TEXAS GULF TERMINALS INC

May 16, 2018

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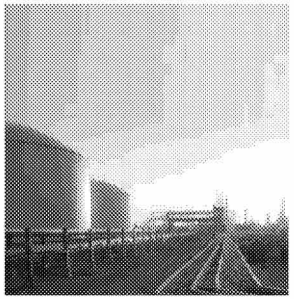
AGENDA

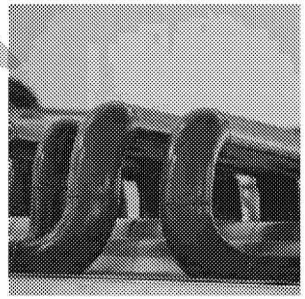


THE APPLICANT

DWPA REGULATIONS

PROJECT BACKGROUND/ PURPOSE & NEED

THE PROJECT



QUESTIONS

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THE APPLICANT

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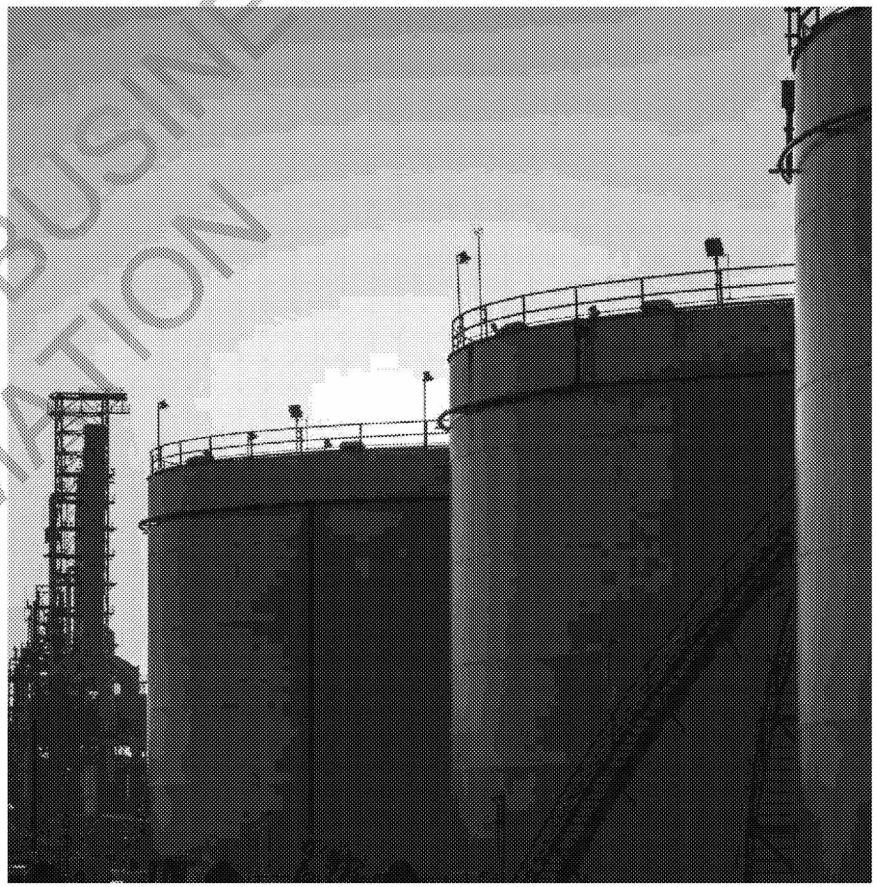
ABOUT US

The Applicant – Texas Gulf Terminals Inc

- Texas Gulf Terminals Inc is a Delaware Corporation that will construct, own, and operate a DeepWater Port (DWP), associated pipeline infrastructure, and an onshore storage terminal facility (OSTF), collectively known as the Texas Gulf Terminals Project.



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THE APPLICATION

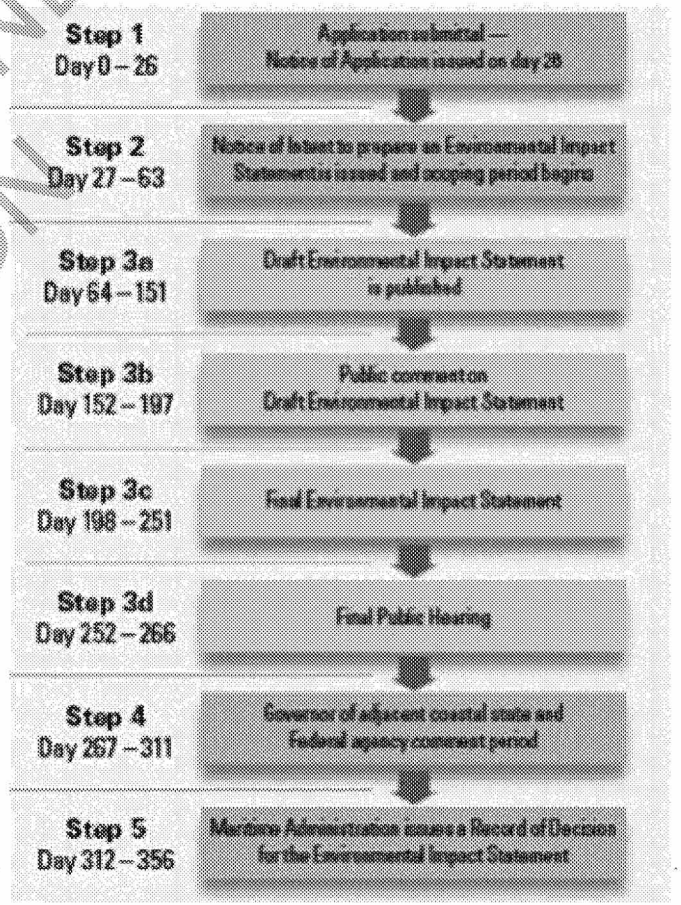
- The Deepwater Port Act (DWPA) regulates and issues the licenses to own, construct, and operate DeepWater Ports (33 U.S.C. 1503) and this responsibility has been delegated to the **Mar**itime **Ad**ministration (MARAD)

- Lead agencies are MARAD and USGC.

