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Exhibit FF.
Syngenta Site
Wetlands Delineation Report

LOUISIANA ECONOMIC DEVELOPMENT CERTIFIED SITE

Baton Rouge Area Chamber®

AECOM **Environment**

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Syngenta Site Wetlands Delineation Report

Wetlands Data Report – Proposed Syngenta Property, for Wanhua Chemical US Holding Inc., Iberville Parish, Louisiana

June 2016
File No. 60439258

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1 Introduction

AECOM Technical Services (AECOM) was requested by Wanhua Chemicals US Holding Inc. (Wanhua) to prepare this wetland data report for the approximately 902 acre Syngenta property (project area) located near Carville, Iberville Parish (Figure 1). The approximate center of the project area is located at Latitude 30.22820 N, Longitude -90.08560 E. The purpose of this wetland data report is to identify potentially jurisdictional wetlands and other waters of the U.S. within the project area as defined in the 33 CFR § 328.3 for concurrence of a preliminary jurisdictional determination (PJD).

2 Procedures

The delineation was completed in accordance with the 1987 Wetland Delineation Manual (USACE 1987) and the Atlantic and Gulf Coastal Plain Regional Supplement (USACE 2010). The project area boundary was loaded into a project Geographic Information System (GIS) database. The database included United States Geological Survey (USGS) topographic maps (USGS 2013), Natural Resource Conservation Service (NRCS) soil maps (NRCS 2015b and NRCS 1977), and available aerial photography. Prior to initiation of field work, the GIS database was reviewed to evaluate the presence of hydrologic features such as identified streams and other water bodies, wetlands, and soil type that may indicate a potential for wetlands or other waters of the U.S. The soils identified in the project area were compared to NRCS hydric soils list (NRCS 2014).

Following the database review, an onsite evaluation of the project area was done to identify potential wetlands and other waters of the U.S. Sample points were established and data forms completed to document existing hydrology, vegetation and soil. Indicators of hydrology were assessed at each sample point and recorded. At least one primary and two secondary indicators must be observed in order to meet the hydrology criteria. Plant species and abundance were recorded at each sample point along with their wetland indicator status (NRCS 2015a, Lichvar et al. 2014, and USACE 2014). Wetland indicator statuses for dominant vegetation consist of upland (UPL), facultative upland (FACU), facultative (FAC), facultative-wetland (FACW), and obligate (OBL) plant species. At least one hydrophytic vegetation indicator must be observed to establish a dominance or prevalence of hydrophytic vegetation. Soil profile observations were recorded at each sample point between the surface and 16-inches except where noted and observed for field indicators of hydric soils (NRCS 2012, Gretag/Macbeth 2000). At least one hydric soil indicator must be observed to meet the hydric soil criteria. Positive indicators of wetland conditions for all three parameters (hydrology, vegetation, and soil) are normally present for a jurisdictional wetland to be present.

Each sampling point was identified as SP and assigned a sequential numbered code (SP1, SP2, etc.). Other waters of the U.S. were identified as OW and given a similar sequential numbered code (OW1, OW2, etc.). Wetland boundaries, other waters of the U.S., and sampling point locations were not professionally surveyed, but were located using a Trimble® YUMA® capable of Differential Global Positioning System (DGPS) utilizing real-time corrections. After field work was completed, data was entered in to GIS software, potentially jurisdictional areas were mapped, areas and lengths were calculated.

3 Off-Site Determination Results

The project area begins on the east bank of the Mississippi River and continues north across the Mississippi River protection levee and LA Highway 75 to Bayou Braud then to existing industries and a railroad spur (Figures 1 and 2). The USGS elevation is shown as 20 feet (ft) above mean sea level (msl) near LA Hwy 75 and slopes to the north away from the river to approximately 15 ft above msl. The portion of the project area north of the Mississippi River flood protection levee system is drained by several man-made drainages that flow toward Bayou Braud. A canal was also identified traversing the northern portion of the project area. The Mississippi River batture land has elevations on the natural ridges of approximately 25 ft above msl and sloping down to the river's edge (Figure 1). The batture area drains to the south into the river.

The project area is within areas that historically were bottomland hardwood forests in the Southern Holocene Meander Belts ecoregion in Louisiana (Daigle et al. 2006). The project area currently traverses through agriculture lands, Mississippi River batture, small industrial areas, and fragmented forested areas. The portion of the project area appears to be former farmland and now is predominately used for cattle. The area north of Bayou Braud appears to be primarily forested with a few disturbed areas. Most of the vegetative cover in the project area likely consists of ruderal grass and weed species north of the Mississippi River levee. Common scrub-shrub and tree species typically found in the project area are likely a mixture of mature trees consisting of black willow (*Salix nigra*), elms (*Ulmus spp.*), sugarberry (*Celtis laevigata*), oaks (*Quercus spp.*) and pecans (*Carya spp.*).

The soils located within the project area are primarily silt loams, silty clay loams, and clays based on the NRCS Web Soil Survey and the Soil Survey of Iberville Parish, Louisiana (NRCS 1977). One hundred percent of the mapped soils in the project area are classified as hydric (approximately 882 acres). These soils are frequently ponded or flooded for long or very long periods during the growing season; therefore, there may be some hydric areas at the site. The distribution of soils across the project area is show in Figure 2, while Table 1 provides a brief description of each soil series.

Table 1. Syngenta Soil Characteristics

Soil Symbol	Soil Name	Acres	Percent	Landform	Hydric Status
Ca	Cancienne silt loam, 0 to 1% slopes	23.22	2.58%	Natural levee	Hydric
Cb	Cancienne silty clay loam, 0 to 1% slopes	13.88	1.54%	Natural levee	Hydric
Cm	Commerce silty clay loam	96.53	10.70%	Natural levee	Hydric
Sg	Sharkey clay, 0 to 1% slopes, rarely flooded	244.72	27.14%	Natural levee/ backswamp transition	Hydric
Va	Vacherie silt loam	297.45	32.98%		Hydric
Gr	Gramercy silty clay loam, 0 to 1% slopes	178.23	19.76%		Hydric
Cg	Cancienne and Carville soils, gently undulating, frequently flooded	25.86	2.87%	Batture	Hydric
Cl	Cancienne silt loam, 0 to 1% slopes	2.29	0.25%	Backswamp	Hydric
W	Water	19.65	2.18%	Mississippi River	
	Total	**901.83**	**100.00%**		

4 Field Reconnaissance Results and Conclusions

A portion of the project area (344 acres) was delineated by Providence Engineering and Environmental Group LLC (Providence) on April 7-9, 2015. The remaining 558 acres was delineated by AECOM biologists on September 2, 3, 15, 16, 22, 23, and 24, 2015. The data from Providence and AECOM have been combined into this one wetland data report. Providence assigned each of their sample points a sequential number (1, 2, 3, etc.). Other WOUS identified were not assigned a sequential number, but were noted on a map. AECOM assigned each of the Providence delineation sample points within the proposed project area the sequential numbered code (SP1, SP2, etc.) described in Section 2. Other WOUS were identified as OW and given a similar sequential numbered code (OW1, OW2, etc.). A cross reference table is presented in Table 2 identifying the Providence sample point numbering and the new sequential numbered code. AECOM delineation samples points were assigned the same code beginning at the next sequential number following the last sequential number from the Providence sample points.

Table 2. Sample Point Numbering Cross Reference

Providence Sample Point Numbering	New Sequential Providence Sample Point Numbering
1	SP1
2	SP2
3	SP3
4	SP4
5	SP5
6	SP6
7	SP7
8	SP8
9	SP9
10	SP10
11	SP11
12	SP12
13	SP13
36	SP14
37	SP15
38	SP16
39	SP17
40	SP18
41	SP19

The Wetland Determination Data Form followed by the digital photographs of the soil profile and representative vegetation at each sample point is provided in Appendix A. Locations of these sample points are shown in Figures 3 and 4.

4.1 Wetlands and Other Waters of the United States

The total potential jurisdictional acreage of wetland surveyed is 198.60 acres (Figures 3 and 4). The potential jurisdictional wetlands are comprised of fourteen (14) forested (PFO) wetland totaling approximately 172.83 acres and twelve (12) emergent (PEM) wetland totaling 25.77 acres (Table 3). The vegetation in each on the potential jurisdictional areas had dominance and/or prevalence of hydrophytic vegetation. Dominant species within each stratum found included (genus-species/wetland plant indicator status):

- Tree Stratum: sugarberry (*Celtis laevigata*, FACW), American sycamore (*Platanus occidentalis*, FACW), pecan (*Carya illinoinensis*, FACU), black willow (*Salix nigra*, OBL), boxelder (Acer negundo, FAC), cherrybark oak (*Quercus pagoda*, FACW), American elm (*Ulmus americana*, FAC), water oak (*Quercus nigra*, FAC), green ash (*Fraxinus pennsylvanica*, FACW), laurel oak (*Quercus laurifolia*, FACW), Chinese tallowtree (*Triadica sebifera*, FAC), Honey-locust (*Gleditsia triacanthos*, FAC), and willow oak (*Quercus phellos,* FACW*);*
- Sapling/Shrub Stratum: boxelder, green ash, sugarberry, American elm, black willow, Chinese tallow bagpod (*Sesbania vesicaria*, FAC), Chinese privet (*Ligustrum sinense*, FAC), , possumhaw (*Ilex decidua*, FACW), roughleaf dogwood (*Cornus drummondii*, FAC), laurel oak, dwarf palmetto (*Sabal minor*, FACW), saw-tooth blackberry (*Rubus argutus,* FAC), honeylocust (Gleditsia triacanthos, FAC), sweet-gum (*Liquidambar styraciflua,* FAC), and parsley hawthorn (*Crataegus marshallii*, FAC);
- Herbaceous stratum: Johnsongrass (*Sorghum halepense*, FACU), sawtooth blackberry, Vasey's grass (*Paspalum urvillei*, FAC), green flatsedge (*Cyperus virens*, FACW), American buckwheat vine (*Brunnichia ovata*, FACW), smut grass (*Sporobolus indicus*, FACU), bahiagrass (*Paspalum notatum*, FACU), annual marsh elder (*Iva annua*, FAC), peppervine (*Ampelopsis arborea*, UPL), tall morning-glory (*Ipomoea purpurea*, FAC), southern crabgrass (*Digitaria ciliaris*, FACU), lateflowering thoroughwort (*Eupatorium serotinum*, FAC), trumpet creeper (*Campsis radicans*, FAC), Canada goldenrod (*Solidago altissima*, FACU), jumpseed (*Persicaria virginiana*, OBL), swamp smartweed (*Persicaria hydropiperoides*, OBL), copper iris (*Iris fulva*, OBL), Wolf's spikerush (*Eleocharis wolfii*, OBL), baketgrass (*Oplismenus hirtellus*, FAC), Virginia strawberry (*Fragaria virginiana*, FACU), asplenium ladyfern (*Athyrium asplenoides*, FAC), biannual lettuce (*Lactuca ludoviciana*, (FAC), smut grass (*Sporobolus indicus*, FACU), St. Augustine grass (*Stenotaphrum secundatum*, FAC), common boneset (*Eupatorium perfoliatum*, FACW), meadow garlic (*Allium canadense*, FACU), southern sedge (*Carex austrina*, FACU), southern dewberry (*Rubus trivialis*, FACU), dotted smartweed (*Persicaria punctate*, OBL), Japanese climbing fern (*Lygodium japonicum*, FAC), poorjoe (*Diodia teres*, FACU), field blackberry (*Rubus arvensis*, FAC), great ragweed (*Ambrosia trifida*, FAC), alligatorweed (*Alternanthera philoxeroides*, OBL), shortbristle horned beaksedge, *Rhynchospora corniculata*, OBL), Virginia buttonweed (*Diodia virginiana*, FACW), common rush (*Juncus effuses*, OBL), broadleaf cattail (*Typha latifolia*, OBL), purpletop vervain (*Verbena incompta*, FACW), Cherokee sedge (*Carex cherokeensis*, FACW), lizard's tail (*Saururus cernuus*, OBL), pecan, poison ivy (*Toxicodendron radicans*, FAC), sugarcane plumegrass (*Saccharum giganteum*, FACW), Wolf's spike-rush (*Eleocharis wolfii*, OBL), long-leaf basket grass (*Oplismenus hirtellus*, FAC), Virginia strawberry (*Fragaria virginicana*, FACU), spotted crane's-bill (Geranium maculatum, FACU), St. Anthony's-turnip (*Ranunculus bulbosus*, FAC), white-edge sedge (*Carex debilis*, FACW), and white clover (*Trifolium repens* FACU); and,
- Woody Vine Stratum: poison ivy, American buckwheat vine (*Brunnichia ovata*, FACW), trumpet creeper, Japanese honeysuckle (*Lonicera japonica*, FACU), Virginia creeper (*Parthenocissus quinquefolia*, FACU), cat greenbrier (*Smilax glauca*, FAC), saw greenbrier (*Smilax bona-nox*,

FAC), peppervine, muscadine (*Vitis rotundifolia*, FAC), and horsebrier (*Smilax rotundifolia*, FAC).

The primary hydrology indicators included high water table (A2), saturation (A3), water-stained leaves (B9), and oxidized rhizospheres along living roots (C3). The secondary hydrology indicators included surface soil cracks (B6), sparsely vegetated concave surface (B8) crawfish burrows (C8), saturation visible on aerial imagery (C9), geomorphic position (D2), and FAC-neutral test (D5). The soil had a depleted matrix indicator and consisted of clay, clay loam, silty clay, and silt loam.

Table 3. Summary of Potential Wetland and Non-Wetland Features

Feature ID	Classification	Acres	Map Sheet #
SP1	Non-wet	-	4
SP2	PFO	0.64	4
SP3	PEM	1.66	4
SP4	PEM	0.74	7
SP5	PEM	2.74	4,5,7
SP6	Non-wet	-	4
SP7	PFO	0.23	4.5
SP8	Non-wet	-	5
SP9	PFO	2.59	5
SP10	PFO	2.13	5
SP11	Non-wet	-	5
SP12	PFO	1.42	5,7
SP13	Non-wet	-	7
SP14/15	PFO	50.67	2,4,5
SP16	Non-wet	-	4
SP17	PFO	3.79	2
SP18	PFO	33.96	1,2,4
SP19	Non-wet	-	1,4
SP20	Non-wet	-	4
SP21	PEM	1.89	4
SP22	Non-wet	-	4
SP23	PEM	3.04	3
SP24	PEM	4.15	3,4
SP25	PEM	2.94	4,6
SP26	Non-wet	-	4
SP27	Non-wet	-	3
SP28	Non-wet	-	4
SP29	Non-wet	-	4
SP30	Non-wet	-	6
SP31	PEM	1.31	6

Feature ID	Classification	Acres	Map Sheet #
SP32	Non-wet	-	6
SP33	Non-wet	-	1
SP34	Non-wet	-	1
SP35	PFO	2.54	1,2
SP36	Non-wet	-	1
SP37	Non-wet	-	1,2
SP38	Non-wet	-	1,2
SP39	PFO	0.93	2
SP40	Non-wet	-	2
SP41	PEM	0.18	1
SP42	PEM	0.27	1
SP43	PFO	0.09	1,2
SP44	PFO	41.05	3,4
SP45	Non-wet	-	3
SP46	PEM	6.35	4
SP47	Non-wet	-	4
SP48	Non-wet	-	4
SP49	Non-wet	-	4
SP50	Non-wet	-	6
SP51	Non-wet	-	6
SP52	Non-wet	-	3
SP53	Non-wet	-	3
SP54	PFO	24.36	1,4
SP55	PEM	0.50	1,2
SP56	Non-wet	-	2
SP57	Non-wet	-	4
SP58	Non-wet	-	4
SP59	PFO	8.44	4,6
SP60	Non-wet	-	3
		Total:	**198.60**

Potential jurisdictional other waters of the U. S. delineated consisted of one (1) named stream (Bayou Braud), forty three (43) drainage ditches, and two impoundments (Figures 3 and 4). The length and area in acres of each drainage way, impoundment and stream is presented in Table 4.

Table 4. Summary of Potential Other Waters of the U. S. Features

Feature ID	Classification	Acres	Length (ft)	Map Sheet #
OW1	Bayou Braud	0.73	1,346.02	4
OW2	Bayou Braud	0.90	2,598.36	3,4
OW3	Intermittent	0.40	3,504.19	3,6
OW4	Perennial	1.36	750.63	1
OW5	Impoundment	3.10	530.00	3
OW6	Impoundment	11.49	1,180.00	3
OW7	Perennial	4.25	3,803.98	3,4
OW8	Ephemeral	0.26	760.16	1,3
OW9	Ephemeral	0.38	975.35	1,3
OW10	Ephemeral	0.15	557.99	3
OW11	Ephemeral	0.11	236.68	3
OW12	Ephemeral	0.18	3,872.65	4,6
OW13	Intermittent	0.04	537.98	4
OW14	Intermittent	0.04	527.87	4
OW15	Intermittent	0.03	579.50	4
OW16	Ephemeral	0.09	944.59	1,2,4
OW17	Intermittent	0.14	844.65	2
OW18	Bayou Braud	1.38	3,037.61	4,5
OW19	Ephemeral	0.15	1,683.54	7
OW20	Ephemeral	0.15	1,689.23	7
OW21	Ephemeral	0.02	473.16	7
OW22	Ephemeral	0.01	277.07	7
OW23	Ephemeral	0.16	2,329.65	5,7
OW24	Ephemeral	0.09	1,373.02	5
OW25	Ephemeral	0.05	698.37	5
OW26	Ephemeral	0.09	1,322.47	5,7
OW27	Ephemeral	0.07	969.13	5
OW28	Ephemeral	0.02	256.77	5
OW29	Ephemeral	0.33	4,767.00	5,7
OW30	Ephemeral	0.20	2,866.35	5,7
OW31	Ephemeral	0.24	3,466.41	5,7
OW32	Ephemeral	0.10	1,472.03	5
OW33	Ephemeral	0.03	433.64	5
OW34	Ephemeral	0.06	806.62	4,5
OW35	Ephemeral	0.09	1,313.83	5
OW36	Ephemeral	0.11	1,648.94	4,5
OW37	Ephemeral	0.01	135.95	7
OW38	Ephemeral	0.30	4,406.38	4,7
OW39	Ephemeral	0.02	299.60	4
OW40	Ephemeral	0.02	264.69	4
OW41	Ephemeral	0.04	612.55	7
OW42	Ephemeral	0.03	377.16	7
OW43	Ephemeral	0.05	682.60	5
OW44	Ephemeral	0.23	3,299.44	5,7
OW45	Ephemeral	0.05	782.66	7
OW46	Ephemeral	0.02	283.44	5
OW47	Ephemeral	0.01	81.21	5
OW48	Perennial	2.26	2,811.51	2,4
		Total:	**28.84**	**65,615.24**

4.2 Conclusions

Based on the wetland delineation conducted at the proposed 901.83 acre project area, there are thirteen (13) forested wetlands (164.40 acres) and twelve (12) emergent wetlands (25.77 acres) that are potentially jurisdictional. Potentially jurisdictional other waters of the U. S. consisted of one (1) named stream (Bayou Braud), forty three (43) drainage ditches, and two (2) impoundments.

The USACE, under the authority of Section 404 of Clean Water Act and Section 10 of River and Harbor Act, has the authority to make the final determination of the location and extent of jurisdictional wetlands and navigable waters within the project area. This report represents the opinion of AECOM and should be considered preliminary until final concurrence is obtained from the USACE New Orleans District.

5 Limitations

Our professional judgments presented herein apply to the existing and reasonably foreseeable site conditions at the time of our assessment. They cannot apply to site changes of which AECOM is unaware and has not had the opportunity to review. Changes in the condition of this property may occur with time due to natural processes or anthropogenic activities at the proposed project area or on adjacent properties. Changes in applicable standards may also occur as a result of legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or in part, by changes beyond our control.

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Figures

AECOM

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Feet

Wanhua
Syngenta Project Area
Figure 1 - Topographic Site Vicinity Map

Project Area

Iberville Parish

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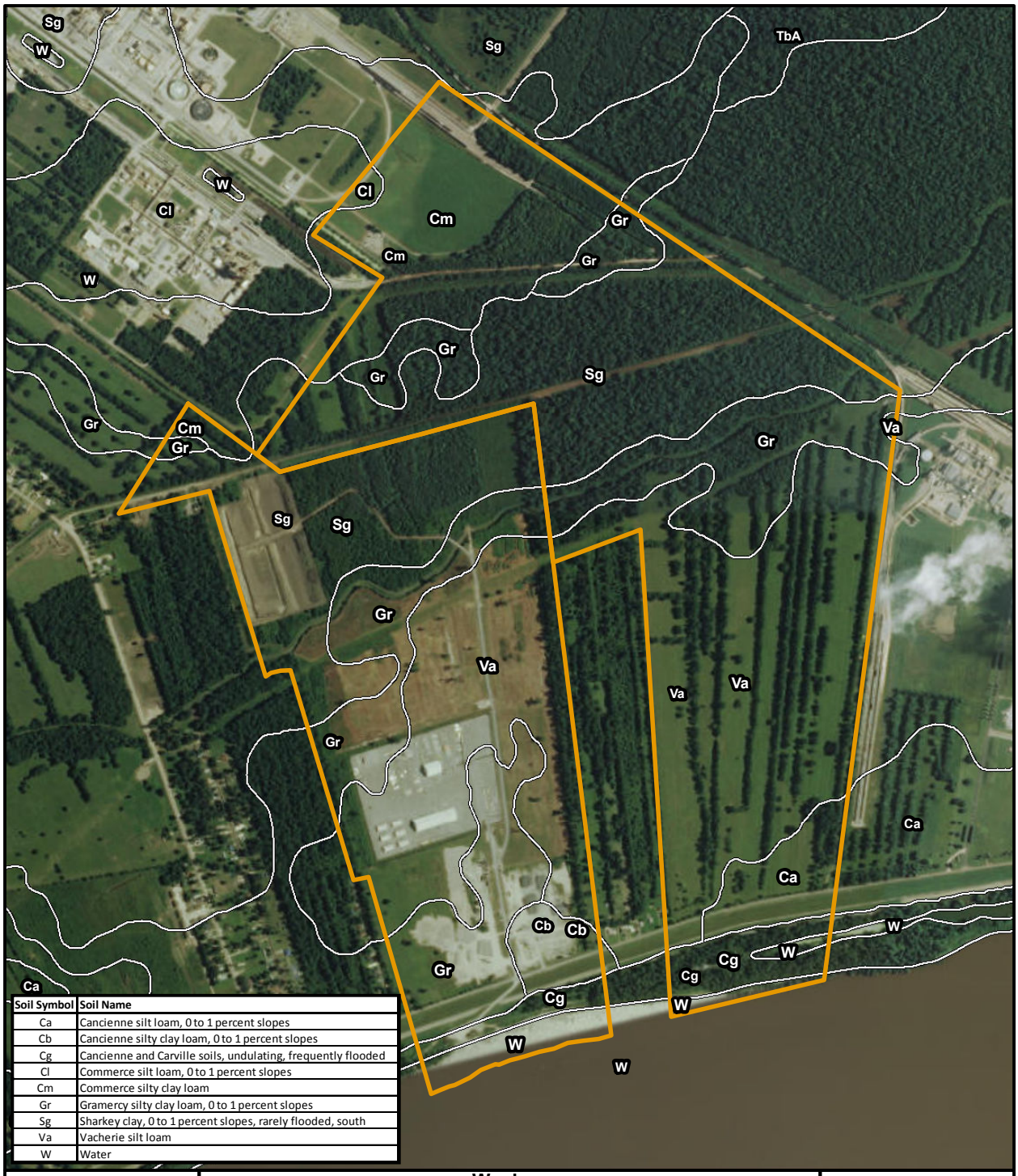

Soil Symbol	Soil Name
Ca	Cancienne silt loam, 0 to 1 percent slopes
Cb	Cancienne silty clay loam, 0 to 1 percent slopes
Cg	Cancienne and Carville soils, undulating, frequently flooded
Cl	Commerce silt loam, 0 to 1 percent slopes
Cm	Commerce silty clay loam
Gr	Gramercy silty clay loam, 0 to 1 percent slopes
Sg	Sharkey clay, 0 to 1 percent slopes, rarely flooded, south
Va	Vacherie silt loam
W	Water

