

RESTORE Council Proposal Document

General Information

Proposal Sponsor: U.S. Department of the Interior (DOI)

Title:

Decommissioning OCS Orphaned Energy Facilities in the Gulf of Mexico

Project Abstract:

The U.S. Department of the Interior (DOI), through the Bureau of Safety and Environmental Enforcement (BSEE), is requesting \$30,453,415, in Council-Selected Restoration Component funding for the proposed Decommissioning OCS Orphaned Energy Facilities in the Gulf of Mexico project. This would include implementation funds as an FPL Category 2 priority for potential funding. Requested funds represent the total project cost of \$45,230,415 minus the \$14,777,000 of leveraged funding from the DOI. The project will support the primary RESTORE Comprehensive Plan goal to restore and conserve habitat through activities to decommission orphaned facilities offshore in the Matagorda Island, High Island, West Delta, and South Timbalier areas of the Gulf of Mexico.

This large-scale project is projected to substantially contribute to protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast. This project would result in the decommissioning of offshore orphaned oil and gas facilities that are unsafe, unusable, and pose public safety issues. This project would eliminate safety and environmental hazards and improve recreational benefits throughout a large geographic region of the Gulf of Mexico and coastal waters. Project duration is 2 years.

FPL Category: Cat2: Implementation Only

Activity Type: Project

Program: N/A

Co-sponsoring Agency(ies): N/A

Is this a construction project?: Yes

RESTORE Act Priority Criteria:

(II) Large-scale projects and programs that are projected to substantially contribute to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast ecosystem.

Priority Criteria Justification:

This is a Large-scale project that is projected to substantially contribute to protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast ecosystem. This project would result in the decommissioning of offshore orphaned oil and gas facilities that are unsafe, unusable, and pose public safety issues. This project would eliminate safety and environmental hazards and improve recreational benefits throughout a large geographic region of the Gulf of Mexico and coastal waters. The risks posed to the ecosystem of not performing this decommissioning will increase with time, due to continued deterioration, as does the cost to address them. Should the structures be reefed (in place or nearby), the project would yield even greater habitat restoration/creation at such locations.

Project Duration (in years): 2

Goals

Primary Comprehensive Plan Goal:

Restore and Conserve Habitat

Primary Comprehensive Plan Objective:

Restore , Enhance, and Protect Habitats

Secondary Comprehensive Plan Objectives:

N/A

Secondary Comprehensive Plan Goals:

N/A

PF Restoration Technique(s):

Protect and conserve coastal, estuarine, and riparian habitats: Decommission unused, orphaned energy facilities

Location

Location:

Western and Central Gulf of Mexico, specifically the Matagorda Island and High Island areas of the Western Gulf of Mexico and the West Delta and South Timbalier areas of the Central Gulf of Mexico. (See Figure 1)

HUC8 Watershed(s):

Texas-Gulf Region(Central Texas Coastal) - Central Texas Coastal(East San Antonio Bay)

Texas-Gulf Region(Central Texas Coastal) - Central Texas Coastal(Aransas Bay)

Lower Mississippi Region(Lower Mississippi) - Lower Mississippi-New Orleans(Lower Mississippi-New Orleans)

Lower Mississippi Region(Lower Mississippi) - Central Louisiana Coastal(West Central Louisiana Coastal)

State(s):

Texas

Louisiana

County/Parish(es):

LA - Lafourche

LA - Plaquemines

LA - Terrebonne

TX - Aransas

TX - Calhoun

Congressional District(s):

LA - 1

TX - 27

Narratives

Introduction and Overview:

DOI and Bureau of Safety and Environmental Enforcement (BSEE) is proposing to decommission orphaned energy facilities in the Matagorda Island, High Island, West Delta, and South Timbalier areas of the Gulf of Mexico.

An orphaned energy facility is one in which the lessee or holder has defaulted on its obligation to decommission and for which sole liability rests on the defaulting lessee or holder, which is often bankrupt, liquidated, and/or unreachable. That is, no viable co-lessee or prior lessee/holder is jointly or severally liable for the decommissioning.

The proposed activity is to decommission these offshore orphaned energy facilities that potentially threaten state waters, coastlines, and habitat. These facilities contain hydrocarbons and lack operable navigational aids (e.g., lights and foghorns); they pose a threat of collision, explosion, or toppling (due to hurricanes or other severe conditions) (<https://www.bsee.gov/faqs/what-is-the-idle-iron-policy-and-why-does-it-exist>). Oil and gas structures have been known to provide habitat for fisheries in these areas (<https://www.bsee.gov/what-we-do/environmental-focuses/rigs-to-reefs#5>); but, in their current condition, these orphaned energy facilities pose a significant risk.