  - Coordinating agencies provide input including EPA, USACE, DOE, DoD, State Governors, etc

- The DWPA directs the entire application process, from submittal of a complete application to Record of Decision (ROD), be completed within 356 days.

TGTI intends to submit the application late 2Q2018/early 3Q2018



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BACKGROUND FOR PROJECT

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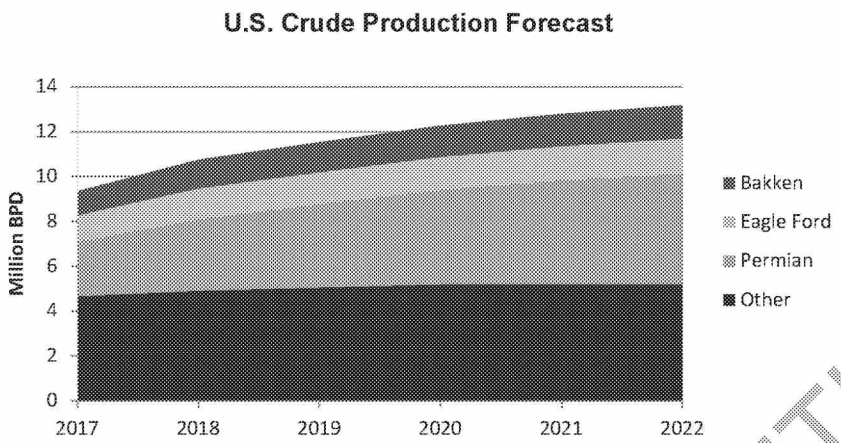
SURGE IN US CRUDE PRODUCTION/CRUDE EXPORTS



Projected U.S. Crude Exports, MMBPD	
2017	1.1
2018	2.4
2019	3.2
2020	3.9
2021	4.4
2022	4.8

Growth in U.S. Crude Production, MMBPD			
Region	2017	2022	Change
Bakken	1.1	1.5	0.4
Eagle Ford	1.2	1.6	0.4
Permian	2.4	4.9	2.5
Other	4.7	5.2	0.5
Total	9.3	13.2	3.8

Source: TM&C

Almost 75% of the increased US production over next 5 years is from Permian and Eagleford.

Projected increase 3.7 MMBBPD per year over next 5 years equals an ***additional*** 675 VLCCs for export each year.

Source: Turner, Mason & Company

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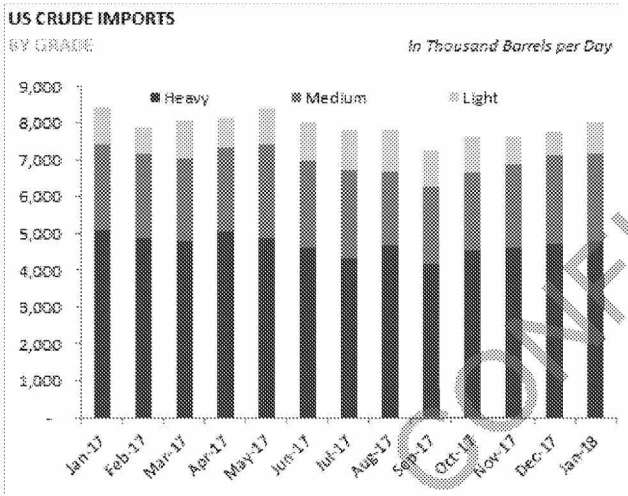
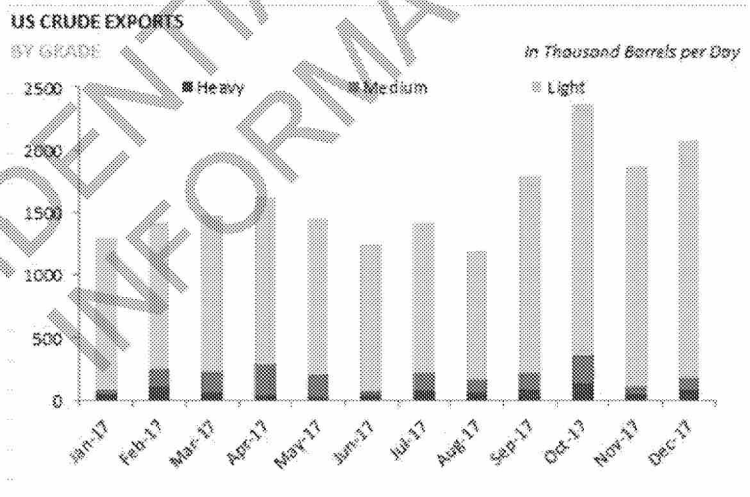
US REFINERY LIMITATIONS

US Refining capability

- Permian and Eagle ford shale are classified as light sweet crude oil
- US refineries are generally designed to process mostly heavy sour crude oil
- The bulk of US imports are heavy crude oil
- The bulk of US export are light sweet crude oil
- **US refineries are not configured to process the new Permian and Eagle ford production.**





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A VLCC

VLCCs

- VLCC – Very Large Crude Carrier
- Most economical and efficient way of transporting crude around the world.
- Can carry up to 2 million barrels at a time
- up to 320,000 deadweight tonnage (DWT)
- require ~75 feet of water for draft
- ~1100 feet LOA (reference ~ 3 football fields)
- ~196 feet wide (reference football field is 160 ft wide)

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TODAY - LOGISTIC LIMITATIONS

- **No** inland ports are capable of directly and fully loading a VLCC
  - VLCCs – draft ~31 feet empty/~74 feet full
  - Every vessel has an Under Keel Clearance Policy (UKC) which is generally an additional 10% clearance inside ports
  - Most US ports are ~45 foot draft and have limitations accepting a vessel this size

The result: Multiple uncontrolled and unregulated STSs to fully load a VLCC

2 Scenarios happen today-

1. A smaller ship – goes into port, loads to capacity and then STS's to the VLCC uncontrolled and unregulated outside US waters . Process is repeated approx. 3 times until the VLCC is full.
2. VLCC comes into port and partially loads until draft is reached. Then goes to deeper water and waits for another smaller ship who has loaded in port to complete a STS. This generally takes 1-2 STSs to fully load the VLCC.

