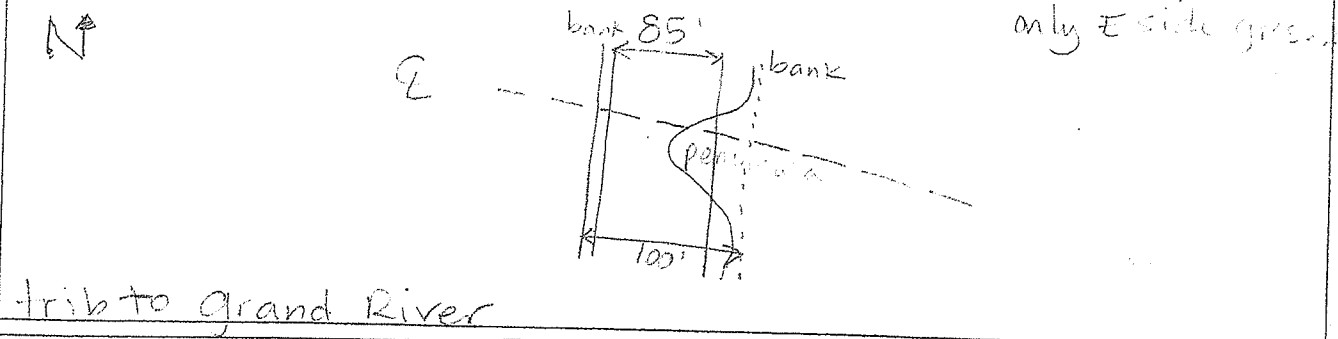


WATERBODY DATA - Page 1 of 1

Date: 4/25/06	Stream ID No.: C.4A.C1.132	GPS File: R042509A	MILEPOST: 629.6
Staff: 4A	Client/Project Name: Rockies Express Pipeline Project (REX-West)	Project #: 04060-018-110	
Logbook page No's.: Book 2 pg. 50	State/County/Municipality: Chariton Co., Mo	LOOP/FACILITY NAME: _____	
	Block/ Lot/Tract No.: C1-003	Photo No(s):	Upstr: ① TOP - W ② Up - N ③ Dnstr

STREAM Sketch Plan (include surrounding area, cardinal direction arrow, flow direction arrow)



Stream Flow	Fast (Perennial)	Moderate Intermittent	Slow Ephemeral	Pooled	None				
Flow Depth (in.)	0	0-3	3-6	6-12	12-24	24-36 X	36-48	48-60	60+
Stream Width at Crossing (ft.)	Top of Banks: 100'		Channel OWHM: 95'		Water Surface: 85'				
Stream Substrate %	Bedrock %	Gravel %	Sand 70 %		Silt/Clay 30 %	Organic %			
Bank Height (ft.) (looking downstream)	Left	0-2	2-4	4-6	6-8	8+			
	Right	0-2	2-4	4-6	6-8	8+			
Bank Slope (%) (looking downstream)	Left	0-20	20-40	40-60	60-80	80+			
	Right	0-20	20-40	40-60	60-80	80+			
Water Clarity	Clear	Slightly Turbid	Turbid	Very Turbid		Color: brown			
Aquatic Habitat	Sand Bar no	Gravel Bar no	Mud Bar yes	Gravel Riffles no	Deep Pools yes				
Undercut Banks yes	Overhanging trees/shrubs yes	In-stream emergent plants no	In-stream submergent plants no	Bank root systems yes	Fringing Wetlands yes				
Aquatic Organisms Observed	Waterfowl	Fish (adult)	Fish (juvenile)	Frogs	Turtles				
	Snakes	Invertebrates	Other: Mussel - see photo on 6'x4'						

