



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

NOV 20 2013

Operations Division
Surveillance and Enforcement Section

Mr. Leonard McCauley
G.E.C. Inc.
9357 Interline Avenue
Baton Rouge, Louisiana

**Exhibit CC. NRG Industrial Park
Jurisdictional Determination & Wetlands
Delineation Report**

Dear Mr. McCauley:

Reference is made to your request, on behalf of Baton Rouge Chamber of Commerce, for a U.S. Army Corps of Engineers' (Corps) jurisdictional determination on property located in Sections 3 and 4, Township 4 South, Range 11 East, Pointe Coupee Parish, Louisiana (enclosed map). Specifically, this property is identified as the 635 acre tract on and crossing Louisiana Highway 981 at Mississippi River river mile 264 near Ventress, Louisiana.

Based on review of recent maps, aerial photography, soils data, information provided with your request, and a brief field site investigation conducted on October 25, 2013, we have determined that part of this property is a wetland and subject to Corps' jurisdiction. A Department of the Army (DA) permit under Section 404 of the Clean Water Act will be required prior to the deposition or redistribution of dredged or fill material into this wetland. Additionally, this wetland is below the ordinary high water mark of the Mississippi River. The Mississippi River is a navigable waterway and subject to Corps' jurisdiction under Section 10 of the Rivers and Harbors Act. A DA Section 10 permit will be required prior to any work in this waterway.

You are advised that you must obtain a permit from a local assuring agency, usually a Levee Board or Parish Council, for any work within 1500 feet of a federal flood control structure such as a levee. You must apply by letter to the appropriate agency including full-size construction plans, cross sections, and details of the proposed work. Concurrently with your application to the assuring agency, you must also forward a copy of your letter and plans to Ms. Amy Powell, Operations Manager for Completed Works of the Corps, the Coastal Protection and Restoration Authority (CPRA), and/or the Louisiana Department of Transportation and Development (LADOTD) for their review and comments concerning the proposed work. The assuring agency will not issue a permit for the work to proceed until they have obtained letters of no objection from these reviewing agencies. For additional information, please contact Ms. Amy Powell at (504) 862-2241.

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

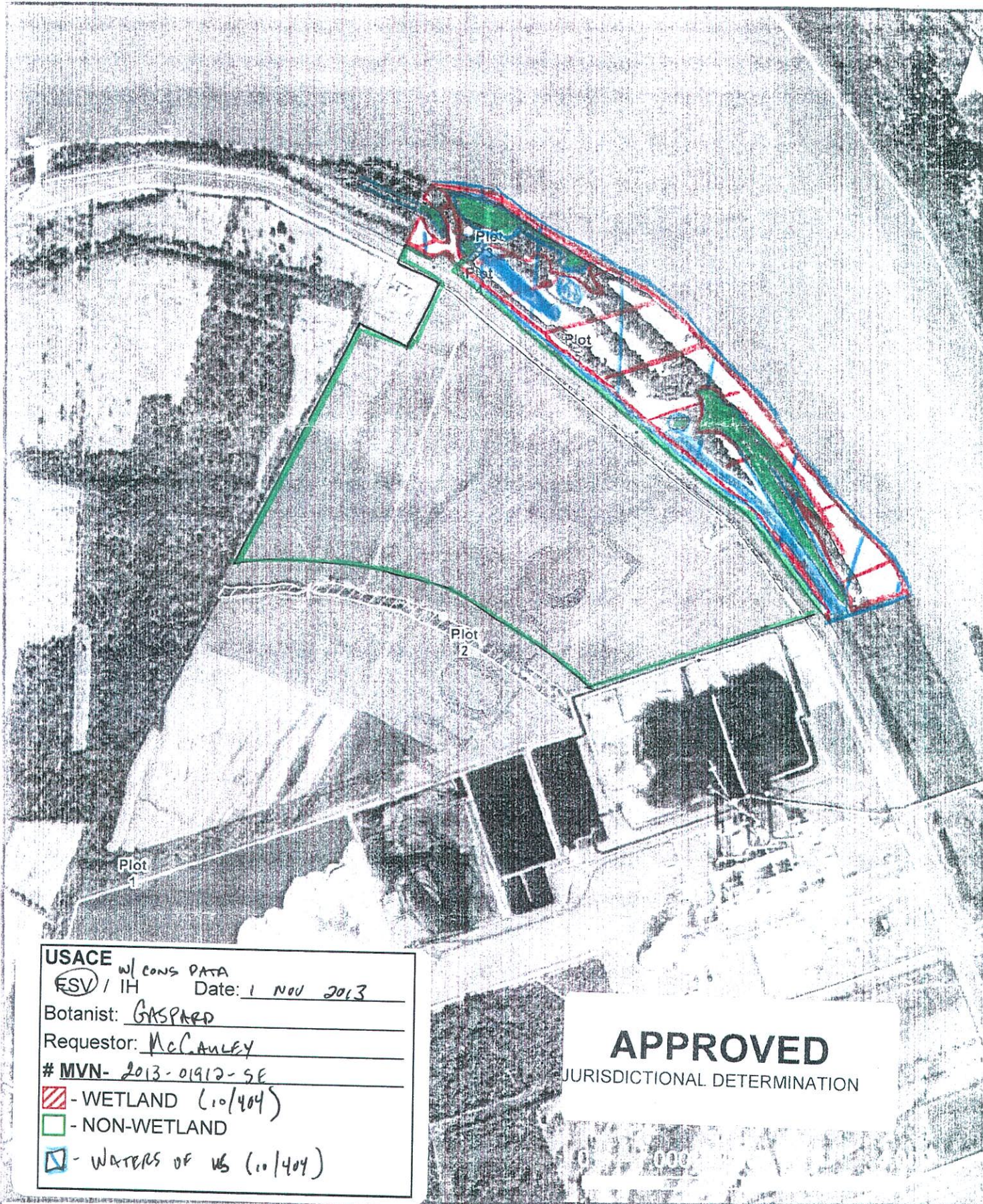
You and your client are advised that this approved jurisdictional determination is valid for a period of 5 years from the date of this letter unless new information warrants revision prior to the expiration date or the District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

