ATTACHMENT D

MITIGATION PLAN

Horizon
Environmental Services, Inc.

MITIGATION PLAN

EXXONMOBIL BEAUMONT POLYETHYLENE PLANT
CONSTRUCTION LAYDOWN YARD
JEFFERSON COUNTY

I. Project Information

Project Name: ExxonMobil Beaumont Polyethylene Plant Construction Laydown Yard
Permit Number: SWG-2016-0___
Project Location: The address of the site is 11440 Hwy 90, Beaumont, Texas, 77713. The Global Positioning System (GPS) location is approximately 30.067940° Latitude and -94.222777° Longitude.
Mitigation Site Location: Daisetta Swamp Mitigation Bank
Watershed: Sabine Lake – HUC # 12040201

II. Avoidance and Minimization

Due to needed space for large equipment laydown, assembly, construction equipment staging, and worker parking, the proposed 54.2-acre laydown area is already minimum size to meet the project needs. Avoidance of on-site wetlands is not practicable. Please see Attachment A for wetland impacts.

III. Compensatory Mitigation Plan

The project site is within the secondary service area of the Daisetta Swamp Mitigation Bank. The applicant proposes to purchase credits from that bank for this project. The applicant will purchase credits at a 1.5:1 ratio.

1. Goals and Objectives: The goal of the mitigation is to ensure that compensation is accomplished in an efficient and beneficial manner through purchase of mitigation bank credits.

2. Site Selection: The applicant is negotiating a credit reservation with the Daisetta Swamp Mitigation Bank.

3. Easements or Encumbrances: NA

4. Baseline Information: The Daisetta Swamp Mitigation Bank baseline information is on file at the Galveston District USACE offices.

5. Mitigation Work Plan: NA

6. Determination of Credits: The proposed laydown yard will impact a total of 4.2 acres of herbaceous and tallow dominated wetlands (see Attachment A). On-site wetland characteristics were documented during the most recent jurisdictional delineation effort in November 2015 and March 2016 by Horizon Environmental Services, Inc. Data sheets are

ATTACHMENT A

PROJECT IMPACT MAP

included in Horizon's April 2016 Jurisdictional Delineation report. A Hydrogeomorphic Model (HGM) analysis was completed for the wetland assessment area (WAA) being impacted in order to determine the number of functional capacity units (FCU)/credits needed to be purchased from the Daisetta Swamp Mitigation Bank. Both wetland areas are nearly identical in characteristics; therefore, both wetlands were combined into one WAA. The Forested Riverine iHGM model was utilized for the analysis. The FCU's were calculated for three different riverine wetland functions including: Temporary Storage and Detention of Surface Water, Maintenance of Plant and Animal Communities, and Removal and Sequestration of Elements and Compounds (Attachment B). Since the project area is in the secondary service area of the Daisetta Swamp Mitigation Bank, a 1.5:1 service area multiplier would apply. Results are shown in Table 1.

TABLE 1:

FCU IMPACTS AND CREDIT PURCHASE REQUIREMENTS

FORESTED WETLANDS

FUNCTION	IMPACT (FCUs)	DSMB CREDIT REQUIREMENT (Impact FCU x 1.5 Multiplier)
Temporary Storage and Detention of Surface Water	1.12	1.68
Maintenance of Plant and Animal Communities	2.52	3.78
Removal and Sequestration of Elements and Compounds	1.69	2.54

The Daisetta Swamp Mitigation Bank sells credits based on even quantities of each function in accordance with the highest function impact FCU. They also round off to the nearest 1/10 credit. Therefore, the total credits that will be purchased are 3.8 credits for each of the three functions for a total of 11.4 FCU credits.

