**

DATE DRILLED: **NOT REPORTED**

WELL DEPTH: **380. FEET**

HOLE DEPTH: **380. FEET**

LOCAL AQUIFER: **200-FOOT SAND OF LAKE CHARLES AREA**

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## Louisiana Water Well Registry (WW)

**MAP ID# 12**

Distance from Property: 0.11 mi. (581 ft.) W

ID NUMBER: 295950093241401  
LOCAL WELL: 192  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: INDUSTRIAL  
USE DESCRIPTION: INDUSTRIAL  
DRILLER NAME: UNKNOWN  
WELL STATUS: ACTIVE  
WELL DEPTH: 380  
WATER LEVEL: 0.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 380  
ELEVATION: 21  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 1977  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: NOT REPORTED  
CASING MATERIAL: NOT REPORTED  
SCREEN DIAMETER: NOT REPORTED  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 11202LC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.997222220 LONGITUDE: -93.403888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 13**

Distance from Property: 0.11 mi. (581 ft.) W

ID NUMBER: 295848093240801  
LOCAL WELL: 6628Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 28  
WATER LEVEL: 10.14  
YIELD: NOT REPORTED  
HOLE DEPTH: 40  
ELEVATION: 0007  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/07/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.980000000 LONGITUDE: -93.402222220

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## Louisiana Water Well Registry (WW)

**MAP ID# 14**

Distance from Property: 0.12 mi. (634 ft.) SE

ID NUMBER: 295934093235601  
LOCAL WELL: 5806Z  
PARISH NUM: 023  
OWNER NAME: WARREN PETRO  
WELL USE: PIEZOMETER  
USE DESCRIPTION: PIEZOMETER  
DRILLER NAME: PROFESSIONAL-  
WELL STATUS: ACTIVE  
WELL DEPTH: 15  
WATER LEVEL: 2.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 15  
ELEVATION: 11  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 08/97  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 0.50  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 1.50  
SCREEN INTERVAL: 12-15  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.992777780 LONGITUDE: -93.398888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 14**

Distance from Property: 0.12 mi. (634 ft.) SE

ID NUMBER: 295935093235601  
LOCAL WELL: 5805Z  
PARISH NUM: 023  
OWNER NAME: WARREN PETRO  
WELL USE: PIEZOMETER  
USE DESCRIPTION: PIEZOMETER  
DRILLER NAME: PROFESSIONAL-  
WELL STATUS: ACTIVE  
WELL DEPTH: 15  
WATER LEVEL: 2.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 15  
ELEVATION: 11  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 08/97  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 0.50  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 1.50  
SCREEN INTERVAL: 12-15  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.993055560 LONGITUDE: -93.398888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 15**

Distance from Property: 0.12 mi. (634 ft.) N

ID NUMBER: 295954093240301  
LOCAL WELL: 5443Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: PLUGGED AND ABANDONED MONITOR  
DRILLER NAME: UNKNOWN  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 50  
WATER LEVEL: 17.80  
YIELD: NOT REPORTED  
HOLE DEPTH: 100  
ELEVATION: 9  
PLUGGED BY: STAMM-SCHEELE  
DATE PLUGGED: 06/89  
DATE COMPLETED: 04/81  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 3  
SCREEN INTERVAL: 40-50  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.998333330 LONGITUDE: -93.400833330

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## Louisiana Water Well Registry (WW)

**MAP ID# 16**

Distance from Property: 0.14 mi. (739 ft.) W

ID NUMBER: 295950093241601  
LOCAL WELL: 5499Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: GUICHARD  
WELL STATUS: ACTIVE  
WELL DEPTH: 24  
WATER LEVEL: 13.50  
YIELD: NOT REPORTED  
HOLE DEPTH: 24  
ELEVATION: NOT REPORTED  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 03/89  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 2  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 2  
SCREEN INTERVAL: 14-24  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.997222220 LONGITUDE: -93.404444440

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## Louisiana Water Well Registry (WW)

**MAP ID# 17**

Distance from Property: 0.12 mi. (634 ft.) E

ID NUMBER: 295857093235601  
LOCAL WELL: 6629Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 40  
WATER LEVEL: 9.39  
YIELD: NOT REPORTED  
HOLE DEPTH: 44  
ELEVATION: 0007  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/07/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.982500000 LONGITUDE: -93.398888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 18**

Distance from Property: 0.13 mi. (686 ft.) E

ID NUMBER: 295850093235301  
LOCAL WELL: 6626Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 22  
WATER LEVEL: 7.22  
YIELD: NOT REPORTED  
HOLE DEPTH: 22  
ELEVATION: 0002  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/11/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.980555560 LONGITUDE: -93.398055560

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## Louisiana Water Well Registry (WW)

**MAP ID# 18**

Distance from Property: 0.13 mi. (686 ft.) E

ID NUMBER: 295850093235301  
LOCAL WELL: 6626Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 22  
WATER LEVEL: 7.22  
YIELD: NOT REPORTED  
HOLE DEPTH: 22  
ELEVATION: 0002  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/11/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.980555560 LONGITUDE: -93.398055560

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## Louisiana Water Well Registry (WW)

**MAP ID# 18**

Distance from Property: 0.13 mi. (686 ft.) E

ID NUMBER: 295850093235301  
LOCAL WELL: 6626Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 22  
WATER LEVEL: 7.22  
YIELD: NOT REPORTED  
HOLE DEPTH: 22  
ELEVATION: 0002  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/11/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.980555560 LONGITUDE: -93.398055560

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## Louisiana Water Well Registry (WW)

**MAP ID# 18**

Distance from Property: 0.13 mi. (686 ft.) E

ID NUMBER: 295850093235301  
LOCAL WELL: 6626Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 22  
WATER LEVEL: 7.22  
YIELD: NOT REPORTED  
HOLE DEPTH: 22  
ELEVATION: 0002  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/11/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.980555560 LONGITUDE: -93.398055560

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## Louisiana Water Well Registry (WW)

**MAP ID# 19**

Distance from Property: 0.13 mi. (686 ft.) E

ID NUMBER: 295845093235301  
LOCAL WELL: 6619Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 33  
WATER LEVEL: 4.65  
YIELD: NOT REPORTED  
HOLE DEPTH: 48  
ELEVATION: 0001  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/08/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.979166670 LONGITUDE: -93.398055560

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## Louisiana Water Well Registry (WW)

**MAP ID# 20**

Distance from Property: 0.14 mi. (739 ft.) E

ID NUMBER: 295902093235501  
LOCAL WELL: 7154Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 16  
WATER LEVEL: 1.1  
YIELD: NOT REPORTED  
HOLE DEPTH: 54  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.983888890 LONGITUDE: -93.398611110

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## Louisiana Water Well Registry (WW)

**MAP ID# 20**

Distance from Property: 0.14 mi. (739 ft.) E

ID NUMBER: 295902093235501  
LOCAL WELL: 7154Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 16  
WATER LEVEL: 1.1  
YIELD: NOT REPORTED  
HOLE DEPTH: 54  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.983888890 LONGITUDE: -93.398611110

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## Louisiana Water Well Registry (WW)

**MAP ID# 20**

Distance from Property: 0.14 mi. (739 ft.) E

ID NUMBER: 295902093235501  
LOCAL WELL: 7154Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 16  
WATER LEVEL: 1.1  
YIELD: NOT REPORTED  
HOLE DEPTH: 54  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.983888890 LONGITUDE: -93.398611110

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## Louisiana Water Well Registry (WW)

[MAP ID# 21](#)

Distance from Property: 0.14 mi. (739 ft.) NE

ID NUMBER: 295954093235902  
LOCAL WELL: 5539Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: GERAGHTY  
WELL STATUS: ACTIVE  
WELL DEPTH: 46  
WATER LEVEL: 0.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 50  
ELEVATION: NOT REPORTED  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 05/90  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 5  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 5  
SCREEN INTERVAL: 36-46  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.998333330 LONGITUDE: -93.399722220

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## Louisiana Water Well Registry (WW)

[MAP ID# 21](#)

Distance from Property: 0.14 mi. (739 ft.) NE

ID NUMBER: 295954093235901  
LOCAL WELL: 5538Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: GERAGHTY  
WELL STATUS: ACTIVE  
WELL DEPTH: 23  
WATER LEVEL: 0.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 23  
ELEVATION: NOT REPORTED  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 05/90  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 5  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 5  
SCREEN INTERVAL: 13-23  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.998333330 LONGITUDE: -93.399722220

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## Louisiana Water Well Registry (WW)

**MAP ID# 22**

Distance from Property: 0.14 mi. (739 ft.) E

ID NUMBER: 295847093235201  
LOCAL WELL: 6620Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 38  
WATER LEVEL: 5.31  
YIELD: NOT REPORTED  
HOLE DEPTH: 48  
ELEVATION: 0001  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/12/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.979722220 LONGITUDE: -93.397777780

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## Louisiana Water Well Registry (WW)

**MAP ID# 23**

Distance from Property: 0.16 mi. (845 ft.) E

ID NUMBER: 295854093235401  
LOCAL WELL: 6630Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 40  
WATER LEVEL: 6.44  
YIELD: NOT REPORTED  
HOLE DEPTH: 44  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/07/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.981666670 LONGITUDE: -93.398333330

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## Louisiana Water Well Registry (WW)

**MAP ID# 24**

Distance from Property: 0.17 mi. (898 ft.) E

ID NUMBER: 295933093235301  
LOCAL WELL: 5809Z  
PARISH NUM: 023  
OWNER NAME: WARREN PETRO  
WELL USE: PIEZOMETER  
USE DESCRIPTION: PIEZOMETER  
DRILLER NAME: PROFESSIONAL-  
WELL STATUS: ACTIVE  
WELL DEPTH: 15  
WATER LEVEL: 2.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 15  
ELEVATION: 10  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 08/97  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 0.50  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 1.50  
SCREEN INTERVAL: 12-15  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.992500000 LONGITUDE: -93.398055560

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## Louisiana Water Well Registry (WW)

**MAP ID# 24**

Distance from Property: 0.17 mi. (898 ft.) E

ID NUMBER: 295932093235301  
LOCAL WELL: 5808Z  
PARISH NUM: 023  
OWNER NAME: WARREN PETRO  
WELL USE: PIEZOMETER  
USE DESCRIPTION: PIEZOMETER  
DRILLER NAME: PROFESSIONAL-  
WELL STATUS: ACTIVE  
WELL DEPTH: 15  
WATER LEVEL: 2.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 15  
ELEVATION: 10  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 08/97  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 0.50  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 1.50  
SCREEN INTERVAL: 12-15  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.992222220 LONGITUDE: -93.398055560

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## Louisiana Water Well Registry (WW)

**MAP ID# 25**

Distance from Property: 0.17 mi. (898 ft.) W

ID NUMBER: 295950093241801  
LOCAL WELL: 5537Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: GERAGHTY  
WELL STATUS: ACTIVE  
WELL DEPTH: 47  
WATER LEVEL: 0.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 49  
ELEVATION: NOT REPORTED  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 05/90  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 5  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 5  
SCREEN INTERVAL: 37-47  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.997222220 LONGITUDE: -93.405000000