Should there be any questions concerning these matters, please contact Mr. Brandon Gaspard at (504) 862-1280 and reference our Account No. MVN 2013-01912-SE. If you have specific questions regarding the permit process or permit applications, please contact our Western Evaluation Section at (504) 862-1950. The New Orleans District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please complete the survey on our web site at <http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,


for Martin S. Mayer
Chief, Regulatory Branch

Enclosures



USACE w/ cons DATA
ESV / IH Date: 1 NOV 2013
Botanist: GASPARD
Requestor: McCANLEY
MVN- 2013-01912-SE
[Red hatched box] - WETLAND (1.0/404)
[Green box] - NON-WETLAND
[Blue box] - WATERS OF US (1.0/404)

APPROVED
JURISDICTIONAL DETERMINATION

WETLAND DELINEATION MAP
NRG Industrial Park Wetland Delineation
Pointe Coupee Parish

USACE
Figure 8
Date: May 2013
Scale: 1" = 100'
Source: GEOBIA

Edited APPROVED JURISDICTIONAL DETERMINATION FORM

U.S. Army Corps of Engineers

To view the unedited version of the form go to: <http://www.mvn.usace.army.mil/regulatory/finalform.htm>.

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 1 November 2013

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: New Orleans, McCauley, 2013-01912-SE

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Louisiana County/parish/borough: Pointe Coupee City: Ventress
Center coordinates of site (lat/long in degree decimal format): Lat. 30.740886° N, Long. 91.377694° W.
Universal Transverse Mercator:

Name of nearest waterbody: Mississippi River

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Mississippi River

Name of watershed or Hydrologic Unit Code (HUC): 08070300 - Lower Grand, 08070100 - Mississippi River

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date:

☒ Field Determination. Date(s): 25 October 2013

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☒ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: The Mississippi River is currently used in the transport of foreign commerce.

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):

☒ TNWs, including territorial seas

☐ Wetlands adjacent to TNWs

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: 185 acres.

c. Limits (boundaries) of jurisdiction based on: Established by OHWM.

Elevation of established OHWM (if known): 44.40 OHWM.

2. Non-regulated waters/wetlands (check if applicable):

☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: **Mississippi River and wetland batture areas below the OHWM.**

Summarize rationale supporting determination: The Mississippi River is currently used in the transport of foreign commerce.

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": .

Section III B and III C - Not Applicable

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:

- ☒ TNWs: linear feet width (ft), Or, 185 acres.
☐ Wetlands adjacent to TNWs: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Wetland delineation report provided.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps:
☐ Corps navigable waters' study:
☒ U.S. Geological Survey Hydrologic Atlas: 08070100, 08070300.
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: 1:24000, New Roads.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: WSS [Cm, Ce, RE].
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps:
☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): 1998, 2004, 2010.
or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): LIDAR.

B. ADDITIONAL COMMENTS TO SUPPORT JD: 42 ft - Growing season 14 Day Flood elevation.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Baton Rouge Chamber of Commerce	File Number: MVN 2013-01912-SE	Date: NOV 20 2013
Attached is:		See Section below
<input type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
<input type="checkbox"/>	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
<input type="checkbox"/>	PERMIT DENIAL	C
<input checked="" type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D
<input type="checkbox"/>	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Rob Heffner (504-862-1288)
Chief, Surveillance & Enforcement Section
U.S. Army Corps of Engineers
P.O. Box 60627
New Orleans, LA 70160

If you only have questions regarding the appeal process you may also contact:

Administrative Appeals Review Officer
USACE – Mississippi Valley Division
P.O. Box 80
Vicksburg, MS 39181-0080
(601) 634-5820

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date: _____

Telephone number: _____

May 2013

**WETLAND DELINEATION REPORT
NRG NEW ROADS HOLDINGS LLC
635 – ACRE TRACT
POINTE COUPEE PARISH,
VENTRESS, LOUISIANA**

Prepared for

**NRG New Roads Holdings LLC
Big Cajun II
P.O. Box 39
Ventress, Louisiana 70783**

Prepared by



Baton Rouge, Louisiana

**WETLAND DELINEATION REPORT
NRG NEW ROADS HOLDINGS LLC
635 – ACRE TRACT
POINTE COUPEE PARISH,
VENTRESS, LOUISIANA**

GEC Project Number: 0013.2122013.003

Prepared by



8282 Goodwood Boulevard
Baton Rouge, Louisiana 70806
Phone – 225/612-3000

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WETLAND DELINEATION REPORT

**WETLAND DELINEATION REPORT
NRG NEW ROADS HOLDINGS LLC
635 – ACRE TRACT
POINTE COUPEE PARISH,
VENTRESS, LOUISIANA**

INTRODUCTION

G.E.C., Inc. (GEC) recently conducted a wetland delineation for NRG New Roads Holdings LLC in Pointe Coupee Parish, Louisiana (Figure 1). Access to the property was through the use of a dirt road off of LA Hwy 981 which follows the Mississippi River levee on the southern side. (Figure 2). The project area to the North Hwy 981 includes an area of land within the batture of the Mississippi River. The project area South LA 981 includes agricultural land, the majority of which is currently planted in winter wheat. The purpose of this delineation was to determine the wetland boundaries within the approximately 635-acre tract.