By not plugging orphaned energy wells, removing energy equipment, or clearing their associated sites: (1) the health and safety risk to the public will continue as fishermen and recreational boaters could be attracted to orphaned oil and gas facilities, and visitors could come into contact with corroding, unstable structures, open pits, and contaminating substances; (2) natural habitats, processes, and resources will continue to be negatively affected due to the removal of available habitat, altered functions and processes, and continued environmental risk from deteriorated equipment or contamination; and (3) the risks to public health and safety and the environment will continue to increase with time, as will the cost to address them.

BSEE has decommissioning requirements (30 CFR § 250 Subpart Q). BSEE will advertise for and award a contract to decommission the facility(ies). The planning for the performance of the decommissioning will be laid out by the contractor in its application and subsequently spelled out in the contract as awarded. Potential decommissioning contractors will bid and provide a decommissioning schedule (e.g., permitting, mobilization, well plugging, pipeline decommissioning, structure removal, site clearing, and demobilization) and a decommissioning plan (e.g., equipment, procedures, or resources that may be used). The terms of the contract will be determined by and the decommissioning contract awarded by BSEE.

Proposed Methods:

BSEE shall obtain contractor support to decommission orphaned facilities [i.e., plug and abandon orphaned wells (cut 15 feet below mudline); remove orphaned structures; flush, fill, and remove or bury orphaned pipelines; and clear sites of debris]. Decommissioning means returning the energy facility to a condition that meets the requirements of BSEE and other agencies that have jurisdiction over certain decommissioning activities [30 CFR §250.1700(a)(2)]. Decommissioning methodology shall be in accordance with 30 CFR § 250 Subpart Q - Decommissioning Activities, Subpart D - Oil and Gas Drilling, and Subpart J - Pipelines and Pipeline Rights-of-Way, which prescribe BSEE's requirements for properly decommissioning structures, wells, and pipeline segments. The contractor shall identify and obtain all requisite permits, agreements, authorizations, and notices. The contract shall specify deliverables, quantities, delivery location, and delivery schedules.

Environmental Benefits:

On the Federal Outer Continental Shelf (OCS), proper decommissioning of orphaned facilities would

have a beneficial impact on the environment [i.e., plugging and abandoning orphaned wells (cut 15 feet below mudline); removing orphaned structures; flushing, filling, and removing or burying orphaned pipelines; and clearing sites of debris (30 CFR 250 Subpart Q)]. It would reduce the risk of polluting the environment and reduce safety hazards due to potential collisions, explosions, or fires. Unplugged or poorly plugged wells are an environmental hazard, as they provide potential conduits for fluids to migrate between formations and potentially into OCS and State waters (Ho et al. 2016). Poorly plugged wells may also provide pathways for natural gas to seep to the surface and potentially cause fires or other health hazards (Dansby 2014). An orphaned well's potential for causing a potential hazard is largely dependent on the original use of the well (Ho et al. 2016). Oil wells that were in operation for years will typically be lower pressure and have a lower risk of contamination, while a gas well that last flowed at a non-economical rate could still possess enough pressure to be a risk to the environment. Hurricane forces toppling structures and wells in the OCS pose risks to unplugged wells (<https://www.bsee.gov/faqs/what-is-the-idle-iron-policy-and-why-does-it-exist>). Although the wells are equipped with downhole safety valves, leakage from these wells can occur (Siebenaler 2015). This is especially true for orphaned wells where the downhole valves are not routinely tested and verified.

The proper decommissioning of orphaned platforms and pipelines would include removing orphaned structures and flushing, filling, and removing or burying orphaned pipeline segments. This would reduce the risk of spills to the environment from the hydrocarbon inventory in platform vessels and tanks and in pipelines. Without decommissioning, these facilities are at risk of being toppled during hurricanes or other storm events. If that occurs, a large volume of hydrocarbons could be released from vessels, tanks, and pipelines. A similar threat could be a cargo or tanker vessel striking the facility and toppling the facility with similar results. Currently, operable navigational aids are not maintained, since the facilities are orphaned, although the United States Coast Guard (USCG) has issued Notices to Mariners to avoid these locations. Personal injury is also a concern if commercial or recreational vessels strike one of these facilities. Decommissioning (when completed) would eliminate these risks.