AECOM

0 1,500
Feet

Wanhua
Syngenta Project Area
Figure 2 - Soil Distribution Map

Project Area
Soils

Iberville Parish

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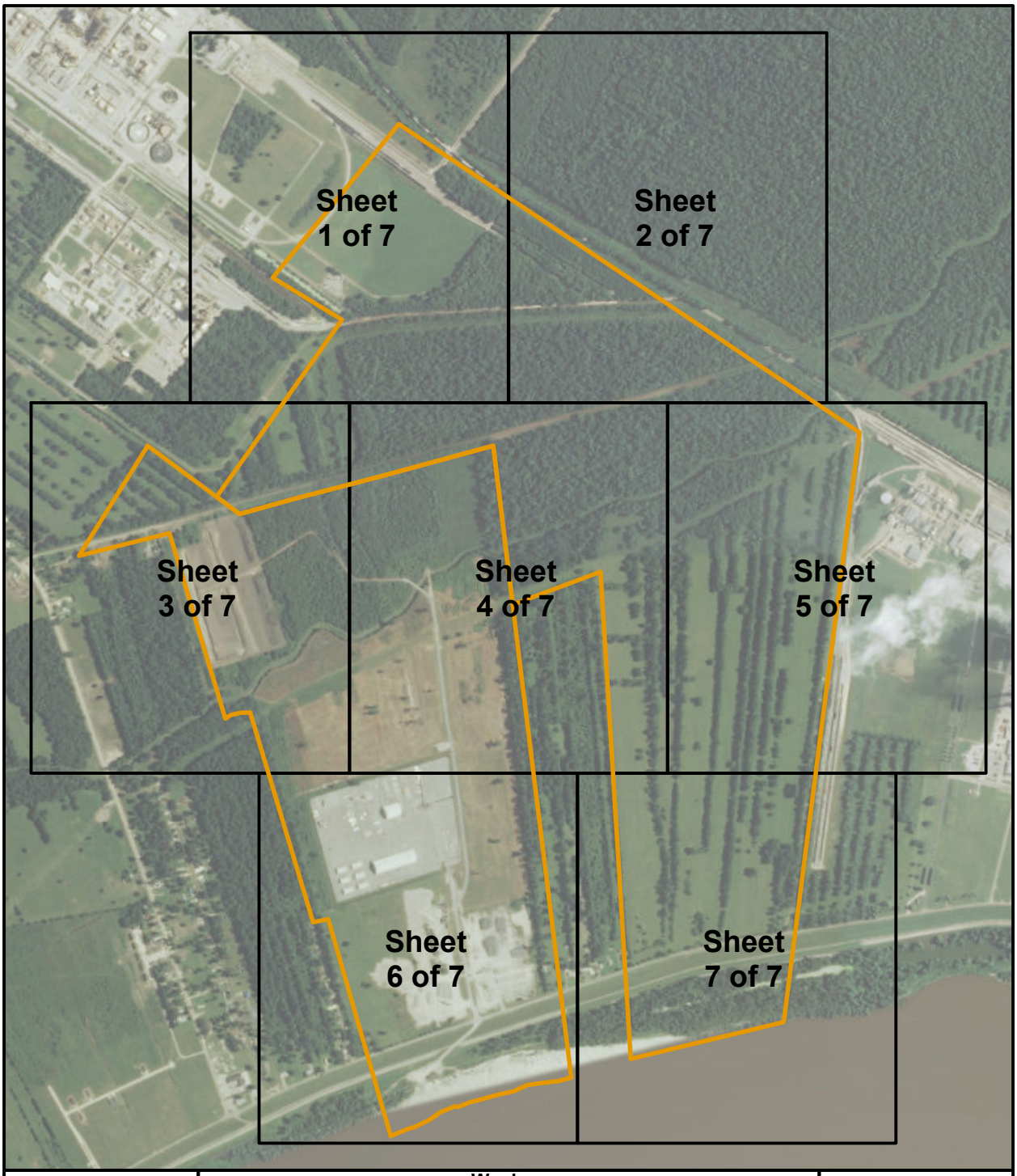

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Wanhua
Syngenta - Aerial Photographs with Delineation Areas
Figure 3 - Index

Project Area
Map Sheets

Iberville Parish

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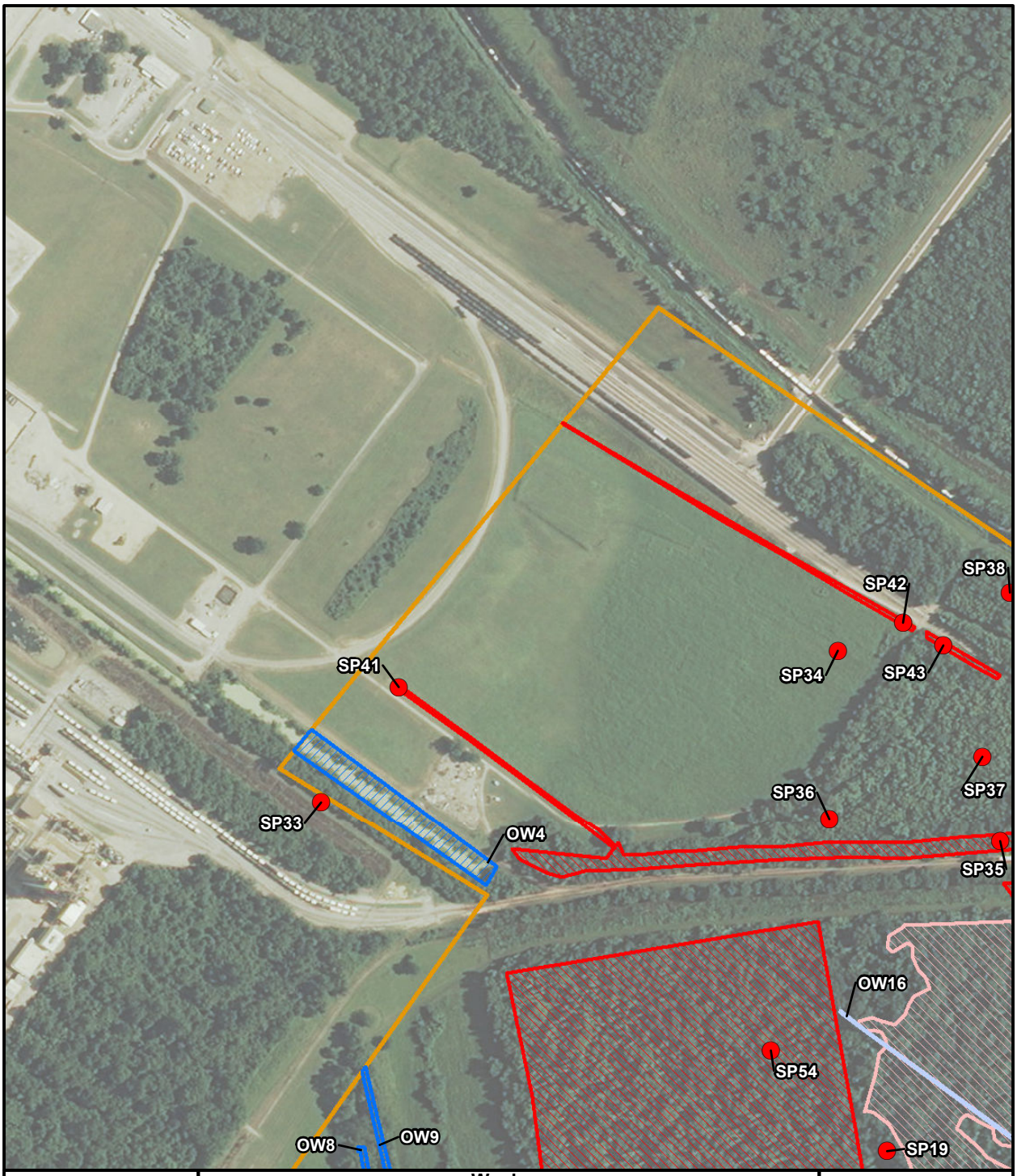

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Wanhua
Syngenta - Aerial Photographs with Delineation Areas
Figure 3 - Sheet 1 of 7

- Sample Point
- Project Area
- Other Waters of the U.S.
- Wetland
- Other Waters of the U.S. (Providence Data)
- Wetland (Providence Data)

Iberville Parish

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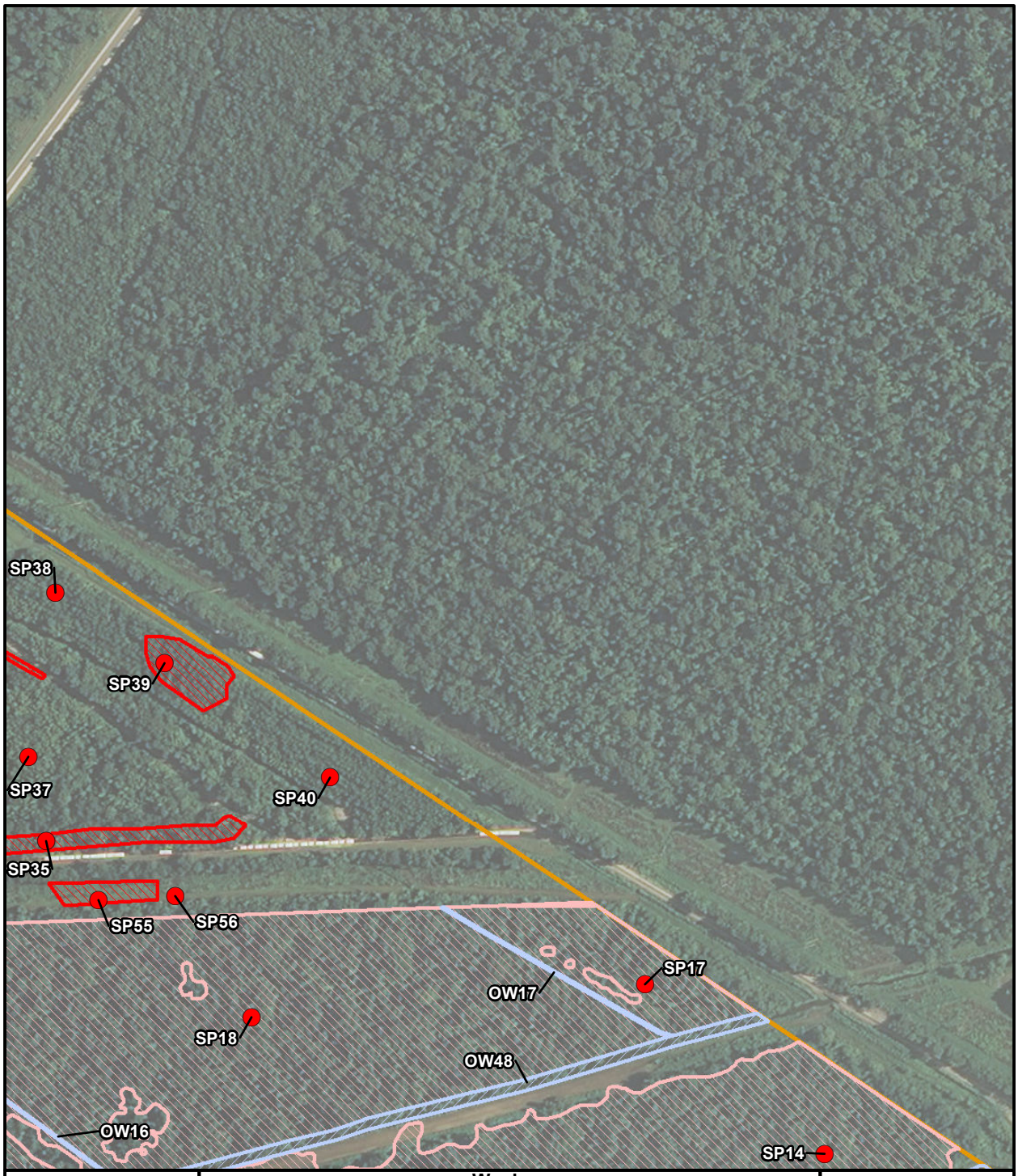

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Feet

Wanhua
Syngenta - Aerial Photographs with Delineation Areas
Figure 3 - Sheet 2 of 7

- Sample Point
- Project Area
- Other Waters of the U.S.
- Wetland
- Other Waters of the U.S. (Providence Data)
- Wetland (Providence Data)

Iberville Parish

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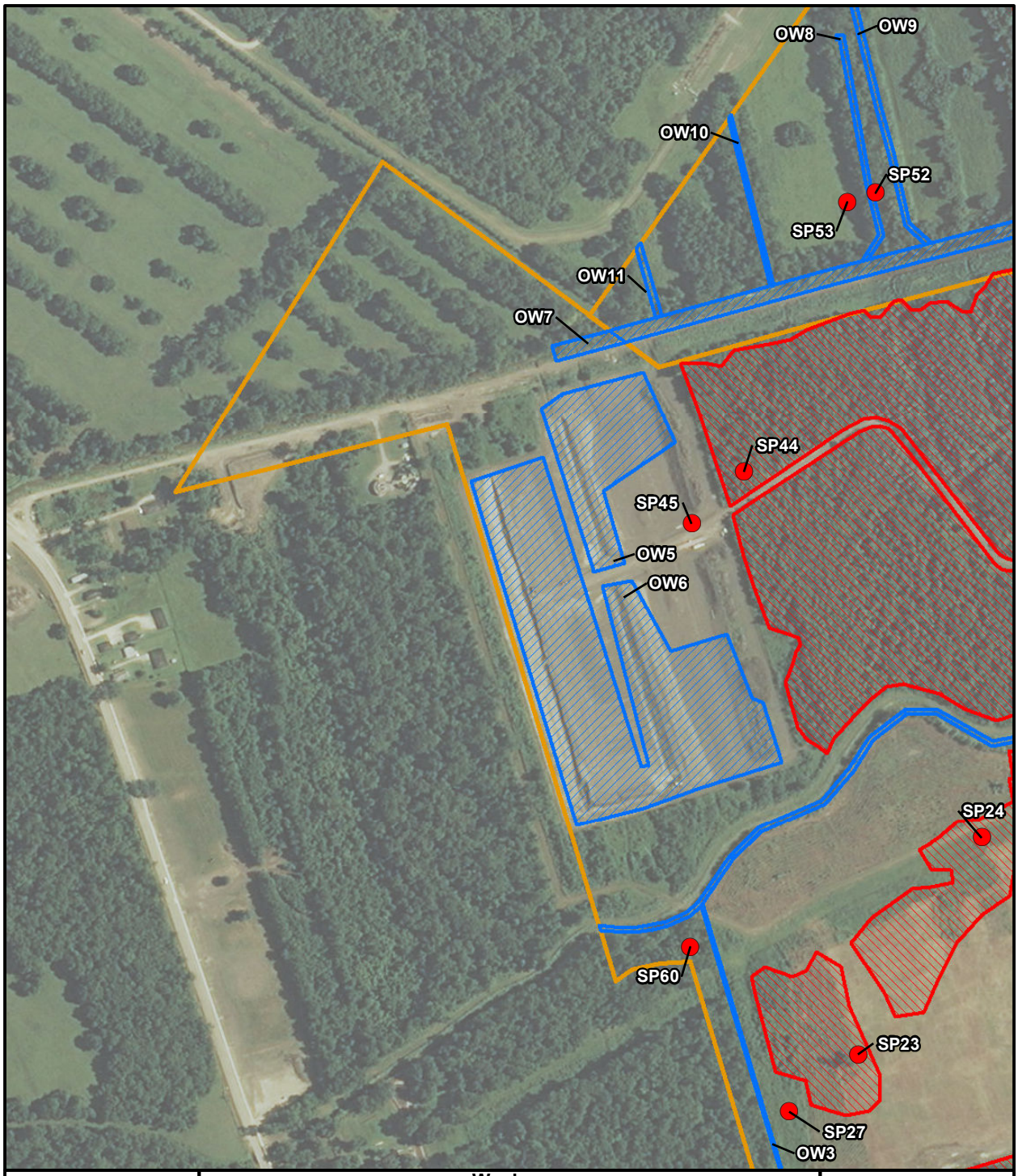

AECOM

0 525
Feet

Wanhua
Syngenta - Aerial Photographs with Delineation Areas
Figure 3 - Sheet 3 of 7

- Sample Point
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Iberville Parish

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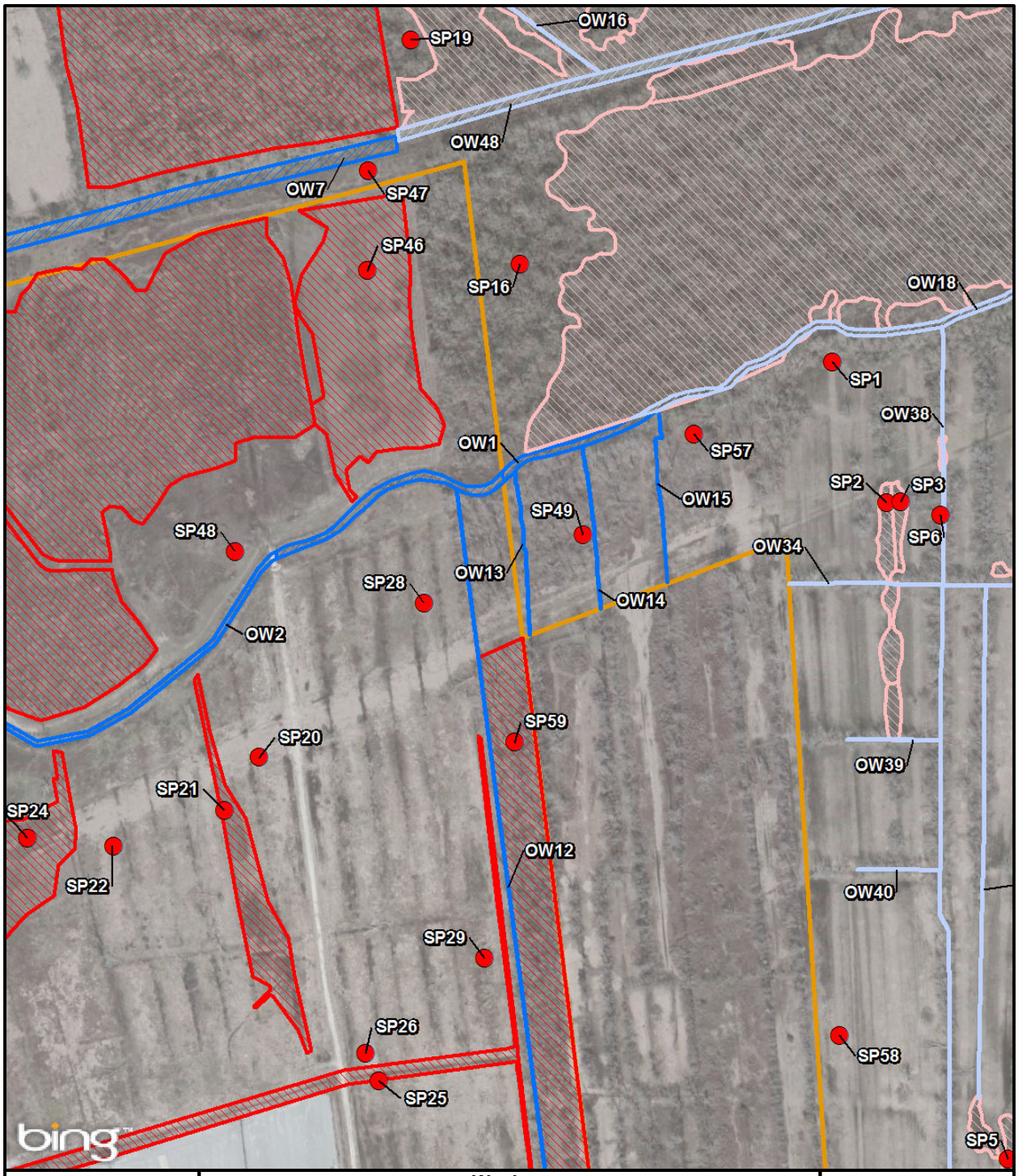

AECOM

0 525
Feet

Wanhua
Syngenta - Aerial Photographs with Delineation Areas
Figure 3 - Sheet 4 of 7

- Sample Point
- Project Area
- Other Waters of the U.S.
- Wetland
- Other Waters of the U.S. (Providence Data)
- Wetland (Providence Data)

Iberville Parish

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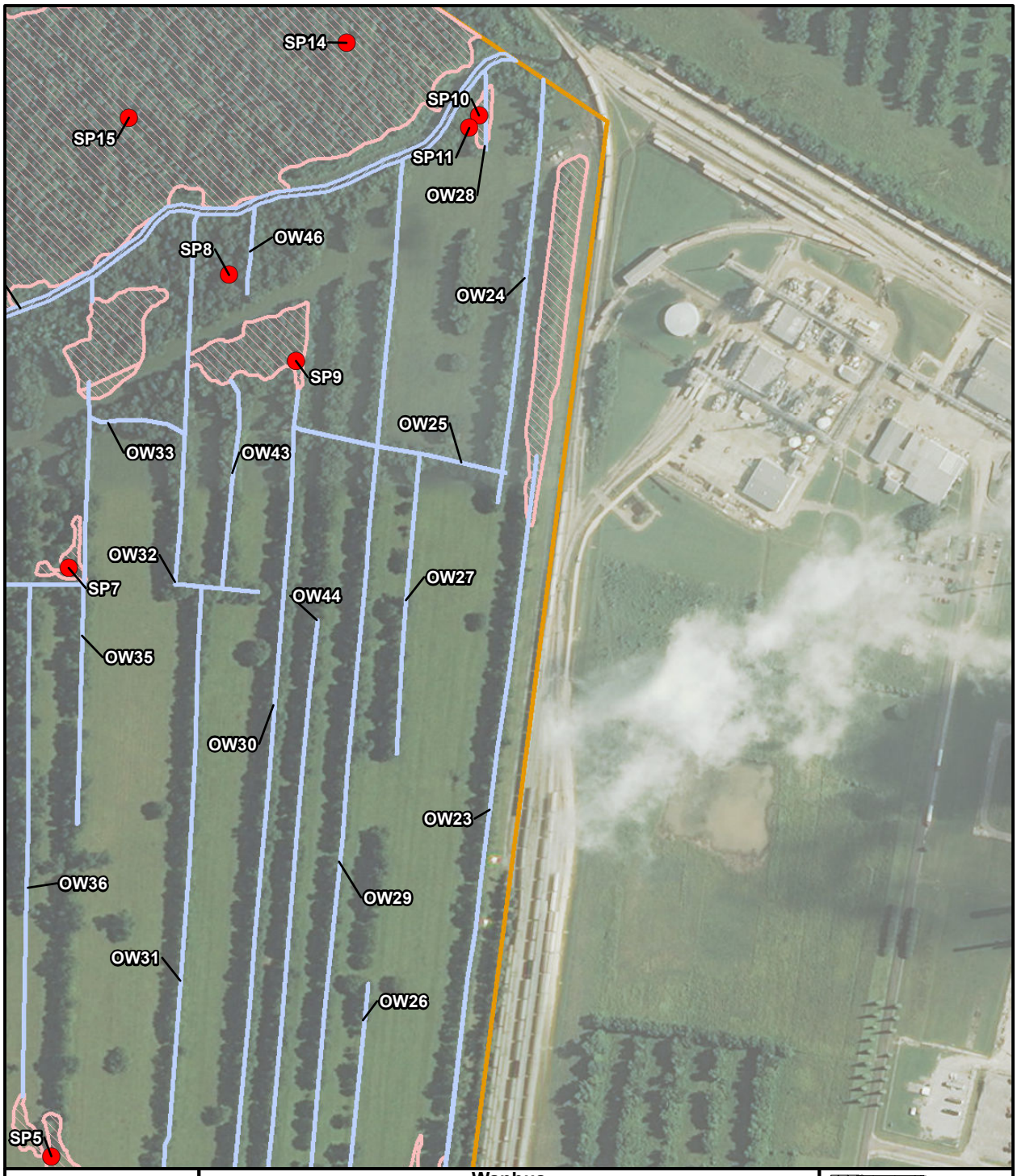

AECOM

0 525
Feet

Wanhua
Syngenta - Aerial Photographs with Delineation Areas
Figure 3 - Sheet 5 of 7

- Sample Point
- Project Area
- Other Waters of the U.S.
- Wetland
- Other Waters of the U.S. (Providence Data)
- Wetland (Providence Data)

