Date 23 Mar 2004

RAMS ACTION TRACKING SHEET (R A T S)

APPLICATION NUMBER	ACTION ID NUMBER	PROJECT MANAGER
D1553(7)/	200400065	PATTILLO

APPLICATION RECEIVED 12 Jan 2004 APPLICATION COMPLETE 19 Mar 2004

APPLICANT INFORMATION:

Applicant/Violator	Contractor/Agent
Chevron, Al	
2811 Hayes Road	
Houston, TX 77210-4879	
(713)560-2235 ( ) -	

Work Phone	Home Phone	Work Phone	Home Phone

WORK INFORMATION:

Waterway	County/City/State
Corpus Christi Ship Channel	Nueces//TX

Area Office SAO Auth: 10 404 X 10/404 9 103

Work Description:
Wetland delineation verification of 0.59 acre of wetlands contiguous Corpus Christi Ship Channel on 174-acre McDermott property at Harbor

PUBLIC NOTICE/COORDINATION LETTER INFORMATION:

Send Notice To: Zone: 1 2 3 4 5

--- Mayor/City Manager
--- Postmaster
--- U.S. Park Service
--- County Judge
--- Adjacent Property Owners
--- Navigation District

PUBLIC NOTICE/COORDINATION LETTER INFORMATION (CONT'D):

Issued _____ 30 days ___

Extended _____ 15 days ___

Ended _____

****

FINAL ACTION INFORMATION:

EA/SOF/404(B)(1) _____ Draft Permit Forwarded _____

Appl. Denied _____ Permit Issued _____

Permit Expiration Date 23 Mar 2009 Fee _____

Appl. Withdrawn _____ Mitigation: ___ Yes X No

Type of Action: ___ IP ___ LP ___ GP ___ NW ___ Mod ___ Transfer

___ Desk Juris X Field Juris ___ No Permit Required

****

UNAUTHORIZED ACTIVITY RESOLUTIONS:

___ After-the-Fact Issued ___ Vol. Rest. ___ Litigation

___ After-the-Fact Penalty ___ Case Closed

****

NON-COMPLIANCE RESOLUTIONS:

___ Mod ___ Vol. Rest. ___ Litigation ___ Penalty ___ Minor

****

401 Cert. _____ CZM _____ Railroad Cert. _____

Related Action ID's: 200400045

1/12/04

USACE- CORPUS
Port Polican Introduction

John HARVAT	ENTRIX	Jharvat@entrix.com
John Wong	USACE, Corpus	713 662 1917
Mark Pattillo	USACE - Corpus	361-814-5847
Matt Barczyk	ENTRIX	361-814-5847
Mike DeNicola	Chevron Texaco	713 662-1906 mbarczyk@entrix.com
		713/560-2235 MDeNicola@chevrontexaco.com

Pre-Application
RAMS ID# 200100045

CHEVRON/ENTERIX Meeting Notes – 12 January 2004

John Wong and I met with Michael De Nicola (Chevron), John Harvat (Enterix), and Matthew Barczyk (Enterix) to discuss their respective companies proposal to construct an offshore LNG re-gassification structure on Harbor Island at the existing McDermott Facility. Construction would require excavating uplands and wetlands to provide a water-filled work area (gravity dock) connected to the Corpus Christi Ship Channel (Port Pelican), which would be used to tow the structure into the Gulf of Mexico. Chevron would be the main partner in the venture and Enterix would be "minor" partners. Mr. De Nicola provided a description of the LNG process and locations where similar facilities were already in place (Louisiana, etc.). The re-gassification facility would be built onshore and floated out into the GOM approximately 40 miles offshore to a water depth of –83 feet. The facility would use the ambient heat of the GOM waters to warm the LNG up to gaseous state and transport the gas onshore via an 8-inch pipeline. The Port Pelican project has already received a U.S. Coast Guard permit for a deep-water port facility. An existing facility in Louisiana received a Section 10 permit from the U.S. Corps of Engineers (New Orleans District). NPDES Permit for Louisiana project allows for production of chilled water 20 degrees F below ambient temperature. Coldwater effluent from the facility should return to within 1 degree F within 100 feet of the structure's discharge point. NPDES permit expected to be issued for Texas project within 1 month. Minimum channel depth of –45 feet is needed to tow the structure offshore – 2 such sites in Galveston, two on CCSC (McDermott and Zachary) and one on La Quinta (Kiewit). Some minor dredging of CCSC may be necessary to ensure minimum depth. We mentioned possible traffic congestion at McDermott site due to small road and high ferry traffic and they responded that their engineering team was looking into that issue as well as possibly going with one of the other possible sites. They added that their plan right now is to use the CCSC unloading facilities and trucking construction material into the McDermott site. Construction of the gravity dock for the offshore facility will be by either mechanical or hydraulic excavation using DMPA 6A for disposal of excavated material. Hydraulic excavation would produce more material than mechanical. Gravity dock would be dredged to –45 feet below grade directly into the CCSC and would be 500 feet long and approximately 300 to 400 feet wide. The Project Team estimated that it would take approximately 3 years to build the re-gassification structure. JEW asked about fate of gravity dock when project was completed and the team responded that it would probably be retained by the site owner (McDermott) for whatever use they decided. The team asked if subsequent dewatering by the site owner after the LNG project could be authorized under NWP 33 and we stated it was possible, but we would have to see project plans before we could make that determination. We briefly discussed water quality issues and mentioned that unless they produced effluent during their dredging the Corps would not be involved and that it would be a state issue. We recommended that they contact TCEQ for specific requirements regarding water quality. The project team estimated that 0.63 acre of wetlands would be impacted – 0.15 near the spoil site and 0.48 acre near the CCSC. Estimated spoil disposal was 0.8 mm yd3 available on site and 1.7 mm yd3 available at DMPA 6A. We advised them to present the project to our Joint Evaluation Meeting to get Resource Agency input once their plans became more definite. We also recommended that they coordinate their plans with our Real Estate Division and the Southern Area Office.

Mark Pattillo

ENTRIX

John P. Harvat
Senior Consultant

5252 Westchester, Suite 250
Houston, TX 77005
(713) 662-1917 Direct
(713) 666-6223 Main
(281) 352-0548 Cell
(713) 666-5227 Fax
jharvat@entrix.com
www.entrix.com

ENTRIX

Matthew B. Barczyk
Environmental Scientist

5252 Westchester, Suite 250
Houston, TX 77005
(713) 662-1906 Direct
(713) 666-6223 Main / (713) 666-5227 Fax
(713) 857-8669 Cell / (800) 209-1475 Pager
mbarczyk@entrix.com
www.entrix.com

Chevron

Chevron

Michael J. De Nicola
Environmental Engineer
Western Profit Center
~~Phone 281-596-9569~~
~~Fax 281-596-3640~~
Mobile ~~281-804-4386~~ 713/560-2235
E-Mail mijd@chevron.com
MDeNicola@ChevronTexaco.com

Chevron Pipe Line Company
2811 Hayes Road
Houston, TX 77082
P.O. Box 4879
Houston, TX 77210-4879

ENTRIX

W. Barry Gillespie, Jr., Ph.D.
Senior Consultant

5252 Westchester, Suite 250
Houston, TX 77005
(713) 666-6223 • (713) 662-1908 Direct
(713) 666-5227 Fax
(713) 775-4505 Cell
bgillespie@entrix.com
www.entrix.com

E N T R I X

ENTRIX, Inc.
5252 Westchester, Suite 250
Houston, Texas 77005
(713) 666-6223
(713) 666-5227 FAX

Since 1984 - Environmental Excellence

JAN 1 2 2004

January 12, 2004

Mr. Lloyd Mullins
Unit Leader
Corpus Christi Field Office
U.S. Army Corps of Engineers
Galveston District
5151 Flynn Parkway, Suite 306
Corpus Christi, Texas 78411

Re: Request for Jurisdictional Verification
McDermott Property on Harbor Island
Nueces County, Texas
Entrix Project # 1076903

Dear Mr. Mullins:

On behalf of ChevronTexaco, ENTRIX, Inc. requests a U.S. Army Corps of Engineers (COE) jurisdictional verification for an approximately 174-acre site located in Nueces County, Texas. The McDermott site is located on Harbor Island in Aransas Pass, Nueces County, Texas, which is west of the confluence of Aransas Channel, Corpus Christi Channel, and Lydia Ann Channel (see Delineation Report for site details).

Thank you for your time and consideration in this matter. If you have any questions or comments please contact me at 713-662-1906 or Barry Gillespie at 713-662-1908.

Sincerely,

Matthew B. Barczyk
Staff Scientist

Barry Gillespie
Senior Consultant

E N T R I X

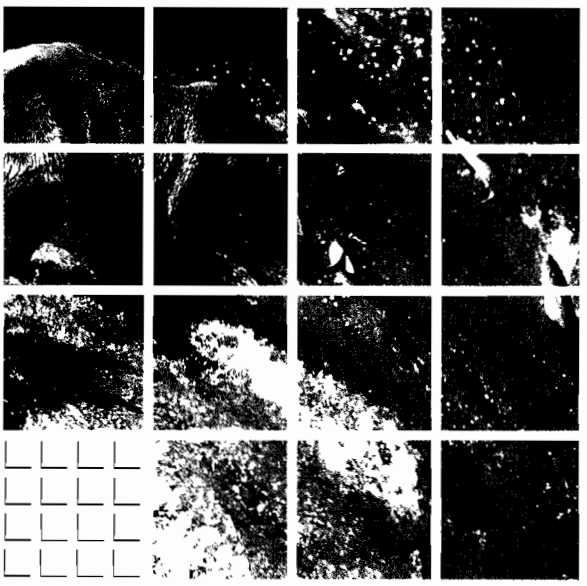
WETLAND ASSESSMENT AND DELINEATION MCDERMOTT PROPERTY ON HARBOR ISLAND NUECES COUNTY, TEXAS

Prepared for:

CHEVRONTEXACO
Houston, Texas

Prepared by:

ENTRIX, Inc.
5252 Westchester, Suite 250
Houston, Texas 77005



Project No. 1076903

October 2003

WETLAND ASSESSMENT AND DELINEATION

MCDERMOTT PROPERTY ON HARBOR ISLAND
NUECES COUNTY, TEXAS

Prepared for:

CHEVRONTEXACO

Houston, Texas

Prepared by:

ENTRIX, Inc.
5252 Westchester
Suite 250
Houston, Texas 77005

Project No. 1076903

October 2003

Table of Contents

1. INTRODUCTION

1.1 Scope of Work

This report presents the results of a wetland assessment and delineation conducted for ChevronTexaco, by ENTRIX, Inc. for an approximately 174-acre site in Nueces County, Texas.

On October 3, 2003, ENTRIX personnel (Matt Barczyk and Graciela Moore) conducted a wetlands delineation to determine:

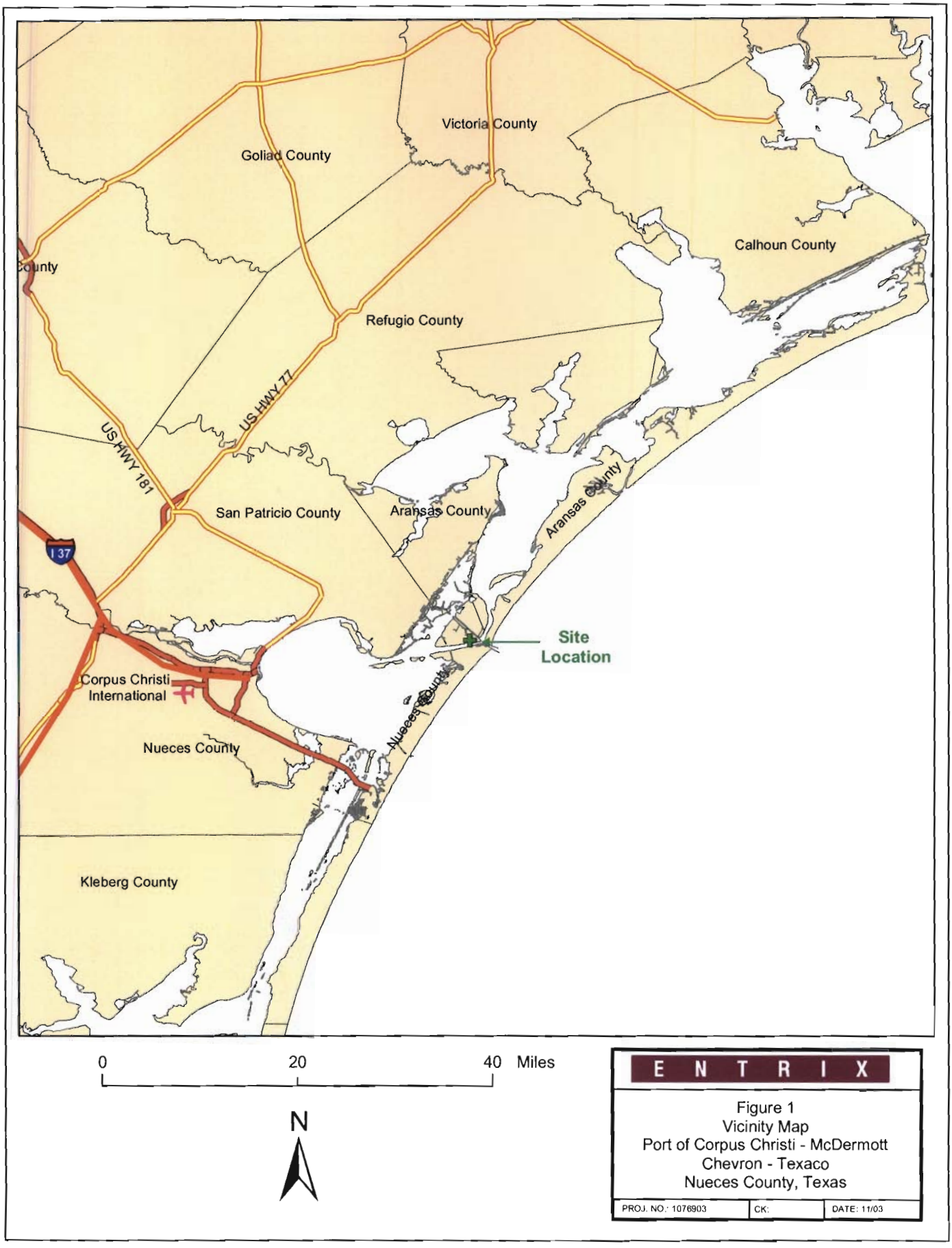
- If potential jurisdictional wetlands or potentially jurisdictional Waters of the US (WUS) exist within the proposed boundaries of the site, and
- Approximate potential jurisdictional boundaries within the site.