The proper plugging of wells provides a great environmental benefit by protecting the environment from potential contamination from oil and gas. Properly plugged wells prevent the movement of fluids between formations, which reduces the chance of oil or gas getting into a formation that could be connected to the seafloor through natural faults. Well plugging techniques differ, depending on the type of well drilled and the actual well conditions (Vrålstad et al. 2019). However, well plugging operations generally consist of removing the tubing, packer, and other completion equipment; pumping cement across producing zones; and placing cement plugs at various depths. A cement plug is set at the surface to cap the well, and wellhead equipment is cut off.

Based on the location of the orphaned platforms, pipelines, and wells, there could be a threat of direct impact to the coastal environment, especially fishery impacts. One orphaned facility is nearly adjacent to the Flower Garden Banks National Marine Sanctuary, which, if impacted, would additionally result in an indirect negative impact to the coastal environment.

Metrics:

Metric Title: HC005 : Decommissioning energy facilities - Number of wells plugged

Target: 38

Narrative: The orphaned facility at West Delta Area Block 117 requires the decommissioning of four wells, three pipelines, and one structure, as well as site clearance. The orphaned facility at South Timbalier Area Block 30 requires the decommissioning of one pipeline and one structure, as well as site clearance. The orphaned facility at Matagorda Island Area Blocks 632/656/657 requires the decommissioning of nine wells, seven pipelines, and seven

structures, as well as site clearance. The orphaned facility at High Island Area Block A 589 requires the decommissioning of two wells, two pipelines, and one structure, as well as site clearance. The evaluation of the project's success over time will be based on the wells, structures, and pipelines that are successfully decommissioned. The project's goal and target is complete decommissioning for all listed sites. (See budget section).

Risk and Uncertainties:

- Delay in or not decommissioning these facilities is the biggest risk. By not flushing, filling, and removing or burying pipeline infrastructure, the risk of leaking pipelines will continue or worsen.
- Operational risks, such as delays or damage due to severe weather (including hurricanes), incidental releases of hydrocarbons, or unexpected well problems will be addressed by the decommissioning contractor, through coordination with and oversight by BSEE and/or USCG.
- Other unlikely risks during decommissioning could include a contractor's inability to complete its decommissioning or a portion of the facility breaking away and causing damage elsewhere, due to storms or hurricanes.

BSEE has considered some of these factors with the following provisions:

- Federal contractors are dissuaded from unduly walking away from obligations under a Federal contract, to avoid Federal actions prohibiting future Federal contracting.
- BSEE's regulatory oversight of offshore oil and gas operators and activities includes preparations for hurricanes, tropical storms, and severe weather, and reporting requirements, should such weather events move through an area of the OCS (<https://www.bsee.gov/resources-tools/hurricane/regulations>). These requirements are promulgated in the Code of Federal Regulations, and additional guidelines are made available through Notices to Lessees.
- Contingency actions and reporting requirements for incidents involving pollution or navigational risks will be coordinated with and through USCG (or EPA, depending on jurisdiction at the point of discharge/release).
- BSEE oversees oil spill planning and preparedness for oil and gas facilities on the OCS.
- All functions related to BSEE authorities in oil spill planning and preparedness are administered by the Oil Spill Preparedness Division. Its primary functions include reviewing and approving oil spill response plans, inspecting oil spill response equipment and resources, providing subject matter expertise during responses to offshore oil spills, and coordinating with USCG.
- Hazardous operations under this project will be subject to the same reviews and requirements as other regularly occurring hazardous operations on the OCS.

Monitoring and Adaptive Management:

BSEE will ensure that decommissioning is performed in a timely and safe manner and will review submitted evidence to determine when the decommissioning is complete. The decommissioning contractor will perform daily navigational aid and pollution inspections.

- BSEE will conduct regularly occurring inspections and other inspections, as needed. BSEE has vast experience regulating decommissioning activities across the OCS; performing decommissioning activities is not within BSEE's purview.
- Outside of BSEE inspections and regulatory oversight, the contractor is responsible for assuring project management.
- A technical liaison is not required, as BSEE District and Regional personnel will communicate directly with and receive communication directly from the contractor, as is normal course of business with any other operator on the OCS.

It is not standard operating procedure to monitor completely decommissioned facilities, once the contractor completes decommissioning operations and demobilizes. However, BSEE will require an end of operations report from the contractor and will act, as may the USCG, upon subsequent reporting of signs of potentially incomplete or improper decommissioning.