Iberville Parish

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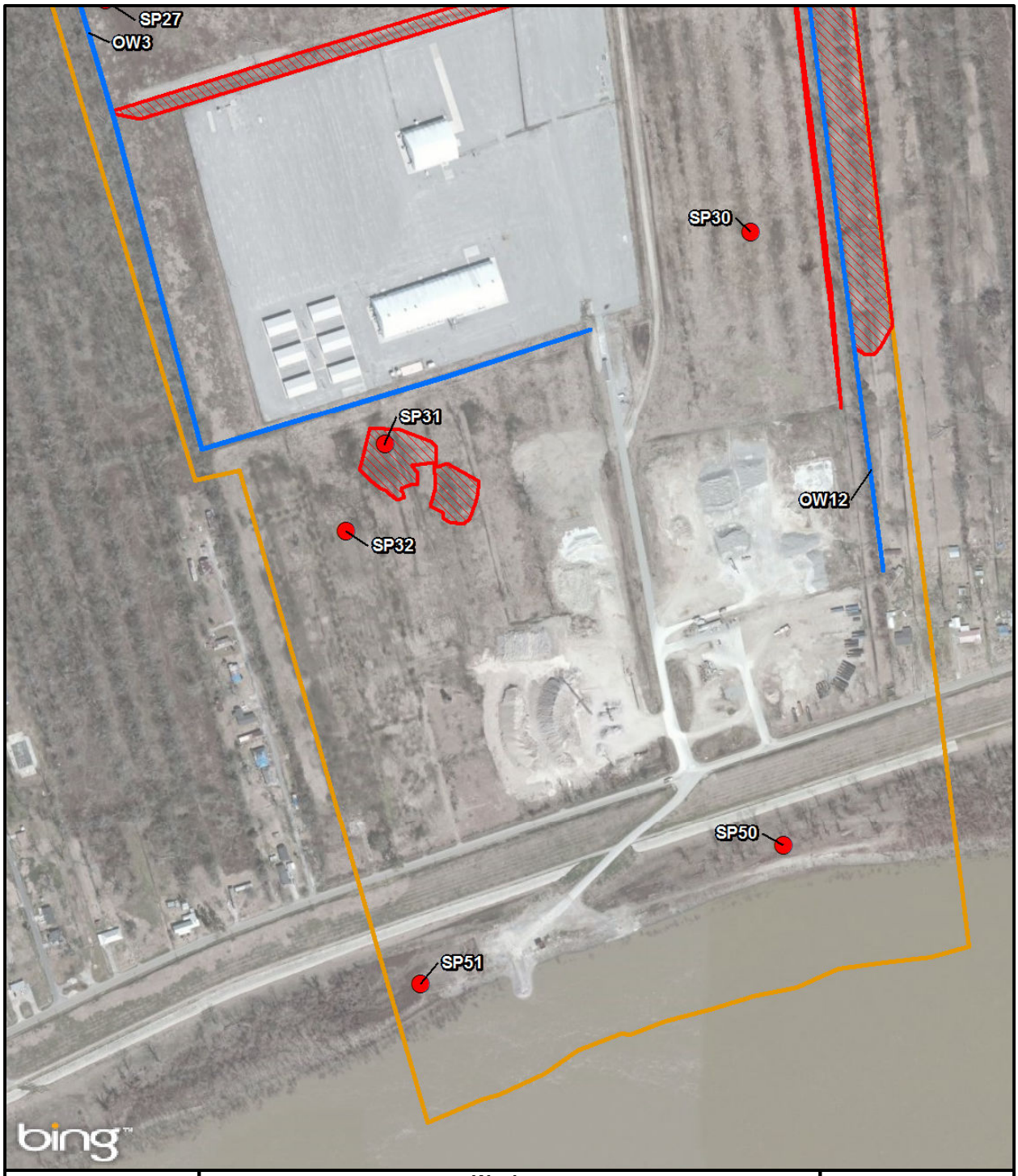

AECOM

0 525
Feet

Wanhua
Syngenta - Aerial Photographs with Delineation Areas
Figure 3 - Sheet 6 of 7

- Sample Point
- Project Area
- Other Waters of the U.S.
- Wetland
- Other Waters of the U.S. (Providence Data)
- Wetland (Providence Data)

Iberville Parish

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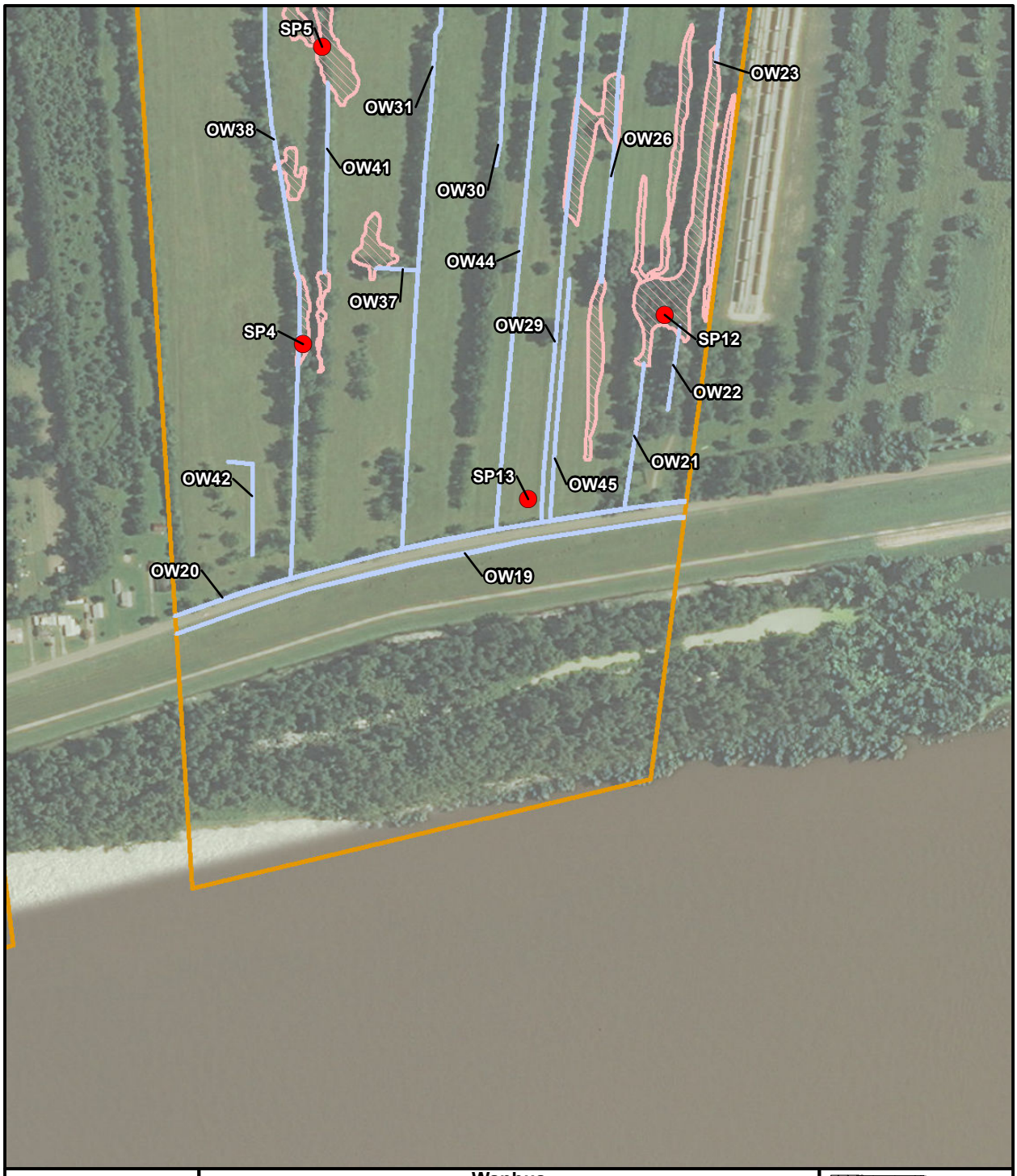

AECOM

0 525
Feet

Wanhua
Syngenta - Aerial Photographs with Delineation Areas
Figure 3 - Sheet 7 of 7

- Sample Point
- Project Area
- Other Waters of the U.S.
- Wetland
- Other Waters of the U.S. (Providence Data)
- Wetland (Providence Data)

Iberville Parish

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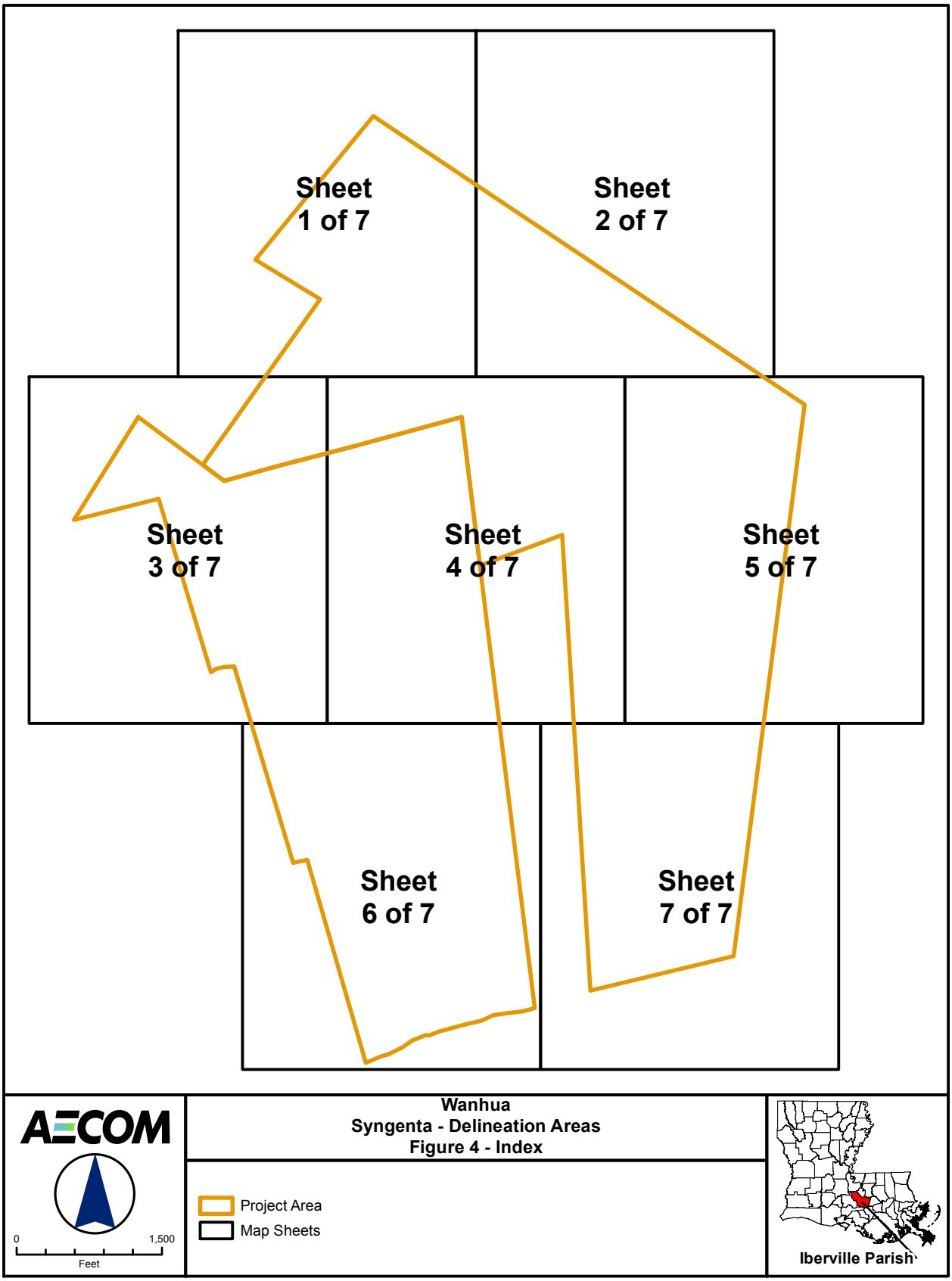

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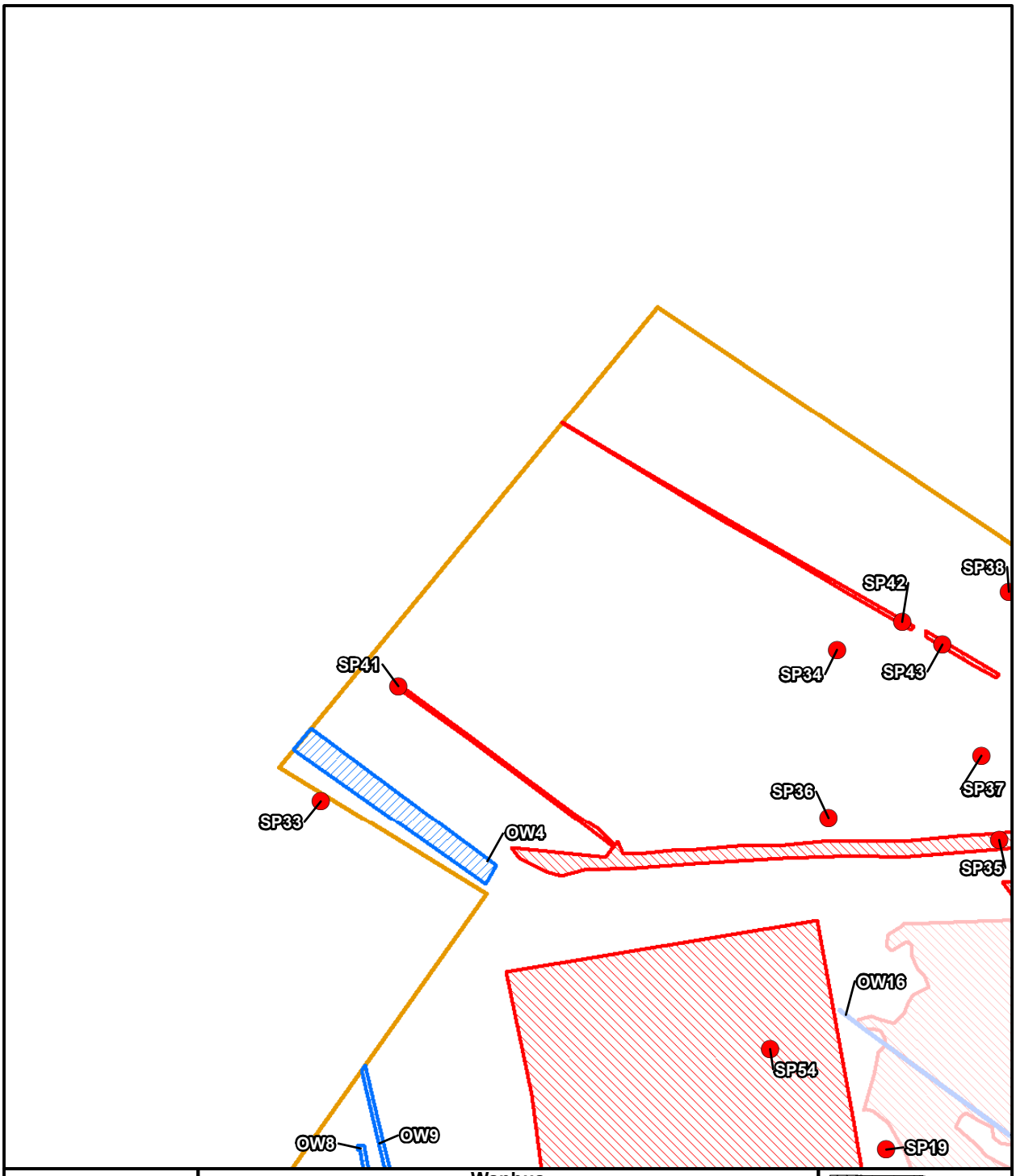

AECOM

0 525
Feet

Wanhua
Syngenta - Delineation Areas
Figure 4 - Sheet 1 of 7

- Sample Point
- Project Area
- Other Waters of the U.S.
- Wetland
- Other Waters of the U.S. (Providence Data)
- Wetland (Providence Data)

Iberville Parish

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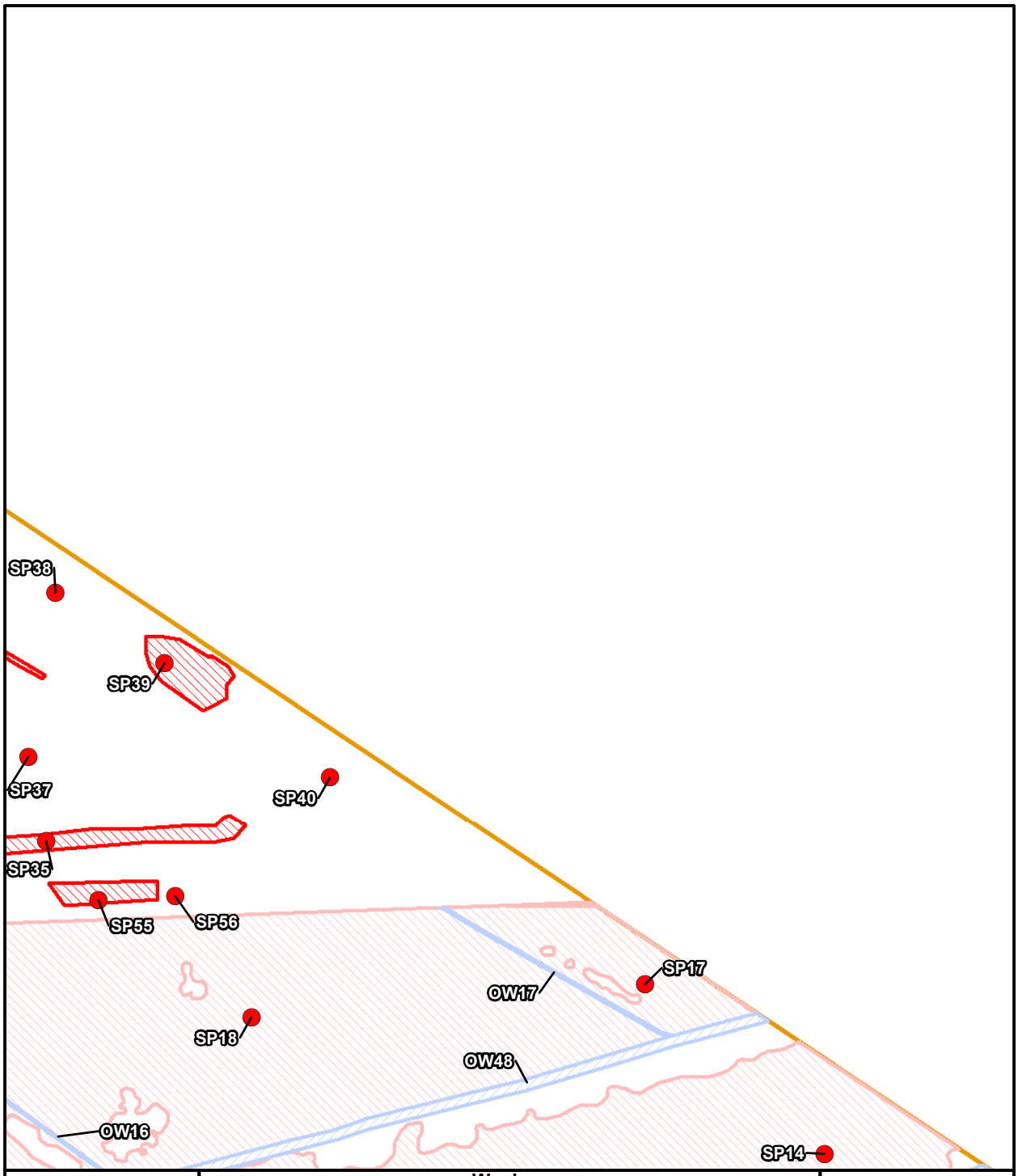

AECOM

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Feet

Wanhua
Syngenta - Delineation Areas
Figure 4 - Sheet 2 of 7

- Sample Point
- Project Area
- Other Waters of the U.S.
- Wetland
- Other Waters of the U.S. (Providence Data)
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Iberville Parish

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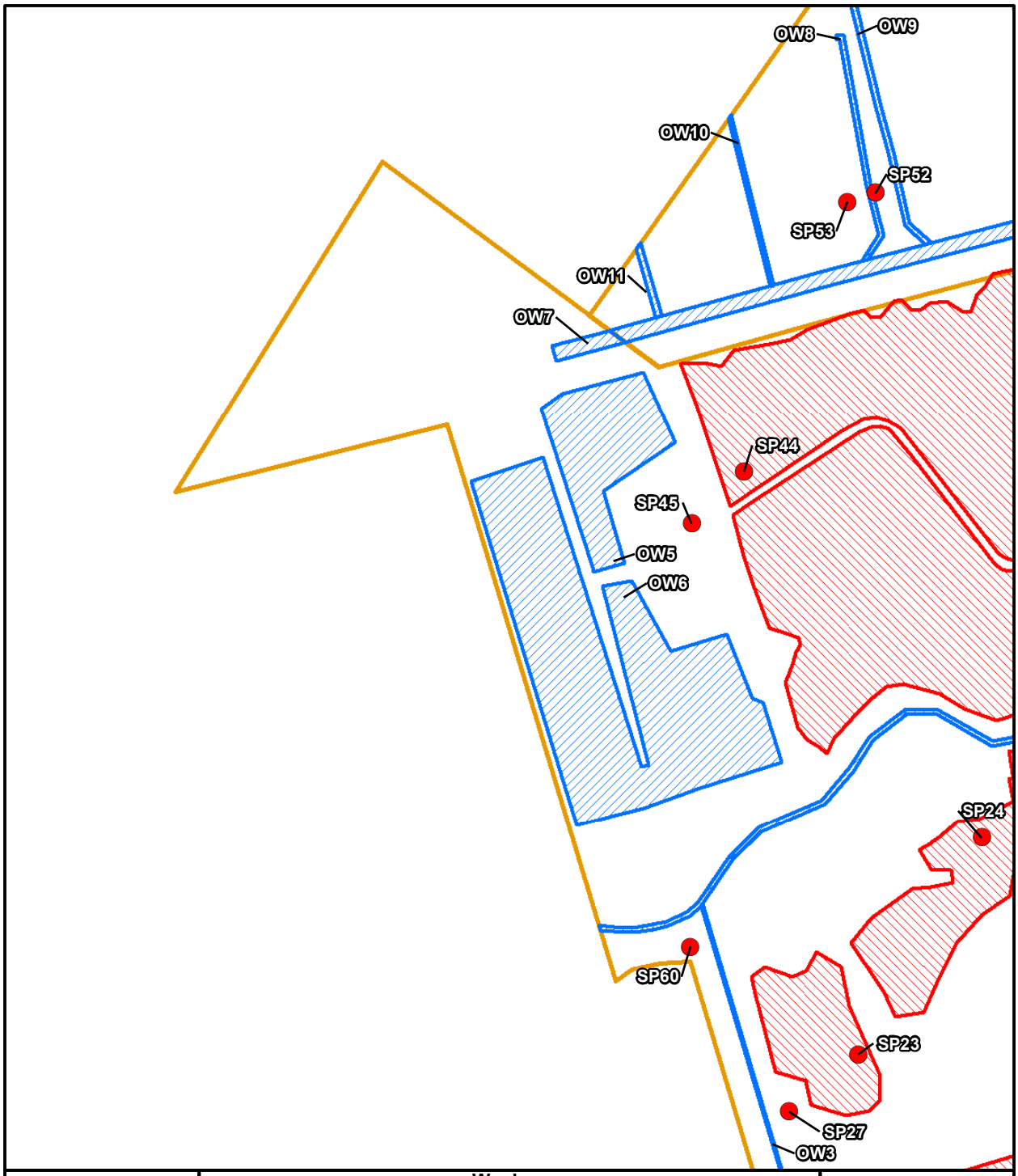

AECOM

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Feet

Wanhua
Syngenta - Delineation Areas
Figure 4 - Sheet 3 of 7

- Sample Point
- Project Area
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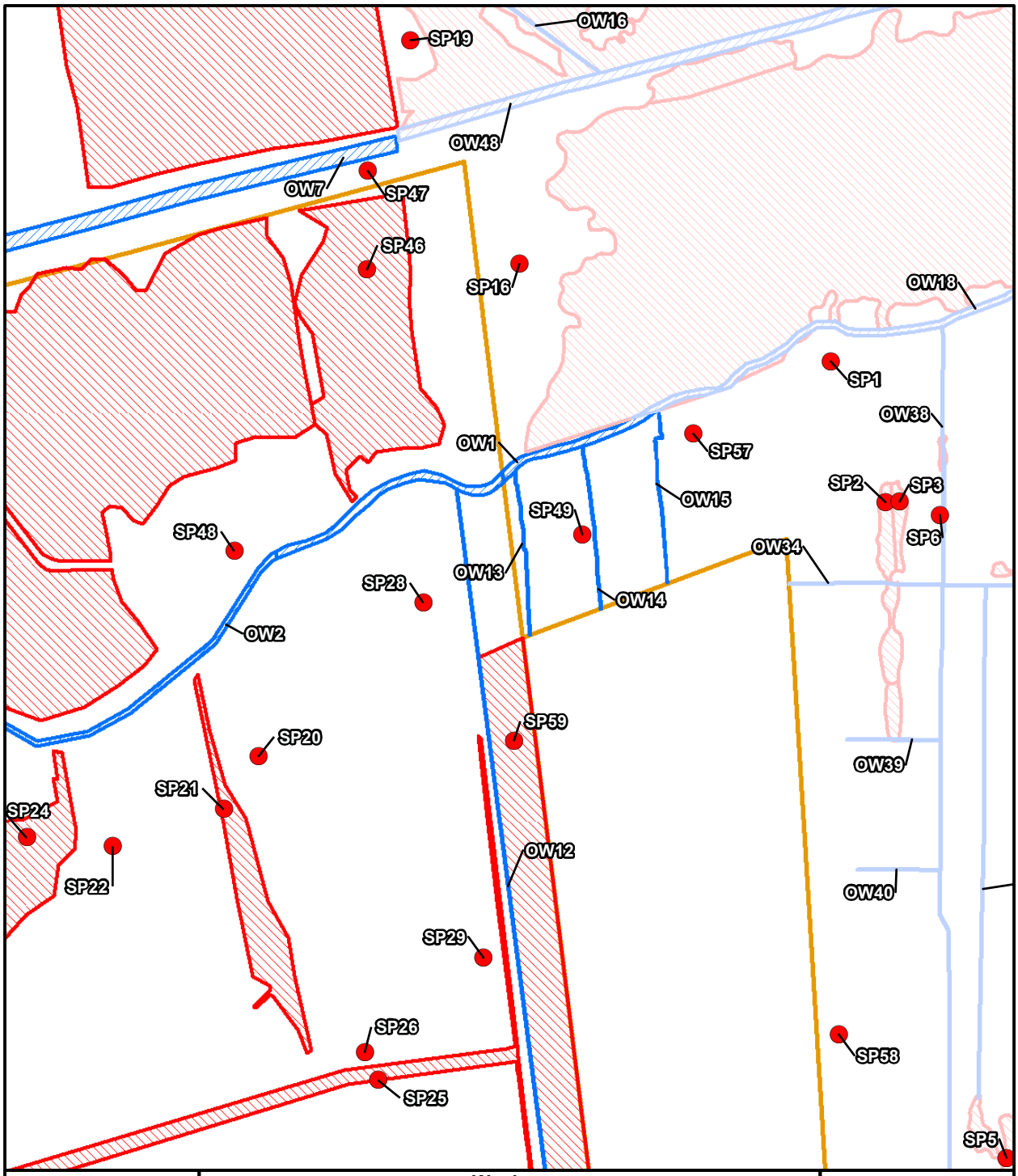