7. Maintenance Plan: NA

8. Site Protection Instrument: NA

9. Performance Standards: NA

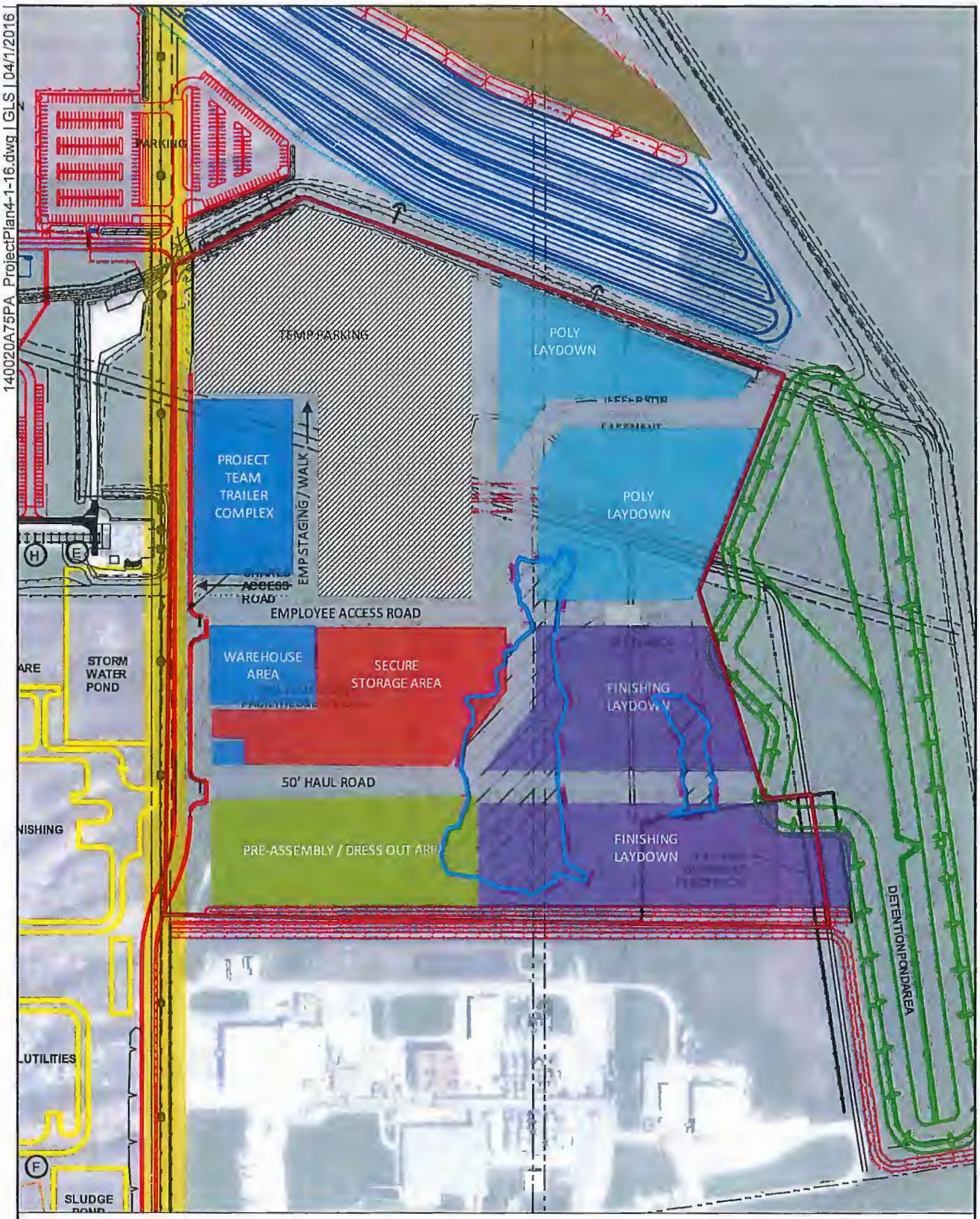
10. Monitoring Requirements: NA

11. Long-term Management Plan: NA

12. Adaptive Management Plan: NA

13. Financial Assurances: The permittee will purchase the total amount of FCUs/credits determined to be needed in Section 6 from the Daisetta Swamp Mitigation Bank prior to the commencement of construction in jurisdictional areas.

MAY 12 2016



Map Source: Client Provided

0 50 100
FEET

Figure 3
Proposed Plan
Proposed Laydown Areas
ExxonMobil Beaumont Polyethylene Plant
Beaumont, Jefferson County, Texas

Horizon Environmental Services, Inc.

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"Do Not Scale This Drawing"

ATTACHMENT B

HGM RESULTS

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HGM Class: RIVERINE FORESTED
HGM subclass: LOW GRADIENT
Projec:: ExxonMobil BPEX Laydown Area(s): WAA 1 & 2 Acre(s): 4.2

Temporary Storage and Detention of Surface Water
Storage Coefficient (FCI) =
square root((square root (Vdur * Vfrq)) * ((Vtopo + Vcwd + Vveg)/3))

Storage Coefficient (FCI):
0.27
Acres:
4.2
Functional Unit (FCU) = Coefficient (FCI) * Acres:
1.12

Maintenance of Plant and Animal Communities
Maintenance Coefficient (FCI) =
(Vtree+Vcwd+Vrich+((Vbasal+Vdensity)/2)+((Vmid+Vherb)/2)+Vconnect)/5

Maintenance Coefficient (FCI):
0.60
Acres:
4.2
Functional Unit (FCU) = Coefficient (FCI) * Acres:
2.52