T/E SPECIES / SUITABLE HABITAT
 no T/E obs; woodland banks, peninsula w/shrubs

RIPARIAN VEGETATION DESCRIPTION
 1st yr. Carex sp, Potentilla sp, Salix nigra

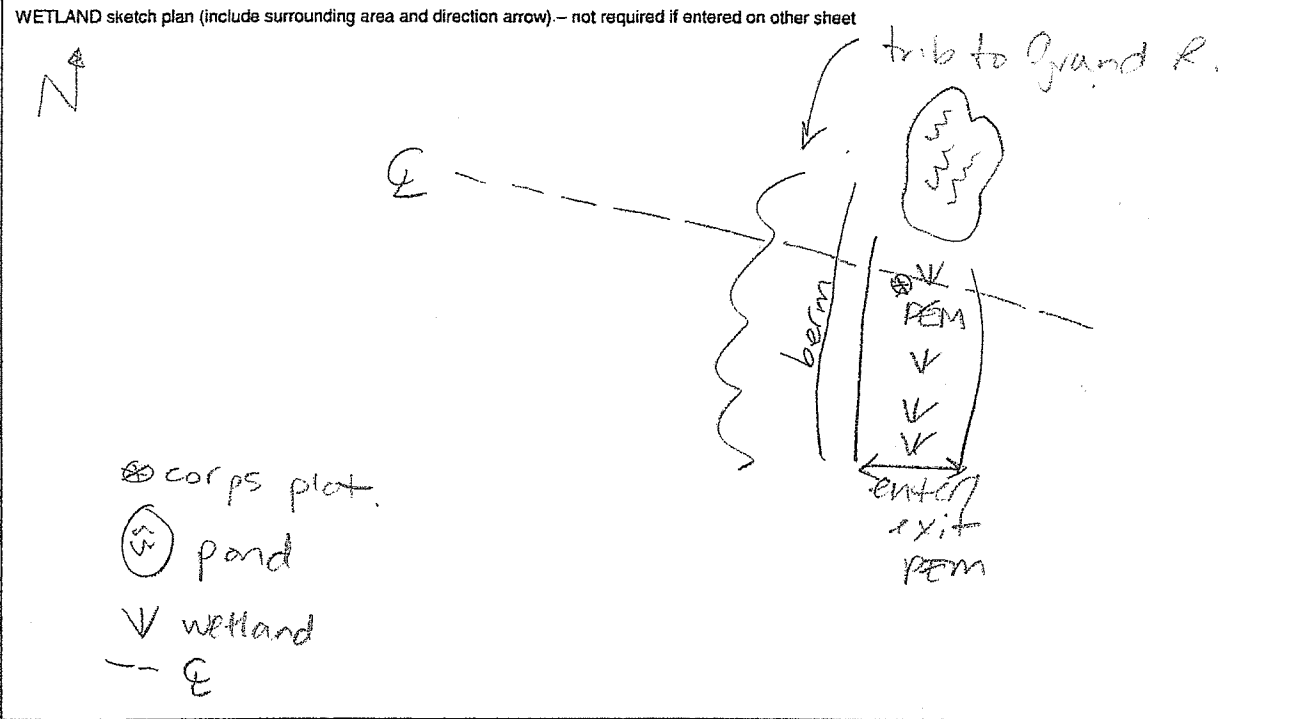
Comments (e.g. pipeline crossing angle, construction constraints, erosion potential, existing disturbances, meanders or width variations)
 pipeline crossing angle perpendicular to stream & riverine wetland

STREAM QUALITY (circle)	High	Medium	Low
<p>High Quality - no indication of stress or disturbance in stream or adjacent area - diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat - gravel beds, submerged logs, undercut banks, riffles and pools - no channelization -</p> <p>Medium Quality - mild to moderate disturbances result in minor recognizable alterations - existing pipeline, road, railroad, other ROWs - provides fair fish and wildlife habitat - some erosion potential - some habitat diversity - fine sediment deposition predominate - flow and depth variation restricted - some channelization - trees, grass, or forbs dominate bank vegetation</p> <p>Low quality - disturbances cause significant changes affecting plant species - mechanical alteration of plant species and/or soils - intense grazing activities - stream course channelization or ditching - exotic, nuisance, or invasive species - habitat diversity lacking - high erosion potential - flow and depth variation lacking - does not provide suitable wildlife habitat - grass or forbs dominate bank vegetation</p>			

