# WETLAND ANALYSIS REPORT MILLER SOUTHEAST RANGE PROPERTY LIVINGSTON PARISH, LOUISIANA

Prepared for:

MILLER SOUTHEAST RANGE, LTD.

**APRIL, 2016** 



Prepared by:

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# WETLAND ANALYSIS REPORT MILLER SOUTHEAST RANGE PROPERTY LIVINGSTON PARISH, LOUISIANA

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## **APPENDIX**

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# **APPENDIX**

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#### **ABSTRACT**

This report describes the methodology and results of a "Routine Wetland Determination" as outlined in the 1987 Corps of Engineers Wetlands Delineation Manual (COE Technical Report Y-87-1) and subsequent Regulatory Guidance Letters (RGL), as well as pertinent regional supplement. The report discusses in detail the specific steps utilized by D&S Environmental Services, Inc. (DSES) to derive an accurate description of jurisdictional wetlands, areas subject to regulation as navigable waters (Section 10) and "Other Waters of the United States" (Section 404) located within the subject property. DSES utilized technically experienced personnel (Professional Wetland Scientist; Certification #1755) along with cutting edge technology to meticulously depict the correct amount and location of jurisdictional wetlands, areas subject to regulation as navigable waters (Section 10) and "Other Waters of the United States" (Section 404) within the subject property. Based on this "Routine Wetland Determination", the site contains 1.78 acres of jurisdictional wetlands and 0.16 acres of "Other Waters of the United States" (Section 404), which will require a DOA permit prior to any dredge/fill activity within these areas. Under the authority of the Clean Water Act (Section 404) and the Rivers and Harbor Act (Section 10) the United States Army Corps of Engineers has the responsibility to make the final determination of the location and extent of jurisdictional wetlands, navigable waters (Section 10) and "Other Waters of the United States" (Section 10) within this property, respectively. This report represents the "best professional judgment" of DSES personnel and should be considered preliminary until final approval is obtained from the New Orleans District Army Corps of Engineers office.

#### INTRODUCTION

This report describes the methodology and results of a "Routine Wetland Determination" regarding a 9.84-acre site located in Section 7, Township 7 South, Range 3 East, Livingston Parish, Louisiana on behalf of Miller Southeast Range, Ltd. The report discusses in detail the specific steps utilized by D&S Environmental Services, Inc. (DSES) to derive an accurate description of jurisdictional wetlands, areas subject to regulation as navigable waters (Section 10) and "Other Waters of the United States" (Section 404) located within the subject property.

Jurisdictional wetlands are defined as "areas that are inundated or saturated at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (40 CFR 230.3). The 1987 Corps of Engineers Wetlands Delineation Manual (COE Technical Report Y-87-1) outlines the mandatory three-parameter/criteria for determining the presence of a jurisdictional wetland, which are: (1) hydrophytic vegetation, (2) wetland hydrology and (3) hydric soils. Due to obvious problem areas (prairie potholes, beaver dams, etc...), the aforementioned criteria are subject to some subjectivity.

## **Definitions**

A hydric soil is defined as a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (US Department of Agriculture [USDA] Soil Conservation Service [SCS] 1994).

Hydrophytic vegetation is defined herein as the sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. When hydrophytic vegetation comprises a community where indicators of hydric soils and wetland hydrology also occur, the area has wetland vegetation (COE Technical Report Y-87-1).

The term "wetland hydrology" encompasses the sum total of wetness characteristics in areas that are inundated or have saturated soils for a sufficient duration to support hydrophytic vegetation (COE Technical Report Y-87-1).

Deepwater aquatic habitats are "areas that are permanently inundated at mean annual water depths >6.6 feet or permanently inundated areas, ≤6.6 feet in depth that do not support rooted-emergent or woody plant species" (Environmental Laboratory. 1987. "COE Wetlands Delineation Manual, Technical Report Y-87-1, U. S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.). Any area that meets this description is commonly classified as "Other Waters of the United States".

## **SITE DESCRIPTION**

#### **Specific Location**

The site is located in Section 7, Township 7 South, Range 3 East, Livingston Parish, Louisiana (Figure 1). More specifically, the site is located south and east of the "dead end" of Shady Park Road, approximately 0.08 miles east of the intersection at Shady Park Road and LA Highway 3002 (South Range Avenue), as depicted in Figures 1 & 2.

### History & Physiography

Historically, west-central Livingston Parish was formed from a sheeting hydrological effect, which resulted in "prairie terrace" type topography. This particular region is composed of Peoria loess of the late-Pleistocene age, which gives rise to level to gently sloping elevations at approximately 35 feet above sea level. This site drains into upper branches of Millers Canal, which flows into Grays Creek, thence into Grays Creek Lake and eventually empties into the Amite River in the lower portion of the parish (Port Vincent). Currently, the entire site is undeveloped "raw property" comprised of two major vegetative community types, which are a remnant pine plantation with a mixture of pine-bottomland hardwood species (majority, non-wetland) and bottomland hardwood with a minor herbaceous component (jurisdictional wetlands). The jurisdictional wetland areas are located in shallow depressions, swales / drainagways and drainage overflow areas, which are typical in this geographical location (Figure 2).

# **METHODOLOGY**

DSES utilized wetland delineation methods that are consistent with the 1987 Corps of Engineers Wetlands Delineation Manual (COE Technical Report Y-87-1) and subsequent Regulatory Guidance Letters (RGL), as well as pertinent regional supplement, (see below for reference material).

## Reference Material

- · Livingston Parish, Louisiana (January, 1991) Soil Survey
- · Soil Mapping Units and Hydric Soils Designations, Louisiana, (May, 1995)
- · State of Louisiana-National Wetland Plant List-Final Draft Ratings U.S. Army Corps of Engineers, Cold Regions Research and Engineering Laboratory (CRREL) (2012).

DSES personnel were on-site on April 15, 2016, to determine the extent and location of jurisdictional wetlands, areas subject to regulation as navigable waters (Section 10) and "Other Waters of the United States" (Section 404). Data plots were established at vegetation community change throughout the site and recorded on a COE approved "Final Wetland Determination Data Form-Atlantic and Gulf Coastal Plain Region-

Version 2" (Appendix I). Plot sizes were sampled within areas either containing a 30-foot radius or equivalent area for each vegetative community of interest.

Dominant vegetation is based on the species that are most abundant within a plot and have a threshold value that is  $\geq 20\%$ . These vegetative species are used in the three-parameter/criteria to determine site wetness and are recorded based on ocular estimation or percent cover. Dominant plant species were recorded in the following strata: Tree, Sapling, Shrub, Herbaceous and/or Woody Vine. Additionally, each species is represented by a wetland indicator value, which corresponds with its "wetland status".

Soil observations were made by using a 2 3/4" bucket auger to extract a 12" (minimum) plug. Each soil plug was compared to a Munsell Soil Color Chart to correlate the soil color/texture at an approximate 10" depth. Soil color/texture is vital in proving/disproving anaerobic conditions.

Hydrology was assessed from various observations, which include, but are not limited to soil characteristics, dominant vegetative communities, physiographic properties, and other tangible observations, such as primary and secondary indicators (Final Wetland Determination Data Form-Atlantic and Gulf Coastal Plain Region-Version 2).

Data plots, natural resources (jurisdictional wetlands and/or Other Waters of the U.S.) and other diagnostic land features were mapped utilizing a Trimble-Pro XRS global positioning system (GPS). Real time corrections were made utilizing the radio signal based on the Radio Technical Commission for Maritime Services Special Committee Paper No. 104 (RTCM SC-104) format.