AECOM

0 525
Feet

Wanhua
Syngenta - Delineation Areas
Figure 4 - Sheet 4 of 7

- Sample Point
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Iberville Parish

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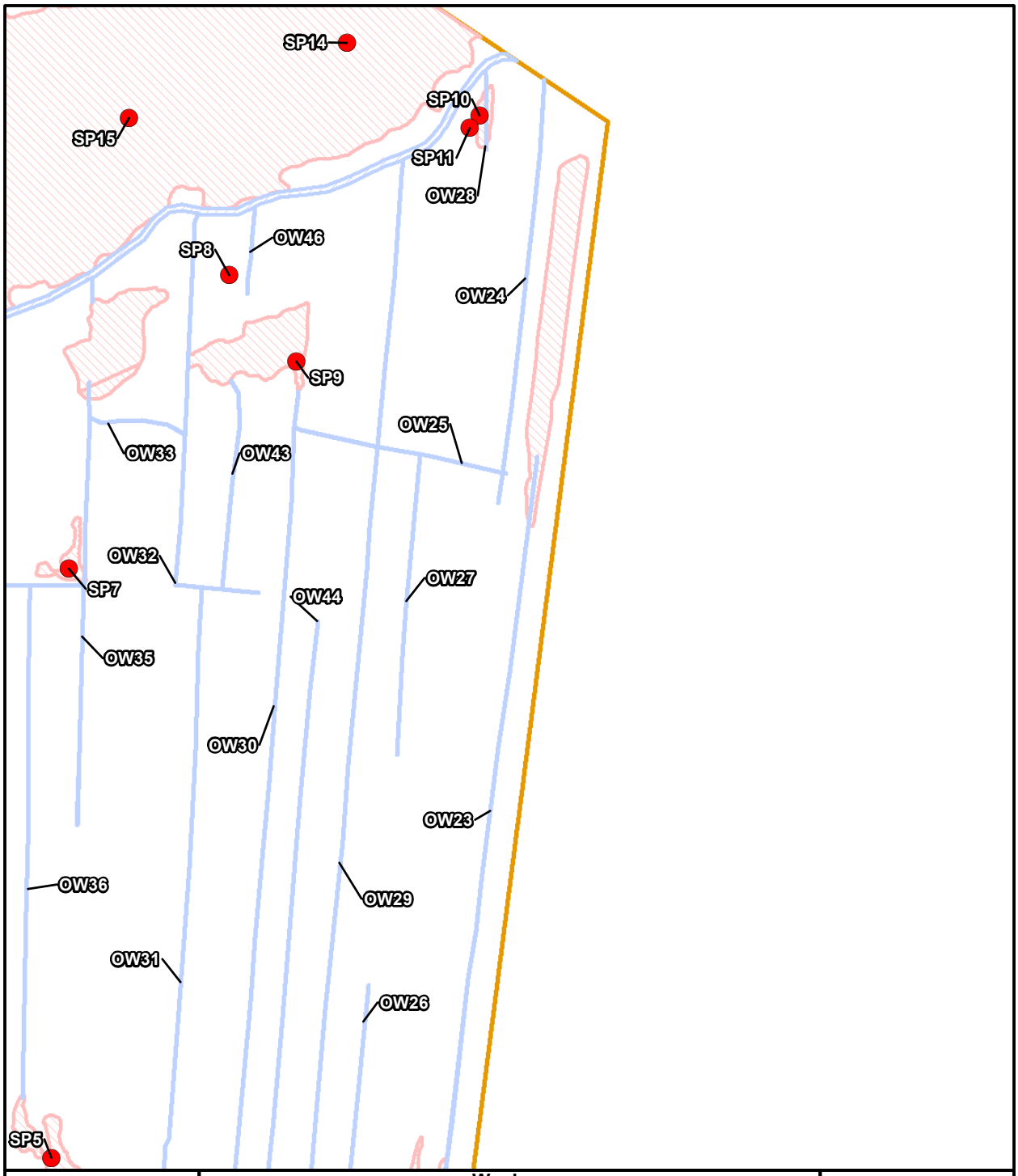

AECOM

0 525
Feet

Wanhua
Syngenta - Delineation Areas
Figure 4 - Sheet 5 of 7

- Sample Point
- Project Area
- Other Waters of the U.S.
- Wetland
- Other Waters of the U.S. (Providence Data)
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Iberville Parish

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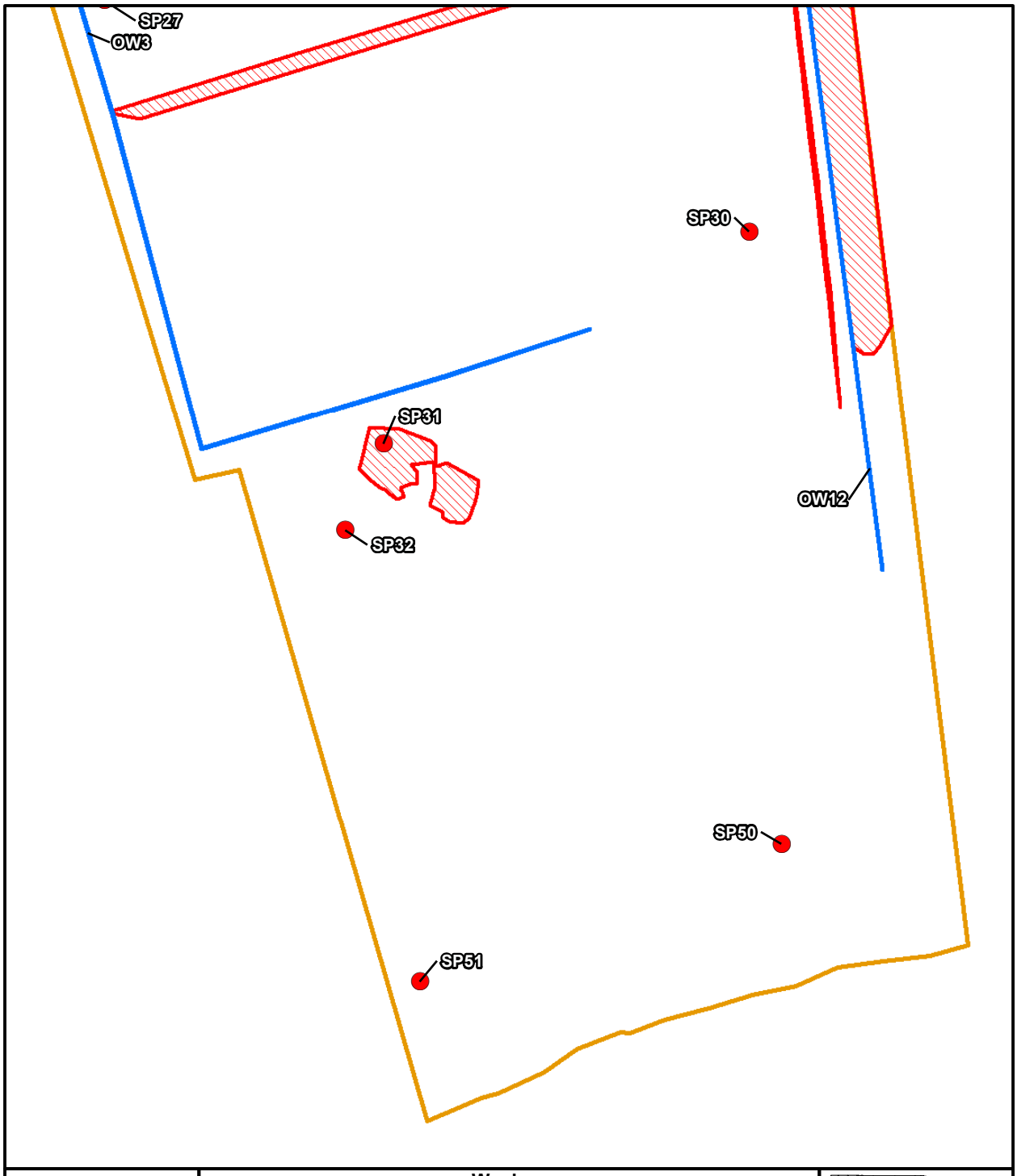

AECOM

0 525
Feet

Wanhua
Syngenta - Delineation Areas
Figure 4 - Sheet 6 of 7

- Sample Point
- Project Area
- Other Waters of the U.S.
- Wetland
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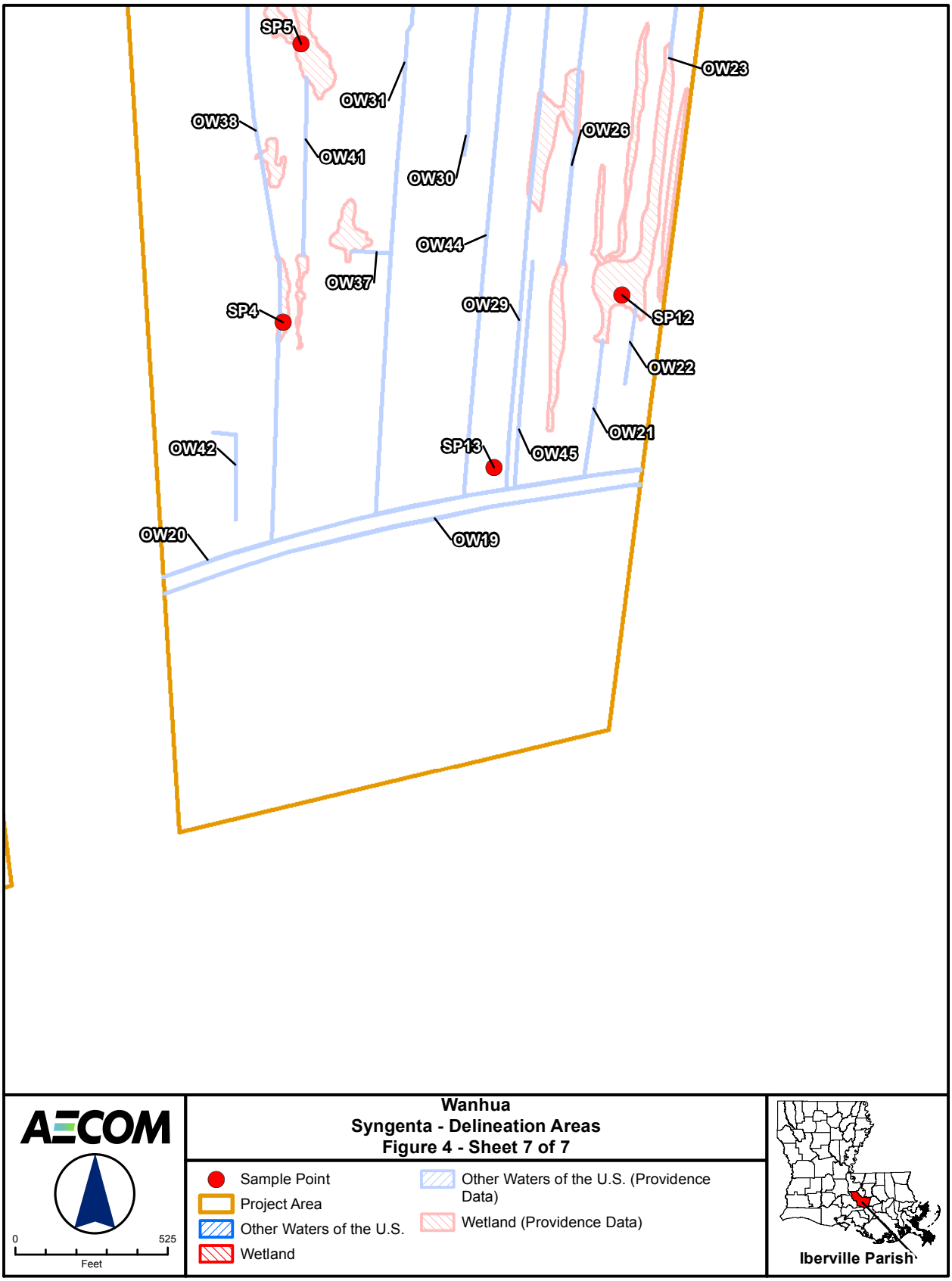

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Appendix A.
Wetland Determination Data Forms and Site Photographs

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	Parish: Iberville		Sampling Date:	4/7/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	1
Investigator(s):	Angela Singletary & John Gross	Section, Township, Range:		Section 67, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat		Local Relief (concave, convex, none): None		Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.229997°	Long: -91.083526°		Datum: NAD 83
Soil Map Unit Name:	Gramercy silty clay loam, 0 to 1 percent slopes			NWI Classification: PFO1A	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	No	
Hydric Soil Present?	No	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	No	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	No	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
No	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	No	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	No	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				No	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	None	Depth (inches):	N/A

Wetland Hydrology Present? **No**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-16	10YR 4/1	100					silt loam

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**	No	1cm Muck (A9) **(LRR O)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**	No	2cm Muck (A10) **(LRR S)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**	No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)	No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Stratified Layers (A5)	No	Depleted Matrix (F3)	No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)	No	Red Parent Material (TF2)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)	No	Very Shallow Dark Surface (TF12)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)	No	Other (Explain)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**		
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**		
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**		
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**		
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**		
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**		
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**		
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**		
No	Dark Surface (S7) **(LRR P, S, T, U)**				

Indicators for Problematic Soils:

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **No**

Remarks:

Soil profile appears to be consistent with Cancienne silt loam.

VEGETATION **SAMPLING POINT** 1

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Paspalum notatum		40	Yes	FACU
Trifolium repens		15	No	FACU
Conyza canadensis		10	No	NL (UPL)
Dichondra carolinensis		5	No	FAC
Cirsium horridulum		5	No	FAC
Ranunculus bulbosus		5	No	FAC
Andropogon virginicus		5	No	FAC
Triadica sebifera		2	No	FAC

87 = Total Cover

50/20 Threshold
50% of Total Cover = 43.5
20% of Total Cover = 17.4

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Smilax bona-nox		5	Yes	FAC

5 = Total Cover

50/20 Threshold
50% of Total Cover = 2.5
20% of Total Cover = 1

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 1

Total Number of Dominant Species Across All Strata 2

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 50.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	No
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
No

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 7, 2015

Photograph #1A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 1.

Photograph #1B

Direction:

South

Comments:

View of habitat and typical landscape features at Sample Location 1.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	Parish: Iberville		Sampling Date:	4/7/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	2
Investigator(s):	Angela Singletary & John Gross	Section, Township, Range:		Section 67, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat	Local Relief (concave, convex, none): None			Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.228702°	Long: -91.082996°		Datum: NAD 83
Soil Map Unit Name:	Gramercy silty clay loam, 0 to 1 percent slopes			NWI Classification: None	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	
Hydric Soil Present?	Yes	**Is the Sampled Area within a Wetland?** **Yes**
Wetland Hydrology Present?	Yes	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	No	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
Yes	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	No	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	Yes	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	Yes	Depth (inches):	6-16

Wetland Hydrology Present? **Yes**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-6	10YR 3/1	95	10YR 3/3	5	C	M	silty clay loam
6-16	10YR 5/1	80	10YR 4/4	10	C	M	silty clay loam
			10YR 5/4	10	C	M	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)
No	Stratified Layers (A5)	Yes	Depleted Matrix (F3)
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**
No	Dark Surface (S7) **(LRR P, S, T, U)**		

Indicators for Problematic Soils:

No	1cm Muck (A9) **(LRR O)**
No	2cm Muck (A10) **(LRR S)**
No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Red Parent Material (TF2)
No	Very Shallow Dark Surface (TF12)
No	Other (Explain)

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **Yes**

Remarks:

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Celtis laevigata		30	Yes	FACW
Ulmus americana		15	Yes	FAC

45 = Total Cover

50/20 Threshold
50% of Total Cover = 22.5
20% of Total Cover = 9

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Triadica sebifera		15	Yes	FAC

15 = Total Cover

50/20 Threshold
50% of Total Cover = 7.5
20% of Total Cover = 3

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Triadica sebifera		20	Yes	FAC
Sabal minor		10	Yes	FACW
Ilex decidua		5	No	FACW
Gleditsia triacanthos		5	No	FAC
Ulmus americana		2	No	FAC

42 = Total Cover

50/20 Threshold
50% of Total Cover = 21
20% of Total Cover = 8.4

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Persicaria hydropiperoides		30	Yes	OBL
Iris fulva		20	Yes	OBL
Ranunculus bulbosus		10	No	FAC
Carex debilis		5	No	FACW
Eleocharis wolfii		5	No	OBL

70 = Total Cover

50/20 Threshold
50% of Total Cover = 35
20% of Total Cover = 14

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Toxicodendron radicans		15	Yes	FAC
Campsis radicans		5	No	FAC
Ampelopsis arborea		5	No	FAC
Smilax bona-nox		2	No	FAC

27 = Total Cover

50/20 Threshold
50% of Total Cover = 13.5
20% of Total Cover = 5.4

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 8

Total Number of Dominant Species Across All Strata 8

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 100.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals B	

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 7, 2015

Photograph #2A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 2.

Photograph #2B

Direction:

South

Comments:

View of habitat and typical landscape features at Sample Location 2.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	Parish: Iberville		Sampling Date:	4/7/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	3
Investigator(s):	Angela Singletary & John Gross	Section, Township, Range:		Section 67, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat		Local Relief (concave, convex, none): None		Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.228727°	Long: -91.082837°		Datum: NAD 83
Soil Map Unit Name:	Gramercy silty clay loam, 0 to 1 percent slopes			NWI Classification: None	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **Yes**
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	No	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
Yes	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	No	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	Yes	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	Yes	Depth (inches):	4-16

Wetland Hydrology Present? **Yes**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-6	10YR 3/1	95	10YR 3/3	5	C	M	silty clay loam
6-16	10YR 5/1	80	10YR 4/4	10	C	M	silty clay loam
			10YR 5/4	10	C	M	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)
No	Stratified Layers (A5)	Yes	Depleted Matrix (F3)
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**
No	Dark Surface (S7) **(LRR P, S, T, U)**		

Indicators for Problematic Soils:

No	1cm Muck (A9) **(LRR O)**
No	2cm Muck (A10) **(LRR S)**
No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Red Parent Material (TF2)
No	Very Shallow Dark Surface (TF12)
No	Other (Explain)

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **Yes**

Remarks:

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Triadica sebifera		5	Yes	FAC
Rubus argutus		2	Yes	FAC

7 = Total Cover

50/20 Threshold
50% of Total Cover = 3.5
20% of Total Cover = 1.4

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Iris fulva		30	Yes	OBL
Eleocharis wolfii		20	Yes	OBL
Paspalum notatum		15	No	FACU
Ranunculus bulbosus		10	No	FAC
Hydrocotyle umbellata		10	No	FACW
Geranium maculatum		5	No	FACU

90 = Total Cover

50/20 Threshold
50% of Total Cover = 45
20% of Total Cover = 18

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Ampelopsis arborea		5	Yes	FAC

5 = Total Cover

50/20 Threshold
50% of Total Cover = 2.5
20% of Total Cover = 1

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 5

Total Number of Dominant Species Across All Strata 5

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 100.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 7, 2015

Photograph #3A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 3.

Photograph #3B

Direction:

North

Comments:

View of habitat and typical landscape features at Sample Location 3.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	Parish: Iberville		Sampling Date:	4/7/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	4
Investigator(s):	Angela Singletary & John Gross	Section, Township, Range:		Section 69, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat		Local Relief (concave, convex, none): None		Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.222978°	Long: -91.081923°		Datum: NAD 83
Soil Map Unit Name:	Vacherie silt loam			NWI Classification: None	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **Yes**
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	No	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
Yes	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	Yes	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	No	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A	**Wetland Hydrology Present?**
Water table Present?	None	Depth (inches):	N/A	**Yes**
Saturation Present?	Yes	Depth (inches):	10-16	

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-16	10YR 4/1	60	10YR 3/4	30	C	M	silty clay
			10YR 3/4	10	C	PL	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**	No	1cm Muck (A9) **(LRR O)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**	No	2cm Muck (A10) **(LRR S)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**	No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)	No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Stratified Layers (A5)	Yes	Depleted Matrix (F3)	No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)	No	Red Parent Material (TF2)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)	No	Very Shallow Dark Surface (TF12)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)	No	Other (Explain)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**		
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**		
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**		
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**		
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**		
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**		
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**		
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**		
No	Dark Surface (S7) **(LRR P, S, T, U)**				

Indicators for Problematic Soils:

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **Yes**

Remarks:

Soil map type not confirmed. Soil profile appears to be consistent with Gramercy silty clay loam.

VEGETATION **SAMPLING POINT** 4

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Celtis laevigata		35	Yes	FACW
Carya aquatica		5	No	OBL

40 = Total Cover

50/20 Threshold
50% of Total Cover = 20
20% of Total Cover = 8

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Triadica sebifera		5	Yes	FAC

5 = Total Cover

50/20 Threshold
50% of Total Cover = 2.5
20% of Total Cover = 1

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Alternanthera philoxeroides		30	Yes	OBL
Paspalum notatum		30	Yes	FACU
Eleocharis wolfii		10	No	OBL
Ranunculus bulbosus		5	No	FAC
Geranium maculatum		5	No	FACU
Hydrocotyle umbellata		2	No	FACW
Rumex crispus		2	No	FAC

84 = Total Cover

50/20 Threshold
50% of Total Cover = 42
20% of Total Cover = 16.8

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Smilax bona-nox		5	Yes	FAC

5 = Total Cover

50/20 Threshold
50% of Total Cover = 2.5
20% of Total Cover = 1

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC	(A): 4
Total Number of Dominant Species Across All Strata	5
Percent of Dominant Species That Are OBL, FACW, or FAC	(A/B): 80.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 7, 2015

Photograph #4A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 4.

Photograph #4B

Direction:

North

Comments:

View of habitat and typical landscape features at Sample Location 4.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	Parish: Iberville		Sampling Date:	4/7/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	5
Investigator(s):	Angela Singletary & John Gross	Section, Township, Range:		Section 69, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat		Local Relief (concave, convex, none): None		Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.222978°	Long: -91.081923°		Datum: NAD 83
Soil Map Unit Name:	Vacherie silt loam			NWI Classification: None	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **Yes**
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

Yes	Surface Water (A1)	No	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
Yes	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
Yes	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	Yes	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	No	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	Yes	Depth (inches):	0-3
Water table Present?	Yes	Depth (inches):	12-16
Saturation Present?	Yes	Depth (inches):	1-16

Wetland Hydrology Present? **Yes**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-16	10YR 5/1	50	7.5YR 4/4	30	C	M	silty clay
			7.5YR 4/4	10	C	PL	
			10YR 4/6	10	C	M	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)
No	Stratified Layers (A5)	Yes	Depleted Matrix (F3)
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**
No	Dark Surface (S7) **(LRR P, S, T, U)**		

Indicators for Problematic Soils:

No	1cm Muck (A9) **(LRR O)**
No	2cm Muck (A10) **(LRR S)**
No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Red Parent Material (TF2)
No	Very Shallow Dark Surface (TF12)
No	Other (Explain)

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **Yes**

Remarks:

Soil map type not confirmed. Soil profile appears to be consistent with Gramercy silty clay loam.

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Triadica sebifera		5	Yes	FAC

5 = Total Cover

50/20 Threshold
50% of Total Cover = 2.5
20% of Total Cover = 1

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Alternanthera philoxeroides		30	Yes	OBL
Persicaria hydropiperoides		20	Yes	OBL
Eleocharis wolfii		10	No	OBL
Ranunculus bulbosus		5	No	FAC
Hydrocotyle umbellata		5	No	FACW
Iris fulva		2	No	OBL
Cirsium horridulum		3	No	FAC

75 = Total Cover

50/20 Threshold
50% of Total Cover = 37.5
20% of Total Cover = 15

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC	(A): 3
Total Number of Dominant Species Across All Strata	3
Percent of Dominant Species That Are OBL, FACW, or FAC	(A/B): 100.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 7, 2015

Photograph #5A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 5.