CONFIDENTIAL

WETLAND DELINEATION FORM (1987 USACE METHOD)			Site ID No.:	Milepost:			
Date: <u>4/25/06</u>		GPS FILE: <u>R042509A</u>					
Staff: <u>4A</u>		Client/Project Name: <u>Rockies Express Pipeline Project (REX-West) 04060-018-110</u>					
Logbook Page No's.: <u>BOOK 2 pg. 56</u>		Block/Lot/Tract No.: <u>C1-004</u>	Photo No's.: <u>DN 05</u>				
Nearest Waterway: <u>trib to grand R.</u>		Watershed: <u>grand R.</u>	Drainage Basin:				
Loop/Facility: <u>---</u>		State/County/Municipality: <u>Chariton Co, MO</u>					
DOMINANT PLANT SPECIES (% Cover)		Stratum	Indicator	NON-DOMINANT PLANT SPECIES (% Cover)		Stratum	Indicator
1. <u>Carex atherodes (75)</u>		<u>H</u>	<u>OBL</u>	1. <u>unkn. Shrub (10)</u>		<u>H</u>	<u>FAC</u>
2. <u>Fleorhachis palustris (15)</u>		<u>H</u>	<u>OBL</u>	2.			
3.				3.			
4.				4.			
5.				5.			
6.				6.			
7.				7.			
8.				8.			
Per Cent of Dominant Species that are OBL, FACW, or FAC (excluding FAC): <u>2/2 = 100%</u>							
REMARKS:							
HYDROLOGY							
Recorded Data?		Describe: <u>bermed wetland - assoc. w/ trib to grand R.</u>					
Depth of Surface Water: <u>none</u> (in. or cm)		Other Notes:					
Depth to Free Water in Pit: <u>none</u> (in. or cm)							
Depth to Saturated Soil: <u>0</u> (in. or cm)							
Primary Wetland Indicators:				Secondary Wetland Indicators (2 or more required):			
<input type="checkbox"/> Inundated				<input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches (30 cm)			
<input checked="" type="checkbox"/> Saturated in Upper 12 Inches (30 cm)				<input checked="" type="checkbox"/> Water-Stained Leaves			
<input type="checkbox"/> Water Marks				<input type="checkbox"/> Local Soil Survey Data			
<input type="checkbox"/> Drift Lines				<input checked="" type="checkbox"/> FAC-Neutral Test			
<input type="checkbox"/> Sediment Deposits				<input type="checkbox"/> Other (Explain in Remarks)			
<input checked="" type="checkbox"/> Drainage Patterns in Wetlands							
Estimate of wetlands or waters within disturbance area <u>35' x 200'</u>							
REMARKS:							
SOILS							
Soil Survey Map Unit (Series and Phase): <u>---</u>				Drainage Class: <u>---</u>			
Taxonomy (to Subgroup): <u>---</u>				Field Observations Confirm Mapped Type? <u>---</u>			
Profile Description: <u>moderately deep clay w/ iron reduction</u>				USDA Land Resource Region:			
Depth Range (Inches or cm)	Horizon Desig.	Matrix Color ¹ (Munsell Moist)	Mottles (Abundance/Contrast/Color)	Texture, Concretions, Structure, Redox Concn., etc.			
<u>0-12"</u>	<u>A1</u>	<u>10YR 4/1</u>	<u>5YR 4/6 10% pm clay in am- platy (fine)</u>				
<input type="checkbox"/> Histosol				<input checked="" type="checkbox"/> Concretions or Redox Concentrations			
<input type="checkbox"/> Histic Epipedon				<input type="checkbox"/> High Organic Content			
<input type="checkbox"/> Sulfidic Odor				<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime				<input type="checkbox"/> Listed on Local Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors				<input type="checkbox"/> Other USDA Hydric Soil Indicator (Explain in Remarks)			
REMARKS:							
WETLAND DETERMINATION							
Hydrophytic Vegetation Present?		<input checked="" type="radio"/> Yes	<input type="radio"/> No	Is This Sampling Point Within a Wetland? <input checked="" type="radio"/> YES <input type="radio"/> NO			
Wetland Hydrology Present?		<input checked="" type="radio"/> Yes	<input type="radio"/> No				
Hydric Soils Present?		<input checked="" type="radio"/> Yes	<input type="radio"/> No				
REMARKS:							
Normal Circumstances? <u>yes</u>		Significantly Disturbed: <u>no</u>		Potential Problem Area? <u>no</u>			