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THE FUTURE

- A SPM
  - eliminates unnecessary ship traffic in inland ports
  - reduces the "double" handling of the same barrels thus reducing the opportunity for spills and the emissions created each time it is loaded
  - places the transfer out of populated areas along the ship channel.

The TGTI SPM will be capable of directly and fully loading a VLCC for crude export in a safe and efficient manner.

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SPM DATA

- There have been over 560 SPMs across the world in over 100 countries.
- SPMs have been in operation since 1958.
- It is estimated that over 60% are still in operations today.
- There are 3 major suppliers of SPMS
  - Bluewater – in operations since 1976
  - SOFEC – (Specialized Offshore Facilities and Engineered Components) – in operations since 1972
  - Imodco – in operations since 1959
- Owners include Shell, BP, US Army, US Air Force, Chevron, Pemex, PDVSA, Petrobras, Mobil, Total, Royal Swedish Navy, West Germany Navy, Conoco, etc

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THE PROJECT

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PROJECT OVERVIEW

- Trafigura proposes to Construct and Operate a DeepWater Port to export crude oil to various nations in support of US and global economic growth.
- The DeepWater Port will load a VLCC directly and fully via a Single Point Mooring buoy system.
- The DeepWater Port infrastructure will be capable of loading VLCCs at approximately 60,000 bph and throughput capacities of approximately 8 VLCCs per month.
- The duration for loading each VLCC will be approx. 36 hours to load plus 6 hours to tie up.

This will be the first export SPM designed and built in the U.S. This project will allow for a safe and efficient direct and fully loading of a VLCC for crude export.

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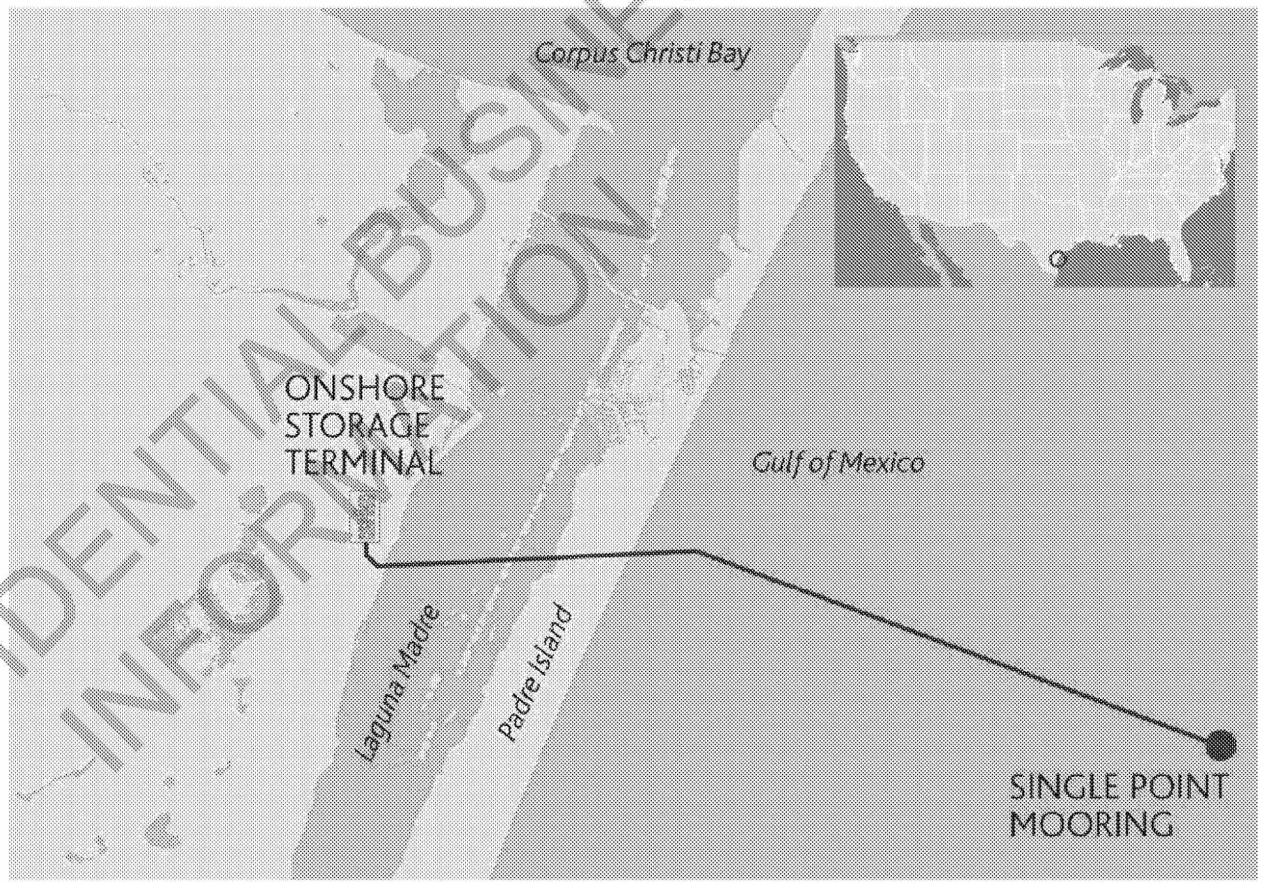
PROJECT DRAWING – SUMMARY

Project includes onshore, inshore, and offshore components.