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## Louisiana Water Well Registry (WW)

**MAP ID# 26**

Distance from Property: 0.19 mi. (1,003 ft.) W

ID NUMBER: 295901093241401  
LOCAL WELL: 6613Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 13  
WATER LEVEL: 7.61  
YIELD: NOT REPORTED  
HOLE DEPTH: 13  
ELEVATION: 0005  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/06/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.983611110 LONGITUDE: -93.403888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 26**

Distance from Property: 0.19 mi. (1,003 ft.) W

ID NUMBER: 295900093241401  
LOCAL WELL: 7156Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 15  
WATER LEVEL: .2  
YIELD: NOT REPORTED  
HOLE DEPTH: 15  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/22/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.983333330 LONGITUDE: -93.403888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 26**

Distance from Property: 0.19 mi. (1,003 ft.) W

ID NUMBER: 295901093241401  
LOCAL WELL: 6613Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 13  
WATER LEVEL: 7.61  
YIELD: NOT REPORTED  
HOLE DEPTH: 13  
ELEVATION: 0005  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/06/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.983611110 LONGITUDE: -93.403888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 26**

Distance from Property: 0.19 mi. (1,003 ft.) W

ID NUMBER: 295901093241401  
LOCAL WELL: 6613Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 13  
WATER LEVEL: 7.61  
YIELD: NOT REPORTED  
HOLE DEPTH: 13  
ELEVATION: 0005  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/06/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.983611110 LONGITUDE: -93.403888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 27**

Distance from Property: 0.19 mi. (1,003 ft.) W

ID NUMBER: 295859093241401  
LOCAL WELL: 6615Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 16  
WATER LEVEL: 7.35  
YIELD: NOT REPORTED  
HOLE DEPTH: 16  
ELEVATION: 0005  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/05/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.983055560 LONGITUDE: -93.403888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 27**

Distance from Property: 0.19 mi. (1,003 ft.) W

ID NUMBER: 295859093241401  
LOCAL WELL: 6615Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 16  
WATER LEVEL: 7.35  
YIELD: NOT REPORTED  
HOLE DEPTH: 16  
ELEVATION: 0005  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/05/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.983055560 LONGITUDE: -93.403888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 27**

Distance from Property: 0.19 mi. (1,003 ft.) W

ID NUMBER: 295859093241401  
LOCAL WELL: 6615Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 16  
WATER LEVEL: 7.35  
YIELD: NOT REPORTED  
HOLE DEPTH: 16  
ELEVATION: 0005  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/05/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.983055560 LONGITUDE: -93.403888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 27**

Distance from Property: 0.19 mi. (1,003 ft.) W

ID NUMBER: 295859093241401  
LOCAL WELL: 6615Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 16  
WATER LEVEL: 7.35  
YIELD: NOT REPORTED  
HOLE DEPTH: 16  
ELEVATION: 0005  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/05/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.983055560 LONGITUDE: -93.403888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 28**

Distance from Property: 0.19 mi. (1,003 ft.) E

ID NUMBER: 295904093235201  
LOCAL WELL: 7149Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 18  
WATER LEVEL: 3.74  
YIELD: NOT REPORTED  
HOLE DEPTH: 18  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.984444440 LONGITUDE: -93.397777780

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## Louisiana Water Well Registry (WW)

**MAP ID# 28**

Distance from Property: 0.19 mi. (1,003 ft.) E

ID NUMBER: 295904093235201  
LOCAL WELL: 7149Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 18  
WATER LEVEL: 3.74  
YIELD: NOT REPORTED  
HOLE DEPTH: 18  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.984444440 LONGITUDE: -93.397777780

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## Louisiana Water Well Registry (WW)

**MAP ID# 28**

Distance from Property: 0.19 mi. (1,003 ft.) E

ID NUMBER: 295904093235201  
LOCAL WELL: 7149Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 18  
WATER LEVEL: 3.74  
YIELD: NOT REPORTED  
HOLE DEPTH: 18  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.984444440 LONGITUDE: -93.397777780

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## Louisiana Water Well Registry (WW)

**MAP ID# 29**

Distance from Property: 0.19 mi. (1,003 ft.) W

ID NUMBER: 295940093241401  
LOCAL WELL: 5171Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: BOREHOLE/PILOT HOLE  
USE DESCRIPTION: PLUGGED AND ABANDONED BOREHOLE  
DRILLER NAME: UNKNOWN  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 200  
WATER LEVEL: 0.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 200  
ELEVATION: 12  
PLUGGED BY: HOUSTON SERVICE  
DATE PLUGGED: 01/84  
DATE COMPLETED: NOT REPORTED  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: NOT REPORTED  
CASING MATERIAL: NOT REPORTED  
SCREEN DIAMETER: NOT REPORTED  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 11200NWM  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.994444440 LONGITUDE: -93.403888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 30**

Distance from Property: 0.2 mi. (1,056 ft.) E

ID NUMBER: 295849093234901  
LOCAL WELL: 6621Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 36  
WATER LEVEL: 3.7  
YIELD: NOT REPORTED  
HOLE DEPTH: 40  
ELEVATION: 0001  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/12/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.980277780 LONGITUDE: -93.396944440

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## Louisiana Water Well Registry (WW)

**MAP ID# 31**

Distance from Property: 0.21 mi. (1,109 ft.) E

ID NUMBER: 295907093235101  
LOCAL WELL: 7148Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 18  
WATER LEVEL: 3.86  
YIELD: NOT REPORTED  
HOLE DEPTH: 44  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.985277780 LONGITUDE: -93.397500000

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## Louisiana Water Well Registry (WW)

**MAP ID# 32**

Distance from Property: 0.21 mi. (1,109 ft.) E

ID NUMBER: 295900093235101  
LOCAL WELL: 7152Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 19  
WATER LEVEL: 01  
YIELD: NOT REPORTED  
HOLE DEPTH: 44  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.983333330 LONGITUDE: -93.397500000

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## Louisiana Water Well Registry (WW)

**MAP ID# 32**

Distance from Property: 0.21 mi. (1,109 ft.) E

ID NUMBER: 295900093235101  
LOCAL WELL: 7152Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 19  
WATER LEVEL: 01  
YIELD: NOT REPORTED  
HOLE DEPTH: 44  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.983333330 LONGITUDE: -93.397500000

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## Louisiana Water Well Registry (WW)

**MAP ID# 32**

Distance from Property: 0.21 mi. (1,109 ft.) E

ID NUMBER: 295900093235101  
LOCAL WELL: 7152Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 19  
WATER LEVEL: 01  
YIELD: NOT REPORTED  
HOLE DEPTH: 44  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.983333330 LONGITUDE: -93.397500000

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## Louisiana Water Well Registry (WW)

**MAP ID# 32**

Distance from Property: 0.22 mi. (1,162 ft.) E

ID NUMBER: 295901093235001  
LOCAL WELL: 7151Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 18  
WATER LEVEL: .85  
YIELD: NOT REPORTED  
HOLE DEPTH: 18  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.983611110 LONGITUDE: -93.397222220

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## Louisiana Water Well Registry (WW)

**MAP ID# 33**

Distance from Property: 0.21 mi. (1,109 ft.) E

ID NUMBER: 295845093234801  
LOCAL WELL: 6625Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 27  
WATER LEVEL: 3.21  
YIELD: NOT REPORTED  
HOLE DEPTH: 40  
ELEVATION: 0001  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/12/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.979166670 LONGITUDE: -93.396666670

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## Louisiana Water Well Registry (WW)

**MAP ID# 34**

Distance from Property: 0.22 mi. (1,162 ft.) E

ID NUMBER: 295851093234801  
LOCAL WELL: 6622Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 36  
WATER LEVEL: 4.8  
YIELD: NOT REPORTED  
HOLE DEPTH: 48  
ELEVATION: 0001  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/11/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.980833330 LONGITUDE: -93.396666670

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## Louisiana Water Well Registry (WW)

**MAP ID# 35**

Distance from Property: 0.22 mi. (1,162 ft.) E

ID NUMBER: 295934093235001  
LOCAL WELL: 5810Z  
PARISH NUM: 023  
OWNER NAME: WARREN PETRO  
WELL USE: PIEZOMETER  
USE DESCRIPTION: PIEZOMETER  
DRILLER NAME: PROFESSIONAL-  
WELL STATUS: ACTIVE  
WELL DEPTH: 15  
WATER LEVEL: 2.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 15  
ELEVATION: 11  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 08/97  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 0.50  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 1.50  
SCREEN INTERVAL: 12-15  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.992777780 LONGITUDE: -93.397222220

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## Louisiana Water Well Registry (WW)

**MAP ID# 36**

Distance from Property: 0.22 mi. (1,162 ft.) W

ID NUMBER: 295833093241601  
LOCAL WELL: 6405Z  
PARISH NUM: 023  
OWNER NAME: TALBOT  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON  
WELL STATUS: ACTIVE  
WELL DEPTH: 26  
WATER LEVEL: 10.59  
YIELD: NOT REPORTED  
HOLE DEPTH: 26  
ELEVATION: 4  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 10/09  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: 16-26  
GEOLOGIC UNIT: 00000000  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 033 10W  
LATITUDE: 29.975833330 LONGITUDE: -93.404444440

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## Louisiana Water Well Registry (WW)

**MAP ID# 36**

Distance from Property: 0.22 mi. (1,162 ft.) W

ID NUMBER: 295833093241600  
LOCAL WELL: 6404Z  
PARISH NUM: 023  
OWNER NAME: TALBOT  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON  
WELL STATUS: ACTIVE  
WELL DEPTH: 50  
WATER LEVEL: 0.75  
YIELD: NOT REPORTED  
HOLE DEPTH: 50  
ELEVATION: 4  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 10/09  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: 40-50  
GEOLOGIC UNIT: 00000000  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 033 10W  
LATITUDE: 29.975833330 LONGITUDE: -93.404444440

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## Louisiana Water Well Registry (WW)

**MAP ID# 37**

Distance from Property: 0.22 mi. (1,162 ft.) W

ID NUMBER: 295858093241601  
LOCAL WELL: 6612Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 38  
WATER LEVEL: 7.55  
YIELD: NOT REPORTED  
HOLE DEPTH: 40  
ELEVATION: 0005  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: 02/17/2015  
DATE COMPLETED: 07/05/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.982777780 LONGITUDE: -93.404444440

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## Louisiana Water Well Registry (WW)

**MAP ID# 37**

Distance from Property: 0.22 mi. (1,162 ft.) W

ID NUMBER: 295858093241601  
LOCAL WELL: 6612Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 38  
WATER LEVEL: 7.55  
YIELD: NOT REPORTED  
HOLE DEPTH: 40  
ELEVATION: 0005  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: 02/17/2015  
DATE COMPLETED: 07/05/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.982777780 LONGITUDE: -93.404444440

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## Louisiana Water Well Registry (WW)

**MAP ID# 38**

Distance from Property: 0.23 mi. (1,214 ft.) E

ID NUMBER: 295936093234901  
LOCAL WELL: 5811Z  
PARISH NUM: 023  
OWNER NAME: WARREN PETRO  
WELL USE: PIEZOMETER  
USE DESCRIPTION: PIEZOMETER  
DRILLER NAME: PROFESSIONAL-  
WELL STATUS: ACTIVE  
WELL DEPTH: 15  
WATER LEVEL: 2.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 15  
ELEVATION: 11  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 08/97  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 0.50  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 1.50  
SCREEN INTERVAL: 12-15  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.993333330 LONGITUDE: -93.396944440