Photograph #5B

Direction:

Southwest

Comments:

View of habitat and typical landscape features at Sample Location 5.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	Parish: Iberville		Sampling Date:	4/7/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	6
Investigator(s):	Angela Singletary & John Gross	Section, Township, Range:		Section 67, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat	Local Relief (concave, convex, none): None			Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.228606°	Long: -91.082504°		Datum: NAD 83
Soil Map Unit Name:	Gramercy silty clay loam, 0 to 1 percent slopes			NWI Classification: None	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **No**
Hydric Soil Present?	No	
Wetland Hydrology Present?	No	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	No	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
No	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	No	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	No	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A	**Wetland Hydrology Present?**
Water table Present?	None	Depth (inches):	N/A	**No**
Saturation Present?	None	Depth (inches):	N/A	

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-4	10YR 3/2	100					silt loam
4-16	10YR 4/1	95	10YR 4/6	5	C	M	silt loam

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**	No	1cm Muck (A9) **(LRR O)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**	No	2cm Muck (A10) **(LRR S)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**	No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)	No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Stratified Layers (A5)	No	Depleted Matrix (F3)	No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)	No	Red Parent Material (TF2)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)	No	Very Shallow Dark Surface (TF12)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)	No	Other (Explain)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**		
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**		
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**		
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**		
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**		
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**		
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**		
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**		
No	Dark Surface (S7) **(LRR P, S, T, U)**				

Indicators for Problematic Soils:

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **No**

Remarks:

Soil profile appears to be consistent with Cancienne silt loam.

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Celtis laevigata		30	Yes	FACW
Ulmus americana		20	Yes	FAC
Triadica sebifera		5	No	FAC

55 = Total Cover

50/20 Threshold
50% of Total Cover = 27.5
20% of Total Cover = 11

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Triadica sebifera		15	Yes	FAC
Rubus argutus		5	Yes	FAC

20 = Total Cover

50/20 Threshold
50% of Total Cover = 10
20% of Total Cover = 4

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Triadica sebifera		10	Yes	FAC

10 = Total Cover

50/20 Threshold
50% of Total Cover = 5
20% of Total Cover = 2

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Oplismenus hirtellus		20	Yes	FAC
Iva annua		15	Yes	FAC
Fragaria virginiana		10	No	FACU
Geranium maculatum		5	No	FACU
Galium aparine		5	No	FACU
Trifolium repens		5	No	FACU

60 = Total Cover

50/20 Threshold
50% of Total Cover = 30
20% of Total Cover = 12

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Toxicodendron radicans		15	Yes	FAC
Smilax bona-nox		10	Yes	FAC
Campsis radicans		5	No	FAC
Ampelopsis arborea		5	No	FAC

35 = Total Cover

50/20 Threshold
50% of Total Cover = 17.5
20% of Total Cover = 7

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 9

Total Number of Dominant Species Across All Strata 9

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 100.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 7, 2015

Photograph #6A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 6.

Photograph #6B

Direction:

North

Comments:

View of habitat and typical landscape features at Sample Location 6.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	Parish: Iberville		Sampling Date:	4/7/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	7
Investigator(s):	Angela Singletary & John Gross	Section, Township, Range:		Section 69, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat		Local Relief (concave, convex, none): None		Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.228160°	Long: -91.081655°		Datum: NAD 83
Soil Map Unit Name:	Gramercy silty clay loam, 0 to 1 percent slopes			NWI Classification: None	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **Yes**
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	No	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
Yes	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
Yes	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	Yes	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	Yes	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	Yes	Depth (inches):	10-16
Saturation Present?	Yes	Depth (inches):	1-16

Wetland Hydrology Present? **Yes**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-16	10YR 4/1	50	GY1 4/N	30	C	M	silty clay loam
			10YR 4/4	10	C	M	
			10YR 4/4	10	C	PL	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**	No	1cm Muck (A9) **(LRR O)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**	No	2cm Muck (A10) **(LRR S)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**	No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)	No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Stratified Layers (A5)	Yes	Depleted Matrix (F3)	No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)	No	Red Parent Material (TF2)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)	No	Very Shallow Dark Surface (TF12)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)	No	Other (Explain)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**		
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**		
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**		
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**		
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**		
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**		
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**		
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**		
No	Dark Surface (S7) **(LRR P, S, T, U)**				

Indicators for Problematic Soils:

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **Yes**

Remarks:

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Gleditsia triacanthos		5	Yes	FAC

5 = Total Cover

50/20 Threshold
50% of Total Cover = 2.5
20% of Total Cover = 1

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Iris fulva		30	Yes	OBL
Iva annua		15	No	FAC
Ranunculus bulbosus		10	No	FAC
Persicaria hydropiperoides		10	No	OBL
Carex debilis		10	No	FACW
Rumex crispus		5	No	FAC
Eleocharis wolfii		5	No	OBL
Juncus effusus		2	No	OBL

87 = Total Cover

50/20 Threshold
50% of Total Cover = 43.5
20% of Total Cover = 17.4

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Ampelopsis arborea		5	Yes	FAC
Toxicodendron radicans		5	Yes	FAC
Campsis radicans		2	No	FAC

12 = Total Cover

50/20 Threshold
50% of Total Cover = 6
20% of Total Cover = 2.4

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 4

Total Number of Dominant Species Across All Strata 4

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 100.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 7, 2015

Photograph #7A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 7.

Photograph #7B

Direction:

Southwest

Comments:

View of habitat and typical landscape features at Sample Location 7.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	Parish: Iberville		Sampling Date:	4/7/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	8
Investigator(s):	Angela Singletary & John Gross	Section, Township, Range:		Section 69, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat		Local Relief (concave, convex, none): None		Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.230695°	Long: -91.079967°		Datum: NAD 83
Soil Map Unit Name:	Gramercy silty clay loam, 0 to 1 percent slopes			NWI Classification: PFO1A	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **No**
Hydric Soil Present?	No	
Wetland Hydrology Present?	No	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	No	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
No	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	No	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	No	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	None	Depth (inches):	N/A

Wetland Hydrology Present? **No**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Redox Type	Redox Location	Texture
0-4	10YR 3/2	95	10YR 5/3	5	D	M	silt loam
4-16	10YR 4/2	80	10YR 4/6	10	C	M	silt loam
			10YR 5/1	10	D	M	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**	No	1cm Muck (A9) **(LRR O)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**	No	2cm Muck (A10) **(LRR S)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**	No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)	No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Stratified Layers (A5)	No	Depleted Matrix (F3)	No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)	No	Red Parent Material (TF2)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)	No	Very Shallow Dark Surface (TF12)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)	No	Other (Explain)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**		
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**		
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**		
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**		
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**		
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**		
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**		
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**		
No	Dark Surface (S7) **(LRR P, S, T, U)**				

Indicators for Problematic Soils:

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **No**

Remarks:

Soil profile appears to be consistent with Cancienne silt loam.

VEGETATION **SAMPLING POINT** 8

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Quercus nigra		20	Yes	FAC
Celtis laevigata		10	Yes	FACW
Quercus pagoda		5	No	FACW
Ulmus americana		5	No	FAC

40 = Total Cover

50/20 Threshold
50% of Total Cover = 20
20% of Total Cover = 8

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Rubus argutus		15	Yes	FAC
Sabal minor		5	Yes	FACW

20 = Total Cover

50/20 Threshold
50% of Total Cover = 10
20% of Total Cover = 4

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Fragaria virginiana		20	Yes	FACU
Iva annua		15	Yes	FAC
Ambrosia trifida		10	No	FAC
Commelina virginica		5	No	FACW
Galium aparine		2	No	FACU

52 = Total Cover

50/20 Threshold
50% of Total Cover = 26
20% of Total Cover = 10.4

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Toxicodendron radicans		20	Yes	FAC
Campsis radicans		10	Yes	FAC
Parthenocissus quinquefolia		10	Yes	FACU

40 = Total Cover

50/20 Threshold
50% of Total Cover = 20
20% of Total Cover = 8

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 7

Total Number of Dominant Species Across All Strata 9

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 77.78%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 7, 2015

Photograph #8A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 8.

Photograph #8B

Direction:

East

Comments:

View of habitat and typical landscape features at Sample Location 8.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	Parish: Iberville		Sampling Date:	4/7/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	9
Investigator(s):	Angela Singletary & John Gross	Section, Township, Range:		Section 69, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat		Local Relief (concave, convex, none): None		Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.229954°	Long: -91.079282°		Datum: NAD 83
Soil Map Unit Name:	Vacherie silt loam			NWI Classification: PFO1A	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **Yes**
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	No	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
No	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	Yes	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	Yes	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	None	Depth (inches):	N/A

Wetland Hydrology Present? **Yes**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-2	10YR 3/1	100					silty clay loam
2-16	10YR 4/1	60	7.5YR 4/6	20	C	M	silty clay loam
			7.5YR 4/6	10	C	PL	
			5Y 4/1	10	C	M	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**	No	1cm Muck (A9) **(LRR O)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**	No	2cm Muck (A10) **(LRR S)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**	No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)	No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Stratified Layers (A5)	Yes	Depleted Matrix (F3)	No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)	No	Red Parent Material (TF2)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)	No	Very Shallow Dark Surface (TF12)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)	No	Other (Explain)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**		
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**		
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**		
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**		
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**		
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**		
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**		
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**		
No	Dark Surface (S7) **(LRR P, S, T, U)**				

Indicators for Problematic Soils:

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **Yes**

Remarks:

Soil map type not confirmed. Soil profile appears to be consistent with Gramercy silty clay loam.

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Celtis laevigata		30	Yes	FACW
Quercus phellos		10	Yes	FACW
Quercus nigra		5	No	FAC
Acer negundo		5	No	FAC

50 = Total Cover

50/20 Threshold
50% of Total Cover = 25
20% of Total Cover = 10

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Sabal minor		15	Yes	FACW
Ilex decidua		5	Yes	FACW

20 = Total Cover

50/20 Threshold
50% of Total Cover = 10
20% of Total Cover = 4

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Persicaria hydropiperoides		30	Yes	OBL
Iva annua		15	Yes	FAC
Carex amphibola		10	No	FACW
Carex styloflexa		10	No	FACW
Iris fulva		5	No	OBL
Galium aparine		5	No	FACU

75 = Total Cover

50/20 Threshold
50% of Total Cover = 37.5
20% of Total Cover = 15

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Toxicodendron radicans		15	Yes	FAC
Smilax bona-nox		5	Yes	FAC
Smilax rotundifolia		5	Yes	FAC

25 = Total Cover

50/20 Threshold
50% of Total Cover = 12.5
20% of Total Cover = 5

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 9

Total Number of Dominant Species Across All Strata 9

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 100.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 7, 2015

Photograph #9A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 9.

Photograph #9B

Direction:

North

Comments:

View of habitat and typical landscape features at Sample Location 9.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	Parish: Iberville		Sampling Date:	4/7/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	10
Investigator(s):	Angela Singletary & John Gross	Section, Township, Range:		Section 69, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat		Local Relief (concave, convex, none): None		Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.232132°	Long: -91.077375°		Datum: NAD 83
Soil Map Unit Name:	Sharkey clay, 0-1 percent slopes, frequently flooded, south			NWI Classification: PFO1A	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **Yes**
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	Yes	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
No	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	Yes	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	Yes	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	None	Depth (inches):	N/A

Wetland Hydrology Present? **Yes**

Remarks:

SOIL

Depth	Matrix		Redox Features				Texture
Inches	Color	%	Color	%	Type	Location	
0-6	10YR 4/1	85	7.5YR 4/6	10	C	M	silty clay loam
			7.5YR 3/3	5	C	M	
6-16	10YR 5/1	65	7.5YR 4/6	30	C	M	silty clay loam
			7.5YR 3/3	5	C	PL	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**	No	1cm Muck (A9) **(LRR O)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**	No	2cm Muck (A10) **(LRR S)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**	No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)	No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Stratified Layers (A5)	Yes	Depleted Matrix (F3)	No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)	No	Red Parent Material (TF2)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)	No	Very Shallow Dark Surface (TF12)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)	No	Other (Explain)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**		
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**		
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**		
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**		
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**		
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**		
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**		
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**		
No	Dark Surface (S7) **(LRR P, S, T, U)**				

Indicators for Problematic Soils:

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **Yes**

Remarks:

VEGETATION **SAMPLING POINT** 10

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Acer negundo		20	Yes	FAC
Celtis laevigata		15	Yes	FACW
Quercus nigra		10	Yes	FAC
Ulmus americana		5	No	FAC

50 = Total Cover

50/20 Threshold
50% of Total Cover = 25
20% of Total Cover = 10

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Sabal minor		20	Yes	FACW
Ilex decidua		10	Yes	FACW
Ulmus americana		5	No	FAC
Rubus argutus		5	No	FAC

40 = Total Cover

50/20 Threshold
50% of Total Cover = 20
20% of Total Cover = 8

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Persicaria hydropiperoides		40	Yes	OBL
Commelina virginica		5	No	FACW
Carex debilis		5	No	FACW
Rumex crispus		5	No	FAC
Cirsium horridulum		2	No	FAC
Iris fulva		2	No	OBL

59 = Total Cover

50/20 Threshold
50% of Total Cover = 29.5
20% of Total Cover = 11.8

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Toxicodendron radicans		15	Yes	FAC
Parthenocissus quinquefolia		5	Yes	FACU

20 = Total Cover

50/20 Threshold
50% of Total Cover = 10
20% of Total Cover = 4

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 7

Total Number of Dominant Species Across All Strata 8

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 87.50%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 7, 2015

Photograph #10A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 10.

Photograph #10B

Direction:

Southeast

Comments:

View of habitat and typical landscape features at Sample Location 10.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	Parish: Iberville		Sampling Date:	4/7/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	11
Investigator(s):	Angela Singletary & John Gross	Section, Township, Range:		Section 69, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Berm		Local Relief (concave, convex, none): Convex		Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.232126°	Long: -91.077406°		Datum: NAD 83
Soil Map Unit Name:	Sharkey clay, 0-1 percent slopes, frequently flooded, south			NWI Classification: PFO1A	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **No**
Hydric Soil Present?	No	
Wetland Hydrology Present?	No	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	No	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
No	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	No	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	No	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				No	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	None	Depth (inches):	N/A

Wetland Hydrology Present? **No**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Redox Type	Redox Location	Texture
0-1	10YR 3/2	100					silty clay loam
1-16	10YR 4/1	85	10YR 4/6	10	C	M	silty clay loam
			10YR 2/1	5	C	M	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**	No	1cm Muck (A9) **(LRR O)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**	No	2cm Muck (A10) **(LRR S)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**	No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)	No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Stratified Layers (A5)	No	Depleted Matrix (F3)	No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)	No	Red Parent Material (TF2)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)	No	Very Shallow Dark Surface (TF12)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)	No	Other (Explain)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**		
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**		
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**		
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**		
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**		
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**		
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**		
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**		
No	Dark Surface (S7) **(LRR P, S, T, U)**				

Indicators for Problematic Soils:

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **No**

Remarks:

Soil profile appears to be consistent with Commerce silt loam.

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Celtis laevigata		30	Yes	FACW
Ulmus americana		20	Yes	FAC

50 = Total Cover

50/20 Threshold
50% of Total Cover = 25
20% of Total Cover = 10

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Crataegus marshallii		10	Yes	FAC
Celtis laevigata		10	Yes	FAC
Ulmus americana		5	Yes	FAC

25 = Total Cover

50/20 Threshold
50% of Total Cover = 12.5
20% of Total Cover = 5

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Geranium maculatum		20	Yes	FACU
Fragaria virginiana		15	Yes	FACU
Ranunculus bulbosus		5	No	FAC
Erigeron strigosus		5	No	FAC
Iva annua		2	No	FAC

47 = Total Cover

50/20 Threshold
50% of Total Cover = 23.5
20% of Total Cover = 9.4

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Toxicodendron radicans		45	Yes	FAC
Campsis radicans		10	No	FAC

55 = Total Cover

50/20 Threshold
50% of Total Cover = 27.5
20% of Total Cover = 11

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 6

Total Number of Dominant Species Across All Strata 8

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 75.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 7, 2015

Photograph #11A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 11.

Photograph #11B

Direction:

Northeast

Comments:

View of habitat and typical landscape features at Sample Location 11.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	Parish: Iberville		Sampling Date:	4/7/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	12
Investigator(s):	Angela Singletary & John Gross	Section, Township, Range:		Section 69, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat	Local Relief (concave, convex, none): None			Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.220517°	Long: -91.078456°		Datum: NAD 83
Soil Map Unit Name:	Cancienne silt loam, 0 to 1 percent slopes			NWI Classification: None	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **Yes**
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	Yes	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
No	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	Yes	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	Yes	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A	**Wetland Hydrology Present?**
Water table Present?	None	Depth (inches):	N/A	**Yes**
Saturation Present?	None	Depth (inches):	N/A	

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Type	Location	Texture
0-2	10YR 3/1	100					silty clay loam
2-16	10YR 5/1	85	7.5YR 4/6	5	C	M	silty clay loam
			7.5YR 4/6	5	C	PL	
			10YR 4/1	5	C	M	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**	No	1cm Muck (A9) **(LRR O)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**	No	2cm Muck (A10) **(LRR S)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**	No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)	No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Stratified Layers (A5)	Yes	Depleted Matrix (F3)	No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)	No	Red Parent Material (TF2)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)	No	Very Shallow Dark Surface (TF12)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)	No	Other (Explain)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**		
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**		
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**		
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**		
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**		
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**		
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**		
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**		
No	Dark Surface (S7) **(LRR P, S, T, U)**				

Indicators for Problematic Soils:

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **Yes**

Remarks:

Soil profile appears to be consistent with Gramercy silty clay loam.

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Celtis laevigata		30	Yes	FACW
Gleditsia triacanthos		15	Yes	FAC
Ulmus americana		10	No	FAC

55 = Total Cover

50/20 Threshold
50% of Total Cover = 27.5
20% of Total Cover = 11

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Ulmus americana		5	Yes	FAC

5 = Total Cover

50/20 Threshold
50% of Total Cover = 2.5
20% of Total Cover = 1

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Ranunculus bulbosus		30	Yes	FAC
Carex debilis		10	Yes	FACW

40 = Total Cover

50/20 Threshold
50% of Total Cover = 20
20% of Total Cover = 8

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Toxicodendron radicans		10	Yes	FAC
Parthenocissus quinquefolia		2	No	FACU

12 = Total Cover

50/20 Threshold
50% of Total Cover = 6
20% of Total Cover = 2.4

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 6

Total Number of Dominant Species Across All Strata 6

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 100.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 7, 2015

Photograph #12A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 12.

Photograph #12B

Direction:

East

Comments:

View of habitat and typical landscape features at Sample Location 12.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	Parish: Iberville		Sampling Date:	4/7/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	13
Investigator(s):	Angela Singletary & John Gross	Section, Township, Range:		Section 69, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat	Local Relief (concave, convex, none): None			Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.218878°	Long: -91.079884°		Datum: NAD 83
Soil Map Unit Name:	Cancienne silt loam, 0 to 1 percent slopes			NWI Classification: None	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	No	**Is the Sampled Area within a Wetland?** **No**
Hydric Soil Present?	No	
Wetland Hydrology Present?	No	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	No	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
No	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	No	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	No	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				No	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	None	Depth (inches):	N/A

Wetland Hydrology Present? **No**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-16	10YR 4/2	100					silt loam

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**	No	1cm Muck (A9) **(LRR O)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**	No	2cm Muck (A10) **(LRR S)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**	No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)	No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Stratified Layers (A5)	No	Depleted Matrix (F3)	No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)	No	Red Parent Material (TF2)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)	No	Very Shallow Dark Surface (TF12)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)	No	Other (Explain)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**		
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**		
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**		
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**		
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**		
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**		
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**		
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**		
No	Dark Surface (S7) **(LRR P, S, T, U)**				

Indicators for Problematic Soils:

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **No**

Remarks:

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Paspalum notatum		50	Yes	FACU
Trifolium repens		20	Yes	FACU
Andropogon virginicus		10	No	FAC
Conyza canadensis		5	No	NL (UPL)
Eleocharis wolfii		2	No	OBL
Ranunculus bulbosus		2	No	FAC

89 = Total Cover

50/20 Threshold
50% of Total Cover = 44.5
20% of Total Cover = 17.8

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 0

Total Number of Dominant Species Across All Strata 2

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 0.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	No
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
No

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 7, 2015

Photograph #13A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 13.

Photograph #13B

Direction:

North

Comments:

View of habitat and typical landscape features at Sample Location 13.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	County: Iberville		Sampling Date:	4/9/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	36
Investigator(s):	John Gross & Josh Roy	Section, Township, Range:		Section 69, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat	Local Relief (concave, convex, none): None			Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.232833°	Long: -91.079066°		Datum: NAD 83
Soil Map Unit Name:	Sharkey clay, 0 to 1 percent slopes, rarely flooded, south			NWI Classification: PFO1A	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **Yes**
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	Yes	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
No	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	Yes	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	No	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	None	Depth (inches):	N/A

Wetland Hydrology Present? **Yes**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-16	10YR 4/1	60	10YR 4/3	20	C	M	silty clay
			10YR 5/4	15	C	M	
			10YR 3/4	5	C	PL	

Type: C=Concentration, D=+A50:F54Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**	No	1cm Muck (A9) **(LRR O)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**	No	2cm Muck (A10) **(LRR S)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**	No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)	No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Stratified Layers (A5)	Yes	Depleted Matrix (F3)	No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)	No	Red Parent Material (TF2)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)	No	Very Shallow Dark Surface (TF12)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)	No	Other (Explain)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**		
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**		
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**		
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**		
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**		
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**		
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**		
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**		
No	Dark Surface (S7) **(LRR P, S, T, U)**				

Indicators for Problematic Soils:

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **Yes**

Remarks:

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Celtis laevigata		25	Yes	FACW
Quercus nigra		15	Yes	FAC
Quercus texana		10	No	FACW
Acer negundo		10	No	FAC

60 = Total Cover

50/20 Threshold
50% of Total Cover = 30
20% of Total Cover = 12

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Celtis laevigata		25	Yes	FACW
Fraxinus pennsylvanica		20	Yes	FACW
Cornus drummondii		5	No	FAC

50 = Total Cover

50/20 Threshold
50% of Total Cover = 25
20% of Total Cover = 10

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Sabal minor		40	Yes	FACW

40 = Total Cover

50/20 Threshold
50% of Total Cover = 20
20% of Total Cover = 8

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Toxicodendron radicans		20	Yes	FAC

20 = Total Cover

50/20 Threshold
50% of Total Cover = 10
20% of Total Cover = 4

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 6

Total Number of Dominant Species Across All Strata 6

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 100.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 9, 2014

Photograph #36A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 36.

Photograph #36B

Direction:

East

Comments:

View of habitat and typical landscape features at Sample Location 36.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	County: Iberville		Sampling Date:	4/9/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	37
Investigator(s):	John Gross & Josh Roy	Section, Township, Range:		Section 69, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat	Local Relief (concave, convex, none): None			Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.232289°	Long: -91.080878°		Datum: NAD 83
Soil Map Unit Name:	Sharkey clay, 0 to 1 percent slopes, rarely flooded, south			NWI Classification: PFO1A	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **Yes**
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	Yes	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
No	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	No	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	Yes	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	None	Depth (inches):	N/A

Wetland Hydrology Present? **Yes**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-5	10YR 3/2	100					silty clay
5-16	10YR 4/1	75	10YR 4/6	25	C	M	clay

Type: C=Concentration, D=+A50:F54Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)
No	Stratified Layers (A5)	Yes	Depleted Matrix (F3)
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**
No	Dark Surface (S7) **(LRR P, S, T, U)**		

Indicators for Problematic Soils:

No	1cm Muck (A9) **(LRR O)**
No	2cm Muck (A10) **(LRR S)**
No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Red Parent Material (TF2)
No	Very Shallow Dark Surface (TF12)
No	Other (Explain)

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **Yes**

Remarks:

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Celtis laevigata		25	Yes	FACW
Acer negundo		25	Yes	FAC
Ulmus americana		15	Yes	FAC

65 = Total Cover

50/20 Threshold
50% of Total Cover = 32.5
20% of Total Cover = 13

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Acer negundo		25	Yes	FAC
Celtis laevigata		15	Yes	FACW
Ulmus americana		10	Yes	FAC

50 = Total Cover

50/20 Threshold
50% of Total Cover = 25
20% of Total Cover = 10

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Sabal minor		40	Yes	FACW

40 = Total Cover

50/20 Threshold
50% of Total Cover = 20
20% of Total Cover = 8

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Iva annua		10	Yes	FAC

10 = Total Cover

50/20 Threshold
50% of Total Cover = 5
20% of Total Cover = 2

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Parthenocissus quinquefolia		15	Yes	FACU
Toxicodendron radicans		10	Yes	FAC

25 = Total Cover

50/20 Threshold
50% of Total Cover = 12.5
20% of Total Cover = 5

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 9

Total Number of Dominant Species Across All Strata 10

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 90.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals B	

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 9, 2014

Photograph #37A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 37.

Photograph #37B

Direction:

East

Comments:

View of habitat and typical landscape features at Sample Location 37.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	County: Iberville		Sampling Date:	4/9/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	38
Investigator(s):	John Gross & Josh Roy	Section, Township, Range:		Section 67, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat	Local Relief (concave, convex, none): None			Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.230929°	Long: -91.086657°		Datum: NAD 83
Soil Map Unit Name:	Sharkey clay, 0 to 1 percent slopes, rarely flooded, south			NWI Classification: PFO1A	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **No**
Hydric Soil Present?	No	
Wetland Hydrology Present?	No	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	No	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
No	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	No	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	No	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	None	Depth (inches):	N/A

Wetland Hydrology Present? **No**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox %	Redox Type	Redox Location	Texture
0-5	10YR 3/2	100					silty clay loam
5-16	10YR 4/2	70	10YR 4/4	20	C	M	silty clay loam
			10YR 4/1	10	D	M	

Type: C=Concentration, D=+A50:F54Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**	No	1cm Muck (A9) **(LRR O)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**	No	2cm Muck (A10) **(LRR S)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**	No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)	No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Stratified Layers (A5)	No	Depleted Matrix (F3)	No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)	No	Red Parent Material (TF2)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)	No	Very Shallow Dark Surface (TF12)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)	No	Other (Explain)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**		
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**		
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**		
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**		
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**		
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**		
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**		
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**		
No	Dark Surface (S7) **(LRR P, S, T, U)**				

Indicators for Problematic Soils:

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **No**

Remarks:

Soil profile appears to be consistent with Commerce silty clay loam.