WETLAND DELINEATION FORM (1987 USACE METHOD) | SITE ID NO.: W4AC1 029

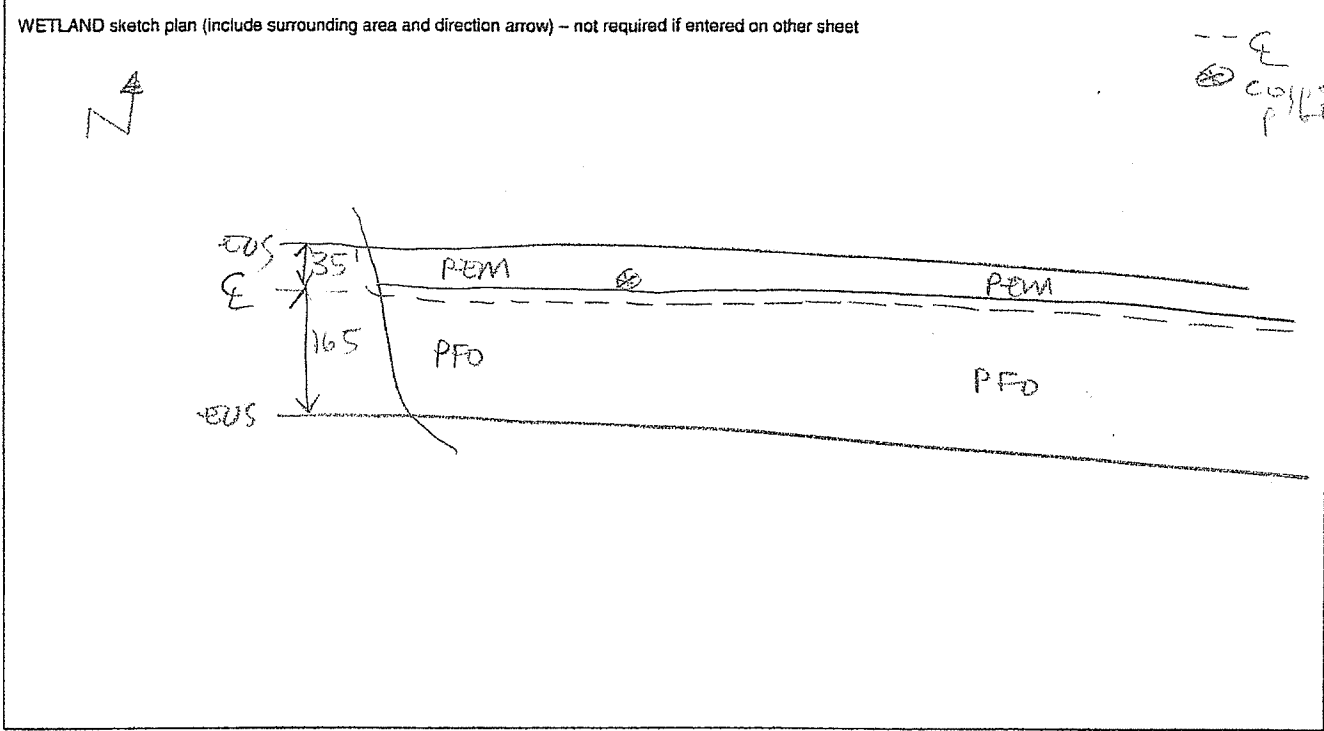


GENERAL COMMENTS (ie. wetland disturbed by landowner, excessive noxious weeds in wetland, weather conditions, landowner issues, etc):