- **Onshore** – components located landward side of the Western Laguna Madre mean high tide (MHT) line; the on-shore storage terminal
- **Inshore** – components located between the western Laguna Madre MHT line to the MHT line located at the interface of North Padre Island and the Gulf of Mexico.
  - 5.82 miles of 2 – 30-inch-diameter crude oil pipelines
- **Offshore** – components located seaward of the MHT line located at the interface of North Padre Island and the Gulf of Mexico.
  - 14.62 miles of 2 – 30-inch diameter crude oil pipelines and the DWP



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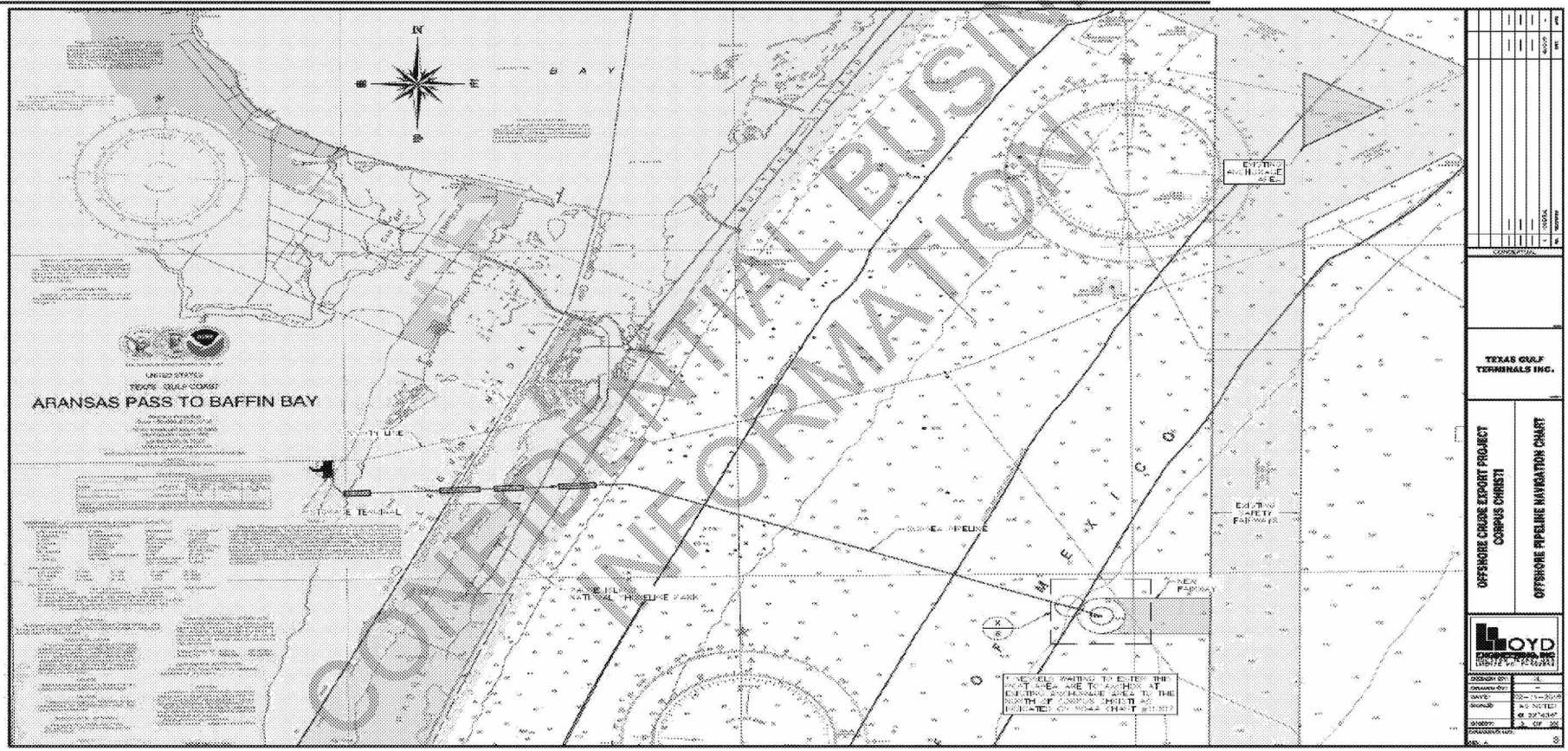
PROJECT DRAWING - DETAILED