This report summarizes the results of the wetland delineation.

1.2 Area Description

The McDermott site is located on Harbor Island in Aransas Pass, Nueces County, Texas, which is west of the confluence of Aransas Channel, Corpus Christi Channel, and Lydia Ann Channel. The site is currently being used to fabricate offshore structures. The site is bordered by the Corpus Christi Channel to the south, by State Highway 361 to the east, by undeveloped land consisting primarily of coastal marsh to the north, and by Brown and Root to the west. The Port of Corpus Christi Authority (POCCA) Zachry site is east of SH 361 (Figure 1 and Figure 2).

The majority of the McDermott property is industrialized and unvegetated. The site has offices, a lay down yard, warehouses, slips, and a bulkhead. The northwest portion of the property is vegetated and would be classified as a shrub/grassland vegetation type. A leveed dredge spoil area is located on the western portion of the property, which is dominated by a mixture of herbaceous wetland and upland vegetation. The southern border of the McDermott property is located along an intercoastal waterway. The majority of the site boundary directly adjacent to the water has been bulkheaded or eroded and is not vegetated. An area in the southwest portion of the site has not been impounded and would be classified as a marsh. This area is primarily composed of herbaceous salt marsh species interspersed with Black mangrove (*Avicennia germinans*) shrubs.



S:\Secure\Pelican\2003\6000 Assigned Task Studies\6207 FabricationSite EA\McDermott\Wetlands\Figure 1.mxd

ENTRIX

Figure 1
Vicinity Map
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ. NO.: 1076903	CK:	DATE: 11/03

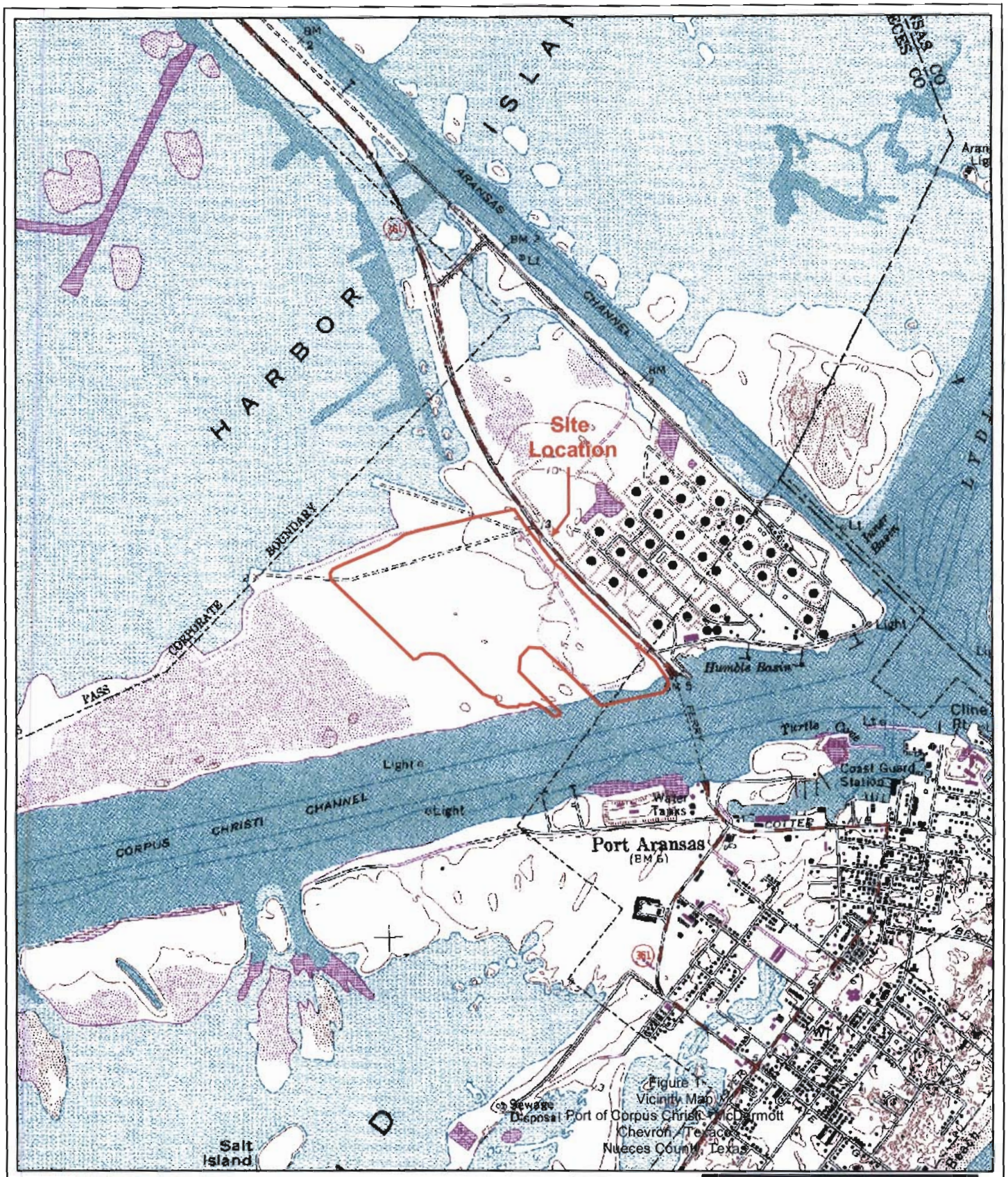


Figure 1
Vicinity Map
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

S:\SecurePelican\2003\6000 Assigned Task Studies\6207 FabricationSite EA\McDermott\Wetlands\Figure 2.mxd

0 0.25 0.5 Miles

N

Base map from the following USGS 7.5 minute quadrangle:
Port Aransas, Texas. 1968

ENTRIX

Figure 2
Site Location Map
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ. NO. 1076903	CK	DATE: 11/03

2. ASSESSMENT METHODOLOGY

2.1 Jurisdictional Wetlands

The jurisdictional wetland evaluation consisted of a site examination to determine whether the three wetland characteristics (hydrophytic vegetation, hydric soils, and wetland hydrology) were present at the site as determined by the U.S. Army Corps of Engineers (COE) criteria for jurisdictional wetlands.

Reference material used in the field and during report preparation included:

- USGS 7.5 minute series topographic map: Port Aransas, Texas; 1968,
- Aerial photography obtained from Lanmon Aerial Photography, Inc. (Date flown: 8/26/2002),
- Federal Emergency Management Agency (FEMA) 100-year floodplain map,
- The United States Department of Agriculture (USDA) Soil Conservation Service (SCS) Soil Survey of Nueces County, Hydric Soils List in Nueces County Area, Texas,
- Munsell Soil Color Charts,
- US Army Corps of Engineers 1987 Wetlands Delineation Manual,
- National List of Plant Species that Occur in Wetlands: South Plains (Region 6), and
- Various field-identification books for plants.

Wetland assessment methodology as set forth in the COE *Federal Manual for Identification of Jurisdictional Wetlands* (1987) was followed. Background soils information of the subject tract was obtained from the USDA SCS-- *Soil Survey of Nueces County, Texas*. The publication *The National List of Plant Species That Occur In Wetlands: South Plains--Region 6* (USFWS 1988) was used to determine the wetland status of plant species found at the site. ENTRIX relied upon field measurements and Global Positioning System (GPS) equipment to determine the approximate wetland acreage.

The findings of the field assessment are presented below. In accordance with the 1987 *Manual*, a survey in an area greater than five acres in size requires the use of transects. Transects were established for the project site prior to conducting field efforts. Data points were placed along the transects where vegetation, hydrology, and soils data was collected. The locations of the data points are analogous with the soil pit locations.

3.1 Vegetation

3.1.1 Plant Indicators Definitions

Table 1 summarizes the Wetland Indicator Status for plants as described in the publications, *National List of Vascular Plant Species That Occur In Wetlands: 1988 National Summary* (USFWS 1988), and *Aquatic and Wetland Plants of the Western Gulf Coast* (Stutzenbaker, 1999).

TABLE 1: Plant Indicator Status Categories

Indicator Category	Indicator Symbol	Definition
Obligate Wetland Plants	OBL	Plants that occur almost always (estimated probability >99%) in wetlands under natural conditions, but which may also occur rarely (estimated probability <1%) in non-wetlands. Examples: *Spartina alterniflora, Taxodium distichum.*
Facultative Wetland Plants	FACW	Plants that occur usually (estimated probability 67-99%) in wetlands, but also occurring in both wetlands and non-wetlands. Examples: *Fraxinus pennsylvanica*; *Sesbania drummondi.*
Facultative Plants	FAC	Plants with a similar likelihood (estimated probability of 33-67%) of occurring in both wetlands and non-wetlands. Examples:*Myrica cerifera,Celtis occidentalis*
Facultative Upland Plants	FACU	Plants that occur sometimes (estimated probability 1-33%) in wetlands, but occur more often (estimated probability 67-99%) in nonwetlands. Examples: *Sapium sebiferum*; *Quercus rubra.*
Obligate Upland Plants	UPL	Plants that occur rarely (estimated probability <1%) in wetlands, but almost always (>99% estimated probability) in non-wetlands. Examples: *Pinus echinata*

3.1.2 Site Observations

The following table indicates the species name and the indicator status of plants found in the potential jurisdictional wetland areas identified within the project site.

TABLE 2: List of Plant Species Observed

Site ID	Vegetation Type	Indicator Status
WB-001	*Eleocharis parvula*	OBL
	Typha latifolia	OBL
	Sesbania drumundii	FACW
	Andropogon glomeratus	FACW+
	Brachiaria platyphylla	FAC
WB-002	*Spartina alterniflora*	OBL
	Avicennia germinans	OBL
	Batis maritima	OBL
	Distichlis spicata	FACW+

Based upon the dominance of hydrophytic vegetation, the hydrophytic vegetation requirement, as set forth in the 1987 *Manual*, is met for the two potential jurisdictional wetland locations identified within the project site.

3.2 Soils

The 1987 *Manual* defines a hydric soil as a "soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation".

Table 3 provides a list of field indicators used to define hydric soils.

TABLE 3: Field Indicators for Hydric Soils

No.	Indicator	Description
1.	Organic Soils	A soil is an organic soil when: (1) More than 50% (by volume) of the upper 32 inches of soil is composed of organic material; or (2) organic soil material of any thickness rests on bedrock.
2.	Histic Epipedons	A histic epipedon is an 8- to 16-inch layer at or near the surface of a mineral hydric soil that is saturated with water for 30 consecutive days or more in most years and contains a minimum of 20% organic matter when no clay is present or a minimum of 30% organic matter when clay content is 60% or greater.
3.	Sulfidic Materials	When mineral soils emit an odor of rotten eggs, hydrogen sulfide is present. Such odors are detected only in waterlogged soils that are permanently saturated and have sulfidic material within a few centimeters of the soil surface.
4.	Aquic or Peraquic Moisture Regime	An aquic moisture regime is a reducing one: i.e., it is virtually free of dissolved oxygen because the soil is saturated by ground water or by water of the capillary fringe. Soils with peraquic moisture regimes are characterized by the presence of groundwater always at or near the soil surface.
5.	Direct Observation of Reducing Soil Conditions	Soils saturated for long or very long duration will usually exhibit reducing conditions. Under such conditions, ions of iron are transformed from a ferric valence state to a ferrous valence state. This condition can be detected in the field by a ferrous iron test performed by USDA soil scientists.
6.	Soil Colors	The colors of various soil components are often the most diagnostic indicator of hydric soils. Colors of these components are strongly influenced by the frequency and duration of soil saturation, which leads to reducing soil conditions. Mineral hydric soils will be either gleyed (gray colors) or will have bright mottles (rust colored spots) and/or low matrix chroma. The soil matrix is the portion of the soil that has the predominant color.
7.	Soil Appearing on Hydric Soils List	Using the National Technical Committee on Hydric Soils (NTCHS) criteria for hydric soils, the NTCHS developed both a local and national list of hydric soils. Listed soils possess reduced soil conditions for a significant portion of the growing season in a major portion of the root zone and are frequently saturated within 12 inches of the soil surface.
8.	Iron and Manganese Concretions	During the oxidation-reduction process, iron and manganese in suspension are sometimes segregated as oxides into concretions or soft masses. These accumulations are usually black or dark brown. Concretions >2 mm in diameter occurring within 7.5 cm of the surface are evidence that the soil is saturated for long periods of time near the surface.
9.	Indicators for Coarse-textured or Sandy Hydric Soils	a. High organic matter content in the surface horizon b. Dark vertical streaking of subsurface horizon by organic matter c. Wet spodosols d. New sandbars

The following Soil Series was mapped by the USDA-Soil Conservation Service (USDA-SCS) and corresponds to the wetland areas defined previously (Figure 3).

- Tidal flats (**Listed** as **Hydric**)

This soil is classified as hydric according to the USDA, SCS Hydric Soils in Nueces County Area, Texas hydric soils list.

3.2.1 Tidal flats (Ta)

Tidal flats are mainly barren, nearly level areas that are above salt water at low tide but are flooded at normal high tide. Slopes range from 0 to 1 percent. At low tide the flats can be seen along parts of the mainland shore, along the edge of islands, and protruding above the water in shallow bays and lagoons.

Layers of sand, shells, and clay make up Tidal flats, but these layers are not considered in texture, in thickness, or in their arrangement. In some places gray clay occurs that is similar to, or is the same as, the parent material of many soils on the mainland.

A sparse growth of grasses and weeds tolerant of salt water borders the edges of these flats that are above water most often. Tidal flats have not been placed in a capability unit.

3.2.2 Soils Site Observations

Based upon the literature reviewed and field observations at the potential jurisdictional wetland location identified, the hydric soil requirement, as set forth in the 1987 *Manual*, is met for the two potential jurisdictional wetland locations identified.

Positive hydric soil indicators were documented at the potential jurisdictional wetland locations, including:

- Gleyed or Low-Chroma Colors
- Listed in Local Hydric Soils List

3.3 Hydrology

The 1987 *Manual* definition of wetland hydrology "encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season". The project site elevation is approximately 0 to 10 feet above mean sea level based upon examination of the USGS 7.5-minute Port Aransas, Texas quadrangle.

3.3.1 Indicators for Wetland Hydrology

Wetland indicators are important to assess properly the type of wetland investigated. The following table describes 1987 *Manual* field indicators for wetland hydrology determinations.