CONFIDENTIAL

WETLAND DELINEATION FORM (1987 USACE METHOD)		Site ID No.: W, 4A, C1, 032	Milepost: 630.2-630.9				
Date: 4/25/06	GPS FILE: R042509A						
Staff: 4A	Client/Project Name: Rockies Express Pipeline Project (REX-West) 04060-018-110						
Logbook Page No's.: Book 2 pg. 51	Block/Lot/Tract No.: C1-004	Photo No's.: ① E ② W ③					
Nearest Waterway: trib to Grand R.	Watershed: Grand R.	Drainage Basin: Grand R.					
Loop/Facility: -	State/County/Municipality: Chariton Co., MO						
DOMINANT PLANT SPECIES (% Cover)		Stratum:	Indicator	NON-DOMINANT PLANT SPECIES (% Cover)		Stratum	Indicator
1. Carex palustris (10)	F	FACW	1. Solidago gigantea (2)	H	FACW		
2. Carex bicolor (10)	F	FACW+	2. Galium sp. (8)	H	≠ FAC		
3. Ranunculus sp. (5)	F	FACW	3. Spilanthes sp. (5)	H/E	≠ FACW		
4. Carex acuta (25)	H	OBL	4. Celtis sp. (5)	F	FAC-		
5. Eleocharis palustris (5)	H	OBL	5. Phlox sp. (5)	F/H	≠ FAC		
6. Ager saccharinum (10)	F	FACW	6. Quercus macrocarpa (3)	F	FAC-		
7.			7. Asclepias incarnata (2)	H	OBL		
8.			8. Ager recondita (5)	F	FACW-		
Per Cent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 6/6 = 100%							
REMARKS:							
HYDROLOGY							
Recorded Data? Describe:							
Depth of Surface Water: 0 (in) or cm	Other Notes: puddles thru row			Some bindweed scattered			
Depth to Free Water in Pit: 12" (in) or cm	PFO Wetland - trans to PEM						
Depth to Saturated Soil: 0 (in) or cm							
Primary Wetland Indicators:				Secondary Wetland Indicators (2 or more required):			
<input type="checkbox"/> Inundated				<input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches (30 cm)			
<input checked="" type="checkbox"/> Saturated in Upper 12 Inches (30 cm)				<input type="checkbox"/> Water-Stained Leaves			
<input type="checkbox"/> Water Marks				<input type="checkbox"/> Local Soil Survey Data			
<input type="checkbox"/> Drift Lines				<input checked="" type="checkbox"/> FAC-Neutral Test			
<input type="checkbox"/> Sediment Deposits				<input type="checkbox"/> Other (Explain in Remarks)			
<input checked="" type="checkbox"/> Drainage Patterns in Wetlands							
Estimate of wetlands or waters within disturbance area ~ 200' x 300'							
REMARKS:							
SOILS							
Soil Survey Map Unit (Series and Phase): -				Drainage Class: -			
Taxonomy (to Subgroup): -				Field Observations Confirm Mapped Type? -			
Profile Description: shallow Dark Clay, Fe reductions				USDA Land Resource Region: -			
Depth Range (Inches or cm)	Horizon Desig.	Matrix Color (Munsell Moist)	Mottles (Abundance/Contrast/Color)	Texture, Concretions, Structure, Redox Concn., etc.			
0-12	A	10YR 3/2	3% Faint / 10YR 5/2	Clay loam fine crumb			
<input type="checkbox"/> Histosol				<input checked="" type="checkbox"/> Concretions or Redox Concentrations			
<input type="checkbox"/> Histic Epipedon				<input type="checkbox"/> High Organic Content			
<input type="checkbox"/> Sulfidic Odor				<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime				<input type="checkbox"/> Listed on Local Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors				<input type="checkbox"/> Other USDA Hydric Soil Indicator (Explain in Remarks)			
REMARKS:							
WETLAND DETERMINATION							
Hydrophytic Vegetation Present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Is This Sampling Point Within a Wetland? <input checked="" type="radio"/> YES <input type="radio"/> NO				
Wetland Hydrology Present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No					
Hydric Soils Present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No					
REMARKS:							
Normal Circumstances?	YES		Significantly Disturbed:	NO		Potential Problem Area?	NO