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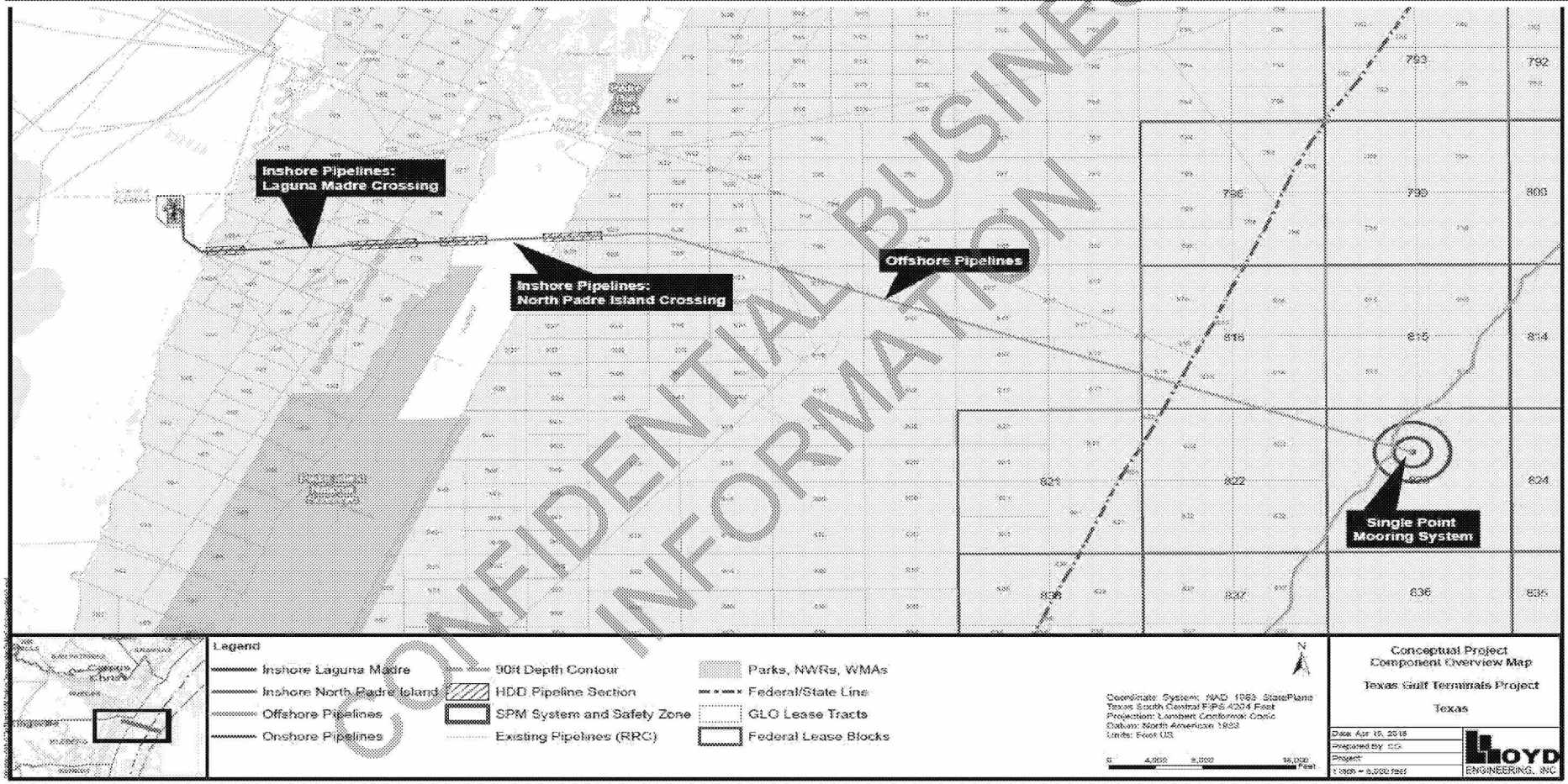
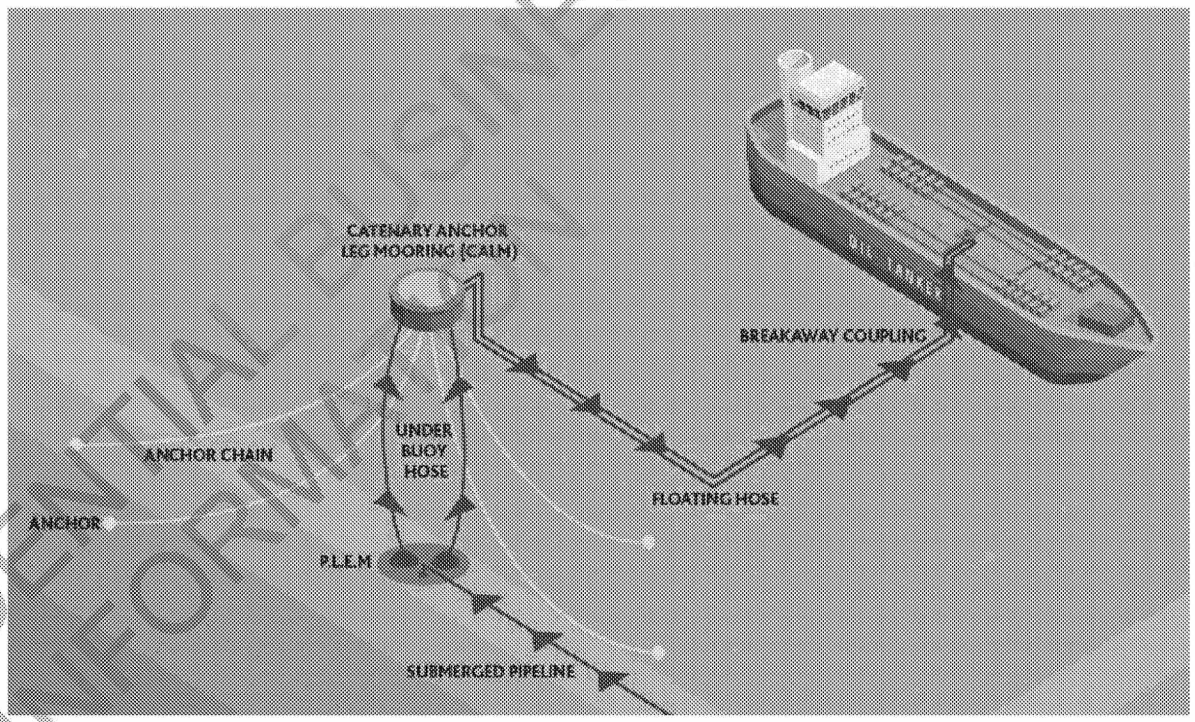
PROJECT OVERVIEW



THE SINGLE POINT MOORING (SPM) BUOY SYSTEM

- The SPM will be located approximately 14 miles off shore of the outer bank of Padre Island in US federal waters
- It will be located in BOEM block 832, off the coast of Corpus Christi Texas
- It will be anchored in ~93 feet of water
- The SPM Buoy System will consist of
  - Pipeline End Manifold (PLEM)
  - Mooring hawsers
  - Floating hoses
  - Submarine hoses



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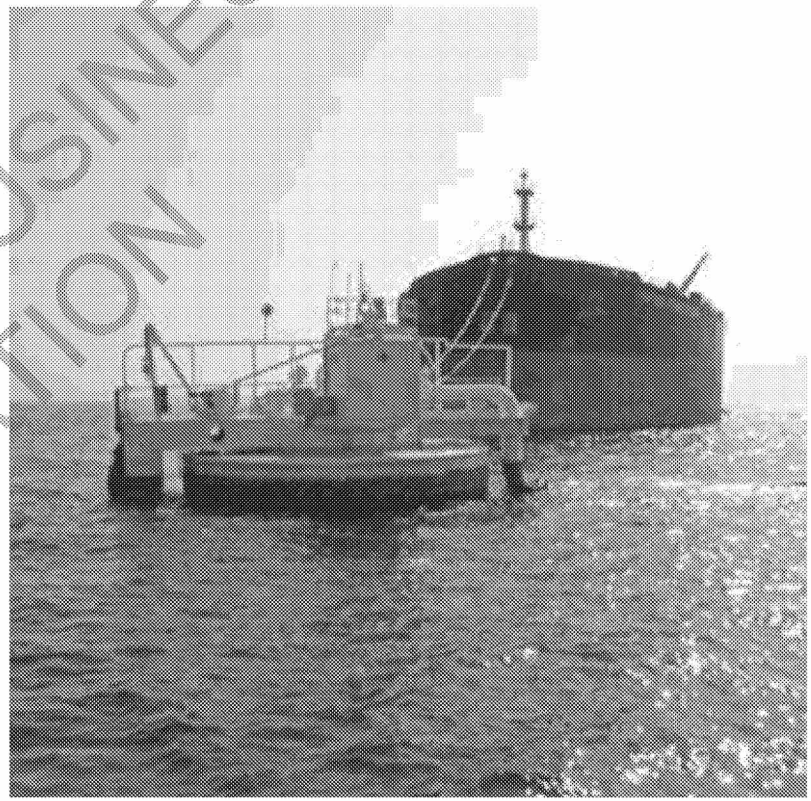
SINGLE POINT MOORING (SPM) SYSTEM

- The vessel will float/weathervane around the SPM
- There are no fixed structures
- It is an unmanned buoy controlled from a Control Center on-shore
- Designed to survive a 100-year storm and remain operational with a moored vessel in 5-foot seas and 35 mph winds.