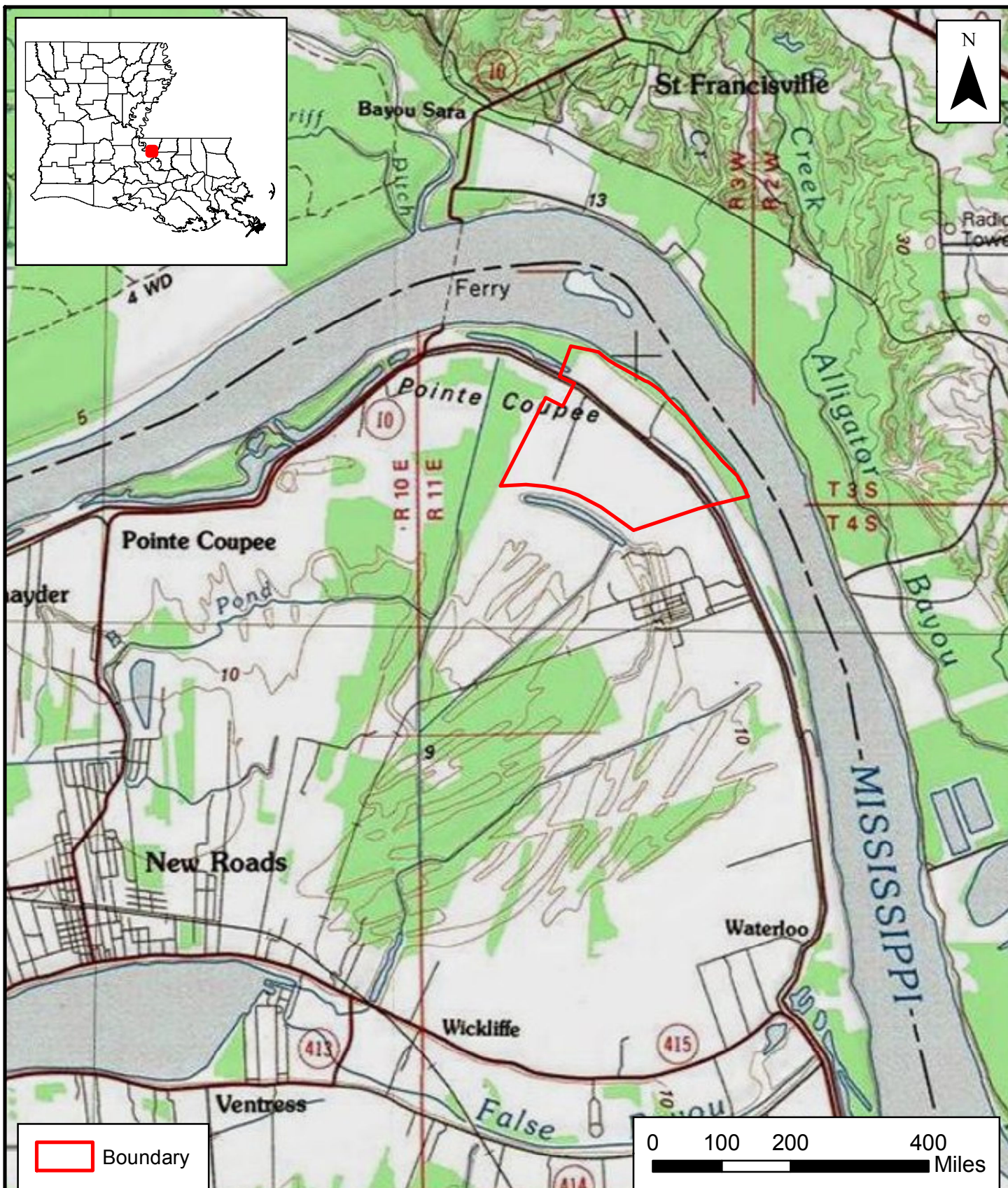
METHODOLOGY

GEC conducted the wetland delineation in accordance with Section D, Subsection 2 of Technical Report Y-87-1, Corps of Engineers Wetlands Delineation Manual as well as the Atlantic and Gulf Coastal Plains Regional Supplement. Aerial photography, Natural Resources Conservation Service (NRCS) Pointe Coupee Parish soil survey map, and U.S. Geological Survey (USGS) topographic quadrangle maps were reviewed prior to the initiation of field work to identify the potential extent of wetlands present on the subject property.

Routine Wetland Delineation Data Forms (Appendix A), as approved by Headquarters, U.S. Army Corps of Engineers (USACE) 10/08, were completed for various vegetative communities encountered within the project area. These data forms contain sufficient information regarding the presence or absence of hydric soils, hydrophytic vegetation, and wetland hydrology, to support the demarcation of a wetland boundary. The location of each sample plot along with mapped wetlands and other waters are shown in Figure 3.

Dominant vegetation was recorded on the data forms along with the indicator status as listed in the *National List of Plant Species Occurring in Wetlands (Region 2)* released by the USACE in May 2012 (Release No. 12-005). Once dominant vegetation was recorded and evaluated, if more than 50 percent of the dominant vegetation had an indicator status of FAC, FACW, or OBL or the prevalence index was ≤ 3.0 , the hydrophytic vegetation criterion was met.

A soil pit was excavated to a depth of approximately 18 inches at each sample plot. The pit remained open for at least 15 minutes to allow the pit to fill with water, if present. Soils were sampled along the exposed stratum. Information recorded on the data forms included soil colors (hue, value, and chroma as per the 1992 revised edition of the Munsell Color Chart), size, color, abundance, and depth of mottles, as well as soil texture. Soil texture was determined using the "texture by feel" analysis. Figure 4 depicts the soils mapped by the NRCS within the project area.



SITE LOCATION

NRG Industrial Park Wetland Delineation
Pointe Coupee Parish

ESRI Web Map Service of USA Topo Maps (Accessed March 2013)