TABLE 4: Primary and Secondary Indicators for Wetland Hydrology

Primary	Indicator
1.	Visual observations of inundation
2.	Visual observations of soil saturation within 12 inches of the soil surface
3.	Water marks on vegetation (particularly woody species)
4.	Drift lines
5.	Water-borne sediment deposits
6.	Drainage patterns characteristic of wetlands
Secondary	**Indicator**
7.	Oxidized rhizospheres (root channels) associated with living roots and rhizomes
8.	Water-Stained Leaves
9.	Local Soil Survey Data (if data correlates to visual observations)
10.	Morphological plant adaptations (e.g. buttressed tree trunks)
11.	FAC-Neutral test (comparative dominance of FAC, FACW, and OBL vegetative species versus FACU and UPL vegetative species)

3.3.2 Hydrological Site Observations

During the site visit, ENTRIX made the following observations regarding primary and secondary wetland hydrology indicators observed in the potential jurisdictional areas identified within the project site:

Primary

- Inundated,
- Saturated in Upper 12 Inches,

Secondary

- Oxidized Root Channels in Upper 12 Inches, and
- Water-stained leaves

Based upon the hydrological indicators observed at the two potential jurisdictional wetland locations within the project site, the wetland hydrology requirement, as set forth in the 1987 *Manual,* is met for the areas investigated.

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Legend

- Potential Junsdictional Wetland
- Site Boundary

Nueces County Soils

- Mustang Fine Sand
- Spoil Banks
- Tidal Flats

0 500 1,000 Feet

N

Ref: Lanmon Aerial Photography, Inc.
Corpus Christi, Texas
Date flown: 8/26/02

ENTRIX

Figure 3
Aerial Photograph Illustrating
Nueces County Soils
Port of Corpus Christi Authority - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ. NO. 1076903	CK	DATE: 11/03

4. CONCLUSION

Figure 4 details the project site, which was determined to contain two potential jurisdictional wetlands based upon 1987 *Manual* criteria. Approximately 0.63 acres of potential jurisdictional wetlands were identified on the project site:

- Wetland area WB-001 0.15 acres
- Wetland area WB-002 0.48 acres

Total Potential Jurisdictional Wetland Acreage 0.63 acres

A review of aerial photographs (2002) of the project site revealed "signatures" characteristic of jurisdictional wetlands. The presence of hydric soils was confirmed and documented through the use of soil survey information and observational indicators. The three characteristics of a wetland (hydrophytic vegetation, hydric soils, and wetland hydrology) were met at the two potentially jurisdictional wetland areas identified. Figure 4 identifies the project site boundary, the potential jurisdictional wetlands identified, potential jurisdictional wetland impacts, soil pit locations, and transect locations. The field data sheets are included in Appendix A and site photographs are included in Appendix B.

Both of the potential jurisdictional wetland areas identified are located within the FEMA 100-year floodplain (Figure 5). The COE considers the FEMA 100-year floodplain when determining if a potentially jurisdictional wetland is isolated (non-jurisdictional) or an adjacent wetland (jurisdictional) for regulatory purposes. Most wetlands located outside the FEMA 100-year floodplain would be considered isolated by the COE. If a potentially jurisdictional wetland contains two or more hydrological barriers from a Water of the U.S and is located within the FEMA 100-year floodplain it is likely the wetland will be considered isolated for regulatory purposes and therefore not jurisdictional.

It should be understood that the scope of this delineation was to determine whether or not in our professional opinion wetlands exist within the project boundaries, and is not a legal delineation of jurisdictional boundaries. The COE has regulatory authority regarding wetland issues, and the COE is responsible for the final jurisdictional determination of wetlands at a given site. This wetland delineation is not official until it has been verified and approved by the COE.

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Legend

- Pit
- Potential Jurisdictional Wetland
- Transect
- Boundary

0 750 1,500 Feet

N

Ref: Lanmon Aerial Photography, Inc.
Corpus Christi, Texas
Date flown: 8/26/02

ENTRIX

Figure 4
Aerial Photograph Illustrating
Potential Jurisdictional Wetlands
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ NO.: 1078903	CK.	DATE: 11/03

S:\Secure\Pelican\2003\6000 Assigned Task Studies\6207 FabricationSite EA\McDermott\Wetlands\Figure 5.mxd

Legend

Potential Jurisdictional Wetland

Boundary

FEMA Flood Plain

100 Year

0 750 1,500 Feet

N

Ref: Lanmon Aerial Photography, Inc.
Corpus Christi, Texas
Date flown: 8/26/02

ENTRIX

Figure 5
Aerial Photograph Illustrating
FEMA Flood Plain
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ. NO 1076903	CK.	DATE: 11/03

APPENDIX A

Field Data Sheets

Project No/.Site: Pelican – McDermott Property

Applicant: ChevronTexaco | County/State: Nueces County, Texas

Date: October 3, 2003 | Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-2
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-002

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Chasmaecrista fasciculata*	H	FACU-	9.			
2.	*Oputina humifusa*	H	FACU	10.			
3.	*Schizachyrium scoparium*	H	FACU+	11.			
4.	*Ambrosia cumanensis*	H	FAC-	12.			
5.	*Croton spp.*	H	FAC	13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. 1/5 (20%)

Remarks:

HYDROLOGY

____Recorded Data (Describe in Remarks):
____Stream, Lake, or Tide Gage
__X__Aerial Photographs
____Other
____No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: >18 (in.)

Depth to Saturated Soil: >18 (in.)

Wetland Hydrology Indicators:

Primary Indicators:

_____ Inundated
_____ Saturated in Upper 12 inches
_____ Water Marks
_____ Drift Lines
_____ Sediment Deposits
_____ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

_____ Oxidized Root Channels in Upper 12 Inches
_____ Water-Stained Leaves
_____ Local Soil Survey Data
_____ Other (Explain in Remarks)

Remarks: No hydrology observed

SOILS

Map Unit Name: Tidal flats (Ta) | Drainage Class: Listed as hydric

Taxonomy (Subgroup): | Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-2	O/A	10YR 4/2	-	-	Sand
2-18	O/A	10YR 5/3	-	-	Sand with clay lenses

Hydric Soil Indicators:

___ Histosol	___ Concretions
___ Histic Epipedon	___ High Organic Content in Surface Layer
___ Sulfidic Odor	___ Organic Streaking
___ Probable Aquic Moisture Regime	X Listed in Local Hydric Soils List
___ Reducing Conditions	___ Listed on National Hydric Soils Lists
X Gleyed or Low-Chroma Colors	___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)			
Hydric Soils Present?	(Yes)	No			

Remarks:

Project No/.Site: Pelican – McDermott Property
Applicant: ChevronTexaco County/State: Nueces County, Texas
Date: October 3, 2003 Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-3
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-001

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Baccharis halimifolia*	S	FACW-	9.			
2.	*Oputina humifusa*	H	FACU	10.			
3.	*Schizachyrium scoparium*	H	FACU+	11.			
4.				12.			
5.				13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. 1/3 (33.3%)

Remarks:

HYDROLOGY

___Recorded Data (Describe in Remarks): ___Stream, Lake, or Tide Gage _X_Aerial Photographs ___Other ___No Recorded Data Available	Wetland Hydrology Indicators: **Primary Indicators:** ___ Inundated ___ Saturated in Upper 12 inches ___ Water Marks ___ Drift Lines ___ Sediment Deposits ___ Drainage Patterns in Wetlands **Secondary Indicators (2 or more required):** ___ Oxidized Root Channels in Upper 12 Inches ___ Water-Stained Leaves ___ Local Soil Survey Data ___ Other (Explain in Remarks)
Field Observations: Depth of Surface Water: N/A (in.) Depth to Free Water in Pit: >18 (in.) Depth to Saturated Soil: >18 (in.)	

Remarks: No hydrology observed

SOILS

Map Unit Name: Tidal flats (Ta) — Drainage Class: Listed as hydric

Taxonomy (Subgroup): — Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	O/A	10YR 6/2	-	-	Silty sand with gravel and shell

Hydric Soil Indicators:

___ Histosol	___ Concretions
___ Histic Epipedon	___ High Organic Content in Surface Layer
___ Sulfidic Odor	___ Organic Streaking
___ Probable Aquic Moisture Regime	X Listed in Local Hydric Soils List
___ Reducing Conditions	___ Listed on National Hydric Soils Lists
X Gleyed or Low-Chroma Colors	___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)			
Hydric Soils Present?	(Yes)	No			

Remarks:

Project No/.Site: Pelican – McDermott Property
Applicant: ChevronTexaco County/State: Nueces County, Texas
Date: October 3, 2003 Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-1
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-003

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Sporobolus virginicus*	H	FACW+	9.			
2.	*Iva angustifolia*	H	FAC	10.			
3.				11.			
4.				12.			
5.				13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC 2/2 (100%) (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands.

Remarks:

HYDROLOGY

___Recorded Data (Describe in Remarks):
___Stream, Lake, or Tide Gage
_X_Aerial Photographs
___Other
___No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: 12 (in.)

Depth to Saturated Soil: >18 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
___ Inundated
___ Saturated in Upper 12 inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name: Tidal flats (Ta) Drainage Class: Listed as hydric

Taxonomy (Subgroup): Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	O/A	10YR 5/2	Gley 2 6/10B	10%	Sand

Hydric Soil Indicators:

____ Histosol	____ Concretions
____ Histic Epipedon	____ High Organic Content in Surface Layer
____ Sulfidic Odor	____ Organic Streaking
____ Probable Aquic Moisture Regime	X Listed in Local Hydric Soils List
____ Reducing Conditions	____ Listed on National Hydric Soils Lists
X Gleyed or Low-Chroma Colors	____ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No
Wetland Hydrology Present?	Yes	(No)
Hydric Soils Present?	(Yes)	No

Is this Sampling Point Within a Wetland? Yes (No)

Remarks:

Project No/.Site: Pelican – McDermott Property
Applicant: ChevronTexaco County/State: Nueces County, Texas
Date: October 3, 2003 Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-1
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-004 (WB-001)

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Eleocharis parvula*	H	OBL	9.			
2.	*Typha latifolia*	H	OBL	10.			
3.	*Sesbania drumundii*	S	FACW	11.			
4.	*Andropogon glomeratus*	H	FACW+	12.			
5.	*Brachiaria platyphylla*	H	FAC	13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC 5/5 (100%)
(except FAC-). Include species noted (*) as showing
morphological adaptations to wetlands.

Remarks:

HYDROLOGY

___Recorded Data (Describe in Remarks): ___Stream, Lake, or Tide Gage _X_Aerial Photographs ___Other ___No Recorded Data Available	Wetland Hydrology Indicators:	
Field Observations: Depth of Surface Water: N/A (in.) Depth to Free Water in Pit: 2 (in.) Depth to Saturated Soil: >18 (in.)	**Primary Indicators:**	
	X	Inundated
	X	Saturated in Upper 12 inches
		Water Marks
		Drift Lines
		Sediment Deposits
		Drainage Patterns in Wetlands
	Secondary Indicators	**(2 or more required):**
		Oxidized Root Channels in Upper 12 Inches
	X	Water-Stained Leaves
		Local Soil Survey Data
		Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name: Tidal flats (Ta) | Drainage Class: Listed as hydric

Taxonomy (Subgroup): | Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-2	O/A	10YR 4/1	-	-	Sand
2-18	O/A	10YR 5/1	-	-	Sand

Hydric Soil Indicators:

____ Histosol	____ Concretions
____ Histic Epipedon	____ High Organic Content in Surface Layer
____ Sulfidic Odor	____ Organic Streaking
____ Probable Aquic Moisture Regime	X Listed in Local Hydric Soils List
____ Reducing Conditions	____ Listed on National Hydric Soils Lists
X Gleyed or Low-Chroma Colors	____ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Sampling Point Within a Wetland?	(Yes)	No
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	(Yes)	No			

Remarks:

Project No/.Site: Pelican – McDermott Property
Applicant: ChevronTexaco County/State: Nueces County, Texas
Date: October 3, 2003 Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-1
Is the area a potential Problem Area?	Yes	(No)	Plot ID:	Pit-005
(If needed, explain on reverse.)				

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Baccharis halimifolia*	H	FACW-	9.			
2.	*Oputina humifusa*	H	FACU	10.			
3.	*Schizachyrium scoparium*	H	FACU+	11.			
4.				12.			
5.				13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. 1/3 (33.3%)

Remarks:

HYDROLOGY

___Recorded Data (Describe in Remarks): ___Stream, Lake, or Tide Gage _X_Aerial Photographs ___Other ___No Recorded Data Available	Wetland Hydrology Indicators: **Primary Indicators:** ___ Inundated ___ Saturated in Upper 12 inches ___ Water Marks ___ Drift Lines ___ Sediment Deposits ___ Drainage Patterns in Wetlands **Secondary Indicators (2 or more required):** ___ Oxidized Root Channels in Upper 12 Inches ___ Water-Stained Leaves ___ Local Soil Survey Data ___ Other (Explain in Remarks)
Field Observations: Depth of Surface Water: N/A (in.) Depth to Free Water in Pit: >18 (in.) Depth to Saturated Soil: >18 (in.)	

Remarks: No hydrology observed

SOILS

Map Unit Name: Tidal flats (Ta) — Drainage Class: Listed as hydric

Taxonomy (Subgroup): — Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	O/A	10YR 5/3	10YR 5/4	10%	Sandy clay

Hydric Soil Indicators:

	Histosol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer
	Sulfidic Odor		Organic Streaking
	Probable Aquic Moisture Regime	X	Listed in Local Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils Lists
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)			
Hydric Soils Present?	(Yes)	No			

Remarks:

Project No/.Site: Pelican – McDermott Property

Applicant: ChevronTexaco County/State: Nueces County, Texas

Date: October 3, 2003 Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-1
Is the area a potential Problem Area?	Yes	(No)	Plot ID:	Pit-006
(If needed, explain on reverse.)				

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Baccharis halimifolia*	S	FACW-	9.			
2.	*Oputina humifusa*	H	FACU	10.			
3.	*Heterotheca subaxillaris*	H	UPL	11.			
4.	*Mimosa strigoillosa*	H	FAC	12.			
5.				13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. 2/4 (50%)

Remarks:

HYDROLOGY

___Recorded Data (Describe in Remarks):
___Stream, Lake, or Tide Gage
_X_Aerial Photographs
___Other
___No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: >18 (in.)

Depth to Saturated Soil: >18 (in.)