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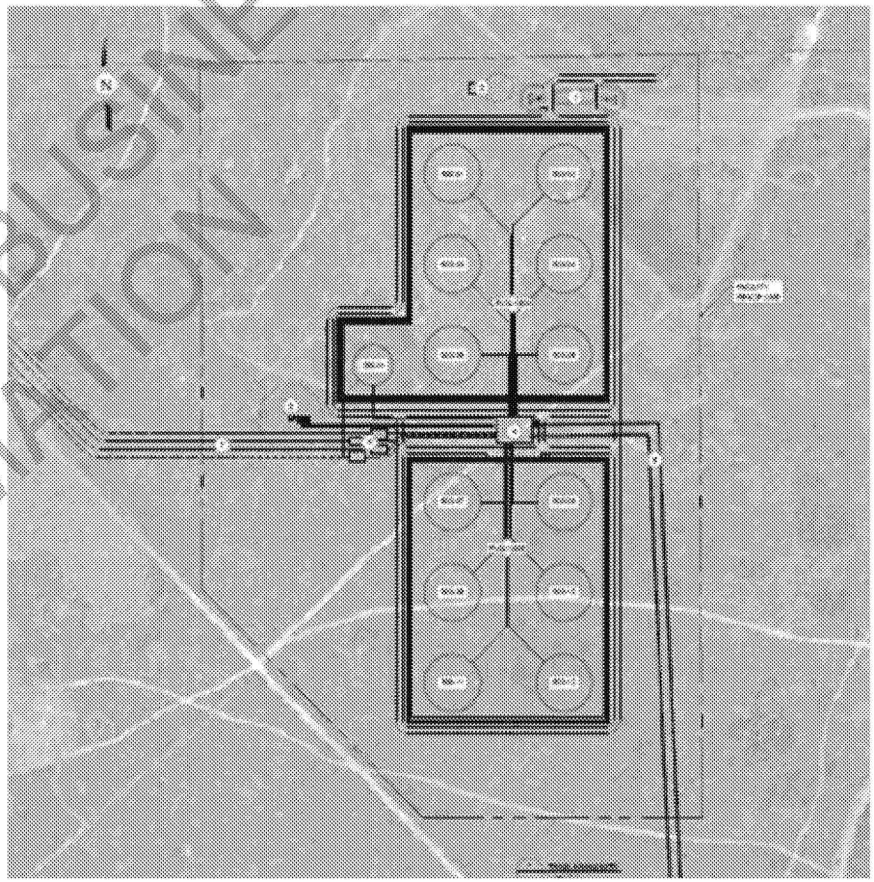
ONSHORE STORAGE FACILITY

- Onshore terminal
  - Located in Corpus Christi, Texas.
  - 12 – 500k barrel crude tanks, a 250k slop tank and a firewater tank and pumps
- Receipts into the terminal will be by various pipelines
- The onshore terminal will connect to the SPM by 2 – 30” pipelines.



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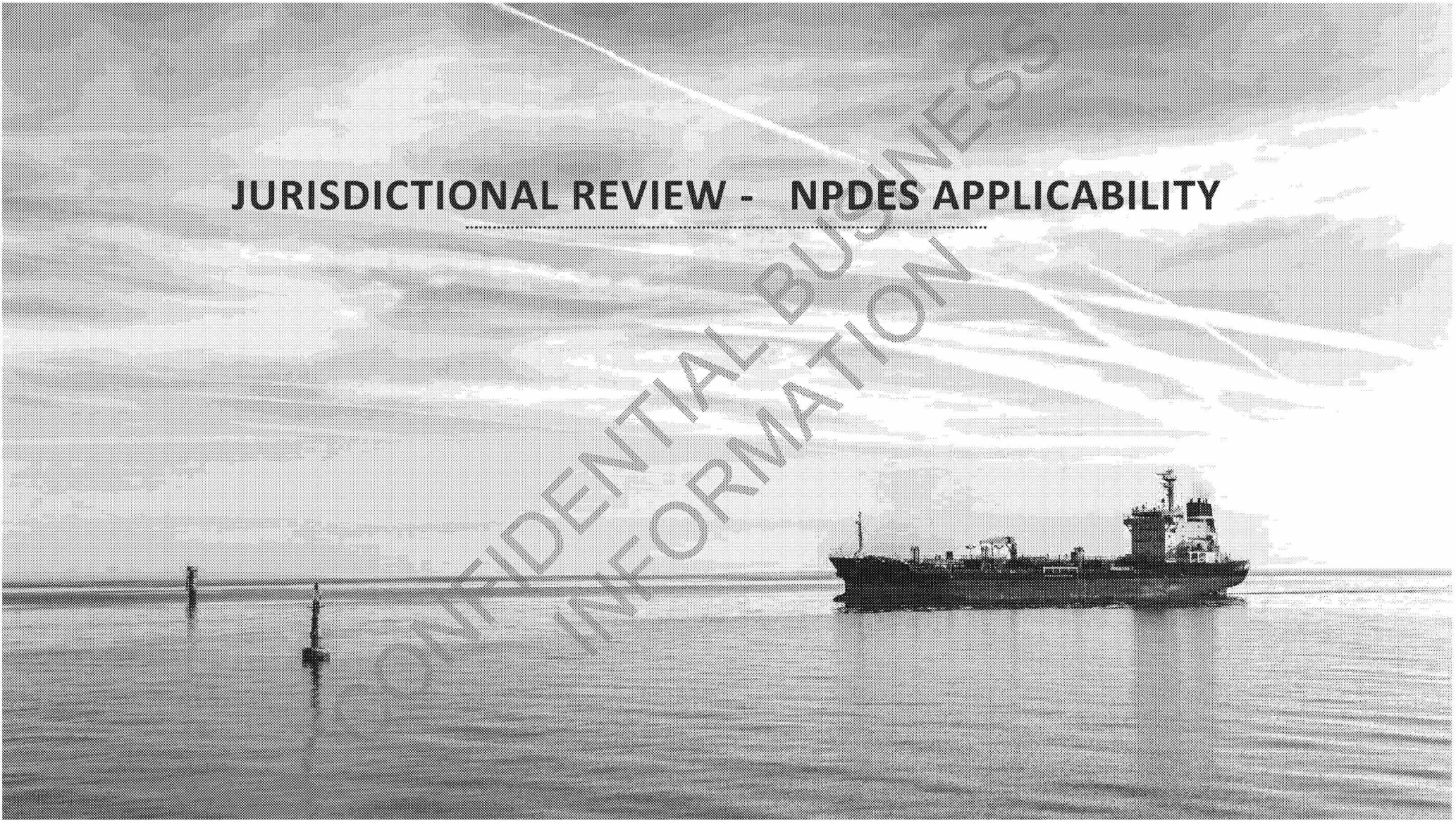
JURISDICTIONAL REVIEW - NPDES APPLICABILITY