Figure: 1

Date: May 2013

Scale: 1:55,000

Source: GEC/USGS

Map ID: 132112013003-3075



SITE VICINITY

NRG Industrial Park Wetland Delineation
Pointe Coupee Parish

Data Source: ESRI Bing Maps Aerial



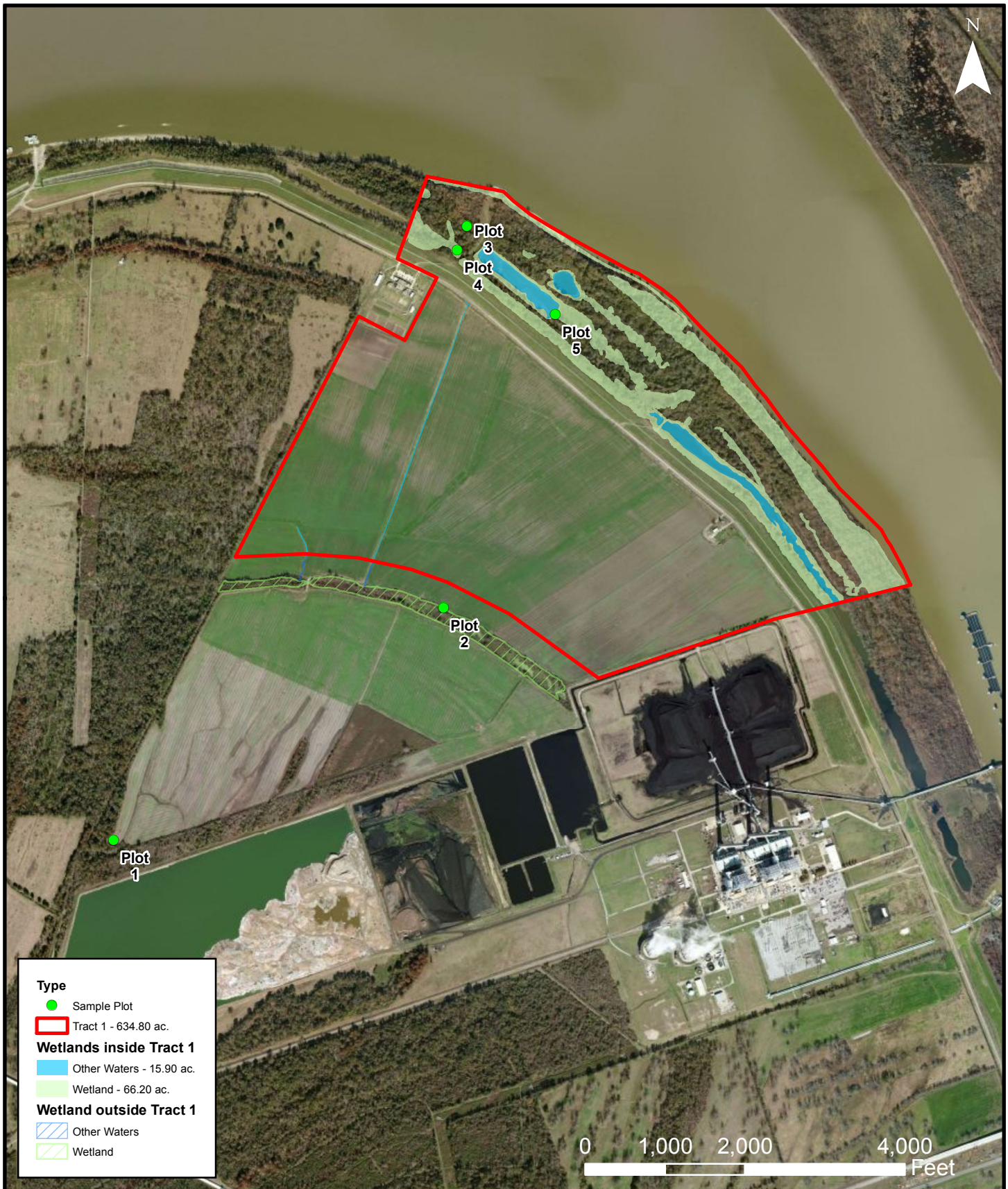
Figure: 2

Date: May 2013

Scale: 1:20,000

Source: GEC/Bing

Map ID: 132112013003-3075



WETLAND DELINEATION MAP

NRG Industrial Park Wetland Delineation
Pointe Coupee Parish

Data Source: ESRI Bing Maps Aerial



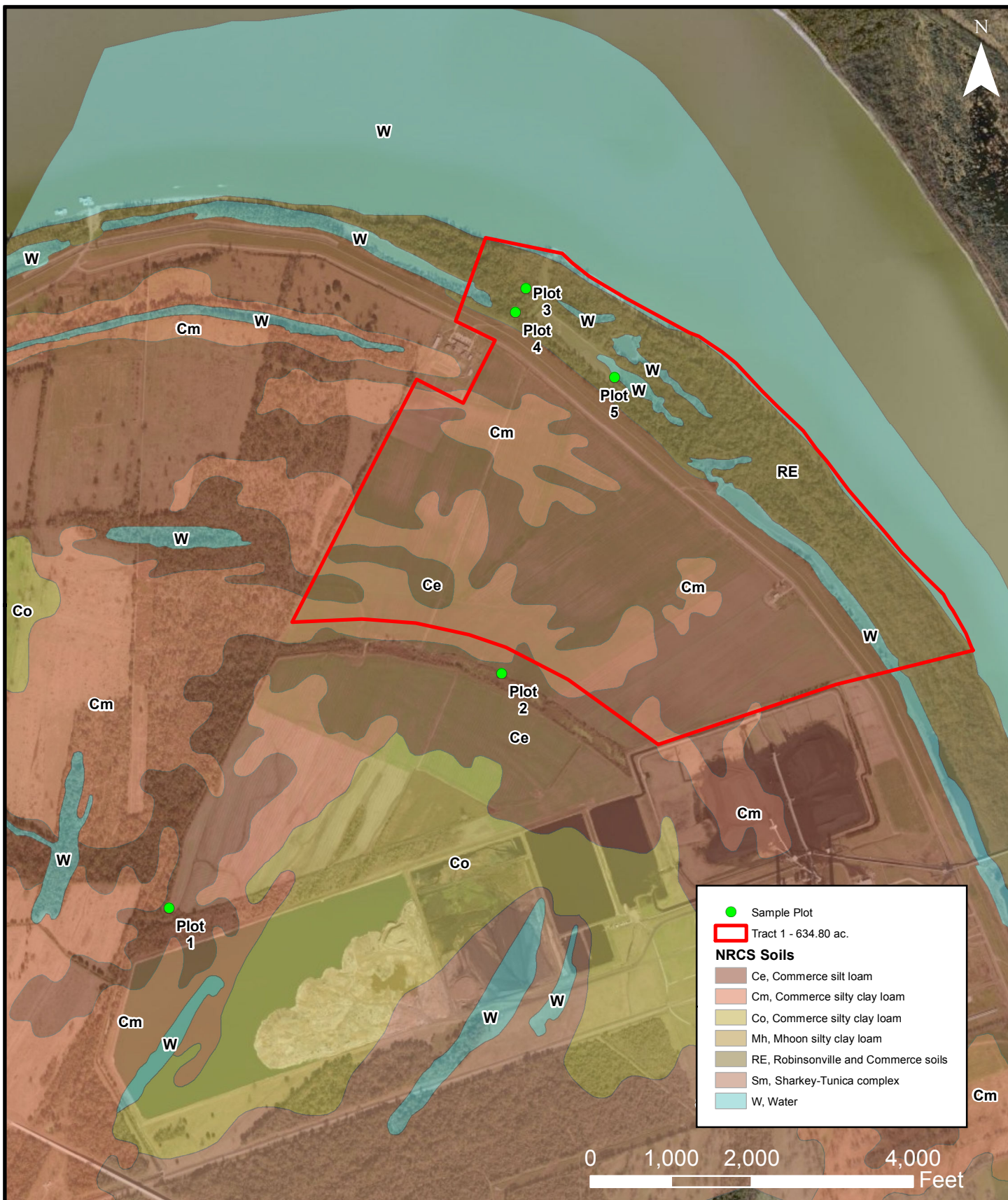
Figure: 3

Date: May 2013

Scale: 1:20,000

Source: GEC/Bing

Map ID: 132112013003-3075



SOIL MAP

NRG Industrial Park Wetland Delineation
Pointe Coupee Parish

Data Source: ESRI Bing Maps Aerial



Figure: 4

Date: May 2013

Scale: 1:20,000

Source: GEC/Bing/NRCS

Map ID: 132112013003-3075

Wetland hydrology indicators were also recorded at each sample plot as per the USACE requirements. If at least one primary or two secondary hydrology indicators were present, the sample plot was classified as having wetland hydrology.

Photographs were taken at each sample plot where a data form was completed. These photographs show a representative soil profile, as well as overviews in the cardinal directions of the sample plot (Appendix B).

RESULTS

The following subsections provide descriptions of each of the sites identified during the field survey. Descriptions of vegetation, soil characteristics, and hydrology indicators at each sample plot recorded are provided

Sample Plot - 1: Sample plot one is located in an agricultural field currently planted in winter wheat. This plot accurately describes all the agricultural land within the project area which is either planted in winter wheat or has been left fallow this spring and has little vegetation on it. The tree and sapling/shrub stratum are absent within this plot. The herbaceous stratum is dominated by winter red wheat (*Triticum aestivum*). The woody vine stratum is also absent from this plot. The hydrophytic vegetation criterion is not met within this sample plot.

The soil series mapped at this plot is the Commerce silt loam. This series is listed on the National Hydric Soils list as well as the Louisiana Hydric Soils list. The soil profile observed did not closely resemble the typical pedon described by the NRCS. Field investigation identified the soil profile as non-hydric in nature. The hydric soils criterion is not met at this plot. Primary indicators of hydrology as well as secondary indicators of hydrology were lacking within this plot. It is GEC's opinion that this sample plot is not within a wetland, based on the lack of hydric vegetation, hydric soils, and wetland hydrology within the plot (see Data Form Plot - 1).

Sample Plot - 2: Sample Plot two is located within a wetland located outside of the project area to the south; it is included to help characterize two other water features that share an ordinary high water mark with this feature (Figure 3). The tree and sapling/shrub stratum are absent from this plot while the herbaceous stratum is dominated by southern waxy sedge (*Carex glaucescens*), and blunt broom sedge (*Carex tribuloides*). The woody vine stratum is dominated by balloon vine (*Cardiospermum halicacabum*). The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Commerce silt loam. This series is listed on the National Hydric Soils