Wetland Hydrology Indicators:

Primary Indicators:

___ Inundated
___ Saturated in Upper 12 inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ Other (Explain in Remarks)

Remarks: No hydrology observed

SOILS

Map Unit Name: Tidal flats (Ta) Drainage Class: Listed as hydric

Taxonomy (Subgroup): Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	O/A	10YR 6/2	-	-	Sandy silt

Hydric Soil Indicators:

____ Histosol	____ Concretions
____ Histic Epipedon	____ High Organic Content in Surface Layer
____ Sulfidic Odor	____ Organic Streaking
____ Probable Aquic Moisture Regime	__X__ Listed in Local Hydric Soils List
____ Reducing Conditions	____ Listed on National Hydric Soils Lists
____ Gleyed or Low-Chroma Colors	____ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)			
Hydric Soils Present?	(Yes)	No			

Remarks:

Project No/.Site: Pelican – McDermott Property
Applicant: ChevronTexaco County/State: Nueces County, Texas
Date: October 3, 2003 Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-1
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-007

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Mimosa strigoillosa*	H	FAC	9.			
2.	*Oputina humifusa*	H	FACU	10.			
3.	*Heterotheca subaxillaris*	H	UPL	11.			
4.				12.			
5.				13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. 1/3 (33.3%)

Remarks:

HYDROLOGY

___Recorded Data (Describe in Remarks):
___Stream, Lake, or Tide Gage
_X_Aerial Photographs
___Other
___No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: >18 (in.)

Depth to Saturated Soil: >18 (in.)

Wetland Hydrology Indicators:

Primary Indicators:

___ Inundated
___ Saturated in Upper 12 inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ Other (Explain in Remarks)

Remarks: No hydrology observed

SOILS

Map Unit Name: Tidal flats (Ta) | Drainage Class: Listed as hydric

Taxonomy (Subgroup): | Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	O/A	10YR 4/3	-	-	Sandy silt

Hydric Soil Indicators:

____ Histosol	____ Concretions
____ Histic Epipedon	____ High Organic Content in Surface Layer
____ Sulfidic Odor	____ Organic Streaking
____ Probable Aquic Moisture Regime	__X__ Listed in Local Hydric Soils List
____ Reducing Conditions	____ Listed on National Hydric Soils Lists
____ Gleyed or Low-Chroma Colors	____ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)			
Hydric Soils Present?	(Yes)	No			

Remarks:

Project No/.Site: Pelican – McDermott Property
Applicant: ChevronTexaco County/State: Nueces County, Texas
Date: October 3, 2003 Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-1
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-008 (WB-002)

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Spartina alterniflora*	H	OBL	9.			
2.	*Avicennia germinans*	S	OBL	10.			
3.	*Batis maritima*	H	OBL	11.			
4.	*Distichlis spicata*	H	FACW+	12.			
5.				13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC 4/4 (100%) (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands.

Remarks:

HYDROLOGY

___Recorded Data (Describe in Remarks):
___Stream, Lake, or Tide Gage
_X_Aerial Photographs
___Other
___No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: 0 (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:

	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
	Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

X	Oxidized Root Channels in Upper 12 Inches
X	Water-Stained Leaves
	Local Soil Survey Data
	Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name: Tidal flats (Ta) | Drainage Class: Listed as hydric

Taxonomy (Subgroup): | Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	O/A	10YR 5/1	10YR 5/6	15%	Sand

Hydric Soil Indicators:

___ Histosol	___ Concretions
___ Histic Epipedon	___ High Organic Content in Surface Layer
___ Sulfidic Odor	___ Organic Streaking
___ Probable Aquic Moisture Regime	X Listed in Local Hydric Soils List
___ Reducing Conditions	___ Listed on National Hydric Soils Lists
X Gleyed or Low-Chroma Colors	___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Sampling Point Within a Wetland?	(Yes)	No
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	(Yes)	No			

Remarks:

APPENDIX B

Photograph Log

Photograph 1: Facing north from upland Pit-001.

Photograph 2: Facing south from upladn Pit-002.

Photograph 3: Facing west from upland Pit-003.

Photograph 4: Facing west toward wetland WB-001.

Photograph 5: Facing west from Pit-008 in wetland WB-002.

Photograph 6: Facing south from the northeast corner of the site.

Photograph 7: Facing northwest from southeast corner of the site.

Pattillo, Mark E SWG

From: Pattillo, Mark E SWG
Sent: Monday, January 26, 2004 11:16 AM
To: 'mbarczyk@entrix.com'
Subject: McDermott Property delineation

Dear Matt:

Our unit leader, Lloyd Mullins, assigned verification of the subject delineation to me for processing. To verify I will need the following:

1) Written permission from the property owner granting the Corps permission to enter the site to verify the delineation.

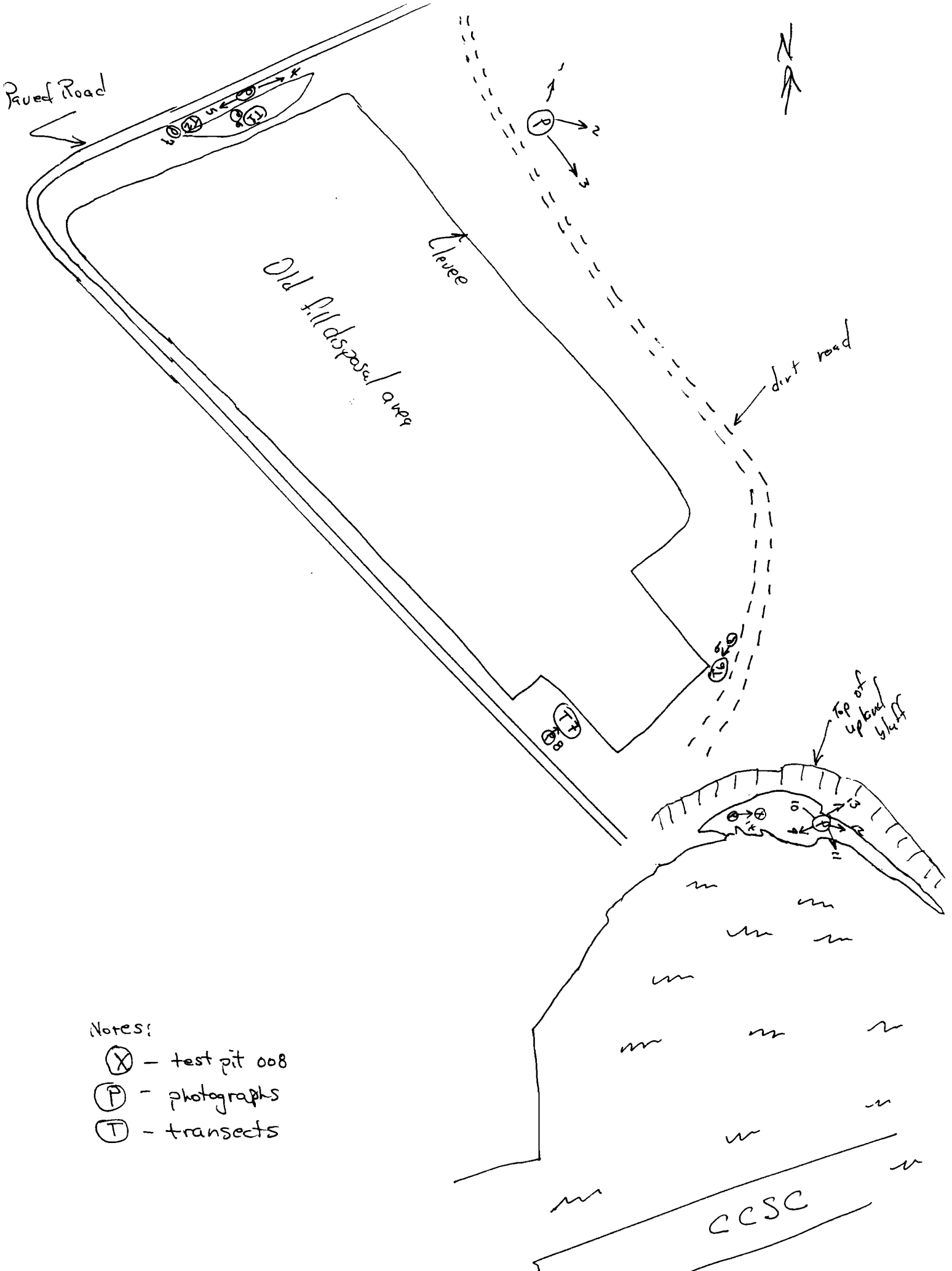
2) The wetlands should be staked prior to our visit and the stakes numbered to correspond with delination map.

3) Survey of the delination - once any adjustments have been made and the boundary has been verified by the Corps, you will need to provide a survey of the wetland sites prepared by a certified Professional Land Surveyor or a Professional Engineer with their signature and seal.

Let me know if you have any questions.

Sincerely,

Mark P


Paved Road
Old fill disposal area
Levee
dirt road
Top of upland bluff
CCSC
N
Notes:
X - test pit 008
P - photographs
T - transects

Photographs taken by Mark Pattillo of shoreline adjacent to
Corpus Christi Ship Channel at McDermott site on Harbor Island
On 24 February 2004

Photo 1: Facing north from dirt road along east side of old leveed disposal area toward NE corner of property. Fence along northern property line visible on left side of photo.

Photo 2: Facing east from same site to show area to the right of Photo 1 for panoramic view.

Photographs taken by Mark Pattillo of shoreline adjacent to
Corpus Christi Ship Channel at McDermott site on Harbor Island
On 24 February 2004

Photo 3: Facing SSE from same site to show area to the right of Photo 2` for panoramic view. Leveed area is to the right (south) of the dirt road.

Photo 4: Facing NE along borrow area for levee along north property line to show cattail wetland resulting from water trapped by depressional area between levee on the right (south) and roadbed to the left (north).

Photographs taken by Mark Pattillo of shoreline adjacent to
Corpus Christi Ship Channel at McDermott site on Harbor Island
On 24 February 2004 (pg 3)

Photo 5: Facing west from same site to show opposite side of wetland area.

Photo 6: Test Pit 1 sampled in upland area between Wetland WB 001 and roadway at north end of agent's transect (T-1).

Photographs taken by Mark Pattillo of shoreline adjacent to
Corpus Christi Ship Channel at McDermott site on Harbor Island
On 24 February 2004 (pg 4)

Photo 7: Facing NE toward Test Pit 3 sampled in upland area at south end of disposal area at agent's test pit (PIT-007).

Photo 8: Facing SW toward Test Pit 4 sampled in upland area at south end of disposal area at agent's test pit (PIT-006).

Photographs taken by Mark Pattillo of shoreline adjacent to
Corpus Christi Ship Channel at McDermott site on Harbor Island
On 24 February 2004 (pg 5)

Photo 9: Facing west along shoreline from middle of wetland area (WB-002).

Photo 10: Facing WNW from same site to show area to the right of Photo 9 for panoramic view. Shovel in middle of picture placed at approximate seasonal high tide line.

Photo 11: Facing NE along shoreline from west end of wetland area (WB-002).

Photo 12: Facing ENE from same site to show area to the left of Photo 11 for panoramic view.

Photo 13: Facing north from same site to show area to the left of Photo 12 for panoramic view.

Photo 14: Facing SSE toward agent's sample point (Pit-008) marked by shovel.

E N T R I X

MAR 1 5 2004

ENTRIX, Inc.
5252 Westchester, Suite 250
Houston, Texas 77005
(713) 666-6223
(713) 666-5227 FAX

Since 1984 - Environmental Excellence

March 12, 2004

Mr. Mark Patillo
Corpus Christi Field Office
U.S. Army Corps of Engineers
Galveston District
5151 Flynn Parkway, Suite 306
Corpus Christi, Texas 78411

Re: Revised Delineation Report
McDermott Property on Harbor Island
Nueces County, Texas
Entrix Project # 1076903

Dear Mr. Mullins:

Please find the revised version of the "Wetland Assessment and Delineation, McDermott Property on Harbor Island" report. Revisions to the report were based on the results of the delineation verification conducted on February 24, 2004. The GPS data corresponding to this delineation report was emailed to you on Friday, March 12, 2004.

Thank you for your help. If you have any questions or comments please contact me at 713-662-1906 or Barry Gillespie at 713-662-1908.

Sincerely,

Matthew B. Barczyk
Staff Scientist

USACE Verified

E N T R I X

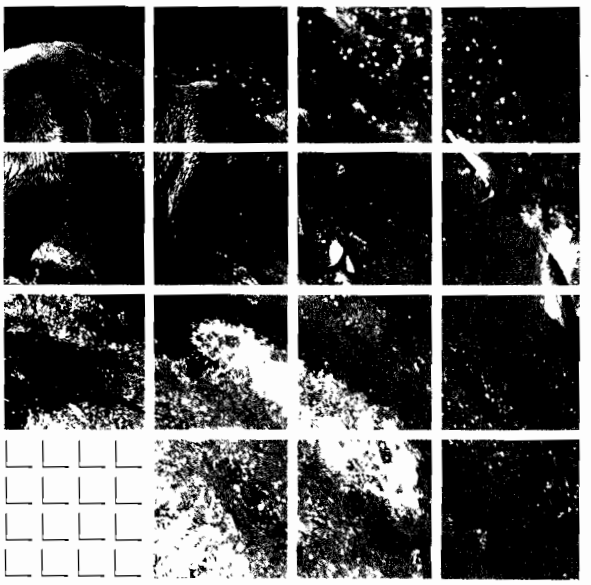
WETLAND ASSESSMENT AND DELINEATION MCDERMOTT PROPERTY ON HARBOR ISLAND NUECES COUNTY, TEXAS

Prepared for:

CHEVRONTEXACO
Houston, Texas

Prepared by:

ENTRIX, Inc.
5252 Westchester, Suite 250
Houston, Texas 77005



Project No. 1076903

October 2003
(Revised March 2004)

USACE Verified

WETLAND ASSESSMENT AND DELINEATION

MCDERMOTT PROPERTY ON HARBOR ISLAND
NUECES COUNTY, TEXAS

Prepared for:

CHEVRONTEXACO

Houston, Texas

Prepared by:

ENTRIX, Inc.
5252 Westchester
Suite 250
Houston, Texas 77005

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Table of Contents

1. INTRODUCTION

1.1 Scope of Work

This report presents the results of a wetland assessment and delineation conducted for ChevronTexaco, by ENTRIX, Inc. for an approximately 174-acre site in Nueces County, Texas.