### **RESULTS**

#### Vegetation

The jurisdictional wetland areas are primarily dominated by red maple (Acer rubrum), Chinese tallow-tree (Triadica sebiferum), water oak (Quercus nigra), green ash (Fraxinus pennsylvanica), American elm (Ulmus americana), spruce pine (Pinus glabra), willow oak (Quercus phellos), swamp chestnut oak (Quercus michauxii), dwarf palmetto (Sabal minor), brome-like sedge (Carex bromoides), lamp rush (Juncus effusus), lizard's-tail (Saururus cernuus), loose-flower water-willow (Justicia ovata), iris (Iris sp.), manyflower penny-wort (Hydrocotyle umbellata), royal fern (Osmunda regalis), cinnamon fern (Osmunda cinnamomea), poison ivy (Toxicodendron radicans), trumpet-creeper (Campsis radicans), Alabama supplejack (Berchemia scandens), horsebrier (Smilax rotunifolia), etc. The non-wetland areas are primarily dominated by loblolly pine (Pinus taeda), sweet-gum (Liquidambar styraciflua), winged elm (Ulmus alata), water oak (Quercus nigra), southern red oak (Quercus falcata), cherry-bark oak (Quercus pagoda), swamp chestnut oak (Quercus michauxii), American beech (Fagus grandifolia), southern magnolia (Magnolia grandiflora), black cherry (Prunus serotina), persimmon (Diospyros virginiana), Chinese privet (Ligustrum sinense), yaupon (Ilex vomitoria), American holly (Ilex opaca), American beauty-berry (Callicarpa americana), long-leaf wood-oats

(Chasmanthium sessiliflorum), muscadine (Vitis rotundifolia), Japanese climbing fern (Lygodium japonicum), crossvine (Bignonia capreolata), Japanese honeysuckle (Lonicera japonica) fringed greenbrier (Smilax bona-nox), poison ivy (Toxicodendron radicans), trumpet-creeper (Campsis radicans), etc.

### Hydrology

Positive primary and secondary wetland hydrology indicators such as high water table, saturation, sediment deposits, oxidized rhizospheres along living roots, positive FAC-Neutral test, etc... were observed within the jurisdictional wetland areas. These indicators were absent in the non-wetland portions of the site.

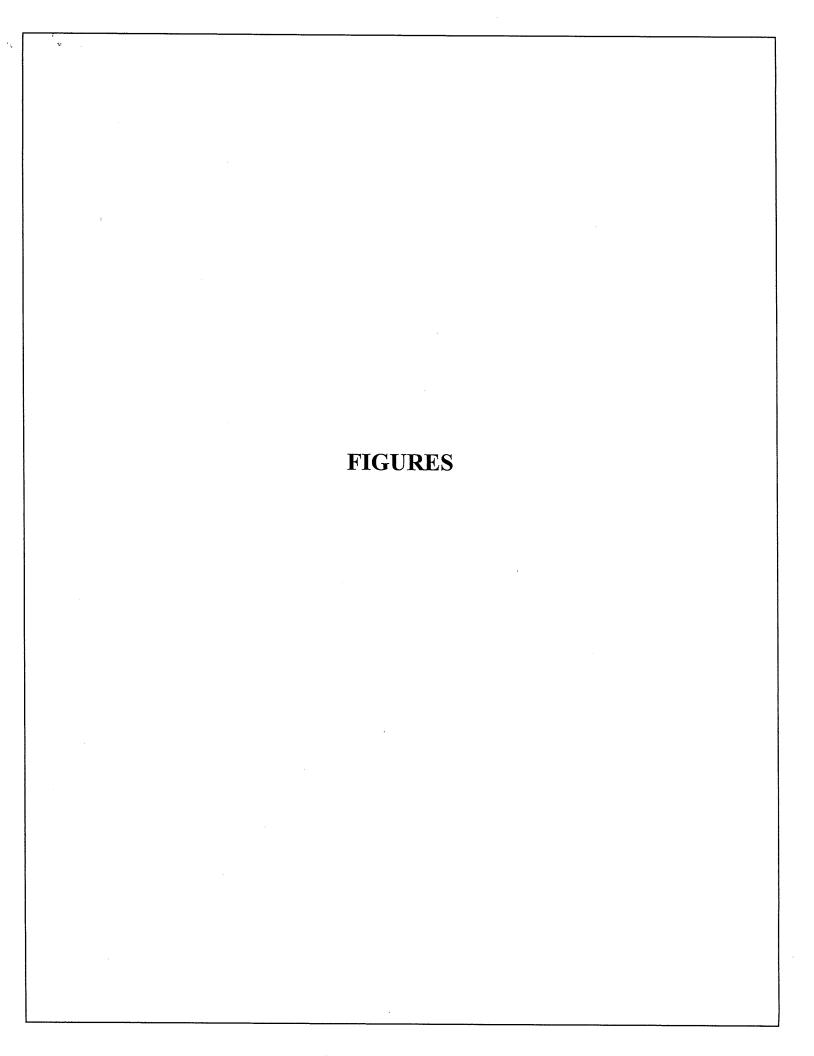
#### Soils

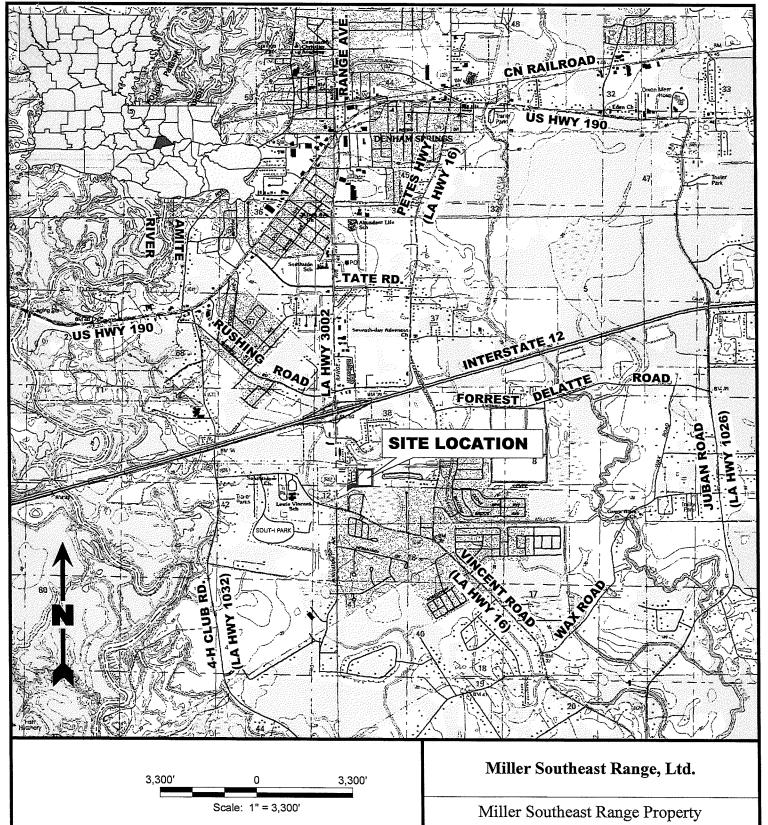
The Soil Survey indicates the site is underlain by Dv: Deerford-Verdun silt loams, which are located in level to gently sloping areas and classified somewhat poorly drained. Additionally, the Soil Survey indicates site is underlain by Ge: Gilbert-Brimstone silt loams, occasionally flooded, which are located in level to depressed areas and classified poorly drained. According to the Soils Mapping Units and Hydric Soils Designations, Louisiana, (May, 1995), Deerford and Verdun soils are classified non-hydric, whereas, Brimstone and Gilbert soils are classified hydric. However, Deerford and Verdun mapped areas may be hydric provided inclusions are present. Observations by DSES personnel during the site visit agree with the descriptions for the soil series described in the Soil Survey, but disagree with portions of the mapping locations.

#### **CONCLUSION**

In accordance with the 1987 Corps of Engineers Wetlands Delineation Manual (COE Technical Report Y-87-1) and subsequent Regulatory Guidance Letters (RGL), as well as pertinent regional supplement, DSES utilized technically experienced personnel (Professional Wetland Scientist; Certification #1755) along with cutting edge technology to meticulously depict the correct amount and location of jurisdictional wetlands, areas subject to regulation as navigable waters (Section 10) and "Other Waters of the United States" (Section 404) within the subject property. Based on this "Routine Wetland Determination", the site contains 1.78 acres of jurisdictional wetlands and 0.16 acres of "Other Waters of the United States" (Section 404), which will require a DOA permit prior to any dredge/fill activity within these areas.