WETLAND DELINEATION FORM (1987 USACE METHOD) SITE ID NO.: W. 4A. CI. 032

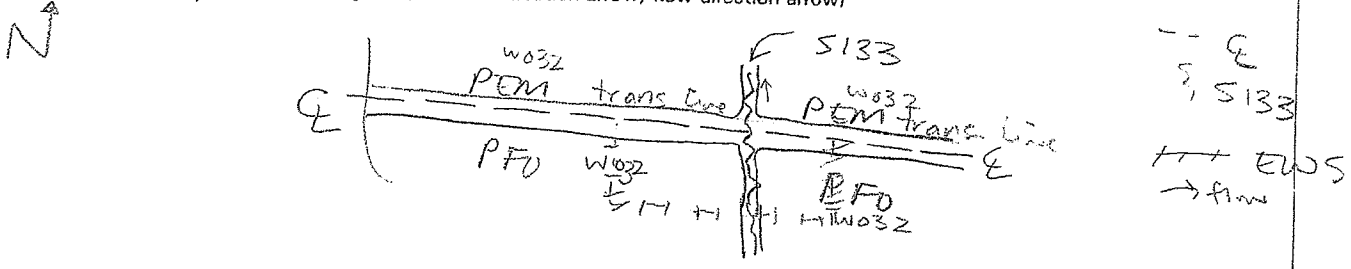


GENERAL COMMENTS (ie. wetland disturbed by landowner, excessive noxious weeds in wetland, weather conditions, landowner issues, etc):

WATERBODY DATA - Page 1 of 1

Date: 4/25/06	Stream ID No.: S.4A.CL.133	GPS File: R042509A	MILEPOST: 630.5
Staff: 4A	Client/Project Name: Rockies Express Pipeline Project (REX-West)	Project #: 04060-018-110	
Logbook page No's.: Book 2 pg. 51	State/County/Municipality: Chariton Co., MO	LOOP/FACILITY NAME: CL + ENS	
	Block/ Lot/Tract No.: C1-004	Photo No. (Left) UN	Photo No. (Right) ES-UP

STREAM Sketch Plan (include surrounding area, cardinal direction arrow, flow direction arrow)



Waterbody in PEM (W032)

Stream Flow	Fast Perennial	Moderate Intermittent	Slow Ephemeral	Pool	None
Direction of Flow: _____					

Flow Depth (in.)	0	0-3	3-6	6-12 X	12-24	24-36	36-48	48-60	60+
------------------	---	-----	-----	---------------	-------	-------	-------	-------	-----

Stream Width at Crossing (ft.)	Top of Banks: 10'	Channel OWHM: 10'	Water Surface: 5'
--------------------------------	-------------------	-------------------	-------------------

Stream Substrate %	Bedrock %	Gravel %	Sand %	Silt/Clay 100% %	Organic %
--------------------	-----------	----------	--------	------------------	-----------

Bank Height (ft.) (looking downstream)	Left E	0-2	2-4	4-6	6-8	8+
	Right W	0-2	2-4	4-6	6-8	8+

Bank Slope (%) (looking downstream)	Left E	0-20	20-40	40-60	60-80	80+
	Right W	0-20	20-40	40-60	60-80	80+

Water Clarity	Clear	Slightly Turbid	Turbid	Very Turbid	Color: red/brown
---------------	-------	-----------------	---------------	-------------	------------------