Data Management:

BSEE has compiled well, structure, and pipeline data. The public will have access to the data via the BSEE website (<https://www.data.bsee.gov/>). Contract support will collect and provide additional data, as needed, which will be made available to BSEE and stored in a database, some of which will also be publicly available.

Collaboration:

BSEE will collaborate and partner with the Bureau of Ocean Energy Management (BOEM) to advance the proposed project and potentially collaborate and partner with Texas, Louisiana, or other Gulf States, should structures be reefed (in place or nearby).

Public Engagement, Outreach, and Education:

N/A

Leveraging:

Funds: \$14,777,000.00

Type: Bldg on Others

Status: Received

Source Type: Other Federal

Description: BSEE and BOEM resources are available to implement these projects and ensure that the project meets the planned objectives. These resources include expertise (e.g., acquisition, procurement, contracting, and engineering) and data (well, structure, and pipeline data). Additionally, experience coordinating with state agencies will help accomplish some or all the actions identified in this project. DOI possesses approximately \$14,777,000 in funding available for this project. Also, a State may accept structures into its reefing program, resulting in a cost saving.

Environmental Compliance:

BOEM prepared a Programmatic Environmental Assessment (PEA) for Decommissioning Activities on the Gulf of Mexico Outer Continental Shelf. This PEA addresses the National Environmental Policy Act (NEPA), OCS Lands Act (OCSLA), the Endangered Species Act (ESA), and the Marine Mammal Protection Act (MMPA). This PEA may be found at <https://www.boem.gov/sites/default/files/boemnewsroom/Library/Publications/2005/2005-013.pdf>. BSEE relies on this PEA for decommissioning activities, which fully covers the proposed project and applicable laws. There may be instances where additional or supplemental environmental compliance documentation is needed; such documentation will be included in association with a federal permit process.

The following are some of the relevant permits that may require NEPA analysis:

Permit Type	Regulation Citation
Permit to Modify (APM)	30 CFR §250.465 and 30 CFR §250.1704(g)
Permit for Pipeline Installation/Modification	30 CFR §250.1000(b)(1) and (2)
Permit for Structure Removal	30 CFR §250.1704(a) and (b)

DOI is preparing the environmental compliance documentation needed to move the implementation component of this proposed activity into FPL Category 1. DOI will provide this documentation, as needed, prior to publication of the draft FPL and will revise the proposal accordingly.

Bibliography:

“BSEE Data Center.” Bureau of Safety and Environmental Enforcement. Accessed Apr. 2020. <https://www.data.bsee.gov/>.

Code of Federal Regulations Title 30 Part 250 Subpart Q - Decommissioning Activities. Revised Jul. 2019.

Code of Federal Regulations Title 30 Part 250 Subpart D - Oil and Gas Drilling Operations. Revised Jul. 2019.

Code of Federal Regulations Title 30 Part 250 Subpart J - Pipelines and Pipeline Rights-of-Way. Revised Jul. 2019.

Dansby, Linda. 2014. “Gulf Coast Ecosystem Restoration Project Proposal: Abandoned Oil and Gas Well Plugging and Site Reclamation.” Gulf Coast Ecosystem Restoration Council. www.restorethegulf.gov/sites/default/files/Abandoned%20Oil%20and%20Gas%20Well%20Plugging%20and%20Site%20Reclamation.pdf.

Ho, Jacqueline, et al. 2016. “Plugging the Gaps in Inactive Well Policy.” Resources For the Future. media.rff.org/archive/files/document/file/RFF-Rpt-PluggingInactiveWells.pdf.

“Hurricane Season Information / Regulations.” Bureau of Safety and Environmental Enforcement. Accessed Jun. 2020. <https://www.bsee.gov/resources-tools/hurricane/regulations>.

“Rigs to Reefs.” Bureau of Safety and Environmental Enforcement. Accessed Apr. 2020. <https://www.bsee.gov/what-we-do/environmental-focuses/rigs-to-reefs#5>.

Siebenaler, Shane. 2015. “Drill Pipe and Tubing Safety Valve Evaluation.” Bureau of Safety and Environmental Enforcement. <https://www.bsee.gov/sites/bsee.gov/files/tap-technical-assessment-program//731aa.pdf>.

Vrålstad, Torbjørn, et al. 2019. “Plug & abandonment of offshore wells: Ensuring long-term well integrity and cost-efficiency.” ScienceDirect. www.sciencedirect.com/science/article/pii/S0920410518309173#bib105.