Under the authority of the Clean Water Act (Section 404) and the Rivers and Harbor Act (Section 10) the United States Army Corps of Engineers has the responsibility to make the final determination of the location and extent of jurisdictional wetlands, navigable waters (Section 10) and "Other Waters of the United States" (Section 404) within this property, respectively. This report represents the "best professional judgment" of DSES personnel and should be considered preliminary until final approval is obtained from the New Orleans District Army Corps of Engineers office.







#### **Notes**

Property is located in Sections 7 T7S-R3E

Latitude: 30°26'55.47"N Longitude: 90°57'11.21"W

#### Reference

Base map comprised of U.S.G.S. 7.5 minute topographic maps "Denham Springs, LA".

# **Vicinity Map**

Livingston Parish, Louisiana



D & S ENVIRONMENTAL SERVICES, INC.

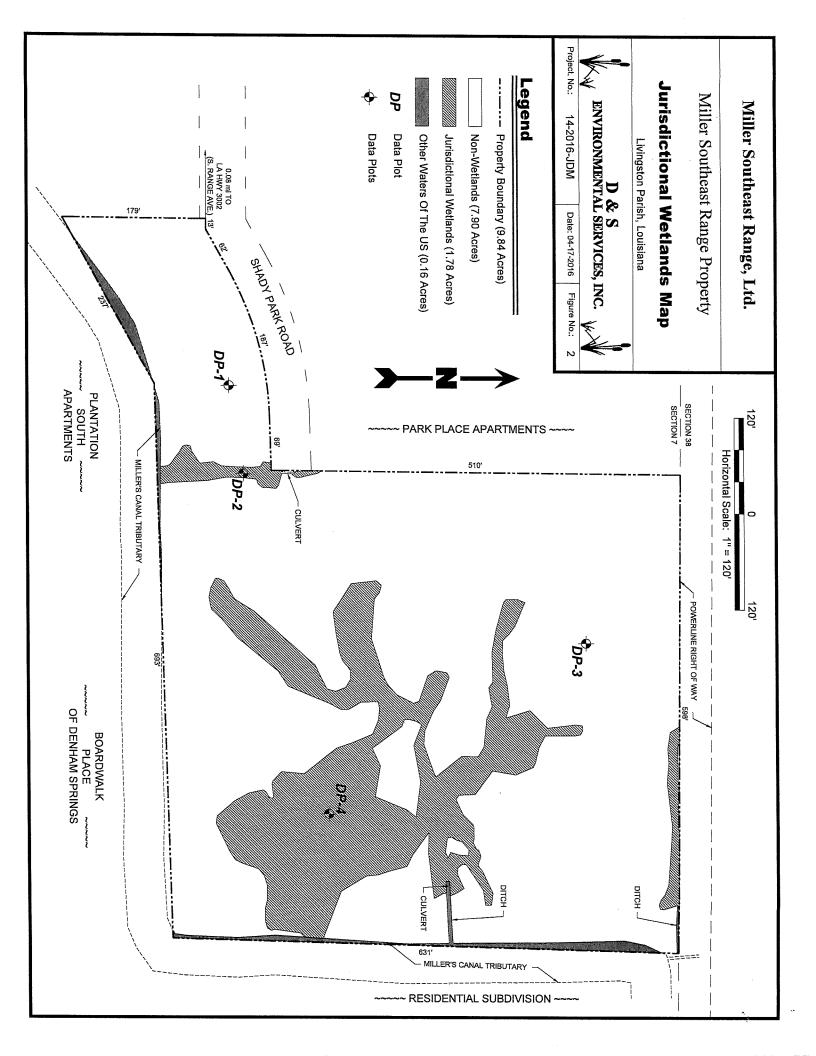


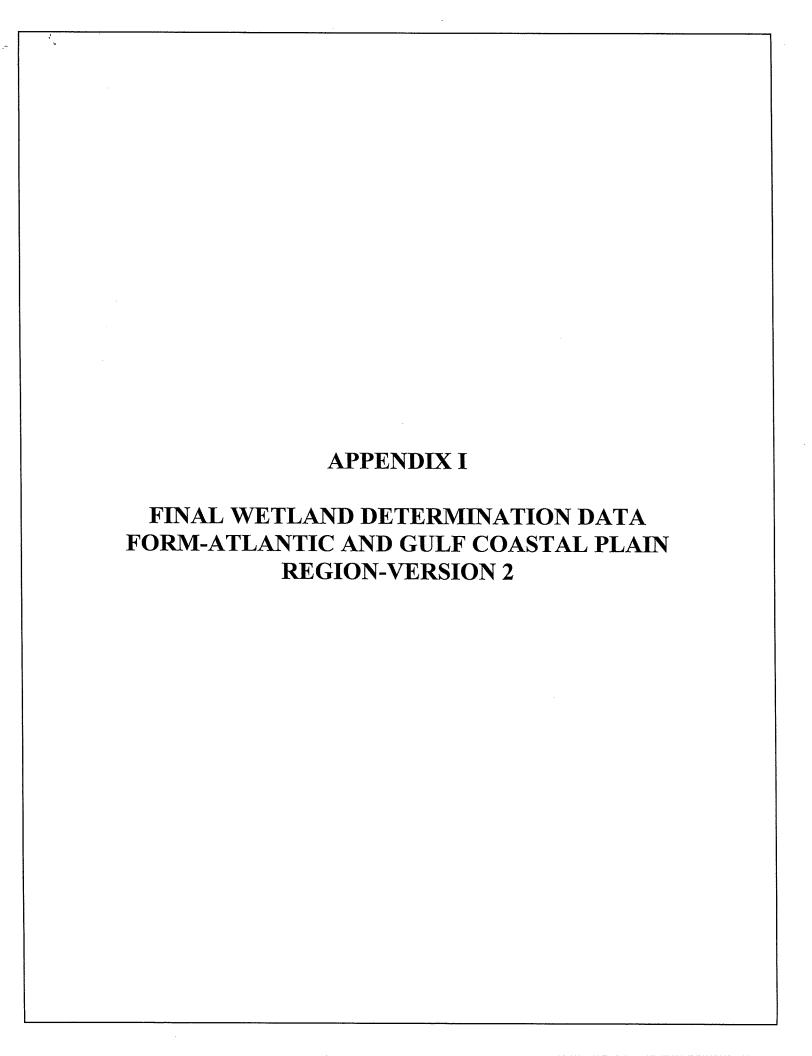
Project. No.:

14-2016-JDM

Date: 04-17-2016

Figure No.:





Project/Site: Miller Southeast Range Property	City/County: Livingst	on Parish	Sampling Date: 4-15-16
Applicant/Owner: Miller Southeast Range, Ltd.		State: LA	
Investigator(s); DSES (David C. Templet, Jr.)	Section, Township,		
Landform (hillslope, terrace, etc.): level to gently sloping top			
Subregion (LRR or MLRA): LRR=P & MLRA=134			
Soil Map Unit Name: Ge: Gilbert-Brimstone silt loams, or		NWI classif	
Are climatic / hydrologic conditions on the site typical for thi	s time of year? Yes ✓ N		
Are Vegetation, Soil, or Hydrologys			present? Yes   No
Are Vegetation, Soil, or Hydrology r		f needed, explain any answ	-
SUMMARY OF FINDINGS – Attach site map			·
Remarks:	o within a We	tland? Yes	No
- Data Plot is located on a well draine currently in a "post-thinning" late stage	_	•	ne plantation, which is
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all	that apply)	Surface So	oil Cracks (B6)
Surface Water (A1) Aquatio	Fauna (B13)	Sparsely V	egetated Concave Surface (B8)
High Water Table (A2) Marl De	eposits (B15) (LRR U)	Drainage F	Patterns (B10)
	en Sulfide Odor (C1)	Moss Trim	Lines (B16)
	d Rhizospheres along Living R	oots (C3) Dry-Seaso	n Water Table (C2)
	ce of Reduced Iron (C4)	Crayfish B	urrows (C8)
	Iron Reduction in Tilled Soils (	C6) Saturation	Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Mi	ick Surface (C7)	Geomorph	ic Position (D2)
1	Explain in Remarks)	Shallow Ad	quitard (D3)
Inundation Visible on Aerial Imagery (B7)			al Test (D5)
Water-Stained Leaves (B9)		Sphagnum	moss (D8) (LRR T, U)
Field Observations:			
Surface Water Present? Yes No _ ✓ De			
	pth (inches):		
(includes capillary fringe)	pth (inches):	Wetland Hydrology Pres	ent? Yes No_✓_
Describe Recorded Data (stream gauge, monitoring well, - Extrapolated data from aerial photographs			ad abawa da wadi a
Remarks:	x LIDAN data were cons	disterit with non-wetta	nu characteristics.
remains.			
		,	
·			
·			
	•		

١	/EGETATION	(Five Strata)	<b>\</b> _	عوا ا	scientific	names	of plants
		Trive Sulata	, - ,	USE.	SUICHIIIU	Halles	UL DIGILIS.