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Celtis laevigata		35	Yes	FACW
Acer negundo		20	Yes	FAC
Ulmus americana		10	No	FAC

65 = Total Cover

50/20 Threshold
50% of Total Cover = 32.5
20% of Total Cover = 13

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Acer negundo		25	Yes	FAC
Celtis laevigata		10	Yes	FACW
Ulmus americana		5	No	FAC

40 = Total Cover

50/20 Threshold
50% of Total Cover = 20
20% of Total Cover = 8

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Sabal minor		25	Yes	FACW
Ligustrum sinense		25	Yes	FAC

50 = Total Cover

50/20 Threshold
50% of Total Cover = 25
20% of Total Cover = 10

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Athyrium asplenioides		10	Yes	FAC
Iva annua		10	Yes	FAC

20 = Total Cover

50/20 Threshold
50% of Total Cover = 10
20% of Total Cover = 4

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 8

Total Number of Dominant Species Across All Strata 8

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 100.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals B	

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 9, 2014

Photograph #38A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 38.

Photograph #38B

Direction:

West

Comments:

View of habitat and typical landscape features at Sample Location 38.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	County: Iberville		Sampling Date:	4/9/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	39
Investigator(s):	John Gross & Josh Roy	Section, Township, Range:		Section 69, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat	Local Relief (concave, convex, none): None			Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.234296°	Long: -91.080445°		Datum: NAD 83
Soil Map Unit Name:	Sharkey clay, 0 to 1 percent slopes, rarely flooded, south			NWI Classification: PFO1A	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **Yes**
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	Yes	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
No	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	No	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	Yes	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	None	Depth (inches):	N/A

Wetland Hydrology Present? **Yes**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-2	10YR 3/2	100					silty clay
2-16	10YR 4/1	70	10YR 5/6	20	C	M	clay
			7.5YR 4/4	10	C	M	

Type: C=Concentration, D=+A50:F54Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)
No	Stratified Layers (A5)	Yes	Depleted Matrix (F3)
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**
No	Dark Surface (S7) **(LRR P, S, T, U)**		

Indicators for Problematic Soils:

No	1cm Muck (A9) **(LRR O)**
No	2cm Muck (A10) **(LRR S)**
No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Red Parent Material (TF2)
No	Very Shallow Dark Surface (TF12)
No	Other (Explain)

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **Yes**

Remarks:

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Quercus nigra		20	Yes	FAC
Acer negundo		20	Yes	FAC
Celtis laevigata		15	Yes	FACW

55 = Total Cover

50/20 Threshold
50% of Total Cover = 27.5
20% of Total Cover = 11

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Acer negundo		30	Yes	FAC
Celtis laevigata		10	Yes	FACW
Quercus nigra		5	No	FAC

45 = Total Cover

50/20 Threshold
50% of Total Cover = 22.5
20% of Total Cover = 9

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Sabal minor		20	Yes	FACW
Ligustrum sinense		10	Yes	FAC

30 = Total Cover

50/20 Threshold
50% of Total Cover = 15
20% of Total Cover = 6

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Acer negundo		10	Yes	FAC
Ligustrum sinense		5	Yes	FAC
Sabal minor		5	Yes	FACW

20 = Total Cover

50/20 Threshold
50% of Total Cover = 10
20% of Total Cover = 4

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Parthenocissus quinquefolia		5	Yes	FACU
Toxicodendron radicans		5	Yes	FAC

10 = Total Cover

50/20 Threshold
50% of Total Cover = 5
20% of Total Cover = 2

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 11

Total Number of Dominant Species Across All Strata 12

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 91.67%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 9, 2014

Photograph #39A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 39.

Photograph #39B

Direction:

West

Comments:

View of habitat and typical landscape features at Sample Location 39.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	County: Iberville		Sampling Date:	4/9/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	40
Investigator(s):	John Gross & Josh Roy	Section, Township, Range:		Section 67, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat	Local Relief (concave, convex, none): None			Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.234091°	Long: -91.084509°		Datum: NAD 83
Soil Map Unit Name:	Sharkey clay, 0 to 1 percent slopes, rarely flooded, south			NWI Classification: PFO1A	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **Yes**
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	Yes	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
Yes	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	Yes	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	Yes	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	Yes	Depth (inches):	6-16

Wetland Hydrology Present? **Yes**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-16	10YR 4/1	50	10YR 5/4	25	C	M	silty clay
			10YR 3/4	15	C	M	
			10YR 3/4	5	C	PL	
			10YR 4/N	5	D	M	

Type: C=Concentration, D=+A50:F54Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)
No	Stratified Layers (A5)	Yes	Depleted Matrix (F3)
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**
No	Dark Surface (S7) **(LRR P, S, T, U)**		

Indicators for Problematic Soils:

No	1cm Muck (A9) **(LRR O)**
No	2cm Muck (A10) **(LRR S)**
No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Red Parent Material (TF2)
No	Very Shallow Dark Surface (TF12)
No	Other (Explain)

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **Yes**

Remarks:

VEGETATION **SAMPLING POINT** 40

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Celtis laevigata		40	Yes	FACW
Acer negundo		30	Yes	FAC
Acer rubrum		10	No	FAC

80 = Total Cover

50/20 Threshold
50% of Total Cover = 40
20% of Total Cover = 16

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Celtis laevigata		20	Yes	FACW
Acer negundo		10	Yes	FAC

30 = Total Cover

50/20 Threshold
50% of Total Cover = 15
20% of Total Cover = 6

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Sabal minor		25	Yes	FACW
Ligustrum sinense		5	No	FAC

30 = Total Cover

50/20 Threshold
50% of Total Cover = 15
20% of Total Cover = 6

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Sabal minor		15	Yes	FACW
Saururus cernuus		10	Yes	OBL
Acer negundo		5	No	FAC

30 = Total Cover

50/20 Threshold
50% of Total Cover = 15
20% of Total Cover = 6

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Toxicodendron radicans		10	Yes	FAC
Smilax bona-nox		5	Yes	FAC

15 = Total Cover

50/20 Threshold
50% of Total Cover = 7.5
20% of Total Cover = 3

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 9

Total Number of Dominant Species Across All Strata 9

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 100.00%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals	**B**

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 9, 2014

Photograph #40A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 40.

Photograph #40B

Direction:

East

Comments:

View of habitat and typical landscape features at Sample Location 40.

WETLAND DETERMINATION DATA FORM - ATLANTIC AND GULF COASTAL PLAIN REGION

Project/Site:	768.14-Acre Syngenta Tract	County: Iberville		Sampling Date:	4/9/2015
Applicant/Owner:	Wanhua Chemical US Holding Inc.	State: Louisiana		Sampling Point:	41
Investigator(s):	John Gross & Josh Roy	Section, Township, Range:		Section 67, Township 9 South, Range 1 East	
Landform (hillslope, terrace, etc.):	Flat	Local Relief (concave, convex, none): None			Slope: 0-1%
Subregion (LRR or MLRA):	LRR O	Lat: 30.232901°	Long: -91.087778°		Datum: NAD 83
Soil Map Unit Name:	Sharkey clay, 0 to 1 percent slopes, rarely flooded, south			NWI Classification: PFO1A	

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

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **No**
Hydric Soil Present?	No	
Wetland Hydrology Present?	No	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators

Primary Indicators (Need 1):

No	Surface Water (A1)	No	Water Stained Leaves (B9)	No	Surface Soil Cracked (B6)
No	High Water Table (A2)	No	Aquatic Fauna (B13)	No	Sparsely Veg. Concave Surface (B8)
No	Saturation (A3)	No	Marl Deposits (B15) **(LRR U)**	No	Drainage Patterns (B10)
No	Water Marks (B1)	No	Hydrogen Sulfide Odor (C1)	No	Moss Trim Lines (B16)
No	Sediment Deposits (B2)	No	Oxidized Root Channels (C3)	No	Dry-Season Water Table (C2)
No	Drift Deposits (B3)	No	Presence of Reduced Iron (C4)	No	Crayfish Burrows (C8)
No	Algal Mat or Crust (B4)	No	Recent Reduct. in Tilled Soils (C6)	No	Saturation on Aerial Imagery (C9)
No	Iron Deposits (B5)	No	Thin Muck Surface (C7)	No	Geomorphic Position (D2)
No	Inundation on Aerial Imagery (B7)	No	Other (Explain in Remarks)	No	Shallow Aquitard (D3)
				Yes	FAC-Neutral Test (D5)
				No	Sphagnum Moss (D8) **(LRR T, U)**

Secondary Indicators (Need 2):

Field Observations:

Surface Water Present?	None	Depth (inches):	N/A
Water table Present?	None	Depth (inches):	N/A
Saturation Present?	None	Depth (inches):	N/A

Wetland Hydrology Present? **No**

Remarks:

SOIL

Depth Inches	Matrix Color	Matrix %	Redox Features Color	Redox Features %	Redox Features Type	Redox Features Location	Texture
0-16	10YR 3/2	80	10YR 4/4	10	C	M	silty clay loam
			10YR 4/1	10	D	M	

Type: C=Concentration, D=+A50:F54Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

No	Histol (A1)	No	Polyvalue Below Surface (S8) **(LRR S,T,U)**	No	1cm Muck (A9) **(LRR O)**
No	Histic Epipedon (A2)	No	Thin Dark Surface (S9) **(LRR S,T,U)**	No	2cm Muck (A10) **(LRR S)**
No	Black Histic (A3)	No	Loamy Mucky Mineral (F1) **(LRR (O)**	No	Reduced Vertic (F18) **(outside MLRA 150A,B)**
No	Hydrogen Sulfide (A4)	No	Loamy Gleyed Matrix (F2)	No	Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
No	Stratified Layers (A5)	No	Depleted Matrix (F3)	No	Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
No	Organic Bodies (A6) **(LRR P,T,U)**	No	Redox Dark Surface (F6)	No	Red Parent Material (TF2)
No	5cm Mucky Mineral (A7) **(LRR P,T,U)**	No	Depleted Dark Surface (F7)	No	Very Shallow Dark Surface (TF12)
No	Muck Presence (A8) **(LRR U)**	No	Redox Depressions (F8)	No	Other (Explain)
No	1cm Muck (A9) **(LRR P,T)**	No	Marl (F10) **(LRR U)**		
No	Depleted Below Dark Surface (A11)	No	Depleted Ochric (F11) **(MLRA 151)**		
No	Thick Dark Surface (A12)	No	Iron-Manganese Masses (F12) **(LRR O,P,T)**		
No	Coast Prairie Redox (A16) **(MLRA 150A)**	No	Umbric Surface (F13) **(LRR P, T, U)**		
No	Sandy Mucky Mineral (S1) **(LRR O,S)**	No	Delta Ochric (F17) **(MLRA 151)**		
No	Sandy Gleyed Matrix (S4)	No	Reduced Vertic (F18) **(MLRA 150A, 150B)**		
No	Sandy Redox (S5)	No	Piedmont Floodplain Soils (F19) **(MLRA 149A)**		
No	Stripped Matrix S6)	No	Anomalous Bright Loamy Soils (F20) **(MRLA 149A, 153C, 153D)**		
No	Dark Surface (S7) **(LRR P, S, T, U)**				

Indicators for Problematic Soils:

Restrictive Layer (if observed):

Type: None
Depth inches: None

Hydric Soil Present? **No**

Remarks:

Soil profile appears to be consistent with Commerce silty clay loam.

Tree Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Ulmus americana		30	Yes	FAC
Quercus nigra		30	Yes	FAC
Acer negundo		5	No	FAC
Celtis laevigata		5	No	FACW

70 = Total Cover

50/20 Threshold
50% of Total Cover = 35
20% of Total Cover = 14

Sapling Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Ulmus americana		10	Yes	FAC
Acer negundo		2	No	FAC

12 = Total Cover

50/20 Threshold
50% of Total Cover = 6
20% of Total Cover = 2.4

Shrub Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Sabal minor		15	Yes	FACW
Ilex decidua		15	Yes	FACW

30 = Total Cover

50/20 Threshold
50% of Total Cover = 15
20% of Total Cover = 6

Herb Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
None				

0 = Total Cover

50/20 Threshold
50% of Total Cover = 0
20% of Total Cover = 0

Woody Vine Stratum	Plot Size: 30'	Absolute % Cover	Dominant Species	Indicator Status
Parthenocissus quinquefolia		25	Yes	FACU
Toxicodendron radicans		10	Yes	FAC

35 = Total Cover

50/20 Threshold
50% of Total Cover = 17.5
20% of Total Cover = 7

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC (A): 6

Total Number of Dominant Species Across All Strata 7

Percent of Dominant Species That Are OBL, FACW, or FAC (A/B): 85.71%

Prevalence Index Worksheet:

Total % Cover of:		Multiply
	OBL x1=	
	FACW x2=	
	FAC x3=	
	FACU x4=	
	UPL x5=	
	A Totals B	

Prevalence Index (B/A)=

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg:	No
Dominance Test > 50%:	Yes
Prevalence Index is ≤3.0:	N/A
Problematic Hydrophytic Veg:	No

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20' or more in height and 3" or larger in DBH.

Sapling - Woody plants, excluding woody vines, approximately 20' or more in height and less than 3" in DBH.

Shrub - Woody plants, excluding woody vines, approximately 3-20' in height.

Herb - All herbaceous plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3' in height.

Woody vine - All woody vines, regardless of height.

Remarks:

Hydrophytic Vegetation Present?
Yes

	WANHUA CHEMICAL US HOLDING INC.
Site Name:	768.14-Acre Syngenta Tract
Site Location:	Iberville Parish, Louisiana
Date:	April 9, 2014

Photograph #41A

Direction:

N/A

Comments:

Typical soil profile at Sample Location 41.

Photograph #41B

Direction:

East

Comments:

View of habitat and typical landscape features at Sample Location 41.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/15/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP20

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 85-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): LRR Lat: 30.22658744 Long: -91.08946141 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Non-wet herbaceous field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP20

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.Paspalum notatum	85	X	FACU
2.Ampelopsis arborea	15		FAC
3.Rosa bracteata	10		UPL
4.Ipomoea purpurea	10		UPL
5.Paspalum urvillei	10		FAC
6.Ambrosia trifida	5		FAC
7.			
8.			
9.			
10.			
11.			
	135 = Total Cover		
50% of total cover: 68	20% of total cover: 27		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

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: 0.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	30	x 3 = 90
FACU species	85	x 4 = 340
UPL species	20	x 5 = 100
Column Totals:	135 (A)	530 (B)

Prevalence Index = B/A = 3.9259

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2						Silt Loam	
3-6	10YR 6/3						Silt Loam	
6-16	10YR 3/2						Silty Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/15/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22658744 Long: -91.08946141

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP20

Photo Number: 9_15_2015_10_58_35_AM.jpg

Direction: NE

Description:

General landscape view.

Sampling Point: SP20

Photo Number: 9_15_2015_10_58_42_AM.jpg

Direction: W

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/15/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22658744 Long: -91.08946141

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP20

Photo Number: 9_15_2015_11_01_35_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/15/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP21

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 85-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR Lat: 30.22612562 Long: -91.08982343 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes** X **No** ___

Remarks:

Herbaceous field with depressional wetlands located between shallow drains.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology Indicators present; C9 & D5.

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

Sampling Point: SP21

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.Campsis radicans	70	X	FAC
2.Diodia virginiana	65	X	FACW
3.Rhynchospora corniculata	30		OBL
4.Brunnichia ovata	25		FACW
5.Paspalum urvillei	15		FAC
6.			
7.			
8.			
9.			
10.			
11.			
	205 = Total Cover		
50% of total cover: 103	20% of total cover: 41		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	90	x 2 =	180
FAC species	85	x 3 =	255
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	205 (A)		465 (B)

Prevalence Index = B/A = 2.2683

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 4/1	95	10YR 4/4	5	RM	M	Silty Clay	
9-16	10YR 5/1	90	10YR 4/3	10	RM	M	Silty Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil present with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/15/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22612562 Long: -91.08982343

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP21

Photo Number: 9_15_2015_11_27_08_AM.jpg

Direction: W

Description:

General landscape view.

Sampling Point: SP21

Photo Number: 9_15_2015_11_27_02_AM.jpg

Direction: E

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/15/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22612562 Long: -91.08982343

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP21

Photo Number: 9_15_2015_11_26_49_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/15/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP22

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 85-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): None Slope (%): 4

Subregion (LRR or MLRA): LRR O Lat: 30.22581768 Long: -91.09096472 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located non-wet herbaceous field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP22

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.Paspalum notatum	85	X	FACU
2.Paspalum urvillei	20		FAC
3.Carya illinoinensis	20		FACU
4.Ampelopsis arborea	10		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	135 = Total Cover		
50% of total cover: 68	20% of total cover: 27		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

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: 0.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	30	x 3 = 90
FACU species	105	x 4 = 420
UPL species	0	x 5 = 0
Column Totals:	135 (A)	510 (B)

Prevalence Index = B/A = 3.7778

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/1	100					Silty Clay	
9-16	10YR 4/2	100					Silty Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/15/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22581768 Long: -91.09096472

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP22

Photo Number: 9_15_2015_12_29_22_PM.jpg

Direction: SW

Description:

General landscape view.

Sampling Point: SP22

Photo Number: 9_15_2015_12_29_09_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/15/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22581768 Long: -91.09096472

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP22

Photo Number: 9_15_2015_12_29_17_PM.jpg

Direction: N

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/15/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP23

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 84-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): LRR O Lat: 30.22400335 Long: -91.09313814 Datum: WGS84

Soil Map Unit Name: Schriever clay, 0 to 1 percent slopes NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes** X **No** ___

Remarks:

Plot is located in a depressional area near shallow drains.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology Indicators present; C3 & D5.

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

Sampling Point: SP23

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.Rhynchospora corniculata	45	X	OBL
2.Iva annua	35	X	FAC
3.Diodia virginiana	30	X	FACW
4.Paspalum urvillei	20		FAC
5.Cyperus virens	10		FACW
6.Fraxinus pennsylvanica	10		FACW
7.			
8.			
9.			
10.			
11.			
	150 = Total Cover		
50% of total cover: 75	20% of total cover: 30		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

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: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	45	x 1 = 45
FACW species	50	x 2 = 100
FAC species	55	x 3 = 165
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	150 (A)	310 (B)

Prevalence Index = B/A = 2.0667

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/1	95	10YR 4/4	5	D	M	Clay	

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil present with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/15/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22400335 Long: -91.09313814

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP23

Photo Number: 9_15_2015_12_48_27_PM.jpg

Direction: N

Description:

General landscape view.

Sampling Point: SP23

Photo Number: 9_15_2015_12_49_22_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/15/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22400335 Long: -91.09313814

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP23

Photo Number: 9_15_2015_12_48_34_PM.jpg

Direction: S

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP24

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 85-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.22590445 Long: -91.09183737 Datum: WGS84

Soil Map Unit Name: Gramercy silty clay loam, 0 to 1 percent slopes NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes** X **No** ___

Remarks:

Plot is located in a depressional area on pipeline right of way near Bayou Braud.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): -

Water Table Present? Yes ___ No X Depth (inches): -

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 10

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology Indicators present; A3, C3 & D5.

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

Sampling Point: SP24

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.Juncus effusus	65	X	OBL
2.Persicaria punctata	45	X	OBL
3.Rhynchospora corniculata	30		OBL
4.Phyla stoechadifolia	15		FACW
5.Panicum repens	10		FACW
6.Hibiscus grandiflorus	10		OBL
7.Sesbania drummondii	5		FACW
8.			
9.			
10.			
11.			
	180 = Total Cover		
50% of total cover: 90	20% of total cover: 36		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	150	x 1 = 150
FACW species	30	x 2 = 60
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	180 (A)	210 (B)

Prevalence Index = B/A = 1.1667

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > 50%

X 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 4/1	95	10YR 4/4	5			Clay	
7-16	10YR 5/1	98	10YR 3/3	2		M	Clay	

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil present with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22590445 Long: -91.09183737

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP24

Photo Number: 9_16_2015_9_01_26_AM.jpg

Direction: NE

Description:

General landscape view.

Sampling Point: SP24

Photo Number: 9_16_2015_9_01_30_AM.jpg

Direction: SW

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22590445 Long: -91.09183737

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP24

Photo Number: 9_16_2015_9_01_19_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP25

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 85-T09S-R01E

Landform (hillslope, terrace, etc.): Drainageway Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.22370558 Long: -91.08829778 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes X No ___**

Remarks:

Plot located in a wet, herbaceous drainage way.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): -

Water Table Present? Yes X No ___ Depth (inches): 11

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? **Yes X No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology Indicators present; A2, A3, C3 & D5.

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

Sampling Point: SP25

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: 30 feet)			
1.Juncus effusus	75	X	OBL
2.Typha latifolia	35	X	OBL
3.Rhynchospora corniculata	15		OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	125 = Total Cover		

50% of total cover: 63 20% of total cover: 25

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	125	x 1 =	125
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	125 (A)		125 (B)

Prevalence Index = B/A = 1

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > 50%

X 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP25

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/1	95	10YR 4/6	5	D	M	Clay	

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil present with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22370558 Long: -91.08829778

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP25

Photo Number: 9_16_2015_10_13_54_AM.jpg

Direction: E

Description:

General landscape view.

Sampling Point: SP25

Photo Number: 9_16_2015_10_14_01_AM.jpg

Direction: W

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22370558 Long: -91.08829778

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP25

Photo Number: 9_16_2015_10_13_45_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP26

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 85-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.22395329 Long: -91.08842732 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located on non-wet ridge near drainage way.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP26

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.Paspalum notatum	50	X	FACU
2.Paspalum urvillei	30	X	FAC
3.Sporobolus indicus	15		FACU
4.Iva annua	10		FAC
5.Ampelopsis arborea	10		FAC
6.Carya illinoinensis	10		FACU
7.			
8.			
9.			
10.			
11.			
	125 = Total Cover		
50% of total cover: 63	20% of total cover: 25		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	50	x 3 = 150
FACU species	75	x 4 = 300
UPL species	0	x 5 = 0
Column Totals:	125 (A)	450 (B)

Prevalence Index = B/A = 3.6

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/2					M	Silty Clay	
9-16	10YR 5/2	60	10YR 4/4	40		M	Sandy Loam	

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil present with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22395329 Long: -91.08842732

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP26

Photo Number: 9_16_2015_10_46_26_AM.jpg

Direction: SE

Description:

General landscape view.

Sampling Point: SP26

Photo Number: 9_16_2015_10_46_17_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22395329 Long: -91.08842732

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP26

Photo Number: 9_16_2015_10_46_31_AM.jpg

Direction: NW

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP27

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 84-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.22350939 Long: -91.09385148 Datum: WGS84

Soil Map Unit Name: Gramercy silty clay loam, 0 to 1 percent slopes NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located non-wet herbaceous field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP27

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.Paspalum notatum	40	X	FACU
2.Iva annua	35	X	FAC
3.Ampelopsis arborea	15		FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
50% of total cover: 45	20% of total cover: 18		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	50	x 3 = 150
FACU species	40	x 4 = 160
UPL species	0	x 5 = 0
Column Totals:	90 (A)	310 (B)

Prevalence Index = B/A = 3.4444

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP27

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	100					Clay	
6-16	10YR 5/1	100					Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22350939 Long: -91.09385148

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP27

Photo Number: 9_16_2015_11_03_41_AM.jpg

Direction: SE

Description:

General landscape view.

Sampling Point: SP27

Photo Number: 9_16_2015_11_03_35_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22350939 Long: -91.09385148

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP27

Photo Number: 9_16_2015_11_03_44_AM.jpg

Direction: N

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP28

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 67-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): None Slope (%): 0

Subregion (LRR or MLRA): LRR O Lat: 30.22792650 Long: -91.08775504 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located non-wet herbaceous field with FACU species as the dominant vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP28

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Toxicodendron radicans	35	X	FAC
2. Ampelopsis arborea	30	X	FAC
3. Carya illinoinensis	30	X	FACU
4. Rubus trivialis	15		FACU
5. Paspalum urvillei	10		FAC
6.			
7.			
8.			
9.			
10.			
11.			
	120 = Total Cover		
50% of total cover: 60	20% of total cover: 24		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 66.67 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	75	x 3 =	225
FACU species	45	x 4 =	180
UPL species	0	x 5 =	0
Column Totals:	120 (A)		405 (B)

Prevalence Index = B/A = 3.375

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP28

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/3	100					Silt Loam	
10-16	10YR 4/4	100					Silt Loam	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22792650 Long: -91.08775504

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP28

Photo Number: 9_16_2015_12_46_11_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP28

Photo Number: 9_16_2015_12_45_50_PM.jpg

Direction: N

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22792650 Long: -91.08775504

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP28

Photo Number: 9_16_2015_12_45_38_PM.jpg

Direction: S

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP29

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 67-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.22477051 Long: -91.08720368 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located non-wet herbaceous field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP29

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: 30 feet)			
1.Ipomoea purpurea	75	X	UPL
2.Ampelopsis arborea	55	X	FAC
3.Paspalum urvillei	22		FAC
4.Solanum carolinense	20		FACU
5.Rubus arvensis	10		FAC
6.Persicaria virginiana	5		FAC
7.			
8.			
9.			
10.			
11.			
	187 = Total Cover		

50% of total cover: 94 20% of total cover: 37

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	92	x 3 =	276
FACU species	20	x 4 =	80
UPL species	75	x 5 =	375
Column Totals:	187 (A)		731 (B)

Prevalence Index = B/A = 3.9091

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP29

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/1	100					Silty Clay	
8-16	10YR 4/2	100					Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22477051 Long: -91.08720368

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP29 Photo Number: 9_16_2015_1_44_24_PM.jpg Direction: Down Description: Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.	