On October 3, 2003, ENTRIX personnel (Matt Barczyk and Graciela Moore) conducted a wetlands delineation to determine:

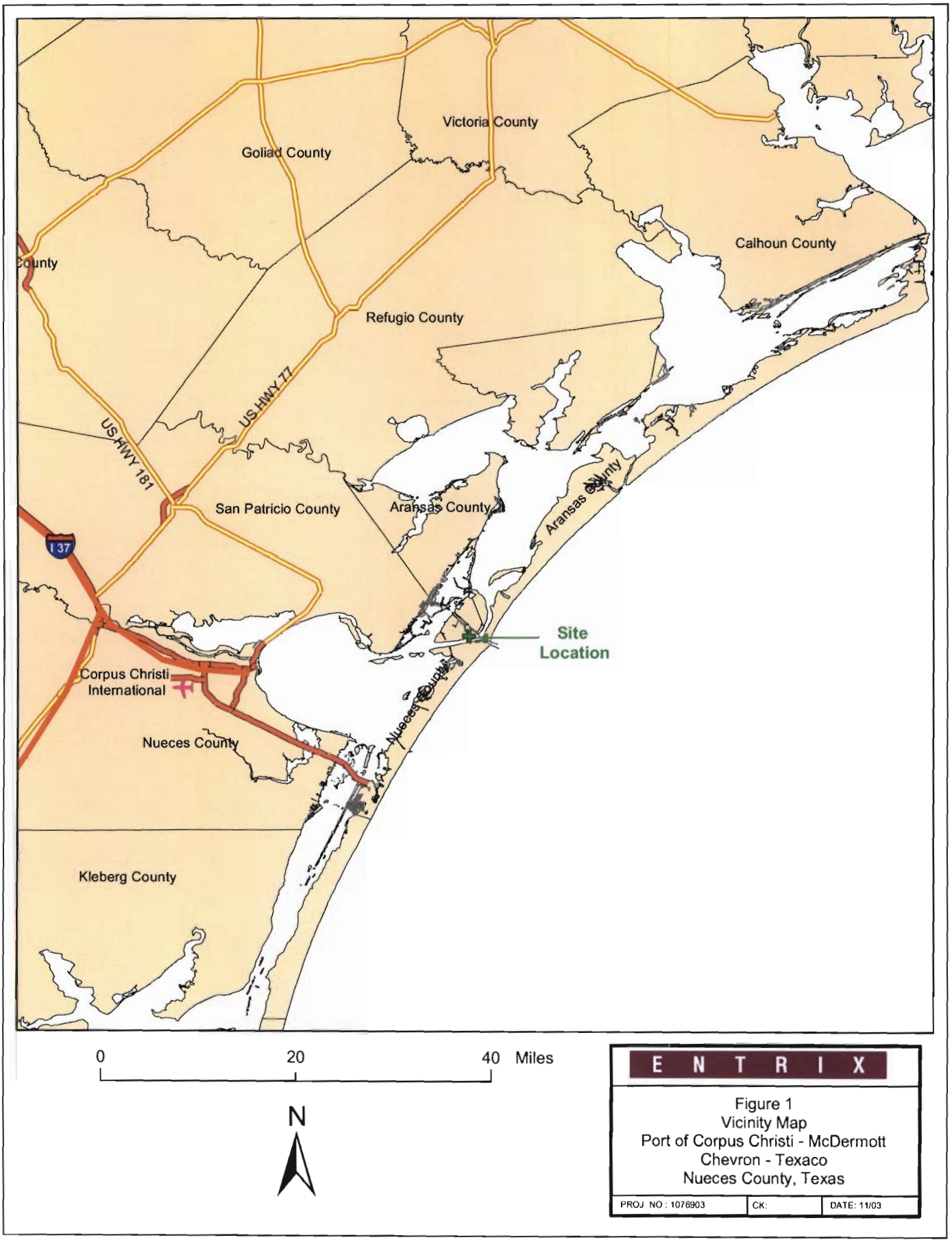
- If potential jurisdictional wetlands or potentially jurisdictional Waters of the US (WUS) exist within the proposed boundaries of the site, and
- Approximate potential jurisdictional boundaries within the site.

This report summarizes the results of the wetland delineation. In addition, this report has been revised based on the results of a wetland verification conducted on February 24, 2004 by ENTRIX (Matt Barczyk) and the COE (Mark Patillo).

1.2 Area Description

The McDermott site is located on Harbor Island in Aransas Pass, Nueces County, Texas, which is west of the confluence of Aransas Channel, Corpus Christi Channel, and Lydia Ann Channel. The site is currently being used to fabricate offshore structures. The site is bordered by the Corpus Christi Channel to the south, by State Highway 361 to the east, by undeveloped land consisting primarily of coastal marsh to the north, and by Brown and Root to the west. The Port of Corpus Christi Authority (POCCA) Zachry site is east of SH 361 (Figure 1 and Figure 2).

The majority of the McDermott property is industrialized and unvegetated. The site has offices, a lay down yard, warehouses, slips, and a bulkhead. The northwest portion of the property is vegetated and would be classified as a shrub/grassland vegetation type. A leveed dredge spoil area is located on the western portion of the property, which is dominated by a mixture of herbaceous wetland and upland vegetation. The southern border of the McDermott property is located along an intercoastal waterway. The majority of the site boundary directly adjacent to the water has been bulkheaded or eroded and is not vegetated. An area in the southwest portion of the site has not been impounded and would be classified as a marsh. This area is primarily composed of herbaceous salt marsh species interspersed with Black mangrove (*Avicennia germinans*) shrubs.



S:\Secure\Pelican\2003\6000 Assigned Task Studies\6207 FabricationSite EA\McDermott\Wetlands\Figure 1.mxd

ENTRIX

Figure 1
Vicinity Map
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ NO : 1076903	CK:	DATE: 11/03

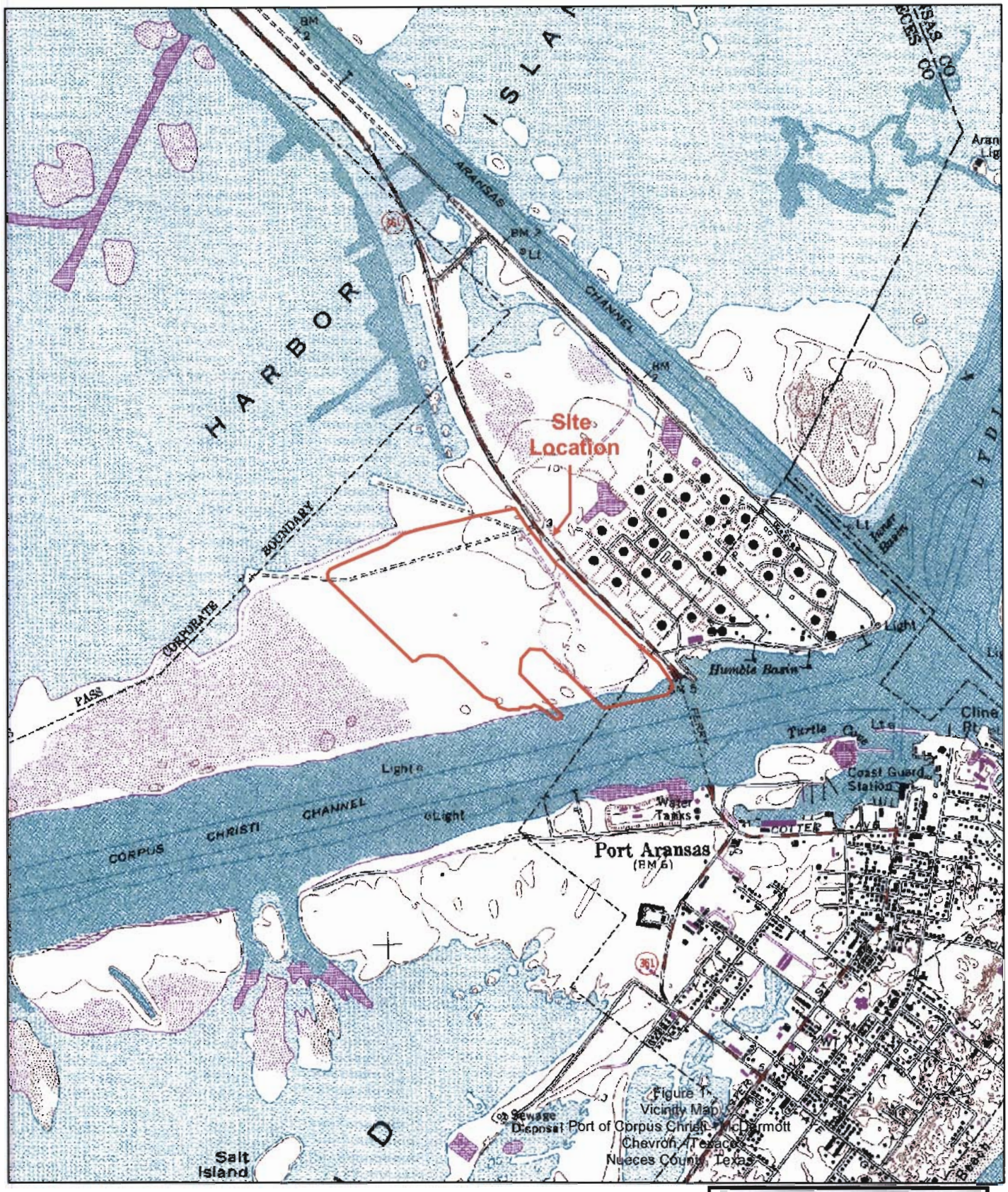


Figure 1
Vicinity Map
Port of Corpus Christi - McDermott
Chevron / Texaco
Nueces County, Texas

Base map from the following USGS 7.5 minute quadrangle:
Port Aransas, Texas. 1968

ENTRIX

Figure 2
Site Location Map
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ. NO. 1076903	CK	DATE 11/03

S:\Secure\Pelican\2003\6000 Assigned Task Studies\6207 Fabrication\Site EA\McDermott\Wetlands\Figure 2.mxd

2. ASSESSMENT METHODOLOGY

2.1 Jurisdictional Wetlands

The jurisdictional wetland evaluation consisted of a site examination to determine whether the three wetland characteristics (hydrophytic vegetation, hydric soils, and wetland hydrology) were present at the site as determined by the U.S. Army Corps of Engineers (COE) criteria for jurisdictional wetlands.

Reference material used in the field and during report preparation included:

- USGS 7.5 minute series topographic map: Port Aransas, Texas; 1968,
- Aerial photography obtained from Lanmon Aerial Photography, Inc. (Date flown: 8/26/2002),
- Federal Emergency Management Agency (FEMA) 100-year floodplain map,
- The United States Department of Agriculture (USDA) Soil Conservation Service (SCS) Soil Survey of Nueces County, Hydric Soils List in Nueces County Area, Texas,
- Munsell Soil Color Charts,
- US Army Corps of Engineers 1987 Wetlands Delineation Manual,
- National List of Plant Species that Occur in Wetlands: South Plains (Region 6), and
- Various field-identification books for plants.

Wetland assessment methodology as set forth in the COE *Federal Manual for Identification of Jurisdictional Wetlands* (1987) was followed. Background soils information of the subject tract was obtained from the USDA SCS-- *Soil Survey of Nueces County, Texas*. The publication *The National List of Plant Species That Occur In Wetlands: South Plains--Region 6* (USFWS 1988) was used to determine the wetland status of plant species found at the site. ENTRIX relied upon field measurements and Global Positioning System (GPS) equipment to determine the approximate wetland acreage.

The findings of the field assessment are presented below. In accordance with the 1987 *Manual*, a survey in an area greater than five acres in size requires the use of transects. Transects were established for the project site prior to conducting field efforts. Data points were placed along the transects where vegetation, hydrology, and soils data was collected. The locations of the data points are analogous with the soil pit locations.

3.1 Vegetation

3.1.1 Plant Indicators Definitions

Table 1 summarizes the Wetland Indicator Status for plants as described in the publications, *National List of Vascular Plant Species That Occur In Wetlands: 1988 National Summary* (USFWS 1988), and *Aquatic and Wetland Plants of the Western Gulf Coast* (Stutzenbaker, 1999).

TABLE 1: Plant Indicator Status Categories

Indicator Category	Indicator Symbol	Definition
Obligate Wetland Plants	OBL	Plants that occur almost always (estimated probability >99%) in wetlands under natural conditions, but which may also occur rarely (estimated probability <1%) in non-wetlands. Examples: *Spartina alterniflora, Taxodium distichum.*
Facultative Wetland Plants	FACW	Plants that occur usually (estimated probability 67-99%) in wetlands, but also occurring in both wetlands and non-wetlands. Examples: *Fraxinus pennsylvanica*; *Sesbania drummondi.*
Facultative Plants	FAC	Plants with a similar likelihood (estimated probability of 33-67%) of occurring in both wetlands and non-wetlands. Examples:*Myrica cerifera,Celtis occidentalis*
Facultative Upland Plants	FACU	Plants that occur sometimes (estimated probability 1-33%) in wetlands, but occur more often (estimated probability 67-99%) in nonwetlands. Examples: *Sapium sebiferum*; *Quercus rubra.*
Obligate Upland Plants	UPL	Plants that occur rarely (estimated probability <1%) in wetlands, but almost always (>99% estimated probability) in non-wetlands. Examples: *Pinus echinata*

3.1.2 Site Observations

The following table indicates the species name and the indicator status of plants found in the potential jurisdictional wetland areas identified within the project site.

TABLE 2: List of Plant Species Observed

Site ID	Vegetation Type	Indicator Status
WB-001	*Eleocharis parvula*	OBL
	Typha latifolia	OBL
	Sesbania drumundii	FACW
	Andropogon glomeratus	FACW+
	Juncus spp.	OBL
	Brachiaria platyphylla	FAC
WB-002	*Spartina alterniflora*	OBL
	Avicennia germinans	OBL
	Batis maritima	OBL
	Spartina patens	FACW
	Borrichia frutescens	FACW+
	Distichlis spicata	FACW+

Based upon the dominance of hydrophytic vegetation, the hydrophytic vegetation requirement, as set forth in the 1987 *Manual*, is met for the two potential jurisdictional wetland locations identified within the project site.

3.2 Soils

The 1987 *Manual* defines a hydric soil as a "soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation".

Table 3 provides a list of field indicators used to define hydric soils.