<b>EGETATION (Five Strata)</b> – Use scientific nar	nes of pla	ants.		Sampling Point: DP-1
T Ch-thur (Dist : 30'		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u> ) 1. <u>Pinus taeda</u>		Species?	FAC	Number of Dominant Species 10
1. <u>Pinus taeda</u> 2. <u>Liquidambar styraciflua</u>	50	yes		That Are OBL, FACW, or FAC: (A)
	10	no	FAC	Total Number of Dominant Species Across All Strate: 12 (B)
3. <u>Ulmus alata</u>	_10	<u>no</u>	FACU	Species Across All Strata: 12 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 83.33 (A/B)
6	70			Prevalence Index worksheet:
700 000	70			Total % Cover of: Multiply by:
50% of total cover: <u>35</u>	20% of	total cover	r: <u>14                                    </u>	OBL species x 1 =0
Sapling Stratum (Plot size: 30' )	20		EAC	FACW species x 2 =0
1. Liquidambar styraciflua	4 =	yes	FAC	FAC species x 3 =0
2. Ulmus alata		<u>ves</u>	FACU	FACU species x 4 =0
3. Quercus nigra		no	FAC_	UPL species x 5 =
4. Prunus serotina			<u>FACU</u>	Column Totals: 0 (A) 0 (B)
5. <u>Diospyros virginiana</u>		no	FAC	Codmin rotals (A) (B)
6. <u>Magnolia grandiflora</u>	_5	_no	FAC	Prevalence Index = B/A =
		= Total Co		Hydrophytic Vegetation Indicators:
50% of total cover: <u>33.7</u>	<u>5</u> 20% of	f total cove	r: <u>13.5                                    </u>	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30' )				2 - Dominance Test is >50%
1. <u>Liqustrum sinense</u>		<u>yes</u>	<u>FAC</u>	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. <u>Ilex vomitoria</u>			FAC	Problematic Hydrophytic Vegetation¹ (Explain)
3. <u>Callicarpa americana</u>			<u>FACU</u>	
4.				Indicators of hydric soil and wetland hydrology must
5			-	be present, unless disturbed or problematic.
6			-	Definitions of Five Vegetation Strata:
		= Total Co		Tree – Woody plants, excluding woody vines,
50% of total cover: <u>25</u>	20% o	f total cove	r. <u>10</u>	approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30')				(7.6 cm) or larger in diameter at breast height (DBH).
Chasmanthium sessiliflorum	_20	yes	<u> FAC </u>	Sapling - Woody plants, excluding woody vines,
2. Toxicodendron radicans	10	yes	FAC	approximately 20 ft (6 m) or more in height and less
3. Lonicera japonica	2.5	no	FAC	than 3 in. (7.6 cm) DBH.
4. <u>Lygodium japonicum</u>	2.5	no	FAC	Shrub – Woody plants, excluding woody vines,
5				approximately 3 to 20 ft (1 to 6 m) in height.
6			-	Herb – All herbaceous (non-woody) plants, including
7				herbaceous vines, regardless of size, and woody
8			-	plants, except woody vines, less than approximately 3 ft (1 m) in height.
9				
10				Woody vine - All woody vines, regardless of height.
11				
	35	= Total Co	over	
50% of total cover: <u>17.</u>		-		
Woody Vine Stratum (Plot size: 30' )			···	-
1. Toxicodendron radicans	2.5	yes	FAC	
Campsis radicans	2.5	ves	FAC	
Vitis rotundifolia	2.5	ves	FAC	-
4. Smilax bona-nox	2.5	ves	FAC	-
		_ves	17.0	-
5		-		- Hydrophytic

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

50% of total cover: 5

- Although hydrophytic vegetation is prevalent, the overall species composition is skewed toward upland, and the other two criteria are not met to classify this area as a jurisdictional wetland (See "Site Photographs").

\_10 = Total Cover

20% of total cover: 2

Yes \_\_\_\_ No \_\_\_

+

Vegetation

Present?

Sampling Pa	oint: DP-1	
-------------	------------	--

Profile Desc	cription: (Describe	to the dep	th needed to docu	ıment the	indicator	or confirn	n the absence	of indicator	s.)	
Depth	Matrix	0/		ox Feature		. ,				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-12	10yr 6/2 & 6/4	100	N/A	_ <u>N/A</u>	-		silt loam	indicative	of the Sa se	ries
								<del></del>		
-					-					
				_						
										_
						L				
1	-									
	oncentration, D=De					ains.			ning, M=Matri	
1	Indicators: (Appli	cable to all			-				natic Hydric (	Soils":
Histosol			Polyvalue E					Vluck (A9) (L		
	pipedon (A2)		Thin Dark S					Muck (A10) (		
_	istic (A3)		Loamy Mud			R O)				ILRA 150A,B)
	en Sulfide (A4)		Loamy Gle		(F2)					(LRR P, S, T)
	d Layers (A5)	D T 10	Depleted M		FC)			_	Loamy Soils (	F20)
. —	: Bodies (A6) (LRR I ucky Mineral (A7) (L		Redox Dark	-	-		-	RA 153B) Iorant Materi	AL /TEX	
1	ucky Mineral (A7) (L resence (A8) (LRR		) Depleted D Redox Dep					arent Materia		2)
l —	uck (A9) (LRR P, T)	•	Nedox Dep Marl (F10)	•	-0)			onallow Dark (Explain in F	Surface (TF1	2)
1	d Below Dark Surfa		Nan (1 10)		(MIRA 1	51)	Other	(Explain in r	temains)	
1	ark Surface (A12)	<b>55</b> (7 (1 1 )	Iron-Manga		-	•	. <b>T)</b> Indi	cators of hyd	rophytic veget	tation and
	Prairie Redox (A16)	(MLRA 150							gy must be pi	
	Mucky Mineral (S1)					, ,		-	d or problema	•
	Gleyed Matrix (S4)		Reduced V			50A, 150B			• '	
Sandy I	Redox (S5)		Piedmont F							
Strippe	d Matrix (S6)		Anomalous	Bright Loa	my Soils	(F20) (ML	RA 149A, 1530	c, 153D)		
	urface (S7) (LRR P,									
Restrictive	Layer (if observed	):								
Type:										
Depth (ir	nches):						Hydric Soi	l Present?	Yes	No. ✓
Remarks:			-							
		e., .								
1	mple is indicativ									
- See "S	ite Photographs	" to obtai	n visual confirm	nation.						