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## Louisiana Water Well Registry (WW)

**MAP ID# 39**

Distance from Property: 0.23 mi. (1,214 ft.) NE

ID NUMBER: 295855093234901  
LOCAL WELL: 6624Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 38  
WATER LEVEL: 5.68  
YIELD: NOT REPORTED  
HOLE DEPTH: 40  
ELEVATION: 0002  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/08/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.981944440 LONGITUDE: -93.396944440

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## Louisiana Water Well Registry (WW)

**MAP ID# 40**

Distance from Property: 0.24 mi. (1,267 ft.) N

ID NUMBER: 300000093241002  
LOCAL WELL: 5541Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: GERAGHTY  
WELL STATUS: ACTIVE  
WELL DEPTH: 22  
WATER LEVEL: 0.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 22  
ELEVATION: NOT REPORTED  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 05/90  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 5  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 5  
SCREEN INTERVAL: 12-22  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 30.000000000 LONGITUDE: -93.402777780

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## Louisiana Water Well Registry (WW)

**MAP ID# 40**

Distance from Property: 0.24 mi. (1,267 ft.) N

ID NUMBER: **300000093241001**  
LOCAL WELL: **5540Z**  
PARISH NUM: **023**  
OWNER NAME: **U S DEPT ENERGY**  
WELL USE: **MONITOR**  
USE DESCRIPTION: **MONITOR**  
DRILLER NAME: **GERAGHTY**  
WELL STATUS: **ACTIVE**  
WELL DEPTH: **47**  
WATER LEVEL: **0.00**  
YIELD: **NOT REPORTED**  
HOLE DEPTH: **50**  
ELEVATION: **NOT REPORTED**  
PLUGGED BY: **NOT REPORTED**  
DATE PLUGGED: **NOT REPORTED**  
DATE COMPLETED: **05/90**  
DRAWDOWN: **NOT REPORTED**  
CASING DIAMETER: **5**  
CASING MATERIAL: **PLASTIC**  
SCREEN DIAMETER: **5**  
SCREEN INTERVAL: **37-47**  
GEOLOGIC UNIT: **112CHCTC**  
QUAD NUM: **214**  
TOWNSHIP/SECTION/RANGE: **12S 020 10W**  
LATITUDE: **30.000000000** LONGITUDE: **-93.402777780**

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## Louisiana Water Well Registry (WW)

**MAP ID# 41**

Distance from Property: 0.24 mi. (1,267 ft.) E

ID NUMBER: 295857093234901  
LOCAL WELL: 6623Z  
PARISH NUM: 023  
OWNER NAME: TALBOT CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: ACTIVE  
WELL DEPTH: 11  
WATER LEVEL: 6.56  
YIELD: NOT REPORTED  
HOLE DEPTH: 11  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/07/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.982500000 LONGITUDE: -93.396944440

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## Louisiana Water Well Registry (WW)

**MAP ID# 42**

Distance from Property: 0.25 mi. (1,320 ft.) W

ID NUMBER: 295949093242301  
LOCAL WELL: 5771Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: LAYNE (ENV)  
WELL STATUS: ACTIVE  
WELL DEPTH: 18  
WATER LEVEL: 10.50  
YIELD: NOT REPORTED  
HOLE DEPTH: 18  
ELEVATION: 23  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 04/96  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 2  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 2  
SCREEN INTERVAL: 6-16  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.996944440 LONGITUDE: -93.406388890

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## Louisiana Water Well Registry (WW)

**MAP ID# 43**

Distance from Property: 0.25 mi. (1,320 ft.) SW

ID NUMBER: 295939093241801  
LOCAL WELL: 5442Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: UNKNOWN  
WELL STATUS: ACTIVE  
WELL DEPTH: 30  
WATER LEVEL: 8.30  
YIELD: NOT REPORTED  
HOLE DEPTH: 30  
ELEVATION: 14  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 04/81  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 3  
SCREEN INTERVAL: 20-30  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.994166670 LONGITUDE: -93.405000000

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## Louisiana Water Well Registry (WW)

**MAP ID# 44**

Distance from Property: 0.25 mi. (1,320 ft.) E

ID NUMBER: 295816093233501  
LOCAL WELL: 5772Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: PLUGGED AND ABANDONED MONITOR  
DRILLER NAME: LAYNE (ENV)  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 20  
WATER LEVEL: 10.50  
YIELD: NOT REPORTED  
HOLE DEPTH: 25  
ELEVATION: 7  
PLUGGED BY: LAYNE (ENV)  
DATE PLUGGED: 11/96  
DATE COMPLETED: 04/96  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 2  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 2  
SCREEN INTERVAL: 8-18  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 033 10W  
LATITUDE: 29.971111110 LONGITUDE: -93.393055560

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## Louisiana Water Well Registry (WW)

**MAP ID# 45**

Distance from Property: 0.25 mi. (1,320 ft.) NE

ID NUMBER: 295956093235201  
LOCAL WELL: 5001Z  
PARISH NUM: 023  
OWNER NAME: DOMINION GAS  
WELL USE: OTHER  
USE DESCRIPTION: PLUGGED AND ABANDONED  
DRILLER NAME: LAYNE (LA)  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 476  
WATER LEVEL: 0.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 476  
ELEVATION: NOT REPORTED  
PLUGGED BY: WATER RESOURCES  
DATE PLUGGED: 12/75  
DATE COMPLETED: 05/46  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: NOT REPORTED  
CASING MATERIAL: NOT REPORTED  
SCREEN DIAMETER: NOT REPORTED  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 11205LC  
QUAD NUM: NOT REPORTED  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.998888890 LONGITUDE: -93.397777780

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## Louisiana Water Well Registry (WW)

**MAP ID# 46**

Distance from Property: 0.27 mi. (1,426 ft.) NE

ID NUMBER: 295826093234401  
LOCAL WELL: 5856Z  
PARISH NUM: 023  
OWNER NAME: BROWN, KENNY  
WELL USE: DOMESTIC  
USE DESCRIPTION: DOMESTIC  
DRILLER NAME: J & R  
WELL STATUS: ACTIVE  
WELL DEPTH: 325  
WATER LEVEL: 38.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 325  
ELEVATION: 7  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 12/98  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 2  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 2  
SCREEN INTERVAL: 320-325  
GEOLOGIC UNIT: 11202LC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 033 10W  
LATITUDE: 29.973888890 LONGITUDE: -93.395555560

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## Louisiana Water Well Registry (WW)

**MAP ID# 47**

Distance from Property: 0.29 mi. (1,531 ft.) E

ID NUMBER: 295856093234601  
LOCAL WELL: 7147Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 35  
WATER LEVEL: .2  
YIELD: NOT REPORTED  
HOLE DEPTH: 35  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/22/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.982222220 LONGITUDE: -93.396111110

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## Louisiana Water Well Registry (WW)

**MAP ID# 47**

Distance from Property: 0.29 mi. (1,531 ft.) E

ID NUMBER: 295857093234601  
LOCAL WELL: 7146Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 35  
WATER LEVEL: .69  
YIELD: NOT REPORTED  
HOLE DEPTH: 35  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/21/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.982500000 LONGITUDE: -93.396111110

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## Louisiana Water Well Registry (WW)

**MAP ID# 48**

Distance from Property: 0.31 mi. (1,637 ft.) E

ID NUMBER: 295907093234501  
LOCAL WELL: 7137Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 16  
WATER LEVEL: 3.62  
YIELD: NOT REPORTED  
HOLE DEPTH: 48  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.985277780 LONGITUDE: -93.395833330

---

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## Louisiana Water Well Registry (WW)

**MAP ID# 48**

Distance from Property: 0.31 mi. (1,637 ft.) E

ID NUMBER: 295907093234501  
LOCAL WELL: 7137Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 16  
WATER LEVEL: 3.62  
YIELD: NOT REPORTED  
HOLE DEPTH: 48  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.985277780 LONGITUDE: -93.395833330

---

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## Louisiana Water Well Registry (WW)

**MAP ID# 48**

Distance from Property: 0.31 mi. (1,637 ft.) E

ID NUMBER: 295907093234501  
LOCAL WELL: 7137Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 16  
WATER LEVEL: 3.62  
YIELD: NOT REPORTED  
HOLE DEPTH: 48  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.985277780 LONGITUDE: -93.395833330

---

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## Louisiana Water Well Registry (WW)

**MAP ID# 49**

Distance from Property: 0.31 mi. (1,637 ft.) NW

ID NUMBER: 300003093241501  
LOCAL WELL: 5440Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: UNKNOWN  
WELL STATUS: ACTIVE  
WELL DEPTH: 30  
WATER LEVEL: 8.90  
YIELD: NOT REPORTED  
HOLE DEPTH: 30  
ELEVATION: 17  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 04/81  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 3  
SCREEN INTERVAL: 20-30  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 177  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 30.000833330 LONGITUDE: -93.404166670

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## Louisiana Water Well Registry (WW)

**MAP ID# 50**

Distance from Property: 0.33 mi. (1,742 ft.) E

ID NUMBER: 295940093234301  
LOCAL WELL: 5813Z  
PARISH NUM: 023  
OWNER NAME: WARREN PETRO  
WELL USE: PIEZOMETER  
USE DESCRIPTION: PIEZOMETER  
DRILLER NAME: PROFESSIONAL-  
WELL STATUS: ACTIVE  
WELL DEPTH: 15  
WATER LEVEL: 2.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 15  
ELEVATION: 9  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 08/97  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 0.50  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 1.50  
SCREEN INTERVAL: 12-15  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.994444440 LONGITUDE: -93.395277780

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## Louisiana Water Well Registry (WW)

**MAP ID# 50**

Distance from Property: 0.32 mi. (1,690 ft.) E

ID NUMBER: 295940093234401  
LOCAL WELL: 5812Z  
PARISH NUM: 023  
OWNER NAME: WARREN PETRO  
WELL USE: PIEZOMETER  
USE DESCRIPTION: PIEZOMETER  
DRILLER NAME: PROFESSIONAL-  
WELL STATUS: ACTIVE  
WELL DEPTH: 15  
WATER LEVEL: 2.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 15  
ELEVATION: 10  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 08/97  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 0.50  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 1.50  
SCREEN INTERVAL: 12-15  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.994444440 LONGITUDE: -93.395555560

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## Louisiana Water Well Registry (WW)

**MAP ID# 51**

Distance from Property: 0.32 mi. (1,690 ft.) E

ID NUMBER: 295901093234401  
LOCAL WELL: 7142Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 18  
WATER LEVEL: 1.42  
YIELD: NOT REPORTED  
HOLE DEPTH: 18  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/21/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.983611110 LONGITUDE: -93.395555560

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## Louisiana Water Well Registry (WW)