list as well as the Louisiana Hydric Soils list. Field investigations concluded that the hydric soils criterion is met within this plot. Primary indicators of wetland hydrology include surface water (A1), high water table (A2), saturation (A3), water marks (B1), drift deposits (B3), and aquatic fauna (B13). Secondary indicators include crawfish burrows (C8), and a positive FAC-neutral test (D5). The hydrology criterion is met at this plot. It is GEC's opinion that this sample plot is within a wetland, based on the presence of hydric vegetation, hydric soils, and hydrology indicators within the plot (see Data Form Plot - 2).

Sample Plot - 3: Sample Plot three is located on a ridge within the batture lands of the Mississippi River (Figure 3). The tree stratum is dominated by ash leaved maple (*Acer negundo*) while the sapling/shrub stratum is dominated by the same species. Coastal plane aster (*Symphyotrichum*

racemosum) and southern dew berry (*Rubus trivialis*) dominated the herbaceous stratum while pepper vine (*Ampelopsis arborea*), frost grape (*Vitis vulpine*), and eastern poison ivy (*Toxicodendron radicans*) dominates the woody vine stratum. The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Robinsonville and Commerce soil. Both of these series are listed on the National and Louisiana Hydric Soils lists. Field investigations concluded that the hydric soils criterion is met within this plot. Primary indicators of wetland hydrology are lacking within this plot while secondary indicators include a positive FAC neutral test. The hydrology criterion is not met at this plot. It is GEC's opinion that this sample plot is not within a wetland, based on the lack of wetland hydrology indicators found within the plot (see Data Form Plot - 3).

Sample Plot - 4: Sample Plot four is located in a mature BLH (Figure 3) on the edge of a swale on the batture side of the levee. The tree stratum is dominated by black willow (*Salix nigra*), and ash leaf maple while the sapling/shrub stratum is dominated by sugarberry. Butterweed (*Packera glabella*), and coastal plain aster dominate the herbaceous stratum while pepper vine, frost grape, and eastern poison ivy dominates the woody vine stratum. The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Robinsonville and Commerce soil. Both of these series are listed on the National and Louisiana Hydric Soils lists. Field investigations concluded that the hydric soils criterion is met within this plot. Primary indicators of wetland hydrology include water marks, and inundation visible on aerial imagery (B7) while secondary indicators include sparsely vegetated concave surface (B8) and a positive FAC neutral test. The hydrology criterion is met at this plot. It is GEC's opinion that this sample plot is within a wetland, based on hydric vegetation, hydric soils, and wetland hydrology found within the plot (see Data Form Plot - 4).

Sample Plot - 5: Sample Plot five is located on the edge of a shallow barrow pond on the batture side of the levee (Figure 3). The tree stratum as well as the sapling/shrub stratum are absent from this plot. Lance leaved frog fruit (*Phyla lanceolata*), and coastal plain aster while trumpet vine (*Campsis radicans*), and balloon vine dominate the woody vine stratum. The hydrophytic vegetation criterion is met within this sample plot.