Project/Site: Miller Southeast Range Property	City/County; Livingston Parish	Sampling Date: 4-15-16
Applicant/Owner: Miller Southeast Range, Ltd.		State: LA Sampling Point: DP-2
Investigator(s): DSES (David C. Templet, Jr.)		ction 7, Township 7 South, Range 3 East
Landform (hillslope, terrace, etc.): level to depressed topo.		
Subregion (LRR or MLRA): LRR=P & MLRA=134 Lat:	30°26'55.47"N	0°57'11.21"W Deb. NAD 83
Soil Map Unit Name: Ge: Gilbert-Brimstone silt loams, occas		NWI classification: -Non-listed
Are climatic / hydrologic conditions on the site typical for this tir		
Are Vegetation, Soil, or Hydrology sign		•
Are Vegetation, Soil, or Hydrology natu		Circumstances <sup>®</sup> present? Yes ✓ No
SUMMARY OF FINDINGS – Attach site map sh		xplain any answers in Remarks.) ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area within a Wetland?	Yes ✓ No
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that		Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fai		
	sits (B15) (LRR U)	Sparsely Vegetated Concave Surface (B8)
	Sulfide Odor (C1)	Drainage Patterns (B10)
	hizospheres along Living Roots (C3)	Moss Trim Lines (B16)
<u> </u>	of Reduced Iron (C4)	Dry-Season Water Table (C2)
		✓ Crayfish Burrows (C8)
	Reduction in Tilled Soils (C6)	✓ Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck lron Deposits (B5) Other (Exp.		Geomorphic Position (D2)
· — · · ·	lain in Remarks)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)		✓ FAC-Neutral Test (D5)
✓ Water-Stained Leaves (B9)		✓ Sphagnum moss (D8) (LRR T, U)
Field Observations:		
Surface Water Present? Yes No Depth		
Water Table Present? Yes <u>√</u> No Depth		
Saturation Present? Yes ✓ No Depth (includes capillary fringe)	(inches): Surface Wetland H	ydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aeri	ial photos, previous inspections), if avai	ilable:
- Extrapolated information from aerial photograp		
Remarks:		
* Although by definition the "surface water" crite	ria was not met there are sno	radic nockets of surface water
throughout, as well as a high water table, satura	tion evidized thizespheres ele	and living roots positive FAC Newton
Test (deminance of hydrophytic vegetation) at-	tion, oxidized mizospheres alo	ong living roots, positive FAC-Neutral
Test (dominance of hydrophytic vegetation), etc.	that attest to the areas freque	ently flooded nature or ultimate site
wetness.		
- Worthy of mention, this area drains into Miller' Creek further downstream, thence into Grays Cr reaches of the parish (Port Vincent).	s Canal along the south and earek Lake and finally empties in	ast boundaries, which flows into Grays nto the Amite River in the lower

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

Sampling Point: <u>DP-2</u>

Troc Strature (Diet size, 30'		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30'		Species?		Number of Dominant Species 10
_	20		FAC_	That Are OBL, FACW, or FAC: (A)
2. Acer rubrum				Total Number of Dominant
3				Species Across All Strata:10(B)
4				Description of Description
5				Percent of Dominant Species That Are OBL, FACW, or FAC:100 (A/B)
6		***		Mar Ale OBL, FACW, OF FAC.
	35	= Total Co	ver	Prevalence Index worksheet:
50% of total cover: <u>17.5</u>				Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30')	20 % 01	i total covel		OBL species x 1 =0
1. Acer rubrum	40		E40	FACW species x 2 =0
	10	ves	FAC	FAC species x 3 =0
2. <u>Triadica sebifera</u>	<u>/.5</u>	γes	<u>FAC</u>	1
3. Quercus nigra	_5	<u>ves</u>	<u>FACU</u>	FACU species x 4 =0
4				UPL species x 5 =
5				Column Totals: 0 (A) 0 (B)
6				Prevalence Index = B/A =
		= Total Co	ver	Hydrophytic Vegetation Indicators:
50% of total cover: <u>11.2</u>	 520% o	f total cove	r: _4.5	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30' )				
1. Crataegus opaca	5	Ves	OBL	2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 <sup>1</sup>
2				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3				
4				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic.
6				Definitions of Five Vegetation Strata:
		= Total Co	ver	The Maidealast well !
50% of total cover: <u>2.5</u>	20% o	f total cove	r: 1	Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30'			·· <del></del>	(7.6 cm) or larger in diameter at breast height (DBH).
Carex bromoides	10	ves	FACW	
				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
2				than 3 in. (7.6 cm) DBH.
3				
4				Shrub – Woody plants, excluding woody vines,
5		-	·	approximately 3 to 20 ft (1 to 6 m) in height.
6				Herb - All herbaceous (non-woody) plants, including
7				herbaceous vines, regardless of size, and woody
8			-	plants, except woody vines, less than approximately 3 ft (1 m) in height.
9				3 it (1 m) in neight.
10				Woody vine - All woody vines, regardless of height.
11	40			
		= Total Co		
50% of total cover: 5	20% o	of total cove	r: <u>2</u>	
Woody Vine Stratum (Plot size: 30')				
Toxicodendron radicans	2.5	yes	FAC	
Campsis radicans	2.5	yes	FAC	
3. Smilax rotundifolia	2.5	ves	FAC	
4.				
5.				
· -				Hydrophytic
	7.5	= Total Co		Vegetation Present?  Yes   ✓ No
50% of total cover: <u>3,75</u>		of total cove	r: <u>1.5</u>	100 <u>v</u> NO
Remarks: (If observed, list morphological adaptations below	w).			
- See "Site Photographs" to obtain visual conf	irmation			
The state of the s		•		

Sampling Point: DP-2

Profile Desc	ription: (Describe	to the dep	th needed to docu	ment the	indicator	or confirm	n the absence	of indicators.)
Depth	Matrix		Redo	ox Feature	s			
(inches)	Color (moist)	%	Color (moist)	%_	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-12	10yr 6/1 & 6/2	85	10yr 5/6	15	С	М	silt loam	indicative of the Ge series
1				_				
			=Reduced Matrix, N			rains.		PL=Pore Lining, M=Matrix.
		cable to all	LRRs, unless other	rwise not	ed.)		Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol	, ,		Polyvalue B	elow Surfa	ice (S8) (	LRR S, T,	<b>U)</b> 1 cm l	Muck (A9) (LRR O)
Histic Ep	oipedon (A2)		Thin Dark S	urface (S9	) (LRR S	, T, U)	2 cm l	Muck (A10) (LRR S)
	stic (A3)		Loamy Muc	ky Mineral	(F1) (LR	R O)	Reduc	ced Vertic (F18) (outside MLRA 150A,E
Hydroge	en Sulfide (A4)		Loamy Gley	red Matrix	(F2)		Piedm	nont Floodplain Soils (F19) (LRR P, S, T
	d Layers (A5)		✓ Depleted Ma	atrix (F3)				alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR		Redox Dark	Surface (	F6)		(ML	RA 153B)
	ıcky Mineral (A7) <b>(L</b>		-				Red F	Parent Material (TF2)
	resence (A8) (LRR		Redox Depr	essions (F	8)		Very	Shallow Dark Surface (TF12)
1 cm Mu	ıck (A9) <b>(LRR P, T)</b>		Marl (F10) (	LRR U)			Other	(Explain in Remarks)
	d Below Dark Surfa	ce (A11)	Depleted O	chric (F11)	(MLRA	151)		
	ark Surface (A12)		Iron-Manga				<b>P, T)</b> <sup>3</sup> Indi	cators of hydrophytic vegetation and
Coast P	rairie Redox (A16)	(MLRA 150	A) Umbric Surf				we	tland hydrology must be present,
	/lucky Mineral (S1)	(LRR O, S)						less disturbed or problematic.
	Sleyed Matrix (S4)		Reduced Ve	ertic (F18)	(MLRA 1	50A, 150E	3)	
	Redox (S5)		Piedmont F	loodplain S	Soils (F19	) (MLRA 1	49A)	
Stripped	l Matrix (S6)		Anomalous	Bright Loa	my Soils	(F20) (ML	RA 149A, 1530	C, 153D)
	rface (S7) (LRR P,							
Restrictive	Layer (if observed	):						
Туре:								
Depth (in	ches);						Hydric Soi	I Present? Yes <u>√</u> No
Remarks:							,	111000IR. 100 <u></u>
romans.			•					
- Soil sar	nple is indicativ	e of the (	Silbert-Brimston	e series.				
- See "Si	te Photographs	" to obtai	n visual confirm	ation.				
	<b>J</b>							
ŀ								
-								
1								