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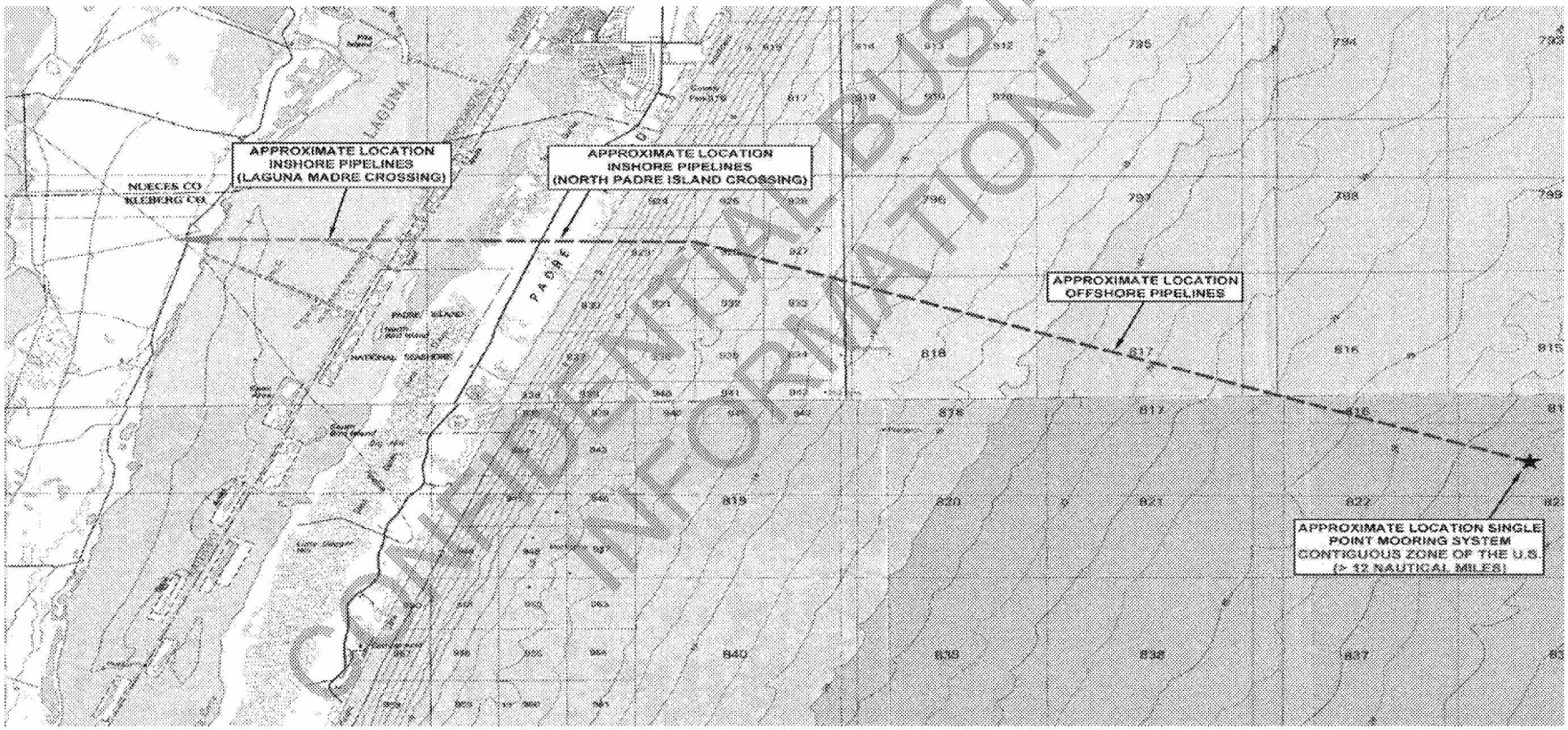
JURISDICTIONAL SETTING