The soil series mapped at this plot is the Robinsonville and Commerce soil. Both of these series are listed on the National and Louisiana Hydric Soils lists. Field investigations concluded that the hydric soils criterion is met within this plot. Primary indicators of wetland hydrology include sediment deposits (B2), inundation visible on aerial imagery, and aquatic fauna. Secondary indicators include a positive FAC neutral test. The hydrology criterion is met at this plot. It is GEC's opinion that this sample plot is within a wetland, based on hydric vegetation, hydric soils, and wetland hydrology found within the plot (see Data Form Plot - 5).

CONCLUSIONS

During the field investigation of the approximately 635-acre site in Ventress, Louisiana, GEC mapped two wetland areas including one wetland area outside of the project area to the south with other waters that stretch into the project area as well as wetlands within the batture land. The other waters that run within the project area flow into the wetland area located to the south of the project area off site. In addition to these two features, numerous other water areas were identified in the batture land. The streams are typically 5-8 feet wide, 3-4 feet deep from top

bank. Throughout the project area, approximately 16 acres of other waters were identified. Several areas designated as wetlands were identified within the project area. These wetlands are typically forested wetland swales within the batture land and encompass approximately 67 acres. The remainder of the project area consists of upland habitat in the form of agricultural fields, as described in Plot 1, and a non-wetland riparian habitat on the bank of the Mississippi River, as described in Plot 3, encompassing approximately 552 acres.

Although GEC uses the same criteria and methodology as that of the USACE, due to the degree of subjectivity associated with studies of this type, there may be some degree of variance in the demarcation of the wetland boundary. Consequently, GEC's opinion may not necessarily reflect that of the USACE, nor does it relieve our client of any legal obligations to verify the wetland findings, consult with the USACE, and possibly obtain a Department of the Army permit prior to performing any dredging, filling and/or construction operations in Waters of the United States, including wetlands.

Appendix A

DATA FORMS

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: NRG Industrial Park City/County: Ventress/Pointe Coupee Parish Sampling Date: 4/25/2013
 Applicant/Owner: NRG New Roads Holdings LLC State: LA Sampling Point: Plot 1
 Investigator(s): J. Avant Section, Township, Range: Sec 37 T4S R11E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1-2
 Subregion (LRR or MLRA): LRR O Lat: 30.7281000000 Long: -91.3949000000 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Plot taken in a wheat field. Currently planted in wheat and evidence of soy planted last year	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations:		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Plot 1

Tree Stratum (Plot size: <u>30 ft rad.</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Sapling/Shrub Stratum (Plot size: <u>30 ft rad.</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Herb Stratum (Plot size: <u>30 ft rad.</u>)				
1. <u>Triticum aestivum*</u>	<u>95</u>	<u>yes</u>	<u>UPL</u>	
2. <u>Lolium perenne</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	
3. <u>Sida rhombifolia</u>	<u>1</u>	<u>no</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>50.5</u> 20% of total cover: <u>20.2</u>				
Woody Vine Stratum (Plot size: <u>30 ft rad.</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Remarks: (If observed, list morphological adaptations below). *winter red wheat is assumed to be an UPL species				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

 Total Number of Dominant Species Across All Strata: 1 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 Problematic Hydrophytic Vegetation¹ (Explain)

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No ✓

SOIL

Sampling Point: Plot 1

[illegible]

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: NRG Industrial Park City/County: Ventress/Pointe Coupee Parish Sampling Date: 4/25/2013
 Applicant/Owner: NRG New Roads Holdings LLC State: LA Sampling Point: Plot 2
 Investigator(s): J. Avant Section, Township, Range: Sec 3 T4S R11E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-1
 Subregion (LRR or MLRA): LRR O Lat: 30.7361000000 Long: -91.3817000000 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation ☒, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: Plot taken on the edge of a vegetated slew. Obligate wetland community with patchy open water in areas. Evidence of recent clearing activities.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) _____ Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) _____ Oxidized Rhizospheres along Living Roots (C3) _____ Sediment Deposits (B2) _____ Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4) _____ Thin Muck Surface (C7) _____ Iron Deposits (B5) _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>-1 inches</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0-18</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0-18</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Plot 2

Tree Stratum (Plot size: <u>30 ft rad.</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ 0 = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Sapling/Shrub Stratum (Plot size: <u>30 ft rad.</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ 0 = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Herb Stratum (Plot size: <u>30 ft rad.</u>)				
1. <u>Carex glaucescens</u>	<u>30</u>	<u>yes</u>	<u>OBL</u>	
2. <u>Carex tribuloides</u>	<u>15</u>	<u>yes</u>	<u>FACW</u>	
3. <u>Ambrosia trifida</u>	<u>10</u>	<u>no</u>	<u>FAC</u>	
4. <u>Phanopyrum gymnocarpon</u>	<u>10</u>	<u>no</u>	<u>OBL</u>	
5. <u>Juncus marginatus</u>	<u>5</u>	<u>no</u>	<u>FACW</u>	
6. <u>Lythrum alatum</u>	<u>5</u>	<u>no</u>	<u>OBL</u>	
7. <u>Carex crus-corvi</u>	<u>3</u>	<u>no</u>	<u>OBL</u>	
8. <u>Verbena brasiliensis*</u>	<u>3</u>	<u>no</u>	<u>FAC</u>	
9. <u>Commelina virginica</u>	<u>3</u>	<u>no</u>	<u>FACW</u>	
10. <u>Cyperus virens</u>	<u>2</u>	<u>no</u>	<u>FACW</u>	
11. <u>Rudbeckia hirta</u>	<u>2</u>	<u>no</u>	<u>FACU</u>	
12. <u>Polygonum hydropiperoides</u>	<u>1</u>	<u>no</u>	<u>OBL</u>	
_____ 89 = Total Cover				
50% of total cover: <u>44.5</u> 20% of total cover: <u>17.8</u>				
Woody Vine Stratum (Plot size: <u>30 ft rad.</u>)				
1. <u>Cardiospermum halicacabum</u>	<u>5</u>	<u>yes</u>	<u>FAC</u>	
2. <u>Ampelopsis arborea</u>	<u>1</u>	<u>no</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ 6 = Total Cover				
50% of total cover: <u>3</u> 20% of total cover: <u>1.2</u>				
Remarks: (If observed, list morphological adaptations below). *1988 plant list designation				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