Project/Site: Miller Southeast Range Property	City/County: Livingston Parish		Sampling Date: 4-15-16
Applicant/Owner: Miller Southeast Range, Ltd.			Sampling Point: DP-3
	Section, Township, Range:		
Landform (hillslope, terrace, etc.): level to gently sloping topo.			
Subregion (LRR or MLRA): LRR=P & MLRA=134 Lat: 3	0°26'55.47"N	90°57'11 21"\N	Siope (%):
Soil Map Unit Name: Dv: Deerford-Verdun silt loams			
		NWI classific	
Are Vegetation			
Are Vegetation, Soil, or Hydrology signifi		•	resent? Yes No
Are Vegetation, Soil, or Hydrology natura SUMMARY OF FINDINGS - Attach site map sho	•	explain any answe ions, transects	
_			,portanti rodulico, etc.
Hydrophytic Vegetation Present? Yes ✓ No_	is the sammen Area		
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No		Yes	No ✓
Wetland Hydrology Present? Yes No Remarks:	<del>Y</del>		
- Data Plot is located on a well drained ricurrently in a "post-thinning" late stage of	rotation (see "Site Pho	tographs").	e plantation, which is
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is required; check all that a		Surface Soil	, ,
Surface Water (A1) Aquatic Faur		Sparsely Veg	getated Concave Surface (B8)
l	s (B15) (LRR U)	Drainage Pat	' '
Saturation (A3) Hydrogen St Water Marks (B1) Oxidized Rhi	* * *	Moss Trim Li	- '
	zospheres along Living Roots (C3)	<del>_</del> -	Water Table (C2)
	Reduced Iron (C4) Reduction in Tilled Soils (C6)	Crayfish Buri	
Algal Mat or Crust (B4) Thin Muck S	, ,		sible on Aerial Imagery (C9) Position (D2)
Iron Deposits (B5) Other (Expla	• •	Shallow Aqui	
Inundation Visible on Aerial Imagery (B7)	,	FAC-Neutral	` '
Water-Stained Leaves (B9)			noss (D8) (LRR T, U)
Field Observations:			
Surface Water Present? Yes No _ ✓ Depth.(i	nches):		
Water Table Present? Yes No _ ✓ Depth (i	nches):		
Saturation Present? Yes No _ ✓ Depth (i	nches): Wetland	Hydrology Presen	nt? Yes No✓
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aeria	photos previous inspections) if a	vailable:	
- Extrapolated data from aerial photographs & LII	DAR data were consistent v	valiable. /ith non-wetland	l characteristics
Remarks:			· Orial action of the

A COURT A TION OF	ive Strata) - Use scientific names of pla	
VEGETATION O	The Stratal — Hea colonillo hamee of his	DIE

EGETATION (Five Strata) – Use scientific na	mes of pla	ants.		Sampling Point: DP-3
Tree Stratum (Plot size: 30' )			t Indicator	Dominance Test worksheet:
	<u>% Cover</u> _50		FAC	Number of Dominant Species 10
n. <u>Pinus taeda</u> 2. <u>Prunus serotina</u>		yes		That Are OBL, FACW, or FAC: (A)
				Total Number of Dominant Species Across All Strata: 13 (B)
3. <u>Ulmus alata</u>			<u>FACU</u>	Species Across All Strata: 13 (B)
<del>-</del>			-	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 76.92 (A/B)
5				Prevalence Index worksheet:
77	<u>75</u>			Total % Cover of:Multiply by:
50% of total cover: <u>37.</u>	5 20% of	total cove	r: <u>15                                    </u>	OBL species x1 =0
Sapling Stratum (Plot size: 30' )	4-5			FACW species x 2 =0
. Liquidambar styraciflua	_ <u>15</u>	ves	<u>FAC</u>	FAC species x 3 =0
2. <u>Ulmus alata</u>		yes	<u>FACU</u>	FACU species x 4 =0
3. Quercus nigra		no	<u>FAC</u>	
4. <u>Prunus serotina</u>	7.5	no	<u>FACU</u>	UPL species x 5 =0
s. Diospyros virginiana	_ 5	no	_ FAC	Column Totals: 0 (A) 0 (B)
S				Prevalence Index = B/A =
	47.5	= Total Co	over	Hydrophytic Vegetation Indicators:
50% of total cover: 23.	75 20% of	f total cove	er: .9.5	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30' )				2 - Dominance Test is >50%
1. <u>Liqustrum sinense</u>	25	yes	FAC	<u> </u>
2. Ilex vomitoria	1 E	yes	FAC	3 - Prevalence Index is ≤3.0¹
3. Callicarpa americana		ves	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
			1700	1.
			<del>-</del>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic.
0.				Definitions of Five Vegetation Strata:
		= Total Co		Tree - Woody plants, excluding woody vines,
50% of total cover: <u>25</u>	20% o	f total cove	er: <u>10                                    </u>	approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30' )			=	(7.6 cm) or larger in diameter at breast height (DBH).
1. Toxicodendron radicans		<u>yes</u>	<u>FAC</u>	Sapling - Woody plants, excluding woody vines,
2. Lonicera japonica	10	ves	<u>FAC</u>	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
3. <u>Lvgodium japonicum</u>	2.5	no	<u>FAC</u>	uian 3 in. (7.6 cm) DBH.
4				Shrub – Woody plants, excluding woody vines,
5			_	approximately 3 to 20 ft (1 to 6 m) in height.
6				Herb - All herbaceous (non-woody) plants, including
7				herbaceous vines, regardless of size, and woody
8				plants, except woody vines, less than approximately 3 ft (1 m) in height.
9				o k (1 m) in noight.
10				Woody vine - All woody vines, regardless of height.
11				
11.		= Total C		
500/ -51-1-1 16		_		
50% of total cover: <u>16</u>	<u>.23</u> 20% c	or total cov	er: <u>6.5</u>	
Woody Vine Stratum (Plot size: 30' )	0.5		E40	
Toxicodendron radicans		ves	_ FAC	
2. <u>Campsis radicans</u>	2.5	<u>ves_</u>	_ FAC	
3. Vitis rotundifolia	2.5	<u>ves</u>	_ <u>FAC</u>	
4. <u>Smilax bona-nox</u>	2.5	ves	<u>FAC</u>	.
5				Hydrophytic
	10 = Total Cover		over	Vegetation
	of total cover: 5 20% of total cover: 2			Present? Yes <u>√</u> No
50% of total cover: 5	20% (	n total cov	erZ	

other two criteria are not met to classify this area as a jurisdictional wetland (See "Site Photographs").

US Army Corps of Engineers

Sampling Point: DP-3

		to the dep	th needed to docu			or confirm	n the absence	of indicato	rs.)	
Depth _(inches)	Matrix Color (moist)	%	Red	ox Feature	sType <sup>1</sup>	12	T4-		<b>.</b>	
0-12	10yr 6/4	100	N/A	<u>%</u>	Type	Loc <sup>2</sup>	Texture		Remarks	
	1031 0/4		IVA	_ <u>N/A</u>			silt loam	indicative	of the Sa	series
								<del></del>		
				_						
<sup>1</sup> Type: C=C	oncentration, D=De	pletion RM	=Reduced Matrix, M	S=Masker	Sand Gr	aine	2l ocation:	PL=Pore L	nina Na-Na	buise
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless other	rwise not	ed.)	aii 13.	Indicators	for Proble	natic Hydri	c Soile <sup>3</sup> :
Histosol			Polyvalue B		-	DD C T 1				c sons .
· — ·	pipedon (A2)		Thin Dark S	urface (S9	(1 PP S	.KK 3, 1, ( T 11)		Muck (A9) <b>(L</b> Muck (A10) (		
	istic (A3)		Loamy Muc							MLRA 150A,B)
	en Sulfide (A4)		Loamy Gley			. •,				9) (LRR P, S, T)
ı —	d Layers (A5)		Depleted Ma		,			alous Bright		
	Bodies (A6) (LRR		Redox Dark		<del>-</del> 6)			RA 153B)	Louiny Coll	. (. 20)
5 cm Mu	ıcky Mineral (A7) (L	RR P, T, U	Depleted Da	ark Surface	(F7)		-	arent Materi	al (TF2)	
	esence (A8) (LRR		Redox Depr	essions (F	8)			Shallow Dark		=12)
	ick (A9) (LRR P, T)		Marl (F10) (					(Explain in F		,
1	d Below Dark Surfa	ce (A11)	Depleted Or				_			
	ark Surface (A12)	(001 D & 450	Iron-Manga					cators of hyd		
	rairie Redox (A16) Nucky Mineral (S1)					, U)		tland hydrol		
	Sleyed Matrix (S4)	(LKK 0, 3)	Delta Ochrid			0.6 4500)		less disturbe	d or problen	natic.
3	Redox (S5)		Reduced Ve							
	Matrix (S6)						13A) RA 149A, 153C	153D)		
	rface (S7) (LRR P,	S, T, U)		g 200.	11, 00113 (	20) (11121	CA 140A, 100C	, (JJD)		
	Layer (if observed			<del>,</del>						
Туре:							1			
Depth (in	ches):						Hydric Soi	Present?	Yes	_ No _ <b>√</b>
Remarks:							Hydric 301	riesein?	162	
			atsuma series.							
- See "Si	te Photographs	" to obtai	n visual confirm	ation.						
-										
							•			
			•							