**MAP ID# 52**

Distance from Property: 0.33 mi. (1,742 ft.) NW

ID NUMBER: 300002093242001  
LOCAL WELL: 5441Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: UNKNOWN  
WELL STATUS: ACTIVE  
WELL DEPTH: 30  
WATER LEVEL: 8.30  
YIELD: NOT REPORTED  
HOLE DEPTH: 30  
ELEVATION: 17  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 04/81  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 3  
SCREEN INTERVAL: 20-30  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 177  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 30.000555560 LONGITUDE: -93.405555560

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## Louisiana Water Well Registry (WW)

**MAP ID# 53**

Distance from Property: 0.34 mi. (1,795 ft.) W

ID NUMBER: 295836093242301  
LOCAL WELL: 6407Z  
PARISH NUM: 023  
OWNER NAME: TALBOT  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON  
WELL STATUS: ACTIVE  
WELL DEPTH: 26  
WATER LEVEL: 12.52  
YIELD: NOT REPORTED  
HOLE DEPTH: 26  
ELEVATION: 4  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 10/09  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: 16-26  
GEOLOGIC UNIT: 00000000  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 033 10W  
LATITUDE: 29.976666670 LONGITUDE: -93.406388890

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## Louisiana Water Well Registry (WW)

**MAP ID# 53**

Distance from Property: 0.34 mi. (1,795 ft.) W

ID NUMBER: 295836093242300  
LOCAL WELL: 6406Z  
PARISH NUM: 023  
OWNER NAME: TALBOT  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON  
WELL STATUS: ACTIVE  
WELL DEPTH: 49  
WATER LEVEL: 12.51  
YIELD: NOT REPORTED  
HOLE DEPTH: 49  
ELEVATION: 4  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 10/09  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: 39-49  
GEOLOGIC UNIT: 00000000  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 033 10W  
LATITUDE: 29.976666670 LONGITUDE: -93.406388890

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## Louisiana Water Well Registry (WW)

**MAP ID# 54**

Distance from Property: 0.35 mi. (1,848 ft.) N

ID NUMBER: 300006093240301  
LOCAL WELL: 5765Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: PLUGGED AND ABANDONED MONITOR  
DRILLER NAME: LAYNE (ENV)  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 20  
WATER LEVEL: 10.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 20  
ELEVATION: 12  
PLUGGED BY: LAYNE (ENV)  
DATE PLUGGED: 11/96  
DATE COMPLETED: 04/96  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 2  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 2  
SCREEN INTERVAL: 8-18  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 177C  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 30.001666670 LONGITUDE: -93.400833330

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## Louisiana Water Well Registry (WW)

**MAP ID# 55**

Distance from Property: 0.35 mi. (1,848 ft.) NE

ID NUMBER: 295856093234201  
LOCAL WELL: 7144Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 15  
WATER LEVEL: .1  
YIELD: NOT REPORTED  
HOLE DEPTH: 15  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/21/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.982222220 LONGITUDE: -93.395000000

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## Louisiana Water Well Registry (WW)

**MAP ID# 56**

Distance from Property: 0.37 mi. (1,954 ft.) E

ID NUMBER: 295900093234101  
LOCAL WELL: 7143Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 13  
WATER LEVEL: .01  
YIELD: NOT REPORTED  
HOLE DEPTH: 13  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.983333330 LONGITUDE: -93.394722220

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## Louisiana Water Well Registry (WW)

**MAP ID# 56**

Distance from Property: 0.37 mi. (1,954 ft.) E

ID NUMBER: 295901093234101  
LOCAL WELL: 7158Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 15  
WATER LEVEL: .1  
YIELD: NOT REPORTED  
HOLE DEPTH: 28  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.983611110 LONGITUDE: -93.394722220

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## Louisiana Water Well Registry (WW)

**MAP ID# 57**

Distance from Property: 0.37 mi. (1,954 ft.) E

ID NUMBER: 295909093234101  
LOCAL WELL: 7136Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 18  
WATER LEVEL: 3.59  
YIELD: NOT REPORTED  
HOLE DEPTH: 44  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.985833330 LONGITUDE: -93.394722220

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**United States Geological Survey National Water Information System  
(NWIS)**

**MAP ID# 58**

Distance from Property: 0.37 mi. (1,954 ft.) E

REPORTING AGENCY: **US GEOLOGICAL SURVEY**

SITE NUMBER: **295938093234001**

STATION NAME: **CN- 65**

SITE TYPE: **WELL**

LATITUDE: **29.994102040** LONGITUDE: **-93.394600600**

DATE DRILLED: **1958-01-22**

WELL DEPTH: **235 FEET**

HOLE DEPTH: **NOT REPORTED**

LOCAL AQUIFER: **200-FOOT SAND OF LAKE CHARLES AREA**

---

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## Louisiana Water Well Registry (WW)

**MAP ID# 58**

Distance from Property: 0.38 mi. (2,006 ft.) E

ID NUMBER: 295938093234001  
LOCAL WELL: 65  
PARISH NUM: 023  
OWNER NAME: OXY USA  
WELL USE: DOMESTIC  
USE DESCRIPTION: PLUGGED AND ABANDONED DOMESTIC  
DRILLER NAME: UNKNOWN  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 235  
WATER LEVEL: 29.93  
YIELD: NOT REPORTED  
HOLE DEPTH: 0  
ELEVATION: NOT REPORTED  
PLUGGED BY: LAYNE (MS)  
DATE PLUGGED: 09/91  
DATE COMPLETED: 04/57  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: NOT REPORTED  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 215-235  
GEOLOGIC UNIT: 11202LC  
QUAD NUM: NOT REPORTED  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.993888890 LONGITUDE: -93.394444440

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## Louisiana Water Well Registry (WW)

**MAP ID# 59**

Distance from Property: 0.38 mi. (2,006 ft.) SW

ID NUMBER: 295936093242601  
LOCAL WELL: 5446Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: DOMESTIC  
USE DESCRIPTION: PLUGGED AND ABANDONED DOMESTIC  
DRILLER NAME: UNKNOWN  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 172  
WATER LEVEL: 0.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 0  
ELEVATION: 14  
PLUGGED BY: SOIL TESTING  
DATE PLUGGED: 07/88  
DATE COMPLETED: NOT REPORTED  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 2  
CASING MATERIAL: STEEL  
SCREEN DIAMETER: NOT REPORTED  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTS  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.993333330 LONGITUDE: -93.407222220

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**United States Geological Survey National Water Information System  
(NWIS)**

**MAP ID# 60**

Distance from Property: 0.4 mi. (2,112 ft.) E

REPORTING AGENCY: **US GEOLOGICAL SURVEY**

SITE NUMBER: **295938093233801**

STATION NAME: **CN- 64**

SITE TYPE: **WELL**

LATITUDE: **29.994102040**                      LONGITUDE: **-93.394045000**

DATE DRILLED: **1957-09-26**

WELL DEPTH: **505 FEET**

HOLE DEPTH: **512 FEET**

LOCAL AQUIFER: **200-FOOT SAND OF LAKE CHARLES AREA**

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## Louisiana Water Well Registry (WW)

**MAP ID# 61**

Distance from Property: 0.41 mi. (2,165 ft.) E

ID NUMBER: 295938093233801  
LOCAL WELL: 64  
PARISH NUM: 023  
OWNER NAME: TRIDENT NGL  
WELL USE: INDUSTRIAL  
USE DESCRIPTION: PLUGGED AND ABANDONED INDUSTRIAL  
DRILLER NAME: LAYNE (LA)  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 504  
WATER LEVEL: 45.80  
YIELD: NOT REPORTED  
HOLE DEPTH: 512  
ELEVATION: NOT REPORTED  
PLUGGED BY: LAYNE (MS)  
DATE PLUGGED: 03/92  
DATE COMPLETED: 03/57  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 10X4  
CASING MATERIAL: STEEL  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 461-504  
GEOLOGIC UNIT: 11205LC  
QUAD NUM: NOT REPORTED  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.993888890 LONGITUDE: -93.393888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 62**

Distance from Property: 0.41 mi. (2,165 ft.) E

ID NUMBER: 295906093233901  
LOCAL WELL: 7133Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 18  
WATER LEVEL: 3.44  
YIELD: NOT REPORTED  
HOLE DEPTH: 44  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.985000000 LONGITUDE: -93.394166670

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**United States Geological Survey National Water Information System  
(NWIS)**

**MAP ID# 63**

Distance from Property: 0.44 mi. (2,323 ft.) E

REPORTING AGENCY: **US GEOLOGICAL SURVEY**

SITE NUMBER: **295938093233601**

STATION NAME: **CN- 66**

SITE TYPE: **WELL**

LATITUDE: **29.994102040**                      LONGITUDE: **-93.393489500**

DATE DRILLED: **1957-04-21**

WELL DEPTH: **503 FEET**

HOLE DEPTH: **506 FEET**

LOCAL AQUIFER: **200-FOOT SAND OF LAKE CHARLES AREA**

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## Louisiana Water Well Registry (WW)

**MAP ID# 64**

Distance from Property: 0.42 mi. (2,218 ft.) E

ID NUMBER: 295903093233801  
LOCAL WELL: 7140Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 14  
WATER LEVEL: .1  
YIELD: NOT REPORTED  
HOLE DEPTH: 14  
ELEVATION: NOT REPORTED  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/20/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: NOT REPORTED  
TOWNSHIP/SECTION/RANGE: NOT REPORTED NOT REPORTED NOT REPORTED  
LATITUDE: 29.984166670 LONGITUDE: -93.393888890

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## Louisiana Water Well Registry (WW)

**MAP ID# 64**

Distance from Property: 0.41 mi. (2,165 ft.) E

ID NUMBER: 295904093233901  
LOCAL WELL: 7139Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 19  
WATER LEVEL: .09  
YIELD: NOT REPORTED  
HOLE DEPTH: 19  
ELEVATION: NOT REPORTED  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/20/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: NOT REPORTED  
TOWNSHIP/SECTION/RANGE: NOT REPORTED NOT REPORTED NOT REPORTED  
LATITUDE: 29.984444440 LONGITUDE: -93.394166670

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## Louisiana Water Well Registry (WW)

**MAP ID# 65**

Distance from Property: 0.42 mi. (2,218 ft.) E

ID NUMBER: 295909093233801  
LOCAL WELL: 7134Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 18  
WATER LEVEL: 5.49  
YIELD: NOT REPORTED  
HOLE DEPTH: 18  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.985833330 LONGITUDE: -93.393888890

---

[Back to Report Summary](#)



## Louisiana Water Well Registry (WW)

**MAP ID# 65**

Distance from Property: 0.42 mi. (2,218 ft.) E

ID NUMBER: 295909093233801  
LOCAL WELL: 7134Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 18  
WATER LEVEL: 5.49  
YIELD: NOT REPORTED  
HOLE DEPTH: 18  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.985833330 LONGITUDE: -93.393888890

---

[Back to Report Summary](#)

## Louisiana Water Well Registry (WW)

**MAP ID# 65**

Distance from Property: 0.42 mi. (2,218 ft.) E

ID NUMBER: 295909093233801  
LOCAL WELL: 7134Z  
PARISH NUM: 023  
OWNER NAME: DAVID V CURRIE  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: ICON ENVIRONMENTAL SERVICES, INC  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 18  
WATER LEVEL: 5.49  
YIELD: NOT REPORTED  
HOLE DEPTH: 18  
ELEVATION: 0004  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 01/15/2015  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: .75  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: .75  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 028 10W  
LATITUDE: 29.985833330 LONGITUDE: -93.393888890