TABLE 3: Field Indicators for Hydric Soils

No.	Indicator	Description
1.	Organic Soils	A soil is an organic soil when: (1) More than 50% (by volume) of the upper 32 inches of soil is composed of organic material; or (2) organic soil material of any thickness rests on bedrock.
2.	Histic Epipedons	A histic epipedon is an 8- to 16-inch layer at or near the surface of a mineral hydric soil that is saturated with water for 30 consecutive days or more in most years and contains a minimum of 20% organic matter when no clay is present or a minimum of 30% organic matter when clay content is 60% or greater.
3.	Sulfidic Materials	When mineral soils emit an odor of rotten eggs, hydrogen sulfide is present. Such odors are detected only in waterlogged soils that are permanently saturated and have sulfidic material within a few centimeters of the soil surface.
4.	Aquic or Peraquic Moisture Regime	An aquic moisture regime is a reducing one: i.e., it is virtually free of dissolved oxygen because the soil is saturated by ground water or by water of the capillary fringe. Soils with peraquic moisture regimes are characterized by the presence of groundwater always at or near the soil surface.
5.	Direct Observation of Reducing Soil Conditions	Soils saturated for long or very long duration will usually exhibit reducing conditions. Under such conditions, ions of iron are transformed from a ferric valence state to a ferrous valence state. This condition can be detected in the field by a ferrous iron test performed by USDA soil scientists.
6.	Soil Colors	The colors of various soil components are often the most diagnostic indicator of hydric soils. Colors of these components are strongly influenced by the frequency and duration of soil saturation, which leads to reducing soil conditions. Mineral hydric soils will be either gleyed (gray colors) or will have bright mottles (rust colored spots) and/or low matrix chroma. The soil matrix is the portion of the soil that has the predominant color.
7.	Soil Appearing on Hydric Soils List	Using the National Technical Committee on Hydric Soils (NTCHS) criteria for hydric soils, the NTCHS developed both a local and national list of hydric soils. Listed soils possess reduced soil conditions for a significant portion of the growing season in a major portion of the root zone and are frequently saturated within 12 inches of the soil surface.
8.	Iron and Manganese Concretions	During the oxidation-reduction process, iron and manganese in suspension are sometimes segregated as oxides into concretions or soft masses. These accumulations are usually black or dark brown. Concretions >2 mm in diameter occurring within 7.5 cm of the surface are evidence that the soil is saturated for long periods of time near the surface.
9.	Indicators for Coarse-textured or Sandy Hydric Soils	a. High organic matter content in the surface horizon b. Dark vertical streaking of subsurface horizon by organic matter c. Wet spodosols d. New sandbars

The following Soil Series was mapped by the USDA-Soil Conservation Service (USDA-SCS) and corresponds to the wetland areas defined previously (Figure 3).

- Tidal flats (**Listed** as **Hydric**)

This soil is classified as hydric according to the USDA, SCS Hydric Soils in Nueces County Area, Texas hydric soils list.

3.2.1 Tidal flats (Ta)

Tidal flats are mainly barren, nearly level areas that are above salt water at low tide but are flooded at normal high tide. Slopes range from 0 to 1 percent. At low tide the flats can be seen along parts of the mainland shore, along the edge of islands, and protruding above the water in shallow bays and lagoons.

Layers of sand, shells, and clay make up Tidal flats, but these layers are not considered in texture, in thickness, or in their arrangement. In some places gray clay occurs that is similar to, or is the same as, the parent material of many soils on the mainland.

A sparse growth of grasses and weeds tolerant of salt water borders the edges of these flats that are above water most often. Tidal flats have not been placed in a capability unit.

3.2.2 Soils Site Observations

Based upon the literature reviewed and field observations at the potential jurisdictional wetland location identified, the hydric soil requirement, as set forth in the 1987 *Manual*, is met for the two potential jurisdictional wetland locations identified.

Positive hydric soil indicators were documented at the potential jurisdictional wetland locations, including:

- Gleyed or Low-Chroma Colors
- Listed in Local Hydric Soils List

S:\Secure\Pelican\2003\6000 Assigned Task Studies\6207 FabricationSite EA\McDermott\Wetlands\Figure 3.mxd

Legend

- Non-Jurisdictional Wetland
- Jurisdictional Wetland
- Site Boundary

Nueces County Soils

- Mustang Fine Sand
- Spoil Banks
- Tidal Flats

0 500 1,000 Feet

N

ENTRIX

Figure 3
Aerial Photograph Illustrating
Nueces County Soils
Port of Corpus Christi Authority - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ. NO.: 1076903	CK:	DATE: 03/04

Ref: Lanmon Aerial Photography, Inc.
Corpus Christi, Texas
Date flown: 8/26/02

3.3 Hydrology

The 1987 *Manual* definition of wetland hydrology "encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season". The project site elevation is approximately 0 to 10 feet above mean sea level based upon examination of the USGS 7.5-minute Port Aransas, Texas quadrangle.

3.3.1 Indicators for Wetland Hydrology

Wetland indicators are important to assess properly the type of wetland investigated. The following table describes 1987 *Manual* field indicators for wetland hydrology determinations.

TABLE 4: Primary and Secondary Indicators for Wetland Hydrology

Primary	Indicator
1.	Visual observations of inundation
2.	Visual observations of soil saturation within 12 inches of the soil surface
3.	Water marks on vegetation (particularly woody species)
4.	Drift lines
5.	Water-borne sediment deposits
6.	Drainage patterns characteristic of wetlands
Secondary	**Indicator**
7.	Oxidized rhizospheres (root channels) associated with living roots and rhizomes
8.	Water-Stained Leaves
9.	Local Soil Survey Data (if data correlates to visual observations)
10.	Morphological plant adaptations (e.g. buttressed tree trunks)
11.	FAC-Neutral test (comparative dominance of FAC, FACW, and OBL vegetative species versus FACU and UPL vegetative species)

3.3.2 Hydrological Site Observations

During the site visit, ENTRIX made the following observations regarding primary and secondary wetland hydrology indicators observed in the potential jurisdictional areas identified within the project site:

Primary

- Inundated,
- Saturated in Upper 12 Inches,

Secondary

- Oxidized Root Channels in Upper 12 Inches, and
- Water-stained leaves

Based upon the hydrological indicators observed at the two potential jurisdictional wetland locations within the project site, the wetland hydrology requirement, as set forth in the 1987 *Manual,* is met for the areas investigated.

4. CONCLUSION

Figure 4a details the project site, which was determined to contain two wetlands based upon 1987 *Manual* criteria. Figures 4b-4c details the wetland locations. Approximately 0.99 acres of wetlands were identified on the project site. Based on the wetland verification wetland area WB-001 was determined not to be under COE section 404 jurisdiction and WB-002 was determined to be jurisdictional by the COE:

• Wetland area WB-001	0.40 acres
• Wetland area WB-002	0.59 acres
Total Wetland Acreage	**0.99 acres**
• Wetland area WB-002	0.59 acres
Total Jurisdictional Wetland Acreage	**0.59 acres**

A review of aerial photographs (2002) of the project site revealed "signatures" characteristic of jurisdictional wetlands. The presence of hydric soils was confirmed and documented through the use of soil survey information and observational indicators. The three characteristics of a wetland (hydrophytic vegetation, hydric soils, and wetland hydrology) were met at the two potentially jurisdictional wetland areas identified. Figure 4 identifies the project site boundary, the wetlands identified, soil pit locations, and transect locations. The field data sheets are included in Appendix A and site photographs are included in Appendix B.

Both of the wetland areas identified are located within the FEMA 100-year floodplain (Figure 5). The COE considers the FEMA 100-year floodplain when determining if a potentially jurisdictional wetland is isolated (non-jurisdictional) or an adjacent wetland (jurisdictional) for regulatory purposes. Most wetlands located outside the FEMA 100-year floodplain would be considered isolated by the COE. If a potentially jurisdictional wetland contains two or more hydrological barriers from a Water of the U.S and is located within the FEMA 100-year floodplain it is likely the wetland will be considered isolated for regulatory purposes and therefore not jurisdictional.

The COE has regulatory authority regarding wetland issues, and the COE is responsible for the final jurisdictional determination of wetlands at a given site. On February 24, 2004 ENTRIX (Matt Barczyk) and COE (Mark Patillo) conducted a site verification to verify the jurisdictional status of the wetlands outlined in this delineation report. The wetland boundaries presented in this report have been verified and approved by the COE.

S:\Secure\Pelican\2003\6000 Assigned Task Studies\6207 FabricationSite EA\McDermottWetlands\Figure 4a.mxd

Legend

- Non-Jurisdictional Wetland
- Jurisdictional Wetland
- Pit
- Transect
- Boundary

0 750 1,500 Feet

Ref: Lanmon Aerial Photography, Inc.
Corpus Christi, Texas
Date flown: 8/26/02

STATE OF TEXAS
W. A. SHOOK JR.
79335
REGISTERED
PROFESSIONAL ENGINEER

Wetland boundaries and acreages delineated using a Trimble GeoXRS GPS system, which is accurate to less than 1 meter.

W. A. Shook 3/12/04

ENTRIX

Figure 4a
Aerial Photograph Illustrating
Potential Jurisdictional Wetlands
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ NO.: 1076903	CK.	DATE: 03/04

S:\Secure\Pelican\2003\6000 Assigned Task Studies\6207 Fabrication\Site EA\McDermott\Wetlands\Figure 5.mxd

Legend

- Non-Jurisdictional Wetland
- Jurisdictional Wetland
- Boundary

FEMA Flood Plain

- 100 Year

0 750 1,500 Feet

N

Ref: Lanmon Aerial Photography, Inc.
Corpus Christi, Texas
Date flown: 8/26/02

ENTRIX

Figure 5
Aerial Photograph Illustrating
FEMA Flood Plain
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ. NO : 1076903	CK:	DATE: 03/04

USACE Verified

APPENDIX A

Field Data Sheets

Project No/.Site: Pelican – McDermott Property
Applicant: ChevronTexaco County/State: Nueces County, Texas
Date: October 3, 2003 Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-3
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-001

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Baccharis halimifolia*	S	FACW-	9.			
2.	*Oputina humifusa*	H	FACU	10.			
3.	*Schizachyrium scoparium*	H	FACU+	11.			
4.				12.			
5.				13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. 1/3 (33.3%)

Remarks:

HYDROLOGY

___Recorded Data (Describe in Remarks):
___Stream, Lake, or Tide Gage
_X_Aerial Photographs
___Other
___No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: >18 (in.)

Depth to Saturated Soil: >18 (in.)

Wetland Hydrology Indicators:

Primary Indicators:

___ Inundated
___ Saturated in Upper 12 inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ Other (Explain in Remarks)

Remarks: No hydrology observed

SOILS

Map Unit Name: Tidal flats (Ta) | Drainage Class: Listed as hydric

Taxonomy (Subgroup): | Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	O/A	10YR 6/2	-	-	Silty sand with gravel and shell

Hydric Soil Indicators:

	Histosol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer
	Sulfidic Odor		Organic Streaking
	Probable Aquic Moisture Regime	X	Listed in Local Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils Lists
X	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)			
Hydric Soils Present?	(Yes)	No			

Remarks:

Project No/.Site: Pelican – McDermott Property

Applicant: ChevronTexaco | County/State: Nueces County, Texas

Date: October 3, 2003 | Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-2
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-002

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Chasmaecrista fasciculata*	H	FACU-	9.			
2.	*Oputina humifusa*	H	FACU	10.			
3.	*Schizachyrium scoparium*	H	FACU+	11.			
4.	*Ambrosia cumanensis*	H	FAC-	12.			
5.	*Croton spp.*	H	FAC	13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. 1/5 (20%)

Remarks:

HYDROLOGY

____Recorded Data (Describe in Remarks):
____Stream, Lake, or Tide Gage
__X__Aerial Photographs
____Other
____No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: >18 (in.)

Depth to Saturated Soil: >18 (in.)

Wetland Hydrology Indicators:

Primary Indicators:

____ Inundated
____ Saturated in Upper 12 inches
____ Water Marks
____ Drift Lines
____ Sediment Deposits
____ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

____ Oxidized Root Channels in Upper 12 Inches
____ Water-Stained Leaves
____ Local Soil Survey Data
____ Other (Explain in Remarks)

Remarks: No hydrology observed

SOILS

Map Unit Name: Tidal flats (Ta) | Drainage Class: Listed as hydric

Taxonomy (Subgroup): | Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-2	O/A	10YR 4/2	-	-	Sand
2-18	O/A	10YR 5/3	-	-	Sand with clay lenses

Hydric Soil Indicators:

___ Histosol	___ Concretions
___ Histic Epipedon	___ High Organic Content in Surface Layer
___ Sulfidic Odor	___ Organic Streaking
___ Probable Aquic Moisture Regime	X Listed in Local Hydric Soils List
___ Reducing Conditions	___ Listed on National Hydric Soils Lists
X Gleyed or Low-Chroma Colors	___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Sampling Point Within a Wetland? Yes (No)
Wetland Hydrology Present?	Yes	(No)	
Hydric Soils Present?	(Yes)	No	

Remarks:

Project No/.Site: Pelican – McDermott Property

Applicant: ChevronTexaco | County/State: Nueces County, Texas

Date: October 3, 2003 | Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-1
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-003

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Sporobolus virginicus*	H	FACW+	9.			
2.	*Iva angustifolia*	H	FAC	10.			
3.				11.			
4.				12.			
5.				13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. 2/2 (100%)

Remarks:

HYDROLOGY

___Recorded Data (Describe in Remarks):
___Stream, Lake, or Tide Gage
_X_Aerial Photographs
___Other
___No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: 12 (in.)

Depth to Saturated Soil: >18 (in.)

Wetland Hydrology Indicators:

Primary Indicators:

___ Inundated
___ Saturated in Upper 12 inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name: Tidal flats (Ta) | Drainage Class: Listed as hydric

Taxonomy (Subgroup): | Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	O/A	10YR 5/2	Gley 2 6/10B	10%	Sand

Hydric Soil Indicators:

___ Histosol	___ Concretions
___ Histic Epipedon	___ High Organic Content in Surface Layer
___ Sulfidic Odor	___ Organic Streaking
___ Probable Aquic Moisture Regime	X Listed in Local Hydric Soils List
___ Reducing Conditions	___ Listed on National Hydric Soils Lists
X Gleyed or Low-Chroma Colors	___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No
Wetland Hydrology Present?	Yes	(No)
Hydric Soils Present?	(Yes)	No

Is this Sampling Point Within a Wetland? Yes (No)

Remarks:

Project No/.Site: Pelican – McDermott Property
Applicant: ChevronTexaco County/State: Nueces County, Texas
Date: October 3, 2003 Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-1
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-004 (WB-001)

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Eleocharis parvula*	H	OBL	9.			
2.	*Typha latifolia*	H	OBL	10.			
3.	*Sesbania drumundii*	S	FACW	11.			
4.	*Andropogon glomeratus*	H	FACW+	12.			
5.	*Brachiaria platyphylla*	H	FAC	13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC 5/5 (100%) (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands.

Remarks:

HYDROLOGY

____Recorded Data (Describe in Remarks):
____Stream, Lake, or Tide Gage
__X__Aerial Photographs
____Other
____No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: 2 (in.)

Depth to Saturated Soil: >18 (in.)