“What is the “idle iron” policy and why does it exist?” Bureau of Safety and Environmental Enforcement. Accessed Apr. 2020. <https://www.bsee.gov/faqs/what-is-the-idle-iron-policy-and-why-does-it-exist>.

Budget

Project Budget Narrative:

The project funding requested is \$30,453,415, which is the total project cost of \$45,230,415 minus the \$14,777,000 of leveraged funding from BOEM. Of the project funding requested, it is estimated that approximately \$1,522,671 will go towards Planning; approximately \$25,885,403 will go towards Implementation; approximately \$1,522,671 will go towards Monitoring; and approximately \$1,522,671 will go towards Project Contingency. Project management will be provided through leveraging

- BSEE appropriated funding (e.g., salaries of BSEE Inspectors and other personnel who regularly oversee and regulate decommissioning operations) and
- through the contractor's own management of the project.

This is a performance, not data seeking, project; as such, the contractor will manage the data it collects and, as necessary, rely on existing data that was provided by BSEE appropriated funding. There will be no agency overhead.

Total FPL 3 Project/Program Budget Request:

\$ 30,453,415.00

Estimated Percent Monitoring and Adaptive Management: 5 %

Estimated Percent Planning: 5 %

Estimated Percent Implementation: 85 %

Estimated Percent Project Management: 0 %

Estimated Percent Data Management: 0 %

Estimated Percent Contingency: 5 %

Is the Project Scalable?:

Yes

If yes, provide a short description regarding scalability:

Project could be scaled down for the decommissioning of orphaned facilities in one or more of the four areas of the Gulf of Mexico. For example, the project could be scaled to only include the Matagorda Island area.

Environmental Compliance¹

Environmental Requirement	Has the Requirement Been Addressed?	Compliance Notes (e.g.,title and date of document, permit number, weblink etc.)
National Environmental Policy Act	Yes	BOEM prepared a Programmatic Environmental Assessment (PEA) for Decommissioning Activities on the Gulf of Mexico Outer Continental Shelf. This PEA addresses the National Environmental Policy Act (NEPA), OCS Lands Act (OCSLA), the Endangered Species Act (ESA), and the Marine Mammal Protection Act (MMPA). This PEA can be found at https://www.boem.gov/sites/default/files/boemnewsroom/Library/Publications/2005/2005-013.pdf . See Environmental Compliance Section text.
Endangered Species Act	Yes	BOEM prepared a Programmatic Environmental Assessment (PEA) for Decommissioning Activities on the Gulf of Mexico Outer Continental Shelf. This PEA addresses the National Environmental Policy Act (NEPA), OCS Lands Act (OCSLA), the Endangered Species Act (ESA), and the Marine Mammal Protection Act (MMPA). This PEA can be found at https://www.boem.gov/sites/default/files/boemnewsroom/Library/Publications/2005/2005-013.pdf . See Environmental Compliance Section text.
National Historic Preservation Act	N/A	Note not provided.
Magnuson-Stevens Act	N/A	Note not provided.
Fish and Wildlife Conservation Act	N/A	Note not provided.
Coastal Zone Management Act	N/A	Note not provided.
Coastal Barrier Resources Act	N/A	Note not provided.
Farmland Protection Policy Act	N/A	Note not provided.
Clean Water Act (Section 404)	N/A	Note not provided.
River and Harbors Act (Section 10)	N/A	Note not provided.
Marine Protection, Research and Sanctuaries Act	Yes	BOEM prepared a Programmatic Environmental Assessment (PEA) for Decommissioning Activities on the Gulf of

¹Environmental Compliance documents available by request (restorecouncil@restorethegulf.gov).

		Mexico Outer Continental Shelf. This PEA addresses the National Environmental Policy Act (NEPA), OCS Lands Act (OCSLA), the Endangered Species Act (ESA), and the Marine Mammal Protection Act (MMPA). This PEA can be found at https://www.boem.gov/sites/default/files/boemnewsroom/Library/Publications/2005/2005-013.pdf . See Environmental Compliance Section text.
Marine Mammal Protection Act	Yes	BOEM prepared a Programmatic Environmental Assessment (PEA) for Decommissioning Activities on the Gulf of Mexico Outer Continental Shelf. This PEA addresses the National Environmental Policy Act (NEPA), OCS Lands Act (OCSLA), the Endangered Species Act (ESA), and the Marine Mammal Protection Act (MMPA). This PEA can be found at https://www.boem.gov/sites/default/files/boemnewsroom/Library/Publications/2005/2005-013.pdf . See Environmental Compliance Section text.
National Marine Sanctuaries Act	N/A	Note not provided.
Migratory Bird Treaty Act	N/A	Note not provided.
Bald and Golden Eagle Protection Act	N/A	Note not provided.
Clean Air Act	N/A	Note not provided.
Other Applicable Environmental Compliance Laws or Regulations	N/A	Note not provided.