Sampling Point: SP29 Photo Number: 9_16_2015_1_44_32_PM.jpg Direction: N Description: General landscape view.	

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22477051 Long: -91.08720368

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP29

Photo Number: 9_16_2015_1_44_38_PM.jpg

Direction: W

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP30

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 85-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): None Slope (%): 0

Subregion (LRR or MLRA): LRR O Lat: 30.22136492 Long: -91.08731443 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located non-wet herbaceous field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators not present.

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

Sampling Point: SP30

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.Paspalum urvillei	65	X	FAC
2.Paspalum notatum	45	X	FACU
3.Iva annua	25		FAC
4.Smilax bona-nox	20		FAC
5.Phyla fruticosa	15		FAC
6.			
7.			
8.			
9.			
10.			
11.			
	170 = Total Cover		
50% of total cover: 85	20% of total cover: 34		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	125	x 3 = 375
FACU species	45	x 4 = 180
UPL species	0	x 5 = 0
Column Totals:	170 (A)	555 (B)

Prevalence Index = B/A = 3.2647

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP30

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/2	100					Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22136492 Long: -91.08731443

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP30

Photo Number: 9_16_2015_2_10_31_PM.jpg

Direction: E

Description:

General landscape view.

Sampling Point: SP30

Photo Number: 9_16_2015_2_10_15_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22136492 Long: -91.08731443

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP30

Photo Number: 9_16_2015_2_10_22_PM.jpg

Direction: N

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP31

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 85-T09S-R01E

Landform (hillslope, terrace, etc.): Drainageway Local Relief (concave, convex, none): Concave Slope (%): ____

Subregion (LRR or MLRA): LRR Lat: 30.21953969 Long: -91.09108121 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes** X **No** ___

Remarks:

Depression in field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- X Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): -

Water Table Present? Yes ___ No X Depth (inches): -

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicators; A3, C3, C8, and D5.

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

Sampling Point: SP31

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: 30 feet)			
1.Alternanthera philoxeroides	65	X	OBL
2.Juncus effusus	40	X	OBL
3.Rhynchospora corniculata	30		OBL
4.Echinochloa colona	25		FACW
5.Persicaria punctata	20		OBL
6.			
7.			
8.			
9.			
10.			
11.			
	180 = Total Cover		

50% of total cover: 90 20% of total cover: 36

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	155	x 1 = 155
FACW species	25	x 2 = 50
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	180 (A)	205 (B)

Prevalence Index = B/A = 1.1389

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > 50%

X 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP31

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100					Clay Loam	
8-16	10YR 4/1	80	10YR 4/6	20	D	M	Clay	

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.21953969 Long: -91.09108121

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP31 Photo Number: 9_16_2015_2_34_38_PM.jpg Direction: S Description: General landscape view.	

Sampling Point: SP31 Photo Number: 9_16_2015_2_34_43_PM.jpg Direction: E Description: General lanscape view.	

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.21953969 Long: -91.09108121

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP31

Photo Number: 9_16_2015_2_34_27_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP32

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 84-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.21877843 Long: -91.09148660 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located non-wet herbaceous field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP32

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Paspalum notatum	65	X	FACU
2. Paspalum urvillei	25	X	FAC
3. Diodia teres	15		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105 = Total Cover		
50% of total cover: 53	20% of total cover: 21		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	25	x 3 = 75
FACU species	80	x 4 = 320
UPL species	0	x 5 = 0
Column Totals:	105 (A)	395 (B)

Prevalence Index = B/A = 3.7619

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP32

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	100					Sandy Clay Loam	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.21877843 Long: -91.09148660

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP32

Photo Number: 9_16_2015_3_01_05_PM.jpg

Direction: S

Description:

General landscape view.

Sampling Point: SP32

Photo Number: 9_16_2015_3_00_57_PM.jpg

Direction: N

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/16/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.21877843 Long: -91.09148660

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP32

Photo Number: 9_16_2015_3_00_42_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP33

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 33-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): None Slope (%): ____

Subregion (LRR or MLRA): LRR O Lat: 30.23607299 Long: -91.09350194 Datum: WGS84

Soil Map Unit Name: Commerce silty clay loam NWI classification: PSS1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes ____ No X Wetland Hydrology Present? Yes ____ No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X

Remarks:

Plot located in non-wet, mowed pasture.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): -
Water Table Present?	Yes ____	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP33

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Sorghum halepense	85	X	FACU
2. Paspalum urvillei	30	X	FAC
3. Digitaria ciliaris	20	X	FACU
4. Diodia teres	15		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	150 = Total Cover		
50% of total cover: 75	20% of total cover: 30		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 33.33 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	30	x 3 = 90
FACU species	120	x 4 = 480
UPL species	0	x 5 = 0
Column Totals:	150 (A)	570 (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP33

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2						Clay Loam	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23607299 Long: -91.09350194

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP33

Photo Number: 9_22_2015_9_54_17_AM.jpg

Direction: N

Description:

General landscape view.

Sampling Point: SP33

Photo Number: 9_22_2015_9_53_38_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23607299 Long: -91.09350194

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP33

Photo Number: 9_22_2015_9_54_11_AM.jpg

Direction: S

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP34

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 76-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): None Slope (%): 0

Subregion (LRR or MLRA): LRR O Lat: 30.23734072 Long: -91.08820607 Datum: WGS84

Soil Map Unit Name: Commerce silty clay loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located in non-wet, mowed pasture.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP34

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: 30 feet)			
1.Sorghum halepense	80	X	FACU
2.Paspalum urvillei	30	X	FAC
3.Digitaria ciliaris	20		FACU
4.Diodia teres	15		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	145 = Total Cover		

50% of total cover: 73 20% of total cover: 29

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	115	x 4 =	460
UPL species	0	x 5 =	0
Column Totals:	145 (A)		550 (B)

Prevalence Index = B/A = 3.7931

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP34

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100					Clay Loam	
10-16	10YR 4/4	100					Silty Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Dominant species FACU and UPL.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23734072 Long: -91.08820607

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP34

Photo Number: 9_22_2015_10_28_08_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP34

Photo Number: 9_22_2015_10_28_53_AM.jpg

Direction: N

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23734072 Long: -91.08820607

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP34

Photo Number: 9_22_2015_10_29_05_AM.jpg

Direction: W

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP35

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 76-T09S-R01E

Landform (hillslope, terrace, etc.): Bottomland Hardwood Forests Local Relief (concave, convex, none): Concave Slope (%): 10

Subregion (LRR or MLRA): LRR O Lat: 30.23563382 Long: -91.08658387 Datum: WGS84

Soil Map Unit Name: Commerce silty clay loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes** X **No** ___

Remarks:

Plot located in forested drainage.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- X Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): -

Water Table Present? Yes ___ No X Depth (inches): -

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 6

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicators present A3, C3,B8,C8, &D5

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

Sampling Point: SP35

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	55	X	OBL
2. Ulmus americana	25	X	FAC
3. Acer negundo	15		FAC
4.			
5.			
6.			
	95 = Total Cover		
50% of total cover: 48	20% of total cover: 19		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Carex cherokeensis	65	X	FACW
2. Campsis radicans	20	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	85 = Total Cover		
50% of total cover: 43	20% of total cover: 17		

Woody Vine Stratum (Plot size: 30 feet)			
1. Brunnichia ovata	15	X	FACW
2.			
3.			
4.			
5.			
	15 = Total Cover		
50% of total cover: 8	20% of total cover: 3		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	55	x 1 =	55
FACW species	80	x 2 =	160
FAC species	60	x 3 =	180
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	195 (A)		395 (B)

Prevalence Index = B/A = 2.0256

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP35

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100					Silt Loam	
3-16	10YR 5/1	90	10YR 4/6	10	D	M	Silt Loam	

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil profile with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23563382 Long: -91.08658387

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP35 Photo Number: IMG_0587.JPG Direction: S Description: General landscape view.	

Sampling Point: SP35 Photo Number: IMG_0581.JPG Direction: E Description: General landscape view.	

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23563382 Long: -91.08658387

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP35

Photo Number: IMG_0585.JPG

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP36

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 76-T09S-R01E

Landform (hillslope, terrace, etc.): Forested ridge Local Relief (concave, convex, none): Concave Slope (%): 6

Subregion (LRR or MLRA): LRR O Lat: 30.23584952 Long: -91.08832374 Datum: WGS84

Soil Map Unit Name: Commerce silty clay loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located on low, hardwood, forested,ridge between 2 drains.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Only 1 secondary indicators present.

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

Sampling Point: SP36

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	90	X	FAC
2. Celtis laevigata	10		FACW
3.			
4.			
5.			
6.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Sapling Stratum (Plot size: 30 feet)			
1. Acer negundo	75	X	FAC
2.			
3.			
4.			
5.			
6.			
	75 = Total Cover		
50% of total cover: 38	20% of total cover: 15		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Eupatorium serotinum	20	X	FAC
2. Rubus argutus	15	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	35 = Total Cover		
50% of total cover: 18	20% of total cover: 7		

Woody Vine Stratum (Plot size: 30 feet)			
1. Brunnichia ovata	10	X	FACW
2. Parthenocissus quinquefolia	5	X	FACU
3.			
4.			
5.			
	15 = Total Cover		
50% of total cover: 8	20% of total cover: 3		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 83.33 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	20	x 2 = 40
FAC species	200	x 3 = 600
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	225 (A)	660 (B)

Prevalence Index = B/A = 2.9333

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP36

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	98	10YR 4/3	2	D	M	Silty Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Hydric soil profile with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23584952 Long: -91.08832374

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP36

Photo Number: 9_22_2015_2_20_01_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP36

Photo Number: 9_22_2015_3_02_00_PM.jpg

Direction: W

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23584952 Long: -91.08832374

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP36

Photo Number: 9_22_2015_2_20_10_PM.jpg

Direction: S

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP37

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 76-T09S-R01E

Landform (hillslope, terrace, etc.): Flat Local Relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): LRR O Lat: 30.23638225 Long: -91.08675179 Datum: WGS84

Soil Map Unit Name: Commerce silty clay loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located in non-wet, hardwood, forested.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP37

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	90	X	FAC
2. Taxodium distichum	4		OBL
3.			
4.			
5.			
6.			
	94 = Total Cover		
50% of total cover: 47	20% of total cover: 19		

Sapling Stratum (Plot size: 30 feet)			
1. Acer negundo	40	X	FAC
2.			
3.			
4.			
5.			
6.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Eupatorium serotinum	65	X	FAC
2. Campsis radicans	25	X	FAC
3. Rubus arvensis	15		FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105 = Total Cover		
50% of total cover: 53	20% of total cover: 21		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

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: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	4	x 1 = 4
FACW species	0	x 2 = 0
FAC species	235	x 3 = 705
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	239 (A)	709 (B)

Prevalence Index = B/A = 2.9665

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP37

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	100					Silty Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23638225 Long: -91.08675179

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP37

Photo Number: 9_22_2015_1_54_31_PM.jpg

Direction: N

Description:

General landscape view.

Sampling Point: SP37

Photo Number: 9_22_2015_1_54_26_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23638225 Long: -91.08675179

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP37

Photo Number: 9_22_2015_1_54_36_PM.jpg

Direction: W

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP38

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 76-T09S-R01E

Landform (hillslope, terrace, etc.): Terrace Local Relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.23783090 Long: -91.08644412 Datum: WGS84

Soil Map Unit Name: Commerce silty clay loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located in hardwood, forested area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP38

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	75	X	FAC
2. Fraxinus pennsylvanica	20		FACW
3. Quercus pagoda	15		FACW
4.			
5.			
6.			
	110 = Total Cover		
50% of total cover: 55	20% of total cover: 22		

Sapling Stratum (Plot size: 30 feet)			
1. Acer negundo	20	X	FAC
2. Cornus drummondii	10	X	FAC
3.			
4.			
5.			
6.			
	30 = Total Cover		
50% of total cover: 15	20% of total cover: 6		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Rubus arvensis	15	X	FAC
2. Ampelopsis arborea	15	X	FAC
3. Campsis radicans	15	X	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
50% of total cover: 23	20% of total cover: 9		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	35	x 2 = 70
FAC species	150	x 3 = 450
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	185 (A)	520 (B)

Prevalence Index = B/A = 2.8108

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP38

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/1	100					Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23783090 Long: -91.08644412

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP38

Photo Number: 9_22_2015_3_01_55_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP38

Photo Number: 9_22_2015_3_02_09_PM.jpg

Direction: N

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/22/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23783090 Long: -91.08644412

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP38

Photo Number: 9_22_2015_3_03_04_PM.jpg

Direction: S

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP39

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 76-T09S-R01E

Landform (hillslope, terrace, etc.): Bottomland Hardwood Forests Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.23718868 Long: -91.08534748 Datum: WGS84

Soil Map Unit Name: Commerce silty clay loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes** X **No** ___

Remarks:

Plot located in Bottom land hardwoods area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- X Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): -

Water Table Present? Yes ___ No X Depth (inches): -

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): -

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicators present B3, B6,B6,C8, & D5.

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

Sampling Point: SP39

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	35	X	FAC
2. Quercus nigra	25	X	FAC
3. Fraxinus pennsylvanica	25	X	FACW
4.			
5.			
6.			
	85 = Total Cover		
50% of total cover: 43	20% of total cover: 17		

Sapling Stratum (Plot size: 30 feet)			
1. Ilex decidua	25	X	FACW
2. Acer negundo	15	X	FAC
3.			
4.			
5.			
6.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Woody Vine Stratum (Plot size: 30 feet)			
1. Brunnichia ovata	10	X	FACW
2. Campsis radicans	10	X	FAC
3. Ampelopsis arborea	10	X	FAC
4.			
5.			
	30 = Total Cover		
50% of total cover: 15	20% of total cover: 6		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	60	x 2 = 120
FAC species	95	x 3 = 285
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	155 (A)	405 (B)

Prevalence Index = B/A = 2.6129

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP39

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/1	95	10YR 4/4	5	D	M	Clay	

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil profile with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23718868 Long: -91.08534748

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP39

Photo Number: 9_23_2015_7_54_04_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP39

Photo Number: 9_23_2015_7_54_31_AM.jpg

Direction: W

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23718868 Long: -91.08534748

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP39

Photo Number: 9_23_2015_7_54_21_AM.jpg

Direction: E

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP40

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 76-T09S-R01E

Landform (hillslope, terrace, etc.): Low ridge Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.23615067 Long: -91.08367613 Datum: WGS84

Soil Map Unit Name: Gramercy silty clay loam, 0 to 1 percent slopes NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located on low, hardwood forested, ridge.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Only 1 secondary indicators present.

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

Sampling Point: SP40

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	65	X	FAC
2. Quercus pagoda	30	X	FACW
3. Fraxinus pennsylvanica	15		FACW
4.			
5.			
6.			
	110 = Total Cover		
50% of total cover: 55	20% of total cover: 22		

Sapling Stratum (Plot size: 30 feet)			
1. Acer negundo	55	X	FAC
2. Ilex decidua	10		FACW
3.			
4.			
5.			
6.			
	65 = Total Cover		
50% of total cover: 33	20% of total cover: 13		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Campsis radicans	25	X	FAC
2. Ampelopsis arborea	20	X	FAC
3. Eupatorium serotinum	10		FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	55 = Total Cover		
50% of total cover: 28	20% of total cover: 11		

Woody Vine Stratum (Plot size: 30 feet)			
1. Campsis radicans	10	X	FAC
2.			
3.			
4.			
5.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	55	x 2 = 110
FAC species	185	x 3 = 555
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	240 (A)	665 (B)

Prevalence Index = B/A = 2.7708

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP40

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	100	10R				Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23615067 Long: -91.08367613

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP40

Photo Number: 9_23_2015_8_25_29_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP40

Photo Number: 9_23_2015_8_26_07_AM.jpg

Direction: E

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23615067 Long: -91.08367613

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP40

Photo Number: 9_23_2015_8_28_25_AM.jpg

Direction: W

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP41

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 32-T09S-R01E

Landform (hillslope, terrace, etc.): Drainageway Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.23708476 Long: -91.09268995 Datum: WGS84

Soil Map Unit Name: Commerce silty clay loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes** X **No** ___

Remarks:

Plot located in herbaceous, linear drainage way next to gravel road.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): -

Water Table Present? Yes ___ No X Depth (inches): -

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicators present A3,C3, & D5.

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

Sampling Point: SP41

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: 30 feet)			
1.Alternanthera philoxeroides	90	X	OBL
2.Echinochloa colona	5		FACW
3.Juncus effusus	5		OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		

50% of total cover: 50 20% of total cover: 20

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	95	x 1 = 95
FACW species	5	x 2 = 10
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	100 (A)	105 (B)

Prevalence Index = B/A = 1.05

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > 50%

X 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP41

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/1	90	10YR 4/6	10	D	M	Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil profile with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23708476 Long: -91.09268995

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP41

Photo Number: 9_23_2015_8_52_46_AM.jpg

Direction: W

Description:

General landscape view.

Sampling Point: SP41

Photo Number: 9_23_2015_8_53_32_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23708476 Long: -91.09268995

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP41

Photo Number: 9_23_2015_8_52_39_AM.jpg

Direction: E

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP42

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 76-T09S-R01E

Landform (hillslope, terrace, etc.): Drainageway Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.23758053 Long: -91.08753570 Datum: WGS84

Soil Map Unit Name: Commerce silty clay loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes** X **No** ___

Remarks:

Plot located in herbaceous, linear drainage way next to gravel road.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): -

Water Table Present? Yes ___ No X Depth (inches): -

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicators present A3,C3, & D5.

VEGETATION (Five Strata) − Use scientific names of plants.

Sampling Point: SP42

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1. Salix nigra	3	X	OBL
2.			
3.			
4.			
5.			
6.			
	3 = Total Cover		
50% of total cover: 2	20% of total cover: 1		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Alternanthera philoxeroides	95	X	OBL
2. Cyperus virens	5		FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	98	x 1 = 98
FACW species	5	x 2 = 10
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	103 (A)	108 (B)

Prevalence Index = B/A = 1.0485

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > 50%

X 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP42

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
16	10YR 4/2	85	10YR 5/6	15	D	M	Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil profile with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23758053 Long: -91.08753570

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP42

Photo Number: 9_23_2015_9_30_38_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP42

Photo Number: 9_23_2015_9_30_50_AM.jpg

Direction: NW

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23758053 Long: -91.08753570

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP42

Photo Number: 9_23_2015_9_31_14_AM.jpg

Direction: SE

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP43

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 76-T09S-R01E

Landform (hillslope, terrace, etc.): Drainageway Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.23737225 Long: -91.08713164 Datum: WGS84

Soil Map Unit Name: Commerce silty clay loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes** X **No** ___

Remarks:

Plot located in drainage way through hardwoods area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): -

Water Table Present? Yes ___ No X Depth (inches): -

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicators present A3,C3, & D5.

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

Sampling Point: SP43

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Celtis laevigata	10	X	FACW
2.			
3.			
4.			
5.			
6.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		

Sapling Stratum (Plot size: 30 feet)			
1. Cornus drummondii	5	X	FAC
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: 3	20% of total cover: 1		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Saururus cernuus	45	X	OBL
2. Cyperus virens	30	X	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	75 = Total Cover		
50% of total cover: 38	20% of total cover: 15		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

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: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	45	x 1 = 45
FACW species	40	x 2 = 80
FAC species	5	x 3 = 15
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	90 (A)	140 (B)

Prevalence Index = B/A = 1.5556

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP43

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/1	90	10YR 4/4	10	D	M	Clay	

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil profile with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23737225 Long: -91.08713164

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP43

Photo Number: 9_23_2015_9_53_04_AM.jpg

Direction: SE

Description:

General landscape view.

Sampling Point: SP43

Photo Number: 9_23_2015_9_52_19_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/23/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23737225 Long: -91.08713164

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP43

Photo Number: 9_23_2015_9_52_27_AM.jpg

Direction: NW

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP44

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 84-T09S-R01E

Landform (hillslope, terrace, etc.): Bottomland Hardwood Forests Local Relief (concave, convex, none): Concave Slope (%): 4

Subregion (LRR or MLRA): LRR O Lat: 30.22917858 Long: -91.09420283 Datum: WGS84

Soil Map Unit Name: Schriever clay, 0 to 1 percent slopes NWI classification: PEM1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes** X **No** ___

Remarks:

Plot located in young blackwillow/ green ash low land.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- X Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): -

Water Table Present? Yes ___ No X Depth (inches): -

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): -

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicators present C8,C3, & D5.

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

Sampling Point: SP44

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	45	X	OBL
2. Fraxinus pennsylvanica	35	X	FACW
3. Celtis laevigata	20	X	FACW
4.			
5.			
6.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Sapling Stratum (Plot size: 30 feet)			
1. Fraxinus pennsylvanica	65	X	FACW
2. Salix nigra	20	X	OBL
3. Ilex decidua	5		FACW
4.			
5.			
6.			
	90 = Total Cover		
50% of total cover: 45	20% of total cover: 18		

Shrub Stratum (Plot size: 30 feet)			
1. Sabal minor	35	X	FACW
2.			
3.			
4.			
5.			
6.			
	35 = Total Cover		
50% of total cover: 18	20% of total cover: 7		

Herb Stratum (Plot size: 30 feet)			
1. Brunnichia ovata	15	X	FACW
2. Toxicodendron radicans	15	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	30 = Total Cover		
50% of total cover: 15	20% of total cover: 6		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	65	x 1 = 65
FACW species	175	x 2 = 350
FAC species	15	x 3 = 45
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	255 (A)	460 (B)

Prevalence Index = B/A = 1.8039

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP44

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	90	10YR 4/6	10	D	M	Clay	

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil profile with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22917858 Long: -91.09420283

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP44

Photo Number: 9_24_2015_8_37_35_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP44

Photo Number: 9_24_2015_8_38_01_AM.jpg

Direction: E

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22917858 Long: -91.09420283

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP44

Photo Number: 9_24_2015_8_37_48_AM.jpg

Direction: W

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP45

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 84-T09S-R01E

Landform (hillslope, terrace, etc.): pasture/berms Local Relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA): LRR O Lat: 30.22872618 Long: -91.09474262 Datum: WGS84

Soil Map Unit Name: Schriever clay, 0 to 1 percent slopes NWI classification: PEM1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located in old barrow pit / field area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP45

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.Digitaria ciliaris	70	X	FACU
2.Iva annua	35	X	FAC
3.Paspalum urvillei	25		FAC
4.Sorghum halepense	15		FACU
5.Setaria pumila	10		FAC
6.			
7.			
8.			
9.			
10.			
11.			
	155 = Total Cover		
50% of total cover: 78	20% of total cover: 31		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	70	x 3 =	210
FACU species	85	x 4 =	340
UPL species	0	x 5 =	0
Column Totals:	155 (A)		550 (B)

Prevalence Index = B/A = 3.5484

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP45

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
12	10YR 3/2	100					Clay	
16	10YR 5/1	90	10YR 4/4	10	D	M	Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

hydric in lower 12 inches

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22872618 Long: -91.09474262

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP45

Photo Number: 9_24_2015_9_25_52_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP45

Photo Number: 9_24_2015_9_26_12_AM.jpg

Direction: N

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22872618 Long: -91.09474262

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP45

Photo Number: 9_24_2015_9_26_01_AM.jpg

Direction: S

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP46

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 67-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): LRR O Lat: 30.23087846 Long: -91.08827433 Datum: WGS84

Soil Map Unit Name: Schriever clay, 0 to 1 percent slopes NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes** X **No** ___

Remarks:

Plot located in open field south of drainage canal.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicators presentC3, & D5.

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

Sampling Point: SP46

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: 30 feet)			
1. Verbena incompta	85	X	FACW
2. Rubus pubescens	20		FACW
3. Campsis radicans	20		FAC
4. Paspalum urvillei	10		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	135 = Total Cover		

50% of total cover: 68 20% of total cover: 27

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	105	x 2 = 210
FAC species	30	x 3 = 90
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	135 (A)	300 (B)

Prevalence Index = B/A = 2.2222

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > 50%

X 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP46

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
16	10YR 4/1	90	10YR 4/4	10	D	M	Clay	

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil profile with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23087846 Long: -91.08827433

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP46

Photo Number: 9_24_2015_12_00_47_PM.jpg

Direction: W

Description:

General landscape view.