Wetland Hydrology Indicators:

Primary Indicators:	
X	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
	Drainage Patterns in Wetlands
Secondary Indicators	**(2 or more required):**
	Oxidized Root Channels in Upper 12 Inches
X	Water-Stained Leaves
	Local Soil Survey Data
	Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name: Tidal flats (Ta) Drainage Class: Listed as hydric

Taxonomy (Subgroup): Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-2	O/A	10YR 4/1	-	-	Sand
2-18	O/A	10YR 5/1	-	-	Sand

Hydric Soil Indicators:

____ Histosol	____ Concretions
____ Histic Epipedon	____ High Organic Content in Surface Layer
____ Sulfidic Odor	____ Organic Streaking
____ Probable Aquic Moisture Regime	__X__ Listed in Local Hydric Soils List
____ Reducing Conditions	____ Listed on National Hydric Soils Lists
__X__ Gleyed or Low-Chroma Colors	____ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Sampling Point Within a Wetland?	(Yes)	No
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	(Yes)	No			

Remarks:

Project No/.Site: Pelican – McDermott Property

Applicant: ChevronTexaco | County/State: Nueces County, Texas

Date: October 3, 2003 | Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-1
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-005-verified

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Baccharis halimifolia*	H	FACW-	9.			
2.	*Oputina humifusa*	H	FACU	10.			
3.	*Schizachyrium scoparium*	H	FACU+	11.			
4.				12.			
5.				13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. 1/3 (33.3%)

Remarks:

HYDROLOGY

____Recorded Data (Describe in Remarks):
____Stream, Lake, or Tide Gage
_X_Aerial Photographs
____Other
____No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: >18 (in.)

Depth to Saturated Soil: >18 (in.)

Wetland Hydrology Indicators:

Primary Indicators:

____ Inundated
____ Saturated in Upper 12 inches
____ Water Marks
____ Drift Lines
____ Sediment Deposits
____ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

____ Oxidized Root Channels in Upper 12 Inches
____ Water-Stained Leaves
____ Local Soil Survey Data
____ Other (Explain in Remarks)

Remarks: No hydrology observed

SOILS

Map Unit Name: Tidal flats (Ta) Drainage Class: Listed as hydric

Taxonomy (Subgroup): Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	O/A	10YR 5/3	10YR 5/4	10%	Sandy clay

Hydric Soil Indicators:

____ Histosol	____ Concretions
____ Histic Epipedon	____ High Organic Content in Surface Layer
____ Sulfidic Odor	____ Organic Streaking
____ Probable Aquic Moisture Regime	__X__ Listed in Local Hydric Soils List
____ Reducing Conditions	____ Listed on National Hydric Soils Lists
____ Gleyed or Low-Chroma Colors	____ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)			
Hydric Soils Present?	(Yes)	No			

Remarks:

Project No/.Site: Pelican – McDermott Property

Applicant: ChevronTexaco | County/State: Nueces County, Texas

Date: October 3, 2003 | Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-1
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-006-verified

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Baccharis halimifolia*	S	FACW-	9.			
2.	*Oputina humifusa*	H	FACU	10.			
3.	*Heterotheca subaxillaris*	H	UPL	11.			
4.	*Mimosa strigoillosa*	H	FAC	12.			
5.				13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. 2/4 (50%)

Remarks:

HYDROLOGY

___Recorded Data (Describe in Remarks):
___Stream, Lake, or Tide Gage
_X_Aerial Photographs
___Other
___No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: >18 (in.)

Depth to Saturated Soil: >18 (in.)

Wetland Hydrology Indicators:

Primary Indicators:

___ Inundated
___ Saturated in Upper 12 inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ Other (Explain in Remarks)

Remarks: No hydrology observed

SOILS

Map Unit Name: Tidal flats (Ta) | Drainage Class: Listed as hydric

Taxonomy (Subgroup): | Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	O/A	10YR 6/2	-	-	Sandy silt

Hydric Soil Indicators:

___ Histosol	___ Concretions
___ Histic Epipedon	___ High Organic Content in Surface Layer
___ Sulfidic Odor	___ Organic Streaking
___ Probable Aquic Moisture Regime	X Listed in Local Hydric Soils List
___ Reducing Conditions	___ Listed on National Hydric Soils Lists
___ Gleyed or Low-Chroma Colors	___ Other (Explain in Remarks)

Remarks:

Evidence that dredge fill material has been placed in this area, but this appears to have been many years ago.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)
Wetland Hydrology Present?	Yes	(No)
Hydric Soils Present?	(Yes)	No

Is this Sampling Point Within a Wetland? Yes (No)

Remarks:

Project No/.Site: Pelican – McDermott Property

Applicant: ChevronTexaco | County/State: Nueces County, Texas

Date: October 3, 2003 | Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	(Yes)	No	Transect ID.:	T-1
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-007-verified

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Mimosa strigoillosa*	H	FAC	9.			
2.	*Oputina humifusa*	H	FACU	10.			
3.	*Distichlis spicata*	H	FACW+	11.			
4.	*Ambrosia trifida*	H	FAC	12.			
5.	*Machaeranthera phyllocephala*	H	FACW	13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. 4/5 (80%)

Remarks:

HYDROLOGY

___Recorded Data (Describe in Remarks):
___Stream, Lake, or Tide Gage
_X_Aerial Photographs
___Other
___No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: >18 (in.)

Depth to Saturated Soil: >18 (in.)

Wetland Hydrology Indicators:

Primary Indicators:

___ Inundated
___ Saturated in Upper 12 inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ Other (Explain in Remarks)

Remarks: No hydrology observed

SOILS

Map Unit Name: Tidal flats (Ta) | Drainage Class: Listed as hydric

Taxonomy (Subgroup): | Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	O/A	10YR 4/3	-	-	Sandy silt

Hydric Soil Indicators:

___ Histosol	___ Concretions
___ Histic Epipedon	___ High Organic Content in Surface Layer
___ Sulfidic Odor	___ Organic Streaking
___ Probable Aquic Moisture Regime	X Listed in Local Hydric Soils List
___ Reducing Conditions	___ Listed on National Hydric Soils Lists
___ Gleyed or Low-Chroma Colors	___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No
Wetland Hydrology Present?	Yes	(No)
Hydric Soils Present?	(Yes)	No

Is this Sampling Point Within a Wetland? Yes (No)

Remarks:

Evidence that dredge fill material has been placed in this area, but this appears to have been many years ago.

Project No/.Site: Pelican – McDermott Property

Applicant: ChevronTexaco | County/State: Nueces County, Texas

Date: October 3, 2003 | Investigator: Matt Barczyk

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-1
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-008 (WB-002) - verified

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Spartina alterniflora*	H	OBL	9.			
2.	*Avicennia germinans*	S	OBL	10.			
3.	*Batis maritima*	H	OBL	11.			
4.	*Distichlis spicata*	H	FACW+	12.			
5.	*Spartina patens*	H	FACW	13.			
6.	*Borrichia frutescens*	H	FACW+	14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC 6/6 (100%) (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands.

Remarks:

HYDROLOGY

____Recorded Data (Describe in Remarks):
____Stream, Lake, or Tide Gage
__X__Aerial Photographs
____Other
____No Recorded Data Available

Field Observations:

Depth of Surface Water: N/A (in.)

Depth to Free Water in Pit: 0 (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:

	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
	Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

X	Oxidized Root Channels in Upper 12 Inches
X	Water-Stained Leaves
	Local Soil Survey Data
	Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name: Tidal flats (Ta) Drainage Class: Listed as hydric

Taxonomy (Subgroup): Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	O/A	10YR 5/1	10YR 5/6	15%	Sand

Hydric Soil Indicators:

___ Histosol	___ Concretions
___ Histic Epipedon	___ High Organic Content in Surface Layer
___ Sulfidic Odor	___ Organic Streaking
___ Probable Aquic Moisture Regime	X Listed in Local Hydric Soils List
___ Reducing Conditions	___ Listed on National Hydric Soils Lists
X Gleyed or Low-Chroma Colors	___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	~~Yes~~	No	Is this Sampling Point Within a Wetland?	Yes No
Wetland Hydrology Present?	~~Yes~~	No		
Hydric Soils Present?	Yes	No		

Remarks:

Project No/.Site: Pelican – McDermott Property

Applicant: ChevronTexaco | County/State: Nueces County, Texas

Date: February 24, 2004 | Investigator: Matt Barczyk and Mark Patillo

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID:	
Have vegetation, soils, or hydrology been disturbed?	Yes	(No)	Transect ID.:	T-1
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID:	Pit-009 (WB-001) – Verification Point

Sample Location:

VEGETATION (Note those species observed to have morphological adaptations to wetlands with a *)

	Dominant Plant Species	Stratum	Indicator		Dominant Plant Species	Stratum	Indicator
1.	*Eleocharis parvula*	H	OBL	9.			
2.	*Typha latifolia*	H	OBL	10.			
3.	*Juncus spp.*	H	OBL	11.			
4.	*Andropogon glomeratus*	H	FACW+	12.			
5.				13.			
6.				14.			
7.				15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC 4/4 (100%) (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands.

Remarks:

HYDROLOGY

___Recorded Data (Describe in Remarks): ___Stream, Lake, or Tide Gage _X_Aerial Photographs ___Other ___No Recorded Data Available	Wetland Hydrology Indicators:	
Field Observations: Depth of Surface Water: N/A (in.) Depth to Free Water in Pit: >18 (in.) Depth to Saturated Soil: 0 (in.)	**Primary Indicators:**	
	___	Inundated
	X	Saturated in Upper 12 inches
	___	Water Marks
	___	Drift Lines
	___	Sediment Deposits
	___	Drainage Patterns in Wetlands
	Secondary Indicators	**(2 or more required):**
	X	Oxidized Root Channels in Upper 12 Inches
	X	Water-Stained Leaves
	___	Local Soil Survey Data
	___	Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name: Tidal flats (Ta) | Drainage Class: Listed as hydric

Taxonomy (Subgroup): | Field Observations Confirm Mapped Type? Yes: No:

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	O/A	10YR 7/1	-	10YR 6/4	Sand

Hydric Soil Indicators:

___ Histosol	___ Concretions
___ Histic Epipedon	___ High Organic Content in Surface Layer
___ Sulfidic Odor	___ Organic Streaking
___ Probable Aquic Moisture Regime	X Listed in Local Hydric Soils List
___ Reducing Conditions	___ Listed on National Hydric Soils Lists
X Gleyed or Low-Chroma Colors	___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is this Sampling Point Within a Wetland?	(Yes)	No
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	(Yes)	No			

Remarks:

USACE Verified

APPENDIX B

Photograph Log

Photograph 1: Facing north from upland Pit-001.

Photograph 2: Facing south from upladn Pit-002.

Photograph 3: Facing west from upland Pit-003.

Photograph 4: Facing west toward wetland WB-001.

Photograph 5: Facing west from Pit-008 in wetland WB-002.

Photograph 6: Facing south from the northeast corner of the site.

Photograph 7: Facing northwest from southeast corner of the site.

MEMORANDUM FOR THE FILE:

DATE: 17 March 2004

SUBJECT: Determination. D-15537; Entrix/ChevronTexaco, Wetland Delineation Verification

On 24 February 2004, I made a site visit to the 174-acre McDermott property, in order to verify a delineation of waters of the United States as identified by Entrix, who is acting as consultant for ChevronTexaco. Weather was cloudy, approximately 60 degrees F, NE wind approximately 20 mph. Heavy rains occurred at the site as we concluded our evaluation. A portion of the site has been leveed and used as a dredged material disposal site. Material to construct the levees appears to have been obtained by "borrowing" the material from the area adjacent to the levee. This construction method has created a ditch that runs along the outside perimeter of the levee with low spots that trap water for extended periods of time. The remainder of the McDermott site shows evidence of having been filled in the past because of the nature of the soil (includes rocks, clay, manmade debris). The site is located on Harbor Island, approximately 0.25 mile west of the Port Aransas ferry terminal on the west side of the Corpus Christi Ship Channel, Nueces County, Texas. The site was photographed for the file.

T-3, Pit-001 is an upland area that did not meet any of the three criteria for wetlands as prescribed in the 1987 manual; therefore, we find that this area is not a water of the U.S. subject to our regulation. All conditions were as reported by the consultant in the data sheet for this site. The area was photographed (Photos 1 and 2) for the file.

T-2, Pit-002 is an upland area that did not meet the vegetation and hydrology criteria for wetlands as prescribed in the 1987 manual; therefore, we find that this area is not a water of the U.S. subject to our regulation. All conditions were as reported by the consultant in the data sheet for this site. The area is included in Photos 1 and 2.

T-1, Pit-003 is an upland area that did not meet the hydrology criterion for wetlands as prescribed in the 1987 manual; therefore, we find that this area is not a water of the U.S. subject to our regulation. All conditions were as reported by the consultant in the data sheet for this site. The area is included in Photos 1, 2, and 3.

T-1, Pit-004 is located in wetland WB-001. The site is a depressional area, approximately 0.40 acre in size, that has the three wetland characteristics and is located within the "borrow" area for the disposal area levee. However, area that forms this site is essentially an upland drainage ditch that was formed by the "borrowing" of material to build the levee. Since we typically do not regulate upland drainage ditches or wetlands that form as the result of construction activities, we find that this area is not a water of the U.S. subject to our regulation. All conditions were as reported by the consultant in the data sheet for this site. Photos 4-6 show area.

T-1, Pit-009 is located in wetland WB-001. This test pit was dug by the Corps to verify the limits of this wetland. Conditions were similar to those reported for Pit-004. Photo 7 shows area.

T-1, Pit-005 is an upland area that did not meet the vegetation and hydrology criteria for wetlands as prescribed in the 1987 manual; therefore, we find that this area is not a water of the U.S. subject to our regulation. All conditions were as reported by the consultant in the data sheet for this site.

T-1, Pit-006 is an upland area that did not meet the vegetation and hydrology criteria for wetlands as prescribed in the 1987 manual; therefore, we find that this area is not a water of the U.S. subject to our regulation. All conditions were as reported by the consultant in the data sheet for this site. Photo 9 shows area.

T-1, Pit-007 is an upland area that did not meet the hydrology criterion for wetlands as prescribed in the 1987 manual; therefore, we find that this area is not a water of the U.S. subject to our regulation. All conditions were as reported by the consultant in the data sheet for this site. Photo 8 shows area.

T-1, Pit-008 is located in wetland WB-002, which is an adjacent wetland contiguous with the CCSC. The area has saltmarsh vegetation as reported in the data sheet for this site. All other conditions were generally as reported by the consultant in the data sheet for this site. Photos 9-13 show site.

Based on our 24 February 2004 site visit and the information provided by Entrix, consultant for ChevronTexaco, we concur that 0.59 acre is a reasonable assessment of the waters of the United States, including wetlands, present on the McDermott facility and subject to our regulation under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act.