---

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## Louisiana Water Well Registry (WW)

**MAP ID# 66**

Distance from Property: 0.42 mi. (2,218 ft.) W

ID NUMBER: 295955093243201  
LOCAL WELL: 263  
PARISH NUM: 023  
OWNER NAME: LA STORAGE, LLC  
WELL USE: TEST HOLE  
USE DESCRIPTION: TEST HOLE  
DRILLER NAME: GRINER DRILLING SERVICE, INC.  
WELL STATUS: NOT REPORTED  
WELL DEPTH: 807  
WATER LEVEL: 53  
YIELD: 147  
HOLE DEPTH: 1000  
ELEVATION: 0020  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 08/12/2015  
DRAWDOWN: 107  
CASING DIAMETER: 6  
CASING MATERIAL: STEEL  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 760-800  
GEOLOGIC UNIT: 11200NWM  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 29.998611110 LONGITUDE: -93.408888890

---

[Back to Report Summary](#)

## Louisiana Water Well Registry (WW)

**MAP ID# 67**

Distance from Property: 0.43 mi. (2,270 ft.) E

ID NUMBER: 295847093233501  
LOCAL WELL: 6881Z  
PARISH NUM: 023  
OWNER NAME: TALBOT, CARMOUCHE & MARCELLO  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: DEVONIAN GROUP, L.L.C.  
WELL STATUS: ACTIVE  
WELL DEPTH: 14  
WATER LEVEL: 7.9  
YIELD: NOT REPORTED  
HOLE DEPTH: 14  
ELEVATION: 0001  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 07/20/2011  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 1  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 1  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112PRIR  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 030 10W  
LATITUDE: 29.979722220 LONGITUDE: -93.393055560

---

[Back to Report Summary](#)

## Louisiana Water Well Registry (WW)

**MAP ID# 68**

Distance from Property: 0.45 mi. (2,376 ft.) E

ID NUMBER: 295938093233601  
LOCAL WELL: 66  
PARISH NUM: 023  
OWNER NAME: TRIDENT NGL  
WELL USE: INDUSTRIAL  
USE DESCRIPTION: INDUSTRIAL  
DRILLER NAME: LAYNE (LA)  
WELL STATUS: ACTIVE  
WELL DEPTH: 503  
WATER LEVEL: 37.00  
YIELD: 2000  
HOLE DEPTH: 506  
ELEVATION: 9  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 04/57  
DRAWDOWN: 21  
CASING DIAMETER: 22X10  
CASING MATERIAL: NOT REPORTED  
SCREEN DIAMETER: 10  
SCREEN INTERVAL: 423-503  
GEOLOGIC UNIT: 11205LC  
QUAD NUM: NOT REPORTED  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.993888890 LONGITUDE: -93.393333330

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## Louisiana Water Well Registry (WW)

**MAP ID# 69**

Distance from Property: 0.44 mi. (2,323 ft.) N

ID NUMBER: **300010093235601**  
LOCAL WELL: **5766Z**  
PARISH NUM: **023**  
OWNER NAME: **U S DEPT ENERGY**  
WELL USE: **MONITOR**  
USE DESCRIPTION: **MONITOR**  
DRILLER NAME: **LAYNE (ENV)**  
WELL STATUS: **ACTIVE**  
WELL DEPTH: **20**  
WATER LEVEL: **6.00**  
YIELD: **NOT REPORTED**  
HOLE DEPTH: **20**  
ELEVATION: **7**  
PLUGGED BY: **NOT REPORTED**  
DATE PLUGGED: **NOT REPORTED**  
DATE COMPLETED: **04/96**  
DRAWDOWN: **NOT REPORTED**  
CASING DIAMETER: **2**  
CASING MATERIAL: **PLASTIC**  
SCREEN DIAMETER: **2**  
SCREEN INTERVAL: **8-18**  
GEOLOGIC UNIT: **112CHCTC**  
QUAD NUM: **177C**  
TOWNSHIP/SECTION/RANGE: **12S 021 10W**  
LATITUDE: **30.002777780** LONGITUDE: **-93.398888890**

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## Louisiana Water Well Registry (WW)

**MAP ID# 70**

Distance from Property: 0.45 mi. (2,376 ft.) W

ID NUMBER: 295931093243001  
LOCAL WELL: 5445Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: DOMESTIC  
USE DESCRIPTION: PLUGGED AND ABANDONED DOMESTIC  
DRILLER NAME: UNKNOWN  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 166  
WATER LEVEL: 0.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 0  
ELEVATION: 11  
PLUGGED BY: SOIL TESTING  
DATE PLUGGED: 07/88  
DATE COMPLETED: NOT REPORTED  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 2  
CASING MATERIAL: STEEL  
SCREEN DIAMETER: NOT REPORTED  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTS  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.991944440 LONGITUDE: -93.408333330

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## Louisiana Water Well Registry (WW)

**MAP ID# 71**

Distance from Property: 0.46 mi. (2,429 ft.) E

ID NUMBER: 295940093233501  
LOCAL WELL: 5815Z  
PARISH NUM: 023  
OWNER NAME: WARREN PETRO  
WELL USE: PIEZOMETER  
USE DESCRIPTION: PIEZOMETER  
DRILLER NAME: PROFESSIONAL-  
WELL STATUS: ACTIVE  
WELL DEPTH: 15  
WATER LEVEL: 2.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 15  
ELEVATION: 10  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 08/97  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 0.50  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 1.50  
SCREEN INTERVAL: 12-15  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.994444440 LONGITUDE: -93.393055560

---

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## Louisiana Water Well Registry (WW)

**MAP ID# 71**

Distance from Property: 0.45 mi. (2,376 ft.) E

ID NUMBER: 295941093233601  
LOCAL WELL: 5814Z  
PARISH NUM: 023  
OWNER NAME: WARREN PETRO  
WELL USE: PIEZOMETER  
USE DESCRIPTION: PIEZOMETER  
DRILLER NAME: PROFESSIONAL-  
WELL STATUS: ACTIVE  
WELL DEPTH: 15  
WATER LEVEL: 2.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 15  
ELEVATION: 11  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 08/97  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 0.50  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 1.50  
SCREEN INTERVAL: 12-15  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214A  
TOWNSHIP/SECTION/RANGE: 12S 021 10W  
LATITUDE: 29.994722220 LONGITUDE: -93.393333330

---

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## Louisiana Water Well Registry (WW)

**MAP ID# 72**

Distance from Property: 0.46 mi. (2,429 ft.) NW

ID NUMBER: 300008093242301  
LOCAL WELL: 5770Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: MONITOR  
USE DESCRIPTION: MONITOR  
DRILLER NAME: LAYNE (ENV)  
WELL STATUS: ACTIVE  
WELL DEPTH: 18  
WATER LEVEL: 10.50  
YIELD: NOT REPORTED  
HOLE DEPTH: 18  
ELEVATION: 17  
PLUGGED BY: NOT REPORTED  
DATE PLUGGED: NOT REPORTED  
DATE COMPLETED: 04/96  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 2  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 2  
SCREEN INTERVAL: 6-16  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 177C  
TOWNSHIP/SECTION/RANGE: 12S 020 10W  
LATITUDE: 30.002222220 LONGITUDE: -93.406388890

---

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## Louisiana Water Well Registry (WW)

**MAP ID# 73**

Distance from Property: 0.48 mi. (2,534 ft.) E

ID NUMBER: 295837093233301  
LOCAL WELL: 5683Z  
PARISH NUM: 023  
OWNER NAME: TRIDENT NGL  
WELL USE: RIG SUPPLY  
USE DESCRIPTION: PLUGGED AND ABANDONED RIG SUPPLY  
DRILLER NAME: RIG WATER  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 546  
WATER LEVEL: 55.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 560  
ELEVATION: NOT REPORTED  
PLUGGED BY: RIG WATER  
DATE PLUGGED: 12/93  
DATE COMPLETED: 10/93  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 4  
CASING MATERIAL: PLASTIC  
SCREEN DIAMETER: 4  
SCREEN INTERVAL: 526-546  
GEOLOGIC UNIT: 11205LC  
QUAD NUM: NOT REPORTED  
TOWNSHIP/SECTION/RANGE: 12S 033 10W  
LATITUDE: 29.976944440 LONGITUDE: -93.392500000

---

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## Louisiana Water Well Registry (WW)

**MAP ID# 74**

Distance from Property: 0.5 mi. (2,640 ft.) SW

ID NUMBER: 295934093243301  
LOCAL WELL: 5444Z  
PARISH NUM: 023  
OWNER NAME: U S DEPT ENERGY  
WELL USE: DOMESTIC  
USE DESCRIPTION: PLUGGED AND ABANDONED DOMESTIC  
DRILLER NAME: UNKNOWN  
WELL STATUS: PLUGGED AND ABANDONED  
WELL DEPTH: 32  
WATER LEVEL: 0.00  
YIELD: NOT REPORTED  
HOLE DEPTH: 0  
ELEVATION: 15  
PLUGGED BY: SOIL TESTING  
DATE PLUGGED: 07/88  
DATE COMPLETED: NOT REPORTED  
DRAWDOWN: NOT REPORTED  
CASING DIAMETER: 6  
CASING MATERIAL: NOT REPORTED  
SCREEN DIAMETER: NOT REPORTED  
SCREEN INTERVAL: NOT REPORTED  
GEOLOGIC UNIT: 112CHCTC  
QUAD NUM: 214  
TOWNSHIP/SECTION/RANGE: 12S 029 10W  
LATITUDE: 29.992777780 LONGITUDE: -93.409166670

---

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## ***Environmental Records Definitions - FEDERAL***

**NWIS**

United States Geological Survey National Water Information System

VERSION DATE: 05/14/15

This USGS National Water Information System database only includes groundwater wells. The USGS defines this well type as: A hole or shaft constructed in the earth intended to be used to locate, sample, or develop groundwater, oil, gas, or some other subsurface material. The diameter of a well is typically much smaller than the depth. Wells are also used to artificially recharge groundwater or to pressurize oil and gas production zones. Additional information about specific kinds of wells should be recorded under the secondary site types or the Use of Site field. Underground waste-disposal wells should be classified as waste-injection wells.

## ***Environmental Records Definitions - STATE (LA)***

**WW**

Louisiana Water Well Registry

VERSION DATE: 04/02/16

The Statewide Water Well Registration data file is maintained by the Louisiana Department of Natural Resources, Office of Conservation (DNR). This database includes wells registered with the Louisiana Department of Transportation and Development (DOTD), along with the Louisiana District of the United States Geological Survey, prior to March 1, 2010 and wells registered with the DNR after March 1, 2010. The information has been carefully prepared from the best available sources of data. It is intended for general informational purposes only and should not be considered authoritative for navigational, engineering, other site-specific uses, or any other uses. The DNR does not warrant or guarantee its accuracy, nor does DNR assume any responsibility or liability for any reliance thereon.