Maps, Charts, Figures

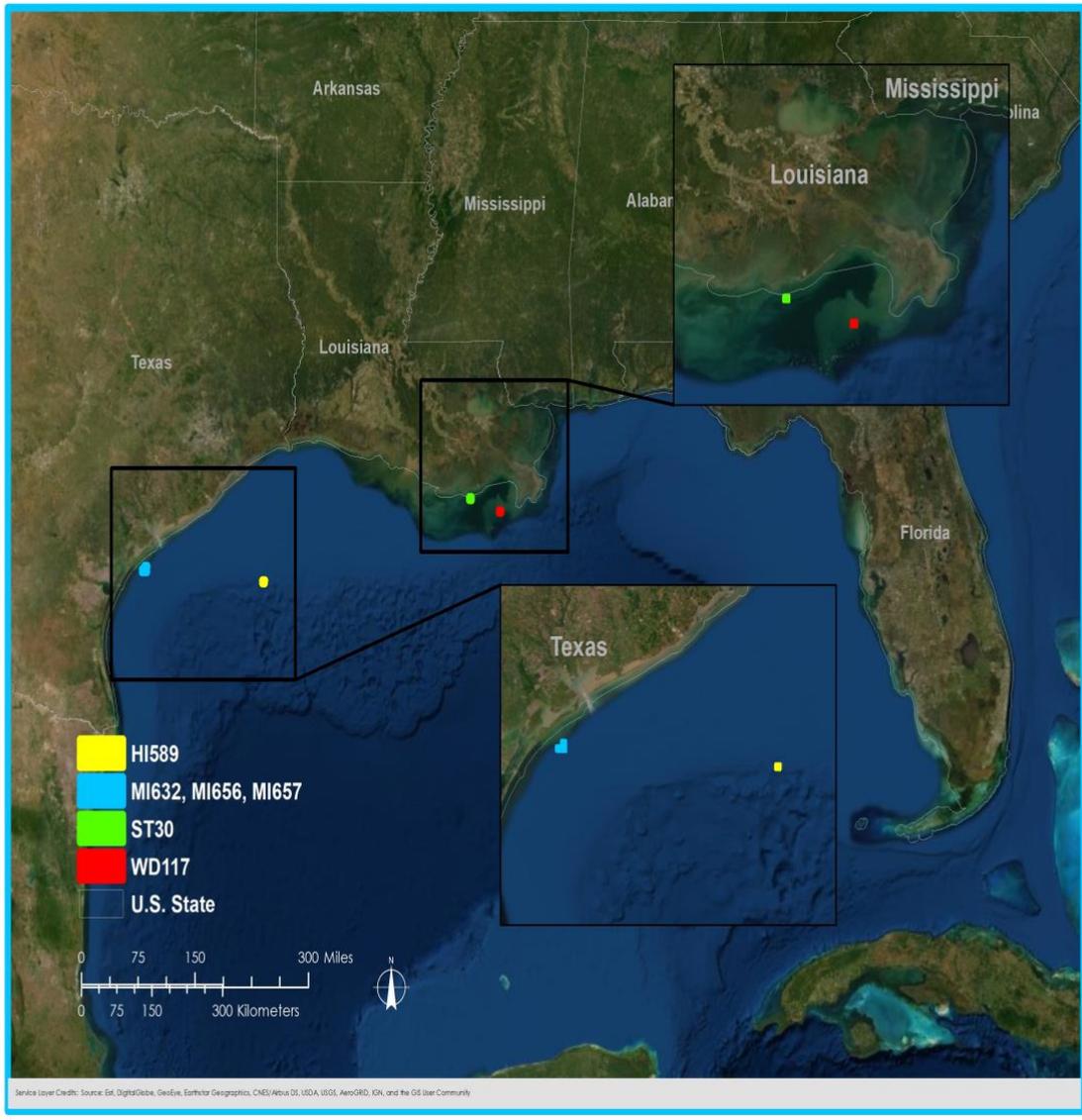


Figure 1: Location of offshore orphaned energy facility sites.