 Total Number of Dominant Species Across All Strata: 3 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 Problematic Hydrophytic Vegetation¹ (Explain)

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: Plot 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10 YR 4/1	95	7.5 YR 4/6	5	C	M	C	
6/12	GLE Y 1 5/10Y	98	7.5 YR 4/4	2	C	PL	C	
12/18	GLE Y 1 5/10Y	93	5 YR 5/8	7	C	PL	C	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)			<input type="checkbox"/> 1 cm Muck (A9) (LRR O)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)			<input type="checkbox"/> 2 cm Muck (A10) (LRR S)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)			<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)		
<input type="checkbox"/> Stratified Layers (A5)			<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)		
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> (MLRA 153B)		
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)			<input type="checkbox"/> Depleted Dark Surface (F7)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Muck Presence (A8) (LRR U)			<input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)			<input type="checkbox"/> Marl (F10) (LRR U)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)					
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)			<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)					
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)			<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)					
<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)					
<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)					
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)								
Restrictive Layer (if observed):								
Type: <u>None seen</u>								
Depth (inches): _____						Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:								
Surrounded on both sides by wheat fields as described by plot 2.								

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: NRG Industrial Park City/County: Ventress/Pointe Coupee Parish Sampling Date: 4/25/2013
 Applicant/Owner: NRG New Roads Holdings LLC State: LA Sampling Point: Plot 3
 Investigator(s): J. Avant Section, Township, Range: Sec 3 T4S R11E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-1
 Subregion (LRR or MLRA): LRR O Lat: 30.7492000000 Long: -91.3808000000 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Plot taken in batture land in an area that is gently undulating. Plot taken on hillslope.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Aquatic Fauna (B13) _____ High Water Table (A2) _____ Marl Deposits (B15) (LRR U) _____ Saturation (A3) _____ Hydrogen Sulfide Odor (C1) _____ Water Marks (B1) _____ Oxidized Rhizospheres along Living Roots (C3) _____ Sediment Deposits (B2) _____ Presence of Reduced Iron (C4) _____ Drift Deposits (B3) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4) _____ Thin Muck Surface (C7) _____ Iron Deposits (B5) _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Inundation is seen in 2011, a record water year. The plot area does not look to be inundated in any other year of the past 5. Information is from Google earth		

Sampling Point: Plot 3

Tree Stratum (Plot size: 30 ft rad.)				Dominance Test worksheet:			
	Absolute % Cover	Dominant Species?	Indicator Status				
1. <u>Acer negundo</u>	60	yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)			
2. <u>Celtis laevigata</u>	10	no	FACW	Total Number of Dominant Species Across All Strata: 7 (B)			
3. <u>Platanus occidentalis</u>	7	no	FACW	Percent of Dominant Species That Are OBL, FACW, or FAC: 86% (A/B)			
4. <u>Cornus drummondii</u>	2	no	FAC				
5. _____							
6. _____							
7. _____							
8. _____							
79 = Total Cover							
50% of total cover: 39.5 20% of total cover: 15.8							
Sapling/Shrub Stratum (Plot size: 30 ft rad.)							
1. <u>Acer negundo</u>	30	yes	FAC	Total % Cover of: _____ Multiply by: _____			
2. <u>Cornus drummondii</u>	3	no	FAC	OBL species _____ x 1 = _____			
3. _____				FACW species _____ x 2 = _____			
4. _____				FAC species _____ x 3 = _____			
5. _____				FACU species _____ x 4 = _____			
6. _____				UPL species _____ x 5 = _____			
7. _____				Column Totals: _____ (A) _____ (B)			
8. _____				Prevalence Index = B/A = NaN			
33 = Total Cover							
50% of total cover: 16.5 20% of total cover: 6.6							
Herb Stratum (Plot size: 30 ft rad.)							
1. <u>Symphytotrichum racemosum</u>	30	yes	FACW	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain)			
2. <u>Rubus trivialis</u>	15	yes	FACU				
3. <u>Toxicodendron radicans</u>	10	no	FAC				
4. <u>Duchesnea indica</u>	7	no	FACU				
5. <u>Galium aparine</u>	3	no	FACU				
6. <u>Diospyros virginiana</u>	1	no	FAC				
7. _____							
8. _____							
9. _____							
10. _____							
66 = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
50% of total cover: 33 20% of total cover: 13.2							
Woody Vine Stratum (Plot size: 30 ft rad.)				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.			
1. <u>Ampelopsis arborea</u>	5	yes	FAC				
2. <u>Vitis vulpina</u>	3	yes	FAC				
3. <u>Toxicodendron radicans</u>	3	yes	FAC				
4. _____							
5. _____							
11 = Total Cover							
50% of total cover: 5.5 20% of total cover: 2.2							
Remarks: (If observed, list morphological adaptations below).						Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	

SOIL

Sampling Point: Plot 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10 YR 3/2	100					C	
5-10	10 YR 5/1	97	7.5 YR 4/4	3	C	M	C	
10-18	10 YR 5/1	90	5 YR 4/6	10	C	PL	C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: <u>None seen</u> Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	--

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: NRG Industrial Park City/County: Ventress/Pointe Coupee Parish Sampling Date: 4/25/2013
 Applicant/Owner: NRG New Roads Holdings LLC State: LA Sampling Point: Plot 4
 Investigator(s): J. Avant Section, Township, Range: Sec 3 T4S R11E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1-2
 Subregion (LRR or MLRA): LRR O Lat: 30.7484000000 Long: -91.3812000000 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Plot taken on the edge of a deep swale.			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Aquatic Fauna (B13) ___ High Water Table (A2) ___ Marl Deposits (B15) (LRR U) ___ Saturation (A3) ___ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) ___ Oxidized Rhizospheres along Living Roots (C3) ___ Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4) ___ Thin Muck Surface (C7) ___ Iron Deposits (B5) ___ Other (Explain in Remarks) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) ___ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Inundation within this plot area has occurred at least 2 of the past 5 years. Information from Google Earth.		