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## ***Historical Aerials Package***

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<http://www.geo-search.net/QuickMap/index.htm?DataID=Standard0000146786>

*Click on link above to access the map and satellite view of current property*

*Target Property:*

***2.1 Mile Corridor***

***Hackberry, Cameron Parish, Louisiana 70645***

*Prepared For:*

***S&B Infrastructure-Houston***

***Order #: 67530***

***Job #: 146786***

***Date: 05/24/2016***

## TARGET PROPERTY SUMMARY

### 2.1 Mile Corridor

**Hackberry, Cameron Parish, Louisiana 70645**

USGS Quadrangle: **Browns Lake, LA**

Target Property Geometry: **Corridor**

Target Property Longitude(s)/Latitude(s):

**(-93.402310, 29.996727), (-93.400890, 29.996720), (-93.400687, 29.993669), (-93.400906, 29.991898), (-93.400893, 29.989738), (-93.400896, 29.986393), (-93.400871, 29.982836), (-93.400884, 29.980880), (-93.400091, 29.980072), (-93.400063, 29.978937), (-93.400859, 29.978141), (-93.400822, 29.976341), (-93.400878, 29.972140), (-93.400178, 29.971675), (-93.397053, 29.970341)**

County/Parish Covered:

**Cameron (LA)**

Zipcode(s) Covered:

**Hackberry LA: 70645**

State(s) Covered:

**LA**

**\*Target property is located in Radon Zone 3.**

**Zone 3 areas have a predicted average indoor radon screening level less than 2 pCi/L (picocuries per liter).**

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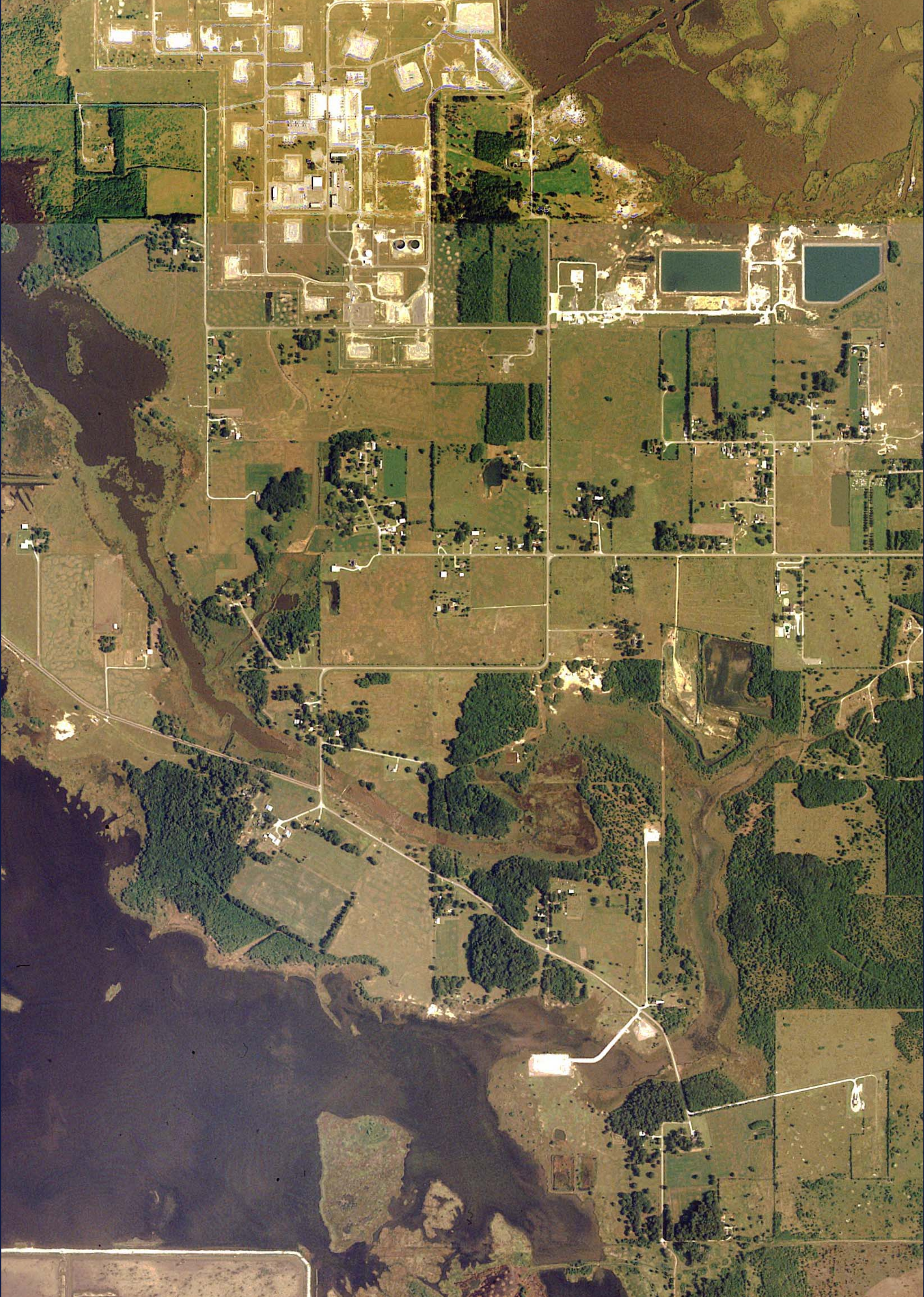




**SITE:** 2.1 MILE CORRIDOR  
**SOURCE:** USDA  
**DATE:** 2015  
**COUNTY:** CAMERON PARISH, LA  
**SCALE:** 1" = 1,000'







**SITE:** 2.1 MILE CORRIDOR  
**SOURCE:** USDA  
**DATE:** 2003  
**COUNTY:** CAMERON PARISH, LA  
**SCALE:** 1" = 1,000'







**SITE:** 2.1 MILE CORRIDOR  
**SOURCE:** LOSCO  
**DATE:** 02/08/1998  
**COUNTY:** CAMERON PARISH, LA  
**SCALE:** 1" = 1,000'







**SITE:** 2.1 MILE CORRIDOR  
**SOURCE:** USGS  
**DATE:** 11/23/1989  
**COUNTY:** CAMERON PARISH, LA  
**SCALE:** 1" = 1,000'







**SITE:** 2.1 MILE CORRIDOR  
**SOURCE:** USGS  
**DATE:** 03/10/1983  
**COUNTY:** CAMERON PARISH, LA  
**SCALE:** 1" = 1,000'







**SITE:** 2.1 MILE CORRIDOR  
**SOURCE:** USGS  
**DATE:** 05/09/1978  
**COUNTY:** CAMERON PARISH, LA  
**SCALE:** 1" = 1,000'







**SITE:** 2.1 MILE CORRIDOR  
**SOURCE:** USGS  
**DATE:** 03/02/1975  
**COUNTY:** CAMERON PARISH, LA  
**SCALE:** 1" = 1,000'







**SITE:** 2.1 MILE CORRIDOR  
**SOURCE:** AMS  
**DATE:** 03/24/1952  
**COUNTY:** CAMERON PARISH, LA  
**SCALE:** 1" = 1,000'







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## ***Historical Topographic Maps***

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<http://www.geo-search.net/QuickMap/index.htm?DataID=Standard0000146781>

*Click on link above to access the map and satellite view of current property*

*Target Property:*

***2.1 Mile Corridor***

***Hackberry, Cameron Parish, Louisiana 70645***

*Prepared For:*

***S&B Infrastructure-Houston***

***Order #: 67530***

***Job #: 146781***

***Date: 05/24/2016***

## TARGET PROPERTY SUMMARY

### 2.1 Mile Corridor

**Hackberry, Cameron Parish, Louisiana 70645**

USGS Quadrangle: **Browns Lake, LA**

Target Property Geometry: **Corridor**

Target Property Longitude(s)/Latitude(s):

**(-93.402310, 29.996727), (-93.400890, 29.996720), (-93.400687, 29.993669), (-93.400906, 29.991898), (-93.400893, 29.989738), (-93.400896, 29.986393), (-93.400871, 29.982836), (-93.400884, 29.980880), (-93.400091, 29.980072), (-93.400063, 29.978937), (-93.400859, 29.978141), (-93.400822, 29.976341), (-93.400878, 29.972140), (-93.400178, 29.971675), (-93.397053, 29.970341)**

County/Parish Covered:

**Cameron (LA)**

Zipcode(s) Covered:

**Hackberry LA: 70645**

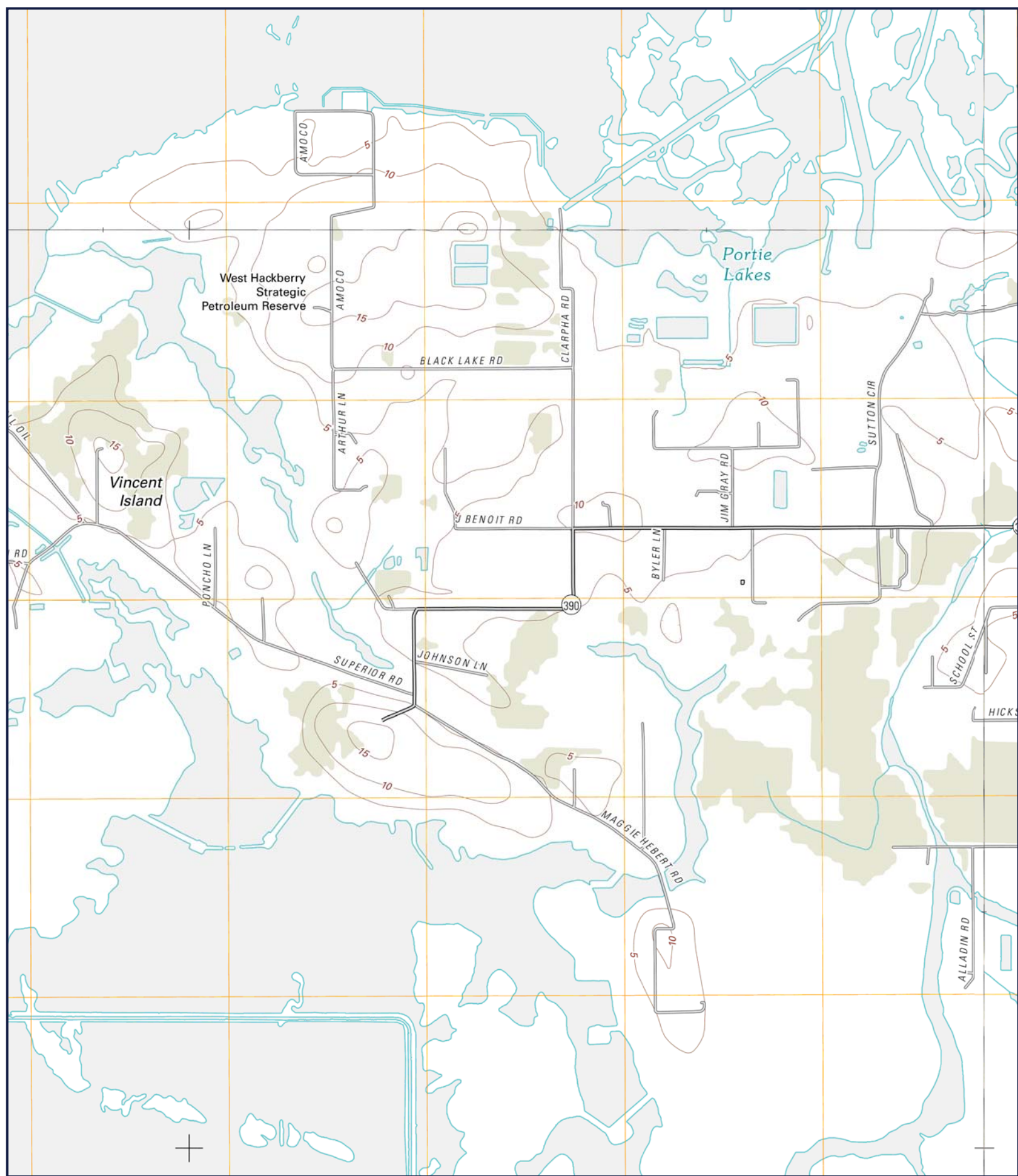
State(s) Covered:

**LA**

**\*Target property is located in Radon Zone 3.**

**Zone 3 areas have a predicted average indoor radon screening level less than 2 pCi/L (picocuries per liter).**

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**SITE: 2.1 MILE CORRIDOR**  
**QUAD: BROWNS LAKE, LA; BLACK LAKE, LA**  
**DATE: 2012**  
**SCALE: 1:24,000**





WEST HACKBERRY STRATEGIC PETROLEUM RESERVE

WEST HACKBERRY OIL FIELD

Vincent Island

Herbert

Hackberry Recreation Area

Hackberry High Sch

China

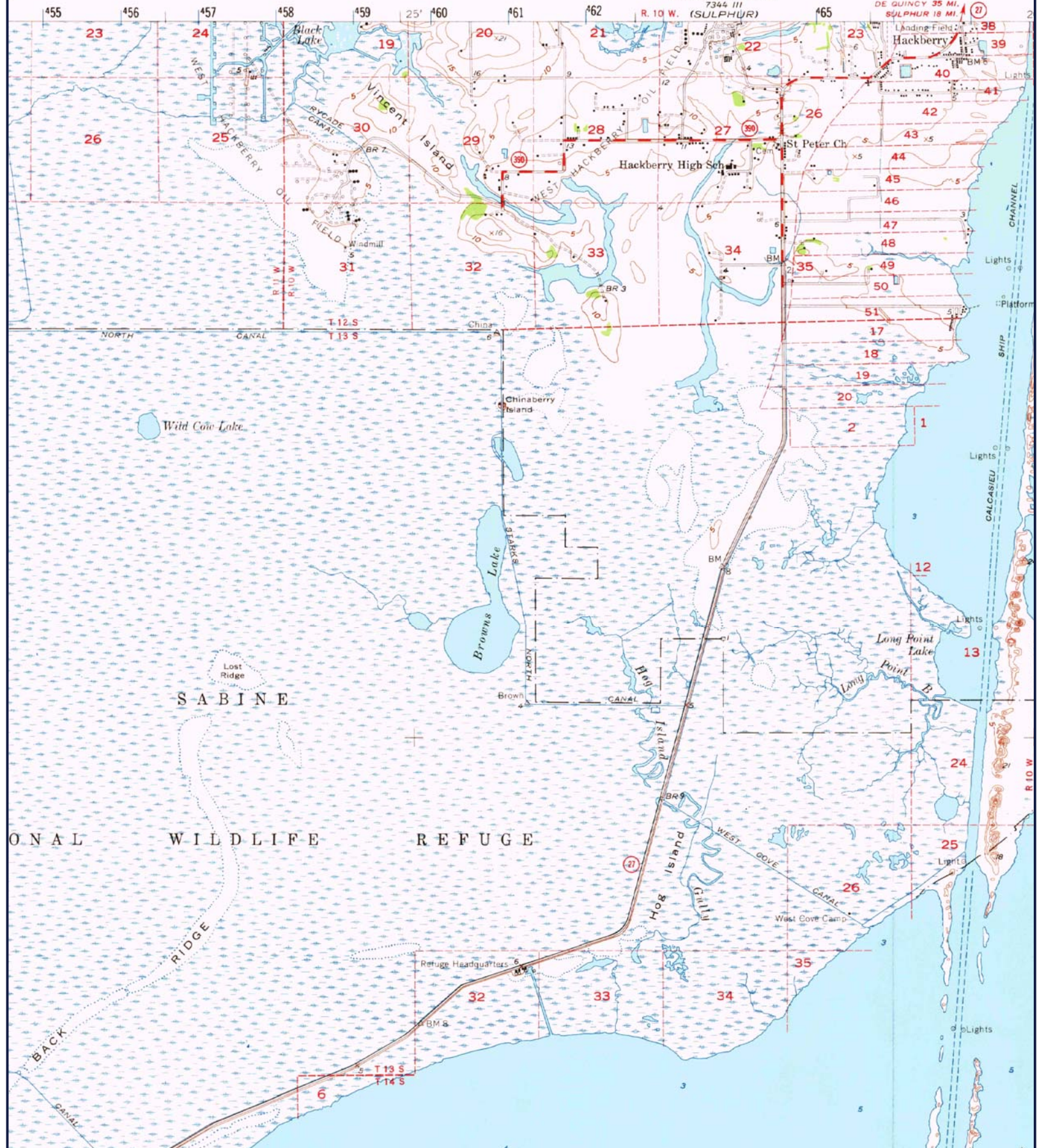
Chinaberry Island



SITE: 2.1 MILE CORRIDOR  
QUAD: BROWNS LAKE, LA  
DATE: 1982  
SCALE: 1:24,000







**SITE: 2.1 MILE CORRIDOR**  
**QUAD: CAMERON, LA**  
**DATE: 1955**  
**SCALE: 1:62,500**



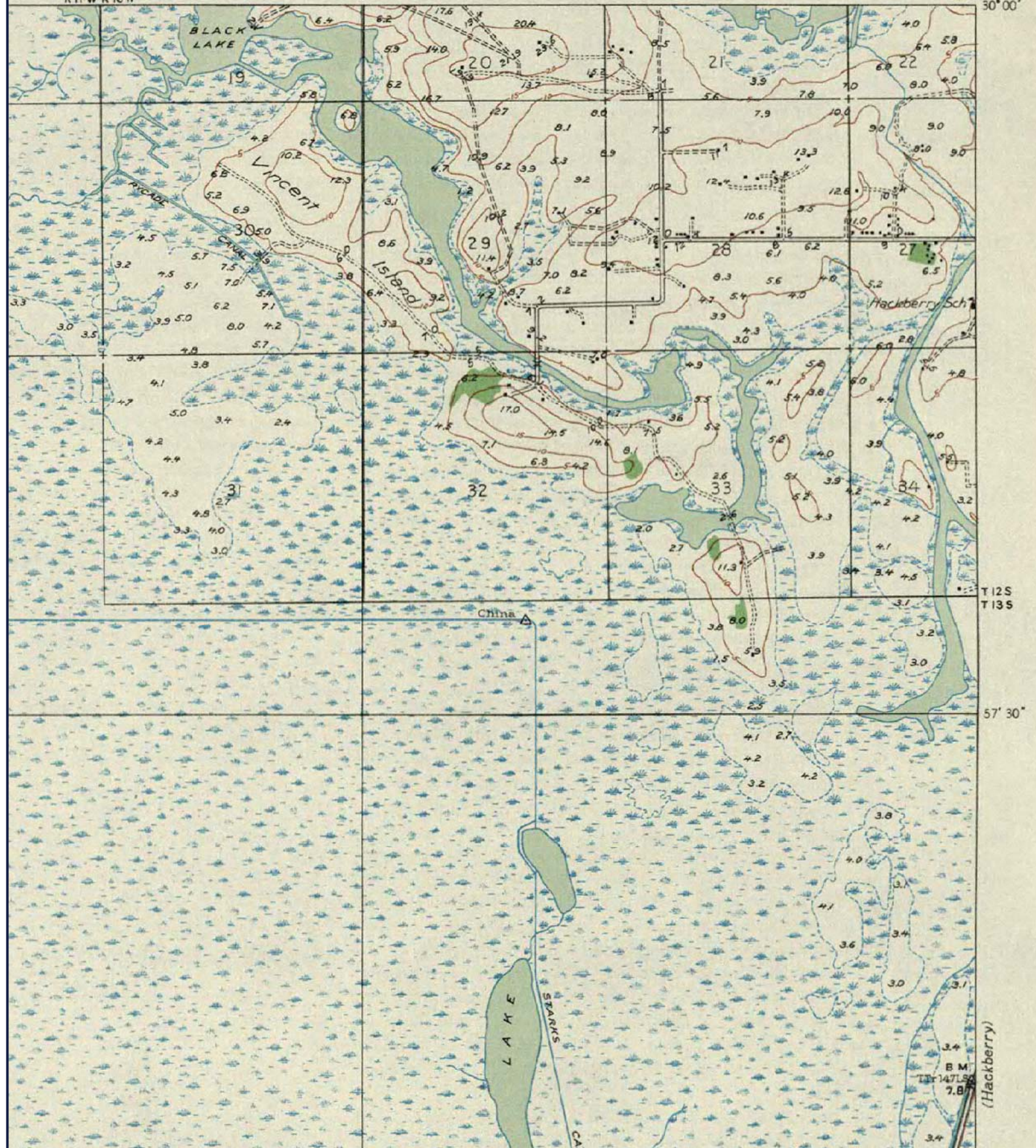


# BROWNS LAKE QUADRANGLE

RIIWRICW

25'