Project/Site: Miller Southeast Range Property	City/County: Livingston Parish	Sampling Date: 4-15-16
Applicant/Owner: Miller Southeast Range, Ltd.		e: LA Sampling Point: DP-4
Investigator(s): DSES (David C. Templet, Jr.)	Section, Township, Range: Section	
Landform (hillslope, terrace, etc.): level to depressed topo.	Local relief (concave, convex, nor	e); concave Slope (%); 0 to 1
Subregion (LRR or MLRA): LRR=P & MLRA=134 Lat: 30°	26'55.47"N Long: 90°5	7'11.21"W Datum: NAD 83
Soil Map Unit Name: Ge: Gilbert-Brimstone silt loams, occasion	مال بالأم ما ما	NWI classification: -Non-listed
Are climatic / hydrologic conditions on the site typical for this time o		
Are Vegetation, Soil, or Hydrology signification		cumstances" present? Yes   ✓ No
Are Vegetation, Soil, or Hydrology naturally		ain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	·	,
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Remarks:  - Data Plot is located in a poorly drained for	within a Wetland?	Yes✓ No Site Photographs).
		netegraphs).
HYDROLOGY		
Wetland Hydrology Indicators:		condary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	oly)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna	(B13)	Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2) Marl Deposits (		Drainage Patterns (B10)
✓ Saturation (A3) Hydrogen Sulfid		Moss Trim Lines (B16)
1 /	spheres along Living Roots (C3)	Dry-Season Water Table (C2)
✓ Sediment Deposits (B2) Presence of Re	- · ·	Crayfish Burrows (C8)
1		Saturation Visible on Aerial Imagery (C9)
	· · ·	Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in the control of the co	•	Shallow Aquitard (D3)
✓ Water-Stained Leaves (B9)		FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)
Field Observations:		Spriagroum moss (Do) (LRR 1, U)
Surface Water Present? Yes No ✓ Depth (inc	hes): *Remarks	
Water Table Present? Yes ✓ No Depth (incl	,	
Saturation Present? Yes ✓ No Depth (includes capillary fringe)	hes): Surface Wetland Hyd	rology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial pi	hotos, previous inspections), if availab	le:
- Extrapolated information from aerial photographs	and LIDAR data are consiste	nt with wetland characteristics.
Remarks:		
* Although by definition the "surface water" criteria	was not met, there are sporag	dic pockets of surface water
throughout, as well as a high water table, saturation	n, oxidized rhizospheres along	living roots, positive FAC-Neutral
Test (dominance of hydrophytic vegetation), etc. that	at attest to the areas frequent	v flooded nature or ultimate site
wetness.	, .	, market material or anamate one
- Worthy of mention, this area drains into Miller's C Creek further downstream, thence into Grays Creek reaches of the parish (Port Vincent).	anal along the south and easi c Lake and finally empties into	boundaries, which flows into Grays the Amite River in the lower

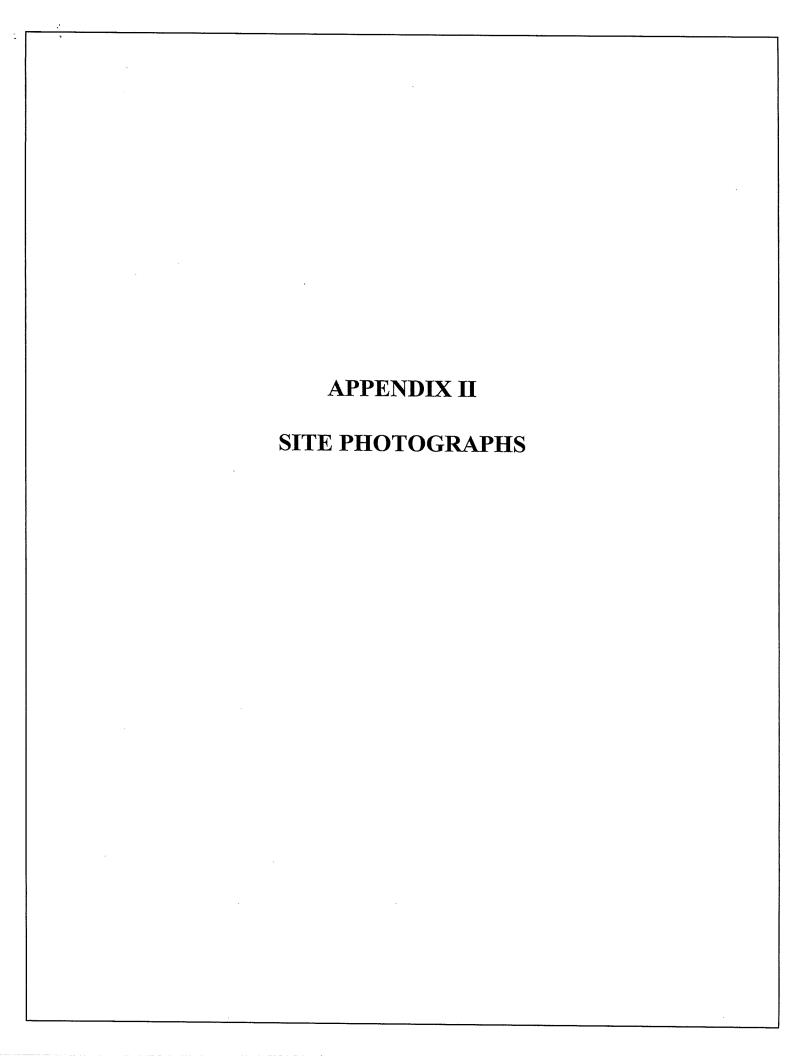
VEGETATION (Five Strata) – Use scientific nar	<u>'</u>			Sampling Point: DP-4
Tree Stratum (Plot size: 30' )  1. Acer rubrum  2. Quercus nigra	<u>% Cover</u> 15	Species yes	t Indicator Status FAC FAC	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:
Cuercus migra     Fraxinus pennsylvanica     Ulmus americana		no	FACW	Total Number of Dominant Species Across All Strata: 12 (B)
5 6				Prevalence Index worksheet:
50% of total cover: 20 Sapling Stratum (Plot size: 30' )		= Total Co total cove		
Acer rubrum     Triadica sebifera	7.5	yes yes	FAC FAC	FACW species x 2 =
Quercus nigra     Fraxinus pennsylvanica	5	no	FACU	FACU species $\begin{array}{cccccc} & x & 4 & = & 0 \\ & & & & & & \\ UPL & species & & & & & \\ Column & Totals: & & & & & \\ & & & & & & \\ \end{array}$
6.		= Total Co	over	Prevalence Index = B/A =  Hydrophytic Vegetation Indicators:
50% of total cover: 15 Shrub Stratum (Plot size: 30' )		f total cove	er: <u>6</u>	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
Ilex decidua     Crataegus opaca	_ <u>5</u>		FACW OBL	3 - Prevalence Index is ≤3.0¹ Problematic Hydrophytic Vegetation¹ (Explain)
3				<sup>1</sup> Indicators of hydric soil and wetland hydrology must