Sampling Point: Plot 4

Tree Stratum (Plot size: 30 ft rad.)				Dominance Test worksheet:	
	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)	
1. <u>Salix nigra</u>	45	yes	OBL	Total Number of Dominant Species Across All Strata: 8 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)	
2. <u>Acer negundo</u>	15	yes	FAC		
3. <u>Celtis laevigata</u>	5	no	FACW		
4. <u>Carya illinoensis</u>	2	no	FACU		
5. _____					
6. _____					
7. _____					
8. _____					
67 = Total Cover					
50% of total cover: 33.5 20% of total cover: 13.4					
Sapling/Shrub Stratum (Plot size: 30 ft rad.)				Prevalence Index worksheet:	
1. <u>Celtis laevigata</u>	2	yes	FACW	Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = NaN	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
2 = Total Cover					
50% of total cover: 1 20% of total cover: 0.4					
Herb Stratum (Plot size: 30 ft rad.)				Hydrophytic Vegetation Indicators:	
1. <u>Packera glabella</u>	5	yes	OBL	1 - Rapid Test for Hydrophytic Vegetation _____ <input checked="" type="checkbox"/> 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) _____ ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Symphyotrichum racemosum</u>	3	yes	FACW		
3. <u>Cocculus carolinus</u>	1	no	FAC		
4. <u>Urtica dioica</u>	1	no	FAC		
5. <u>Berchemia scandens</u>	iso	no	FAC		
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
10 = Total Cover					
50% of total cover: 5 20% of total cover: 2					
Woody Vine Stratum (Plot size: 30 ft rad.)				Definitions of Four Vegetation Strata:	
1. <u>Cardiospermum halicacabum</u>	2	yes	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.	
2. <u>Vitis vulpina</u>	2	yes	FAC		
3. <u>Ampelopsis arborea</u>	1	yes	FAC		
4. _____					
5. _____					
5 = Total Cover					
50% of total cover: 2.5 20% of total cover: 1					
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	

SOIL

Sampling Point: Plot 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10 YR 3/2	100					C	
3-15	10 YR 5/1	93	2.5 YR 3/6	7	C	PL	SCL	
15-18	10 YR 5/1	97	5 YR 3/4	3	C	M	SCL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: <u>None seen</u> Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	--

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: NRG Industrial Park City/County: Ventress/Pointe Coupee Parish Sampling Date: 4/25/2013
 Applicant/Owner: NRG New Roads Holdings LLC State: LA Sampling Point: Plot 5
 Investigator(s): J. Avant Section, Township, Range: Sec 3 T4S R11E
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1-2
 Subregion (LRR or MLRA): LRR O Lat: 30.7462000000 Long: -91.3773000000 Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: Plot taken in basin of vegetated swale.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <input checked="" type="checkbox"/> Aquatic Fauna (B13) ___ High Water Table (A2) ___ Marl Deposits (B15) (LRR U) ___ Saturation (A3) ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) ___ Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4) ___ Thin Muck Surface (C7) ___ Iron Deposits (B5) ___ Other (Explain in Remarks) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) ___ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Inundation in this area documented several times within the past 5 years		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Plot 5

Tree Stratum (Plot size: <u>30 ft rad.</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Sapling/Shrub Stratum (Plot size: <u>30 ft rad.</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
Herb Stratum (Plot size: <u>30 ft rad.</u>)				
1. <u>Phyla lanceolata</u>	<u>60</u>	<u>yes</u>	<u>OBL</u>	
2. <u>Symphyotrichum racemosum</u>	<u>25</u>	<u>yes</u>	<u>FACW</u>	
3. <u>Xanthium strumarium</u>	<u>15</u>	<u>no</u>	<u>FAC</u>	
4. <u>Vicia caroliniana</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	
5. <u>Trifolium repens</u>	<u>3</u>	<u>no</u>	<u>FACU</u>	
6. <u>Packera glabella</u>	<u>3</u>	<u>no</u>	<u>OBL</u>	
7. <u>Galium aparine</u>	<u>3</u>	<u>no</u>	<u>FACU</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>57</u> 20% of total cover: <u>22.8</u>				
Woody Vine Stratum (Plot size: <u>30 ft rad.</u>)				
1. <u>Campsis radicans</u>	<u>10</u>	<u>yes</u>	<u>FAC</u>	
2. <u>Cardiospermum halicacabum</u>	<u>3</u>	<u>yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>6.5</u> 20% of total cover: <u>2.6</u>				
Remarks: (If observed, list morphological adaptations below).				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

 Total Number of Dominant Species Across All Strata: 4 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = NaN

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: Plot 5

[illegible]

Appendix B

PHOTOGRAPHS



Photograph 1. Soil Profile Observed at Plot 1



**Photograph 2. Overview of the Habitat Observed at Plot 1,
Facing North**



**Photograph 3. Overview of the Habitat Observed at Plot 1,
Facing East**



**Photograph 4. Overview of the Habitat Observed at Plot 1,
Facing South**



Photograph 5. Soil Profile Observed at Plot 2



**Photograph 6. Overview of the Habitat Observed at Plot 2,
Facing North**



**Photograph 7. Overview of the Habitat Observed at Plot 2,
Facing East**



**Photograph 8. Overview of the Habitat Observed at Plot 2,
Facing South**



Photograph 9. Soil Profile Observed at Plot 3



**Photograph 10. Overview of the Habitat Observed at Plot 3,
Facing North**



**Photograph 11. Overview of the Habitat Observed at Plot 3,
Facing East**



**Photograph 12. Overview of the Habitat Observed at Plot 3,
Facing South**



Photograph 13. Soil Profile Observed at Plot 4



**Photograph 14. Overview of the Habitat Observed at Plot 4,
Facing North**



**Photograph 15. Overview of the Habitat Observed at Plot 4,
Facing East**



**Photograph 16. Overview of the Habitat Observed at Plot 4,
Facing South**



Photograph 17. Soil Profile Observed at Plot 5



**Photograph 18. Overview of the Habitat Observed at Plot 5,
Facing North**



**Photograph 19. Overview of the Habitat Observed at Plot 5,
Facing East**



**Photograph 20. Overview of the Habitat Observed at Plot 5,
Facing South**