Mark Pattillo

MAR 2 2 2004

E N T R I X

ENTRIX, Inc.
5252 Westchester, Suite 250
Houston, Texas 77005
(713) 666-6223
(713) 666-5227 FAX

Since 1984 - Environmental Excellence

March 19, 2004

Mr. Mark Patillo
Corpus Christi Field Office
U.S. Army Corps of Engineers
Galveston District
5151 Flynn Parkway, Suite 306
Corpus Christi, Texas 78411

Re: Supplements to Wetland Assessment and Delineation Report
McDermott Property on Harbor Island
Nueces County, Texas
Entrix Project # 1076903

Dear Mr. Patillo:

Per our March 18, 2004 conversion I have enclosed the supplemental information to the "Wetland Assessment and Delineation, McDermott Property on Harbor Island" report we discussed. This information includes the revised versions of Figure 4b and 4c and an additional table, which lists the GPS coordinates of wetland verticies depicted in the revised figures.

Thank you for your help. If you have any questions or comments please contact me at 713-662-1906.

Sincerely,

Matthew B. Barczyk
Staff Scientist

Enclosure: Figure 4b, Figure 4c, and Table 5

S:\Secure\Pelican\2003\6000 Assigned Task Studies\6207 FabricationSite EA\McDermott\Wetlands\Figure 4c.mxd

Legend

- Non-Jurisdictional Wetland
- Jurisdictional Wetland
- Pit
- Transect
- Boundary
- Wetland Points

0 75 150 Feet

N

Wetland locations and acreages obtained using a Trimble Pro-XRS GPS system, which is accurate to less than 1 meter.

Ref: Lanmon Aerial Photography, Inc.
Corpus Christi, Texas
Date flown: 8/26/02

ENTRIX

Figure 4c-Revised
Aerial Photograph Illustrating
Potential Jurisdictional Wetlands
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

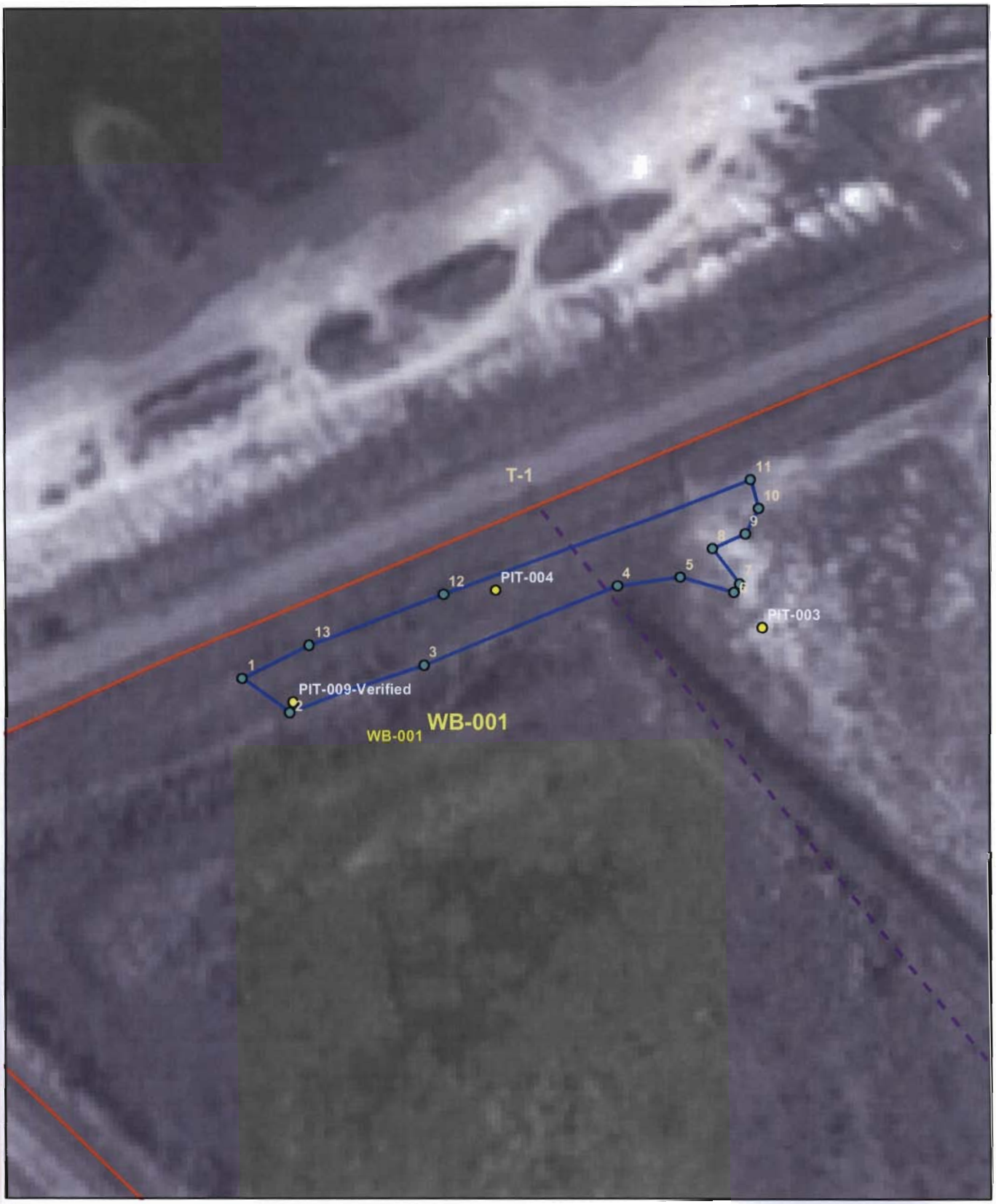
PROJ. NO.: 1076903	CK:	DATE 03/04

Table 5: Wetland Coordinates Corresponding to the Wetland Verticies in Figures 4b and 4c

(Coordinates are shown in UTM NAD83 Zone14N, meters)

	WB-001	
Point #	Northing	Easting
1	3081912.65	688557.60
2	3081904.86	688568.62
3	3081915.68	688599.74
4	3081933.82	688644.54
5	3081935.81	688659.08
6	3081932.32	688671.49
7	3081934.27	688672.78
8	3081942.38	688666.53
9	3081945.77	688674.11
10	3081951.59	688677.30
11	3081958.25	688675.38
12	3081932.00	688604.26
13	3081920.34	688573.12

	WB-002	
Point #	X	Y
1	3081525.42	688884.22
2	3081525.64	688895.47
3	3081522.20	688898.53
4	3081523.30	688902.10
5	3081528.67	688906.06
6	3081523.52	688907.13
7	3081522.07	688913.47
9	3081515.84	688941.12
8	3081524.94	688921.49
10	3081515.95	688947.42
11	3081521.04	688953.88
12	3081520.37	688965.30
13	3081481.94	689022.16
14	3081469.29	689036.91
15	3081486.31	689022.41
16	3081516.67	688984.48
17	3081549.12	688951.78
18	3081555.48	688928.75
19	3081544.58	688911.63
20	3081532.86	688890.32



S:\Secure\Pelican\2003\6000 Assigned Task Studies\6207 FabricationSite EA\McDermott\Wetlands\Figure 4b.mxd

Legend

- Non-Jurisdictional Wetland
- Jurisdictional Wetland
- Pit
- Transect
- Boundary
- Wetland Points

0 75 150 Feet

N

Wetland locations and acreages obtained using a Trimble Pro-XRS GPS system, which is accurate to less than 1 meter.

Ref: Lanmon Aerial Photography, Inc.
Corpus Christi, Texas
Date flown: 8/26/02

ENTRIX

Figure 4b-Revised
Aerial Photograph Illustrating
Potential Jurisdictional Wetlands
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ. NO 1076903	CK.	DATE: 03/04

U.S. Army Corps of Engineers - Galveston District
Regulatory Branch

Basis for Jurisdictional Determination

Applicants: ChevronTexaco **File Number:** D-15537 **Date:** 22 Mar 04

☒ **A. Property referenced in the attached correspondence contains waters of the United States based on:**

☒ The presence of wetlands determined by the occurrence of hydrophytic vegetation, hydric soils and wetland hydrology.[1] The wetlands are adjacent to navigable or interstate waters, or eventually drain or flow into navigable or interstate waters through a tributary system that may include man-made conveyances such as ditches or channelized streams.[2]

☒ The presence of waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, i.e., navigable waters of the United States (in part). Includes all property below the ordinary high water mark of the navigable stream or channel.[3]

☒ The presence of waters which are subject to the ebb and flow of the tide, including tidal wetlands, i.e., navigable waters of the United States (in part).[1, 3]

☐ The presence of one or more tributaries (stream channels, man-made conveyances, lakes, ponds, rivers, etc.) that eventually drain or flow into navigable or interstate waters. Includes property below the ordinary high water mark of the tributary.[3]

☐ The presence of interstate waters.[3]

☐ The presence of an impoundment(s) of waters of the United States.

☐ The presence of territorial seas.

☐ The site contains other waters such as intrastate lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce. The claim of interstate commerce is based on the following:

☐ **B. Property referenced in the attached correspondence does not include or contain any of the waters of the United States described above.**

---

[1] Wetlands are identified and delineated using the methods and criteria established in the Corps of Engineers Wetland Delineation Manual (87 Manual).
[2] Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, etc. are "adjacent wetlands".
[3] The lateral limits of waters of the U.S. are/or have been determined by the high tide line, ordinary high water mark, and/or by the limit of adjacent wetlands.

Project Manager: Mark Pattillo

DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
Corpus Christi Regulatory Field Office
5151 Flynn Parkway, Suite 306
Corpus Christi, Texas 78411-4318

REPLY TO
ATTENTION OF

March 22, 2004

Regulatory Branch

Subject: D-15537

Entrix
Attn: Mr. Matthew Barczyk
5252 Westchester, Suite 250
Houston, Texas 77005-4102

Gentlemen:

This concerns your January 12, 2004, letter requesting a wetland delineation of a 174-acre industrial complex located on Harbor Island, approximately 0.25 mile west of the Port Aransas ferry terminal on the west side of the Corpus Christi Ship Channel (CCSC), Nueces County, Texas.

Based on our site visit of February 24, 2004, we concur that 0.59 acre, WB-002, is a reasonable depiction of the geographic extent of waters of the United States, including wetlands contiguous to the CCSC, on the site as shown on the survey you submitted on five sheets (copies enclosed). The wetlands exhibit the indicators necessary as per the 1987 Corps Wetland Delineation Manual; a predominance of hydrophytic vegetation, wetland soils, and hydrology sufficient to support the aforementioned indicators. Under Section 404 of the Clean Water Act a Department of the Army (DA) permit is required prior to the discharge of dredged and/or fill material into any water of the United States. Please note that the CCSC is a navigable water, and as such, any structures and/or work in/or affecting this water will also require a DA permit under Section 10 of the Rivers and Harbors Act of 1899.

We also determined that an additional 0.4 acre (WB-001) of waters of the U.S., including wetlands, are present in the planned project area. However, based on a review of additional site-specific information, our determination is that these areas are non-tidal and consist of a ditch and livestock ponds excavated from uplands, and isolated, non-navigable, intrastate waters, which have no known nexus to interstate commerce and as such are not waters of the U.S. subject to DA jurisdiction under Section 404. This verification does not address seagrass beds, which are special aquatic sites, that may be present in the area.

This delineation has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in this request. This delineation may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

This approved determination is valid for 5 years from the date of this letter unless new information warrants revision before the expiration date. Please reference the determination number D-15537 in all future correspondence with our office regarding this request. If you have any questions, please contact Mark Pattillo at the letterhead address or by telephone at (361) 814-5851. The attached sheet provides information associated with the administrative appeals process.

Sincerely,

Lloyd Mullins
Leader, Corpus Christi Field Office

Enclosures

Copy Furnished:

Chevron Pipe Line Company
Attn: Michael De Nicola
2811 Hayes Road
Houston, Texas 77210-4879

S:\Secure\Pelican\2003\6000 Assigned Task Studies\6207 FabricationSite EA\McDermottWetlandsIFigure 4c.mxd

Legend

- Non-Jurisdictional Wetland
- Jurisdictional Wetland
- Pit
- Transect
- Boundary

75 0 150 Feet

STATE OF TEXAS
W. A. SHOOK JR.
79335
REGISTERED
PROFESSIONAL ENGINEER

Wetland boundaries and acreages were determined using a Trimble XRS GPS system, which is accurate to less than 1 meter.

3/12/04

Ref: Lanmon Aerial Photography, Inc.
Corpus Christi, Texas
Date flown: 8/26/02

ENTRIX

Figure 4c
Aerial Photograph Illustrating
Potential Jurisdictional Wetlands
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ. NO.: 1076903	CK:	DATE: 03/04

S:\Secure\Pelican\2003\6000 Assigned Task Studies\6207 FabricationSite EA\McDermott\Wetlands\Figure 4c.mxd

Legend

- Non-Jurisdictional Wetland
- Jurisdictional Wetland
- Pit
- Transect
- Boundary
- Wetland Points

0 75 150 Feet

N

Wetland locations and acreages obtained using a Trimble Pro-XRS GPS system, which is accurate to less than 1 meter.

Ref: Lanmon Aerial Photography, Inc.
Corpus Christi, Texas
Date flown: 8/26/02

ENTRIX

Figure 4c-Revised
Aerial Photograph Illustrating
Potential Jurisdictional Wetlands
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ. NO. 1076903	CK:	DATE: 03/04

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Ref: Lanmon Aerial Photography, Inc.
Corpus Christi, Texas
Date flown: 8/26/02

STATE OF TEXAS
W. A. SHOOK JR.
79335
REGISTERED
PROFESSIONAL ENGINEER

W. A. Shook
3/12/04

Wetland locations and acreages obtained using a Trimble Pro-XRS GPS system, which is accurate to less than 1 meter.

ENTRIX

Figure 4b
Aerial Photograph Illustrating
Potential Jurisdictional Wetlands
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ. NO.: 1076903	CK:	DATE: 03/04

S:\Secure\Pelican\2003\6000 Assigned Task Studies\6207 FabricationSite EA\McDermott\Wetlands\Figure 4b.mxd

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ENTRIX

Figure 4b-Revised
Aerial Photograph Illustrating
Potential Jurisdictional Wetlands
Port of Corpus Christi - McDermott
Chevron - Texaco
Nueces County, Texas

PROJ NO 1076903	CK.	DATE 03/04

ENTRIX

Table 5: Wetland Coordinates Corresponding to the Wetland Verticies in Figures 4b and 4c

(Coordinates are shown in UTM NAD83 Zone14N, meters)

	WB-001	
Point #	Northing	Easting
1	3081912.65	688557.60
2	3081904.86	688568.62
3	3081915.68	688599.74
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5	3081935.81	688659.08
6	3081932.32	688671.49
7	3081934.27	688672.78
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