Aquatic Habitat	Sand Bar <i>no</i>	Gravel Bar <i>no</i>	Mud Bar <i>yes</i>	Gravel Riffles <i>no</i>	Deep Pools <i>no</i>
Undercut Banks	Overhanging trees/shrubs <i>no</i>	In-stream emergent plants <i>yes</i>	In-stream submergent plants <i>no</i>	Bank root systems <i>no</i>	Fringing Wetlands <i>yes</i>

Aquatic Organisms Observed	Waterfowl	Fish (adult)	Fish (juvenile)	Frogs	Turtles
	Snakes	Invertebrates	Other:		

T/E SPECIES / SUITABLE HABITAT
no T/E obs; suitable habitat for woodlands sp. 1,

RIPARIAN VEGETATION DESCRIPTION
same as W032 (PEM) sp.

Comments (e.g. pipeline crossing angle, construction constraints, erosion potential, existing disturbances, meanders or width variations)
Channel created as a result of Platte Line - stream assoc. w/ W032

STREAM QUALITY (circle)	High	Medium	Low
-------------------------	------	---------------	-----

High Quality - no indication of stress or disturbance in stream or adjacent area - diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat - gravel beds, submerged logs, undercut banks, riffles and pools - no channelization -

Medium Quality - mild to moderate disturbances result in minor recognizable alterations - existing pipeline, road, railroad, other ROWs - provides fair fish and wildlife habitat - some erosion potential - some habitat diversity - fine sediment deposition predominate - flow and depth variation restricted - some channelization - trees, grass, or forbs dominate bank vegetation

Low quality - disturbances cause significant changes affecting plant species - mechanical alteration of plant species and/or soils - intense grazing activities - stream course channelization or ditching - exotic, nuisance, or invasive species - habitat diversity lacking - high erosion potential - flow and depth variation lacking - does not provide suitable wildlife habitat - grass or forbs dominate bank vegetation

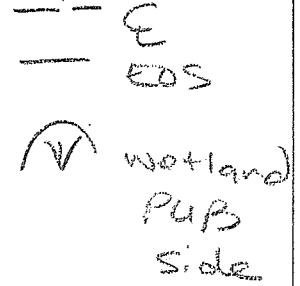
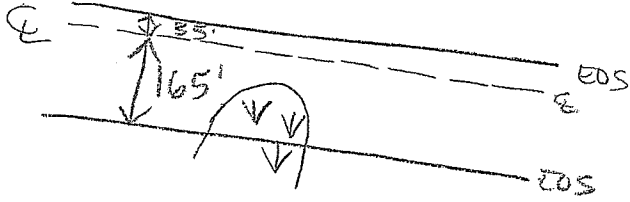
CONFIDENTIAL