Sampling Point: SP46

Photo Number: 9_24_2015_12_00_33_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23087846 Long: -91.08827433

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP46

Photo Number: 9_24_2015_12_00_42_PM.jpg

Direction: N

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP47

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 67-T09S-R01E

Landform (hillslope, terrace, etc.): spoil bank Local Relief (concave, convex, none): Concave Slope (%): 10

Subregion (LRR or MLRA): LRR O Lat: 30.23175707 Long: -91.08825089 Datum: WGS84

Soil Map Unit Name: Schriever clay, 0 to 1 percent slopes NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located on spoil bank area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP47

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.Digitaria ciliaris	75	X	FACU
2.Ipomoea purpurea	45	X	UPL
3.Brunnichia ovata	25		FACW
4.Sorghum halepense	15		FACU
5.Ambrosia trifida	10		FAC
6.			
7.			
8.			
9.			
10.			
11.			
	170 = Total Cover		
50% of total cover: 85	20% of total cover: 34		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	25	x 2 = 50
FAC species	10	x 3 = 30
FACU species	90	x 4 = 360
UPL species	45	x 5 = 225
Column Totals:	170 (A)	665 (B)

Prevalence Index = B/A = 3.9118

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP47

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/2	100					Silty Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23175707 Long: -91.08825089

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP47

Photo Number: 9_24_2015_12_13_27_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP47

Photo Number: 9_24_2015_12_13_32_PM.jpg

Direction: W

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23175707 Long: -91.08825089

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP47

Photo Number: 9_24_2015_12_13_37_PM.jpg

Direction: E

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP48

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 85-T09S-R01E

Landform (hillslope, terrace, etc.): slopeed spoil Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.22840967 Long: -91.08967218 Datum: WGS84

Soil Map Unit Name: Gramercy silty clay loam, 0 to 1 percent slopes NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located in sloped field north of Bayou Braud.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators.

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

Sampling Point: SP48

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.Sorghum halepense	45	X	FACU
2.Solidago altissima	35	X	FACU
3.Campsis radicans	30	X	FAC
4.Ipomoea purpurea	15		UPL
5.Passiflora edulis	15		FACU
6.			
7.			
8.			
9.			
10.			
11.			
	140 = Total Cover		
50% of total cover: 70	20% of total cover: 28		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 33.33 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	95	x 4 =	380
UPL species	15	x 5 =	75
Column Totals:	140 (A)		545 (B)

Prevalence Index = B/A = 3.8929

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP48

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/1	80	10YR 5/6	20	D	M		

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil profile with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22840967 Long: -91.08967218

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP48

Photo Number: 9_24_2015_12_40_27_PM.jpg

Direction: E

Description:

General landscape view.

Sampling Point: SP48

Photo Number: 9_24_2015_12_40_14_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22840967 Long: -91.08967218

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP48

Photo Number: 9_24_2015_12_40_20_PM.jpg

Direction: W

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP49

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 67-T09S-R01E

Landform (hillslope, terrace, etc.): Flat forested Local Relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): LRR O Lat: 30.22850494 Long: -91.08612244 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located in a non wet hardwood area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present

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

Sampling Point: SP49

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Celtis laevigata	75	X	FACW
2. Carya illinoinensis	15		FACU
3.			
4.			
5.			
6.			
	90 = Total Cover		
50% of total cover: 45	20% of total cover: 18		

Sapling Stratum (Plot size: 30 feet)			
1. Celtis laevigata	45	X	FACW
2. Acer negundo	10		FAC
3. Acer negundo	5		FAC
4.			
5.			
6.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Lactuca ludoviciana	25	X	FAC
2. Persicaria virginiana	15	X	FAC
3. Campsis radicans	10	X	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	50 = Total Cover		
50% of total cover: 25	20% of total cover: 10		

Woody Vine Stratum (Plot size: 30 feet)			
1. Toxicodendron radicans	5	X	FAC
2. Smilax glauca	5	X	FAC
3.			
4.			
5.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	120	x 2 = 240
FAC species	75	x 3 = 225
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	210 (A)	525 (B)

Prevalence Index = B/A = 2.5

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > 50%

X 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP49

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
4	10YR 4/2	100					Silt Loam	
0-16	10YR 6/4	100					Silt Loam	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22850494 Long: -91.08612244

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP49

Photo Number: 9_24_2015_1_24_45_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP49

Photo Number: 9_24_2015_1_25_10_PM.jpg

Direction: E

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22850494 Long: -91.08612244

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP49

Photo Number: 9_24_2015_1_25_01_PM.jpg

Direction: N

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP50

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 85-T09S-R01E

Landform (hillslope, terrace, etc.): Batture land Local Relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.21593303 Long: -91.08708746 Datum: WGS84

Soil Map Unit Name: Carville and Robinsonville soils, undulating, frequently flooded NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located in non wet, forested area of MS. river batture area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Only 1 secondary indicator present.

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

Sampling Point: SP50

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Platanus occidentalis	35	X	FACW
2. Ulmus americana	15	X	FAC
3. Celtis laevigata	5	X	FACW
4.			
5.			
6.			
	55 = Total Cover		
50% of total cover: 28	20% of total cover: 11		

Sapling Stratum (Plot size: 30 feet)			
1. Celtis laevigata	5		FACW
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: 3	20% of total cover: 1		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Ampelopsis arborea	70	X	FAC
2. Brunnichia ovata	25	X	FACW
3. Toxicodendron radicans	25	X	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	120 = Total Cover		
50% of total cover: 60	20% of total cover: 24		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	110	x 3 =	330
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	180 (A)		470 (B)

Prevalence Index = B/A = 2.6111

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP50

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 7/2	100					Silt	
4-16	10YR 5/3	100					Silt Loam	

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil profile with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.21593303 Long: -91.08708746

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP50

Photo Number: 9_24_2015_1_51_53_PM.jpg

Direction: N

Description:

General landscape view.

Sampling Point: SP50

Photo Number: 9_24_2015_1_51_47_PM.jpg

Direction: N

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.21593303 Long: -91.08708746

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP50

Photo Number: 9_24_2015_2_00_53_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP51

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 84-T09S-R01E

Landform (hillslope, terrace, etc.): Batture area Local Relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.21476430 Long: -91.09080368 Datum: WGS84

Soil Map Unit Name: Carville and Robinsonville soils, undulating, frequently flooded NWI classification: PSS1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located in batture area of MS. river

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Only 1 secondary indicators present.

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

Sampling Point: SP51

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		
Sapling Stratum (Plot size: 30 feet)			
1. Salix nigra	30	X	OBL
2. Sesbania vesicaria	30	X	FAC
3.			
4.			
5.			
6.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		
Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		
Herb Stratum (Plot size: 30 feet)			
1. Persicaria punctata	45	X	OBL
2. Ampelopsis arborea	35	X	FAC
3. Rubus trivialis	25	X	FACU
4. Campsis radicans	25	X	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	130 = Total Cover		
50% of total cover: 65	20% of total cover: 26		
Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 83.33 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	75	x 1 = 75
FACW species	0	x 2 = 0
FAC species	90	x 3 = 270
FACU species	25	x 4 = 100
UPL species	0	x 5 = 0
Column Totals:	190 (A)	445 (B)

Prevalence Index = B/A = 2.3421

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > 50%

X 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP51

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/3	90	10YR 4/6	10	D	M	Silt Loam	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.21476430 Long: -91.09080368

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP51

Photo Number: 9_24_2015_2_26_51_PM.jpg

Direction: N

Description:

General landscape view.

Sampling Point: SP51

Photo Number: 9_24_2015_2_26_56_PM.jpg

Direction: W

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/24/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.21476430 Long: -91.09080368

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP51

Photo Number: 9_24_2015_2_26_42_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: St. James Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP52

Investigator(s): Kely Turk, Travis Moore Section, Township, Range: 85-T09S-R01E

Landform (hillslope, terrace, etc.): Flat Local Relief (concave, convex, none): Concave Slope (%): ____

Subregion (LRR or MLRA): LRR O Lat: 30.23162516 Long: -91.09281500 Datum: WGS84

Soil Map Unit Name: Schriever clay, 0 to 1 percent slopes NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ____ Hydric Soil Present? Yes ____ No X Wetland Hydrology Present? Yes ____ No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X

Remarks:

Mixed growth forest south of rail spur.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): -
Water Table Present?	Yes ____	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: SP52

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Celtis laevigata	60	X	FACW
2. Ulmus americana	20	X	FAC
3. Carya illinoinensis	10		FACU
4. Quercus nigra	10		FAC
5.			
6.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Sapling Stratum (Plot size: 30 feet)			
1. Celtis laevigata	50	X	FACW
2. Ligustrum sinense	30	X	FAC
3. Ulmus americana	10		FAC
4.			
5.			
6.			
	90 = Total Cover		
50% of total cover: 45	20% of total cover: 18		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Campsis radicans	30	X	FAC
2. Lygodium japonicum	15	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
50% of total cover: 23	20% of total cover: 9		

Woody Vine Stratum (Plot size: 30 feet)			
1. Lonicera japonica	10	X	FACU
2. Toxicodendron radicans	10	X	FAC
3.			
4.			
5.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 87.50 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	110	x 2 = 220
FAC species	125	x 3 = 375
FACU species	20	x 4 = 80
UPL species	0	x 5 = 0
Column Totals:	255 (A)	675 (B)

Prevalence Index = B/A = 2.6471

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP52

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
3	10YR 2/1	100					Loam	
16	10YR 3/1	90	10YR 4/4	10	D	M	Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23162516 Long: -91.09281500

Investigator(s): Kely Turk, Travis Moore

Sampling Point: SP52

Photo Number: 9_25_2015_9_24_15_AM.jpg

Direction: N

Description:

General landscape view.

Sampling Point: SP52

Photo Number: 9_25_2015_9_24_28_AM.jpg

Direction: SE

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23162516 Long: -91.09281500

Investigator(s): Kely Turk, Travis Moore

Sampling Point: SP52

Photo Number: 9_25_2015_9_24_06_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP53

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 85-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.23154625 Long: -91.09310170 Datum: WGS84

Soil Map Unit Name: Schriever clay, 0 to 1 percent slopes NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located in non-wet, pasture.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP53

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1. Paspalum notatum	90	X	FACU
2. Diodia teres	30	X	FACU
3. Paspalum urvillei	20		FAC
4. Diospyros virginiana	5		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	145 = Total Cover		
50% of total cover: 73	20% of total cover: 29		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	120	x 4 =	480
UPL species	0	x 5 =	0
Column Totals:	145 (A)		555 (B)

Prevalence Index = B/A = 3.8276

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP53

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/1	90	10YR 4/4	10	D	M	Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil profile with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23154625 Long: -91.09310170

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP53

Photo Number: 9_25_2015_9_33_34_AM.jpg

Direction: N

Description:

General landscape view.

Sampling Point: SP53

Photo Number: 9_25_2015_9_33_42_AM.jpg

Direction: W

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23154625 Long: -91.09310170

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP53

Photo Number: 9_25_2015_9_33_23_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP54

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 67-T09S-R01E

Landform (hillslope, terrace, etc.): Bottomland Hardwood Forests Local Relief (concave, convex, none): None Slope (%): 0

Subregion (LRR or MLRA): LRR O Lat: 30.23381309 Long: -91.08895957 Datum: WGS84

Soil Map Unit Name: Schriever clay, 0 to 1 percent slopes NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes X No ___**

Remarks:

Plot located in Bottom land hardwood area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): -

Water Table Present? Yes ___ No X Depth (inches): -

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): -

Wetland Hydrology Present? **Yes X No ___**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicators present D6, C3, & D5.

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

Sampling Point: SP54

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus americana	45	X	FAC
2. Quercus laurifolia	35	X	FACW
3. Celtis laevigata	20	X	FACW
4.			
5.			
6.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Sapling Stratum (Plot size: 30 feet)			
1. Acer negundo	20	X	FAC
2. Celtis laevigata	15	X	FACW
3. Quercus laurifolia	10	X	FACW
4.			
5.			
6.			
	45 = Total Cover		
50% of total cover: 23	20% of total cover: 9		

Shrub Stratum (Plot size: 30 feet)			
1. Sabal minor	40	X	FACW
2.			
3.			
4.			
5.			
6.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		

Herb Stratum (Plot size: 30 feet)			
1. Toxicodendron radicans	40	X	FAC
2. Persicaria virginiana	20	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		

Woody Vine Stratum (Plot size: 30 feet)			
1. Toxicodendron radicans	15	X	FAC
2.			
3.			
4.			
5.			
	15 = Total Cover		
50% of total cover: 8	20% of total cover: 3		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 10 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	120	x 2 =	240
FAC species	140	x 3 =	420
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	260 (A)		660 (B)

Prevalence Index = B/A = 2.5385

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP54

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/1						Clay	
4-16	10YR 4/2	80	10YR 4/4	20	D	M	Clay	

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil profile with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23381309 Long: -91.08895957

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP54

Photo Number: 9_25_2015_10_32_53_AM.jpg

Direction: N

Description:

General landscape view.

Sampling Point: SP54

Photo Number: 9_25_2015_10_32_36_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23381309 Long: -91.08895957

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP54

Photo Number: 9_25_2015_10_32_43_AM.jpg

Direction: E

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP55

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 67-T09S-R01E

Landform (hillslope, terrace, etc.): Flat Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.23510082 Long: -91.08606069 Datum: WGS84

Soil Map Unit Name: Gramercy silty clay loam, 0 to 1 percent slopes NWI classification: PEM1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes X No ___ Wetland Hydrology Present? Yes X No ___	**Is the Sampled Area within a Wetland?** **Yes** X **No** ___

Remarks:

Plot located in depression area on power line ROW.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- X Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): -

Water Table Present? Yes ___ No X Depth (inches): -

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): -

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicators present A3,C3, & D5.

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

Sampling Point: SP55

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.Rhynchospora corniculata	40	X	OBL
2.Saccharum giganteum	40	X	FACW
3.Ampelopsis arborea	40	X	FAC
4.Panicum dichotomiflorum	15		FACW
5.Sabal minor	10		FACW
6.Xanthium strumarium	10		FAC
7.			
8.			
9.			
10.			
11.			
	155 = Total Cover		
50% of total cover: 78	20% of total cover: 31		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

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: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	65	x 2 =	130
FAC species	50	x 3 =	150
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	155 (A)		320 (B)

Prevalence Index = B/A = 2.0645

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP55

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/1	90	10YR 4/4	10	D	M	Clay	

[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 or otherwise noted.)

- ___ Histol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prarie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR, S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR, P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

Hydric soil profile with depleted matrix.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23510082 Long: -91.08606069

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP55

Photo Number: 9_25_2015_11_37_47_AM.jpg

Direction: N

Description:

General landscape view.

Sampling Point: SP55

Photo Number: 9_25_2015_11_37_23_AM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23510082 Long: -91.08606069

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP55

Photo Number: 9_25_2015_11_37_39_AM.jpg

Direction: E

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP56

Investigator(s): Kelly Turk, Travis Moore Section, Township, Range: 67-T09S-R01E

Landform (hillslope, terrace, etc.): small ridge Local Relief (concave, convex, none): Concave Slope (%): 8

Subregion (LRR or MLRA): LRR O Lat: 30.23512468 Long: -91.08527476 Datum: WGS84

Soil Map Unit Name: Gramercy silty clay loam, 0 to 1 percent slopes NWI classification: PEM1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located in non-wet, area of powerline ROW.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present

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

Sampling Point: SP56

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.Rubus arvensis	50	X	FAC
2.Ambrosia trifida	50	X	FAC
3.Sorghum halepense	30		FACU
4.Paspalum urvillei	25		FAC
5.Lactuca biennis	15		FACU
6.			
7.			
8.			
9.			
10.			
11.			
	170 = Total Cover		
50% of total cover: 85	20% of total cover: 34		

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	125	x 3 = 375
FACU species	45	x 4 = 180
UPL species	0	x 5 = 0
Column Totals:	170 (A)	555 (B)

Prevalence Index = B/A = 3.2647

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP56

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2						Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23512468 Long: -91.08527476

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP56

Photo Number: 9_25_2015_12_02_14_PM.jpg

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP56

Photo Number: 9_25_2015_12_02_32_PM.jpg

Direction: W

Description:

General landscape view.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 9/25/2015

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.23512468 Long: -91.08527476

Investigator(s): Kelly Turk, Travis Moore

Sampling Point: SP56

Photo Number: 9_25_2015_12_02_23_PM.jpg

Direction: E

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 1/29/2016

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP57

Investigator(s): Allan Pringle / Travis Moore Section, Township, Range: 67-T09S-R01E

Landform (hillslope, terrace, etc.): Bottomland Hardwood Forests Local Relief (concave, convex, none): Concave Slope (%): 4

Subregion (LRR or MLRA): LRR O Lat: 30.22937867 Long: -91.08497329 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ___ Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot located in early successional woodland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP57

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Carya illinoinensis	30	X	FACU
2. Celtis laevigata	20	X	FACW
3. Gleditsia triacanthos	10		FAC
4.			
5.			
6.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		

Sapling Stratum (Plot size: 30 feet)			
1. Acer negundo	45	X	FAC
2. Quercus nigra	30	X	FAC
3. Liquidambar styraciflua	25	X	FAC
4. Celtis laevigata	15		FACW
5.			
6.			
	115 = Total Cover		
50% of total cover: 58	20% of total cover: 23		

Shrub Stratum (Plot size: 30 feet)			
1. Ligustrum sinense	10	X	FAC
2. Sabal minor	5	X	FACW
3.			
4.			
5.			
6.			
	15 = Total Cover		
50% of total cover: 8	20% of total cover: 3		

Herb Stratum (Plot size: 30 feet)			
1. Geranium maculatum	20	X	FACU
2. Carex austrina	20	X	FACU
3. Eupatorium perfoliatum	15	X	FACW
4. Hackelia virginiana	10		FAC
5. Verbesina virginica	5		FACU
6.			
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
50% of total cover: 35	20% of total cover: 14		

Woody Vine Stratum (Plot size: 30 feet)			
1. Rubus trivialis	15	X	FACU
2. Lygodium japonicum	10	X	FAC
3. Vitis rotundifolia	10	X	FAC
4. Smilax glauca	5		FAC
5.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across All Strata: 13 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 69.23 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	55	x 2 =	110
FAC species	155	x 3 =	465
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	300 (A)		935 (B)

Prevalence Index = B/A = 3.1167

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP57

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100					Silty Clay	
3-16	10YR 5/2	100					Silty Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 1/29/2016

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22937867 Long: -91.08497329

Investigator(s): Allan Pringle / Travis Moore

Sampling Point: SP57

Photo Number: IMG_0122.JPG

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP57

Photo Number: IMG_0123.JPG

Direction: N

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 1/29/2016

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP58

Investigator(s): Allan Pringle / Travis Moore Section, Township, Range: 67-T09S-R01E

Landform (hillslope, terrace, etc.): Pasture land Local Relief (concave, convex, none): Convex Slope (%): 3

Subregion (LRR or MLRA): LRR O Lat: 30.22403879 Long: -91.08359634 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot taken in a non-wet cattle field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): -
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present.

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

Sampling Point: SP58

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Sapling Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: 30 feet)			
1.Sporobolus indicus	30	X	FACU
2.Stenotaphrum secundatum	20	X	FAC
3.Eleocharis wolfii	5		OBL
4.Geranium maculatum	5		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60 = Total Cover		

50% of total cover: 30 20% of total cover: 12

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	35	x 4 =	140
UPL species	0	x 5 =	0
Column Totals:	60 (A)		205 (B)

Prevalence Index = B/A = 3.4167

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is > 50%

____ 3 - Prevalence Index is ≤3.0[1]

____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP58

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	100					Silty Clay	
6-16	10YR 5/2	90	10YR 5/4	10	C	M	Silty Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Non-hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 1/29/2016

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22403879 Long: -91.08359634

Investigator(s): Allan Pringle / Travis Moore

Sampling Point: SP58

Photo Number: IMG_0133.JPG

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

Sampling Point: SP58

Photo Number: IMG_0134.JPG

Direction: N

Description:

General landscape view.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 1/29/2016

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP59

Investigator(s): Allan Pringle / Travis Moore Section, Township, Range: 69-T09S-R01E

Landform (hillslope, terrace, etc.): Bottomland Hardwood Forests Local Relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR O Lat: 30.22668519 Long: -91.08685447 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X Hydric Soil Present? Yes ___ No X Wetland Hydrology Present? Yes ___ No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X

Remarks:

Plot bottomland hardwood forest.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 16
Water Table Present?	Yes ___	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 16

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Indicators A1 and A3 present

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

Sampling Point: SP59

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	45	X	FAC
2. Quercus nigra	25	X	FAC
3. Celtis laevigata	5		FACW
4.			
5.			
6.			
	75 = Total Cover		
50% of total cover: 38	20% of total cover: 15		

Sapling Stratum (Plot size: 30 feet)			
1. Quercus nigra	50	X	FAC
2. Acer negundo	20	X	FAC
3. Celtis laevigata	10		FACW
4. Sambucus nigra	5		FACW
5.			
6.			
	85 = Total Cover		
50% of total cover: 43	20% of total cover: 17		

Shrub Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Woody Vine Stratum (Plot size: 30 feet)			
1. Smilax bona-nox	15		FAC
2. Vitis rotundifolia	15		FAC
3. Toxicodendron radicans	5		FAC
4.			
5.			
	35 = Total Cover		
50% of total cover: 18	20% of total cover: 7		

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: 100.00 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	20	x 2 = 40
FAC species	175	x 3 = 525
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	195 (A)	565 (B)

Prevalence Index = B/A = 2.8974

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP59

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	95	10YR 4/6	5	D	M	Silty Clay	
8-16	10YR 5/1	80	10YR 4/6	20	D	M	Silty Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 1/29/2016

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22668519 Long: -91.08685447

Investigator(s): Allan Pringle / Travis Moore

Sampling Point: SP59

Photo Number: IMG_0139.JPG

Direction: N

Description:

General landscape view.

Sampling Point: SP59

Photo Number: IMG_0138.JPG

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

WETLAND DETERMINATION DATA FORM − Atlantic and Gulf Coastal Plain Region

Project/Site: Wanhua - Syngenta City/County: Iberville Sampling Date: 1/29/2016

Applicant/Owner: Wanhua Chemical US Holding Inc. State: LA Sampling Point: SP60

Investigator(s): Allan Pringle / Travis Moore Section, Township, Range: 101-T09S-R01E

Landform (hillslope, terrace, etc.): Hillside Local Relief (concave, convex, none): Convex Slope (%): 3

Subregion (LRR or MLRA): LRR O Lat: 30.22497793 Long: -91.09483054 Datum: WGS84

Soil Map Unit Name: Vacherie silt loam NWI classification: ____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ____ Hydric Soil Present? Yes ____ No X Wetland Hydrology Present? Yes ____ No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X

Remarks:

Plot located in upland forest.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crawfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): -
Water Table Present?	Yes ____	No X	Depth (inches): -
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): -

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Secondary indicator D5 present.

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

Sampling Point: SP60

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Celtis laevigata	45	X	FACW
2. Carya illinoinensis	30	X	FACU
3. Liquidambar styraciflua	15		FAC
4. Ostrya virginiana	10		FACU
5.			
6.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Sapling Stratum (Plot size: 30 feet)			
1. Celtis laevigata	60	X	FACW
2. Liquidambar styraciflua	5		FAC
3.			
4.			
5.			
6.			
	65 = Total Cover		
50% of total cover: 33	20% of total cover: 13		

Shrub Stratum (Plot size: 30 feet)			
1. Ligustrum sinense	35	X	FAC
2. Sabal minor	10	X	FACW
3.			
4.			
5.			
6.			
	45 = Total Cover		
50% of total cover: 23	20% of total cover: 9		

Herb Stratum (Plot size: 30 feet)			
1. Allium canadense	35	X	FACU
2. Ligustrum sinense	20	X	FAC
3. Lonicera japonica	20	X	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	75 = Total Cover		
50% of total cover: 38	20% of total cover: 15		

Woody Vine Stratum (Plot size: 30 feet)			
1. Toxicodendron radicans	10	X	FAC
2.			
3.			
4.			
5.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 66.67 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	115	x 2 = 230
FAC species	85	x 3 = 255
FACU species	95	x 4 = 380
UPL species	0	x 5 = 0
Column Totals:	295 (A)	865 (B)

Prevalence Index = B/A = 2.9322

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ Problematic Hydrophytic Vegetaion[1] (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP60

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/2	100					Silty Clay	
6-16	10YR 5/1	80	10YR 5/6	20	D	M	Silty Clay	

[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 or otherwise noted.)

___ Histol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prarie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR, S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR, P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anamalous Bright Loamy Soils (F20) **(MLRA 149A,153C,153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MRLA 150A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR, P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Hydric soil profile.

PHOTOGRAPHIC LOG - Potential Jurisdictional Features

Project/Site: Wanhua - Syngenta

Sampling Date: 1/29/2016

Applicant/Owner: Wanhua Chemical US Holding Inc.

Lat: 30.22497793 Long: -91.09483054

Investigator(s): Allan Pringle / Travis Moore

Sampling Point: SP60

Photo Number: IMG_0142.JPG

Direction: N

Description:

General landscape view.

Sampling Point: SP60

Photo Number: IMG_0141.JPG

Direction: Down

Description:

Soil pit and profile with a tape measure placed along side of a soil profile. Munsell color key was used to separate the soil profile into horizons according to the color chart value and chroma in each horizon at each data point.

About AECOM

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