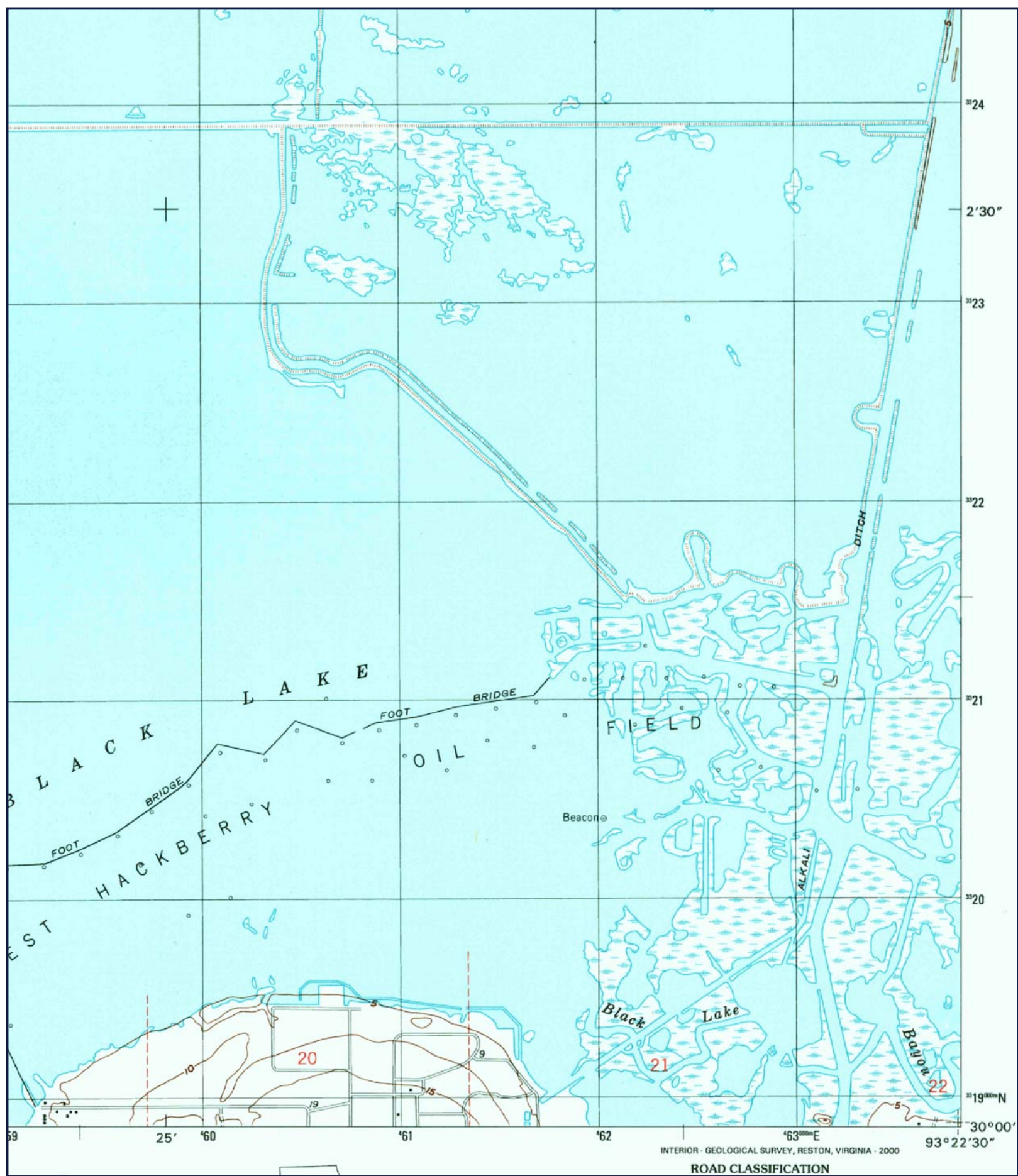
93° 22' 30"  
30° 00'



**SITE: 2.1 MILE CORRIDOR**  
**QUAD: BROWNS LAKE, LA**  
**DATE: 1935**  
**SCALE: 1:31,680**







**SITE: 2.1 MILE CORRIDOR**  
**QUAD: BLACK LAKE, LA**  
**DATE: 1998**  
**SCALE: 1:24,000**



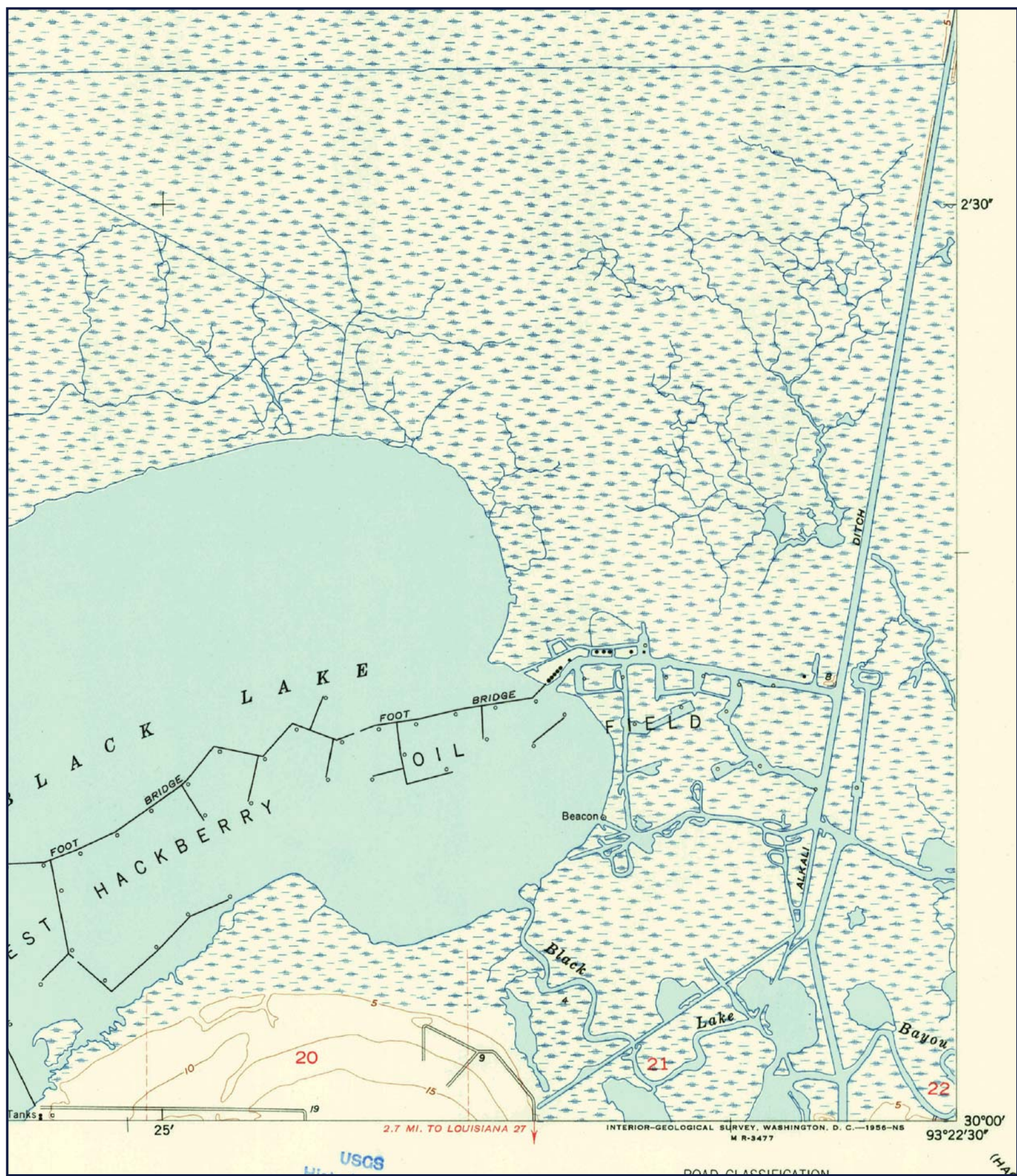




**SITE: 2.1 MILE CORRIDOR**  
**QUAD: BLACK LAKE, LA**  
**DATE: 1955 PHOTOREVISED 1975**  
**SCALE: 1:24,000**

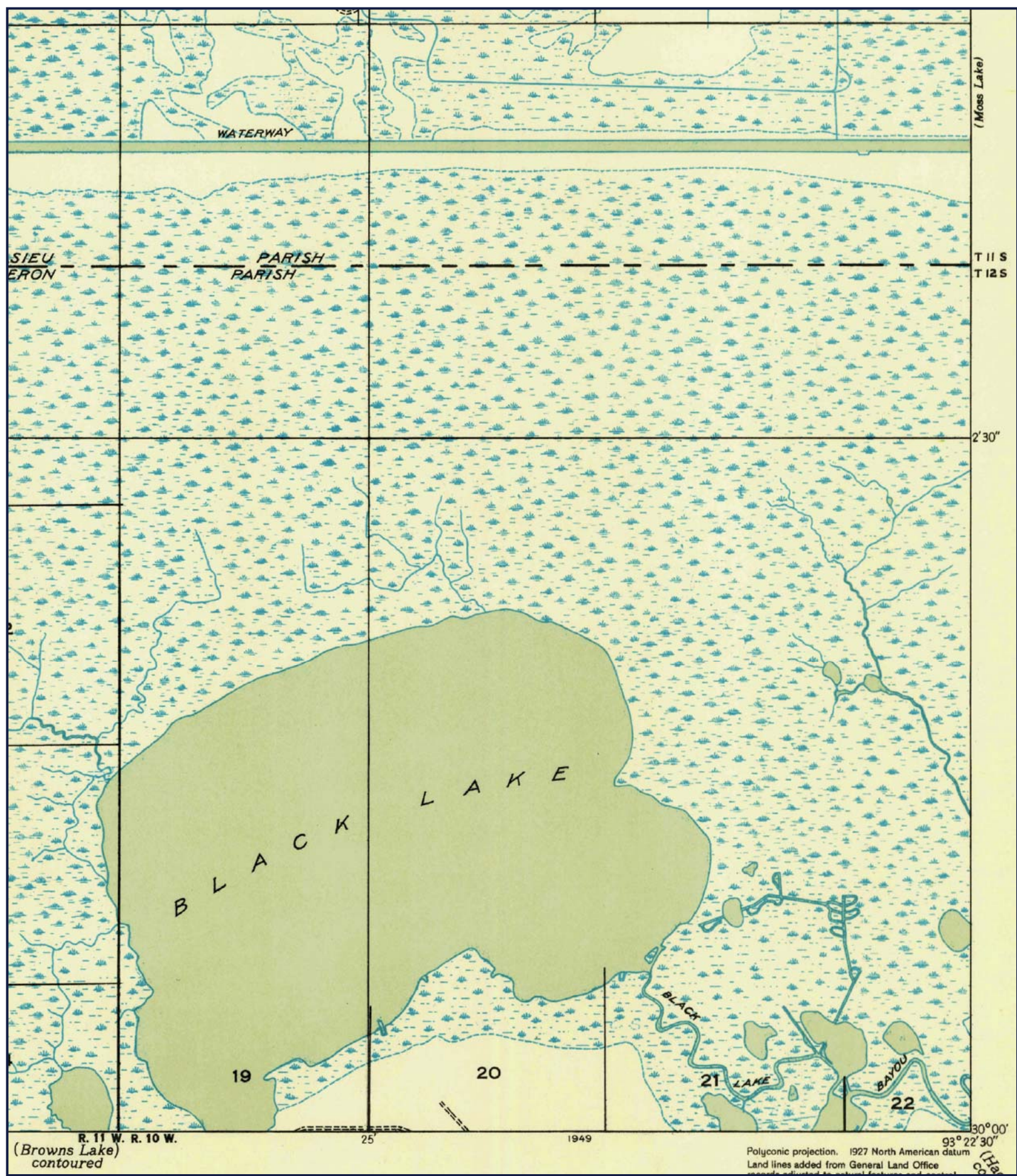






**SITE: 2.1 MILE CORRIDOR**  
**QUAD: BLACK LAKE, LA**  
**DATE: 1955**  
**SCALE: 1:24,000**





**SITE: 2.1 MILE CORRIDOR**  
**QUAD: BLACK LAKE, LA**  
**DATE: 1949**  
**SCALE: 1:31,680**