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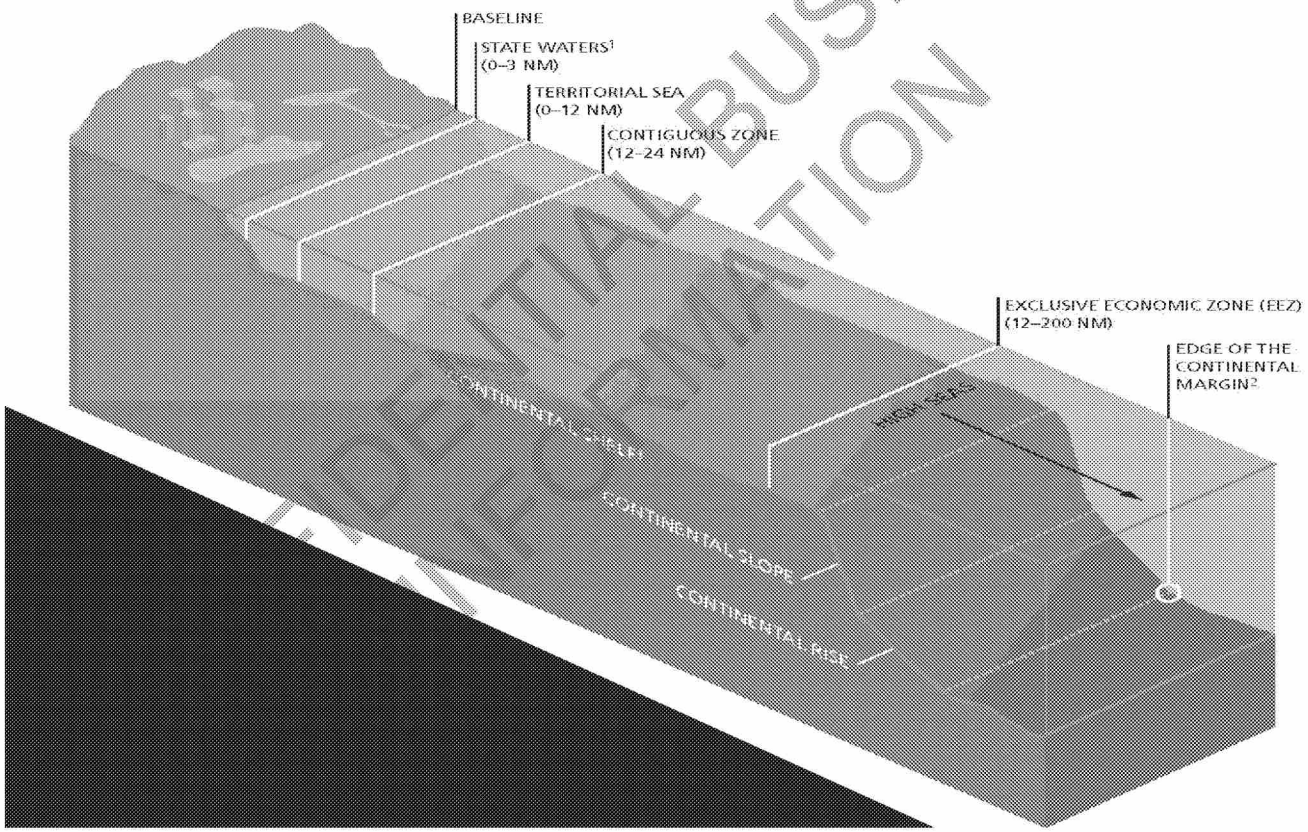
JURISDICTIONAL SETTING

Figure P.1 Lines of U.S. Authority in Offshore Waters



INTERNAL BUSINESS DISTRIBUTION

JURISDICTIONAL SETTING – ONSHORE

- On-shore Crude Oil Terminal (Breakout Storage)
  - Regulated by Railroad Commission of Texas (RCT)
- Stormwater Construction General Permit Applicability
  - Construction project qualifies for oil and gas exemption
  - NOI or SWPPP not required
  - EPA encourages development and implementation of a SWPPP
- Exempt from TPDES or NPDES Stormwater Permitting
  - RCT not delegated authority for stormwater permitting
- Anticipated Non-Stormwater Discharges
  - Hydrostatic test discharge permitting (RCT jurisdiction)
  - **Future** management options of oily water (hurricane prep.)

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JURISDICTIONAL SETTING – OFFSHORE

- SPM Located in "Contiguous U.S. Waters"
  - SPM located within zone 12-24 nautical miles offshore
  - Beyond Texas territorial sea boundary

- Loading Process and Vessel Certifications
  - Temp. mooring (VLCC continues to act as means of transportation)
  - Approximately 48-hour loading period
  - VLCC's entering coastal ports have Vessel General Permit (VGP)
  - USCG Certificate of Compliance (VGP coverage required)

- Typical Discharges Included in Preliminary Evaluation
  - Sanitary Wastewater, RO reject, cooling water, ballast water, firewater testing, inert gas scrubber water

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Basis for Potential NPDES Applicability Evaluation

- Jurisdictional Waters of the U.S.
  - "Waters of the United States" (WOTUS) includes, "(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide."
  - WOTUS is subject of on-going rulemaking
  - USEPA assertion of CWA jurisdiction over exclusive economic zone up to 200 miles (i.e. beyond contiguous zone)
- Vessel General Permit Applicability
  - "Waters subject to the VGP are "waters of the United States" as defined in 40 CFR 112.2 (extending to the outer reach of the 3-mile territorial sea as defined in section 502(8) of the CWA)."

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Basis for Potential NPDES Applicability Evaluation

- Vessel General Permit Applicability (Continued)
  - Identifies 27 waste streams eligible for coverage
  - Not applicable beyond 3-miles offshore

- Vessel General Permit – Interim Revised NPDES Inspection Manual (January 2017)
  - Chapter 16 –VGP:
    - Generally, except as provided for above, a vessel is operating in the capacity as a means of transportation while underway (in transit), temporarily moored to a pier or other mooring device, performing cargo loading/off-loading operations, fueling or defueling, during tug or tow operations, or while performing maintenance outside of a drydock while temporarily moored."

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Basis for Potential NPDES Applicability Evaluation

- EPA Jurisdiction Over Vessels During Crude Oil Loading
  - Jurisdiction typically triggered when "operating in a capacity **other than as a means of transportation**" such as:
    - Energy or mining facility
    - Storage facility
    - Seafood processing facility; or
    - Facility secured to the bed of the ocean, contiguous zone, or waters of the U.S. **for the purpose of mineral or oil exploration or development**

- Basis for SPM Exception from NPDES Applicability
  - No discharges from SPM
  - Not in use for oil exploration or production

- Basis for VLCC Exception from NPDES Applicability
  - Operating outside limits of VGP authority as "means of transportation"

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Q&A

- Formal NPDES Applicability Determination

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THANK YOU

Denise Rogers - Compliance Manager
Denise-Rogers@texasgulfterminals.com

Texas Gulf Terminals, Inc
1401 McKinney Suite 1500
Houston Texas 77010
Tel: 832-203-6493
Mobile: 713-594-2619

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