Site Score	VARIABLES	Score	Criteria
0.10	Vdur	1.00	In average year, at least 80% of site either floods or ponds for at least 14 days
	(duration of flooding)	0.75	In average year, at least 80% of site either floods or ponds for at least 7 days
		0.50	In average year, 50 to 79% of site floods or ponds for at least 7 days
		0.25	In average year, 25 to 49% of site floods or ponds for at least 7 days
		0.10	In average year, all or portions floods or ponds from 1 - 7 days
		0.00	The area is not subject to flooding or ponding
0.25	Vfrq	1.00	Floods or ponds annually 5 out of 5 years
	(frequency of flooding)	0.75	Floods or ponds 3 of 5 years or 4 of 5 years
		0.50	Floods or ponds 2 of 5 years
		0.25	Floods or ponds less than 2 of 5 years
		0.00	The area is not subject to flooding or ponding
0.10	Vtopo	1.00	> 30% of the site is represented by rises, dips, hummocks, channel sloughs and other topographic features
	(topography)	0.70	15 to 30% of the site is represented by rises, dips, hummocks, channel sloughs and other topographic features
		0.40	< 15%of the site is covered by rises, dips, hummocks, channel sloughs and other topographic features
		0.10	Smooth, flat, or very gently undulating with little or no topographic relief
0.50	Vcwd	1.00	> 7 pieces of cwd > 3" diameter along 100' transect
	(coarse woody debris)	0.50	3 to 7 pieces of cwd > 3" diameter along 100' transect
		0.30	< 3 pieces of cwd > 3" diameter along 100' transect
		0.10	Area is openland (pasture or cropland)
0.75	Vveg	1.00	> 90% of area is covered by woody vegetation
	(vegetation)	0.75	67 to 89% of area is covered by woody vegetation
		0.50	34 to 66% of area is covered by woody vegetation
		0.25	11 to 33% of are is covered by woody vegetation
		0.10	1 to 10% of area is covered by woody vegetation
0.50	Vconnect	1.00	Wetland plus four habitats and/or surrounded by forested
	(connection to other habitat)	0.75	Wetland plus two or more habitat type (other than forested) OR three or more habitat types
		0.50	Wetland plus one other habitat types or two other habitat types
		0.25	One other habitat types other than urban habitat
		0.10	Surround by urban (homes, lawn, concrete, etc)
0.30	Vtree	1.00	At least 60% of stand is oak, hickory or elm (black willow, cottonwood, tallow and sycamore = < 5% of stand)
	(tree species)	0.80	> 40% of stand is oak, hickory or elm (black willow, cottonwood, tallow and sycamore = < 10% of stand)
		0.50	> 20% of stand is oak, hickory or elm (black willow, cottonwood, tallow and sycamore = < 15% of stand)
		0.30	< 20% of stand is oak, hickory or elm (no oak, hickory or elm within Plot or immediate surrounding area)
		0.10	The area is openland
0.60	Vrich	1.00	5 or more tree species present
	(tree species richness)	0.80	4 tree species present
	trees > 5% of stand	0.60	3 tree species present
		0.40	1 or 2 species present
		0.10	The site is openland
0.40	Vbasal	1.00	The basal area (DBH) of site averages > 100 sq ft/acre
	(tree basal area)	0.80	The basal area of site averages 80 to 100 sq ft/acre
		0.60	The basal area of the site averages 60 to 79 sq ft/acre
		0.40	The basal area of the site averages < 60 sq ft/acre
		0.10	The site is openland
1.00	Vdensity	1.00	The site averages a tree density of 100 to 250 trees/acre
	(tree density)	0.60	The site averages a tree density of 250 to 500 trees/acre OR 50 to 100 trees/acre
		0.40	The site averages < 50 trees/acre
		0.10	The site is openland
0.50	Vmid	1.00	Midstory cover averages > 50%
	(midstory)	0.75	Midstory cover averages 31 to 50%

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Removal and Sequestration of Elements and Compounds

Removal Coefficient (FCI) =
(Vveg+Vfrq+Vdur+((Vtopo+Vcwd+Vveg)/3)+((Vdetritus+Vredox+Vsorp)/3))/5

Removal Coefficient (FCI):
0.40

Acres:
4.2

Functional Unit (FCU) = Coefficient (FCI) * Acres:
1.69

		0.50	Midstory cover averages 11 to 30%
		0.30	Midstory cover < 10%
		0.10	The site is openland
0.30	Vherb (herbaceous layer)	1.00	Herbaceous cover averages 5 to 30%
		0.50	Herbaceous cover averages 31 to 50%
		0.30	Herbaceous cover < 5% OR > 50%
		0.10	The site is dominated by tame pasture species or is cropland
0.30	Vdetritus (detritus)	1.00	> 85% of the area possesses an O or A horizon
		0.50	From 11 to 84% of the area possesses an O or A horizon
		0.30	< 10% of the area possesses and O or A horizon
		0.10	Site is plowed
0.10	Vredox (redoximorphic processes)	1.00	Redox features represent >20% of the pedon within the top 4" of soil surface (mottles = many)
		0.10	Redox features < 20% (mottles = common or few)
1.00	Vsorp (sorptive soil properties)	1.00	Site is dominated by clays (clay, clay loam, silty clay loams) or highly organic (value=2/chroma=1; 2/2; 3/1)
		0.50	Site is dominated by loams (silt loams, very fine sandy loams, fine sandy loams, loams) OR non-montmorillonitic clays
		0.10	Site is dominated by sands (sands, loamy fine sands, loamy sands)