	40	= Total Co	over	Prevalence Index worksheet:			
50% of total cover: 20		-		Total % Cover of:	Multiply by:		
Sapling Stratum (Plot size: 30' )		or total oove	//· <u> </u>	OBL species	x 1 = <u>0</u>		
1. Acer rubrum	10	yes	FAC	FACW species	x2=0		
z. <u>Triadica sebifera</u>		ves	FAC	FAC species	x3=0		
3. Quercus nigra			FACU	FACU species	x 4 =0		
4. Fraxinus pennsylvanica			IACO		x 5 =0		
		_ <u>no</u>			(A) (B)		
5							
6	20			Prevalence Index =	B/A =		
	30 = Total Cover			Hydrophytic Vegetation Indicators:			
50% of total cover: 15	20%	of total cove	er: <u>6</u>	1 - Rapid Test for Hydrophytic Vegetation			
Shrub Stratum (Plot size: 30' )				2 - Dominance Test is	>50%		
1. <u>Ilex decidua</u>			<u>FACW</u>	3 - Prevalence Index i	s ≤3.0 <sup>1</sup>		
2. Crataegus opaca	5	<u>yes</u>	OBL_	Problematic Hydrophy	tic Vegetation¹ (Explain)		
3							
4				Indicators of hydric soil ar	nd wetland hydrology must		
5				be present, unless disturb	ed or problematic.		
6				Definitions of Five Veget	ation Strata:		
	15	= Total C	over				
50% of total cover: 7.5	20% of total cover: _3			Tree – Woody plants, exclusive approximately 20 ft (6 m)			
Herb Stratum (Plot size: 30'					eter at breast height (DBH).		
1. Sabal minor	35	yes	FACW	Continue 10(a advantanta			
2. Carex bromoides	15	ves	FACW	Sapling – Woody plants, approximately 20 ft (6 m)			
				than 3 in. (7.6 cm) DBH.			
				Chrish Mondaniants as			
4				Shrub – Woody plants, ex approximately 3 to 20 ft (1			
5							
6	-			Herb – All herbaceous (no herbaceous vines, regardi	on-woody) plants, including		
7	-				s, less than approximately		
8	-			3 ft (1 m) in height.			
9	-			Woody vine - All woody	vines, regardless of height.		
10				Troody villo 7 ti woody	vinos, regardiess of freight.		
11		-					
	50 = Total Cover						
50% of total cover: 25	20%	of total cov	er: <u>10</u>				
Woody Vine Stratum (Plot size: 30' )							
Toxicodendron radicans	2.5	ves	FAC				
2. Campsis radicans	2.5	yes	FAC				
3. Smilax rotundifolia	2.5	yes	FAC				
4.		— <del>- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - </del>					
5							
	7.5	_ = Total C		Hydrophytic Vegetation			
50% of total cover: <u>3.7</u> 5	-			Present? Yes	No		
DUM DITRIBLEDVACE -5 / 5	J /U%	THE RUN COM	PI 1 7	1			

- See "Site Photographs" to obtain visual confirmation.

Sampling Point: DP-4

(inches)	Matrix			x Features						
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-12 ·	10yr 6/1	90	10yr 5/6	10	С	M	silt loam	indicative	of the Ge se	ries
	ncentration D=De	nletion PM-	Reduced Matrix, M		Sond Cr	oinc	2l postion:	DI - Dere Li	ning Nation	
			LRRs, unless othe			anis.			ning, M=Matrix natic Hydric \$	
Histosol			Polyvalue B			DD C T			-	JOIIS .
	ipedon (A2)		Thin Dark S					Muck (A9) <b>(L</b> Muck (A10) <b>(</b>		
Black His			Loamy Mucl						18) (outside N	11 RA 150A F
	n Sulfide (A4)		Loamy Gley			,			in Soils (F19)	
Stratified	Layers (A5)		✓ Depleted Ma		,			_	Loamy Soils (I	
_ Organic	Bodies (A6) (LRR	P, T, U)	Redox Dark	Surface (F	6)			RA 153B)	• ,	,
	cky Mineral (A7) (I		Depleted Da	ark Surface	(F7)		Red F	Parent Materi	al (TF2)	
	esence (A8) (LRR		Redox Depr		3)		Very	Shallow Dark	Surface (TF1	2)
	ck (A9) (LRR P, T		Marl (F10) (				Other	(Explain in F	Remarks)	
	Below Dark Surfa	ace (A11)	Depleted O				- 3			
	rk Surface (A12)	(MILDA 150)	Iron-Mangai						rophytic veget	
	airie Redox (A16) lucky Mineral (S1)		<ul> <li>Umbric Surf</li> <li>Delta Ochric</li> </ul>			, u)			ogy must be pr d or problema	
	ileyed Matrix (S4)	(21010 0, 0)	Reduced Ve			50A 150P		iess aistaine	u or problema	uc.
	edox (S5)		Piedmont F							
	Matrix (S6)						RA 149A, 1530	C, 153D)		
Dark Sur	face (S7) (LRR P,	S, T, U)								
Restrictive I	ayer (if observed	i):								
Туре:										
Depth (inc	ches):						Hydric Soi	I Present?	Yes _ ✓	No
Remarks:										
Soil san	nple is indicativ	e of the G	ilbert-Brimston	e series.						
	-		visual confirm							
000 011	o i notograpiic	o to obtain	i visual committi	ation.						





Vegetation indicative of Data Plot-1 (non-wetland).



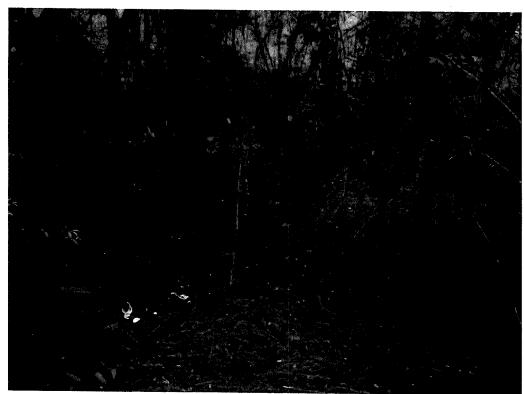
Non-hydric soil indicative of the Satsuma series found within Data Plot-1.



Vegetation indicative of Data Plot-2 (jurisdictional wetland).



Hydric soil indicative of the Gilbert-Brimstone series found within Data Plot-2.



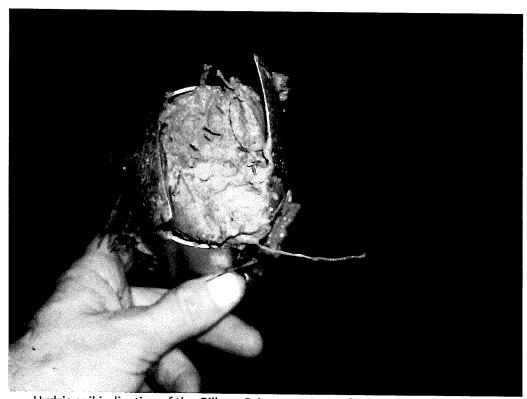
Vegetation indicative of Data Plot-3 (non-wetland).



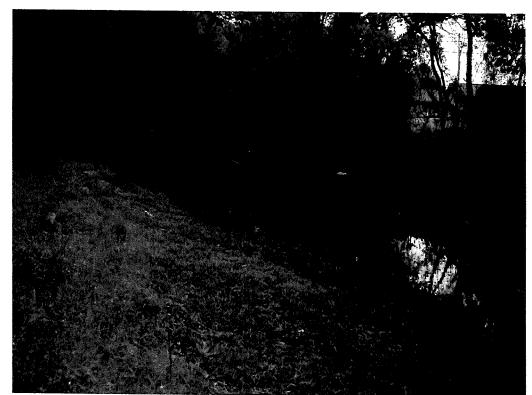
Non-hydric soil indicative of the Satsuma series found within Data Plot-3.



Vegetation indicative of Data Plot-4 (jurisdictional wetland).



Hydric soil indicative of the Gilbert-Brimstone series found within Data Plot-4.



"Other Waters of the United States" (Section 404) found along the southern boundary (Miller's Canal tributary).