WETLAND DELINEATION FORM (1987 USACE METHOD)		Site ID No.: <u>W.4A C1.021</u>	Milepost: <u>637.9</u>
Date: <u>4/21/06</u>		GPS FILE: <u>ROT2108A</u>	
Staff: <u>4A</u>		Client/Project Name: <u>Rockies Express Pipeline Project (REX-West) 04060-018-110</u>	
Logbook Page No's.: <u>BOOK 2 pg. 37</u>		Block/Lot/Tract No.: <u>C1-033</u>	Photo No's.: <u>05</u>
Nearest Waterway: <u>Unnamed Stream</u>		Watershed: <u>—</u>	Drainage Basin: <u>—</u>
Loop/Facility: <u>—</u>		State/County/Municipality: <u>Chariton Co., MO</u>	
DOMINANT PLANT SPECIES (% Cover)		Stratum:	Indicator
1. <u>Typha angustifolia (45)</u>		<u>H</u>	<u>OBL</u>
2. <u>Carex sp. (25)</u>		<u>H</u>	<u>≥ FACW</u>
3. <u>Juncus sp. (10)</u>		<u>H</u>	<u>≥ FACW</u>
4. <u>—</u>			
5. <u>—</u>			
6. <u>—</u>			
7. <u>—</u>			
8. <u>—</u>			
1. <u>Typha angustifolia (5)</u>		<u>H</u>	<u>FACW</u>
2. <u>DUCKWEED (10)</u>		<u>H</u>	<u>OBL</u>
3. <u>LEMNA sp. (5)</u>		<u>H</u>	<u>OBL</u>
4. <u>—</u>			
5. <u>—</u>			
6. <u>—</u>			
7. <u>—</u>			
8. <u>—</u>			
Per Cent of Dominant Species that are OBL, FACW, or FAC (excluding FAC): <u>3/3 = 100%</u>			
REMARKS:			
HYDROLOGY			
Recorded Data? Describe: <u>pond w/ man-made berm</u>		Other Notes:	
Depth of Surface Water: <u>None</u> (in. or cm)		<u>side PUB w/ frogs & turtles</u>	
Depth to Free Water in Pit: <u>6</u> (in. or cm)			
Depth to Saturated Soil: <u>0</u> (in. or cm)			
Primary Wetland Indicators:		Secondary Wetland Indicators (2 or more required):	
<u>—</u> Inundated w/ 1' from pit		<u>—</u> Oxidized Root Channels in Upper 12 Inches (30 cm)	
<u>X</u> Saturated in Upper 12 Inches (30 cm)		<u>X</u> Water-Stained Leaves	
<u>—</u> Water Marks		<u>—</u> Local Soil Survey Data	
<u>—</u> Drift Lines		<u>X</u> FAC-Neutral Test	
<u>—</u> Sediment Deposits		<u>—</u> Other (Explain in Remarks)	
<u>X</u> Drainage Patterns in Wetlands			
Estimate of wetlands or waters within disturbance area <u>160' x 120'</u>			
REMARKS:			
SOILS			
Soil Survey Map Unit (Series and Phase): <u>—</u>		Drainage Class: <u>—</u>	
Taxonomy (to Subgroup): <u>—</u>		Field Observations Confirm Mapped Type? <u>—</u>	
Profile Description: <u>shallow dark profile w/ insol. material ≥ 10"</u>		USDA Land Resource Region: <u>—</u>	
Depth Range (Inches or cm)	Horizon Desig.	Matrix Color (Munsell Moist)	Mottles (Abundance/Contrast/Color)
<u>0-10"</u>	<u>A1</u>	<u>10YR4/1</u>	<u>7.5Y2.5/6 w/ 15% distinct clay loam, fine granular</u>
<u>—</u> Histosol		<u>X</u> Concretions or Redox Concentrations	
<u>—</u> Histic Epipedon		<u>—</u> High Organic Content	
<u>—</u> Sulfidic Odor		<u>—</u> Organic Streaking in Sandy Soils	
<u>—</u> Aquic Moisture Regime		<u>—</u> Listed on Local Hydric Soils List	
<u>X</u> Gleyed or Low-Chroma Colors		<u>—</u> Other USDA Hydric Soil Indicator (Explain in Remarks)	
REMARKS:			
WETLAND DETERMINATION			
Hydrophytic Vegetation Present?	<u>(Yes)</u> No	Is This Sampling Point Within a Wetland? <u>(YES)</u> NO	
Wetland Hydrology Present?	<u>(Yes)</u> No		
Hydric Soils Present?	<u>(Yes)</u> No		
REMARKS:			
Normal Circumstances? <u>yes</u>	Significantly Disturbed: <u>no</u>	Potential Problem Area? <u>no</u>	

WETLAND DELINEATION FORM (1987 USACE METHOD)

SITE ID NO.: W4A21 021

WETLAND sketch plan (include surrounding area and direction arrow) - not required if entered on other sheet



GENERAL COMMENTS (ie. wetland disturbed by landowner, excessive noxious weeds in wetland, weather conditions, landowner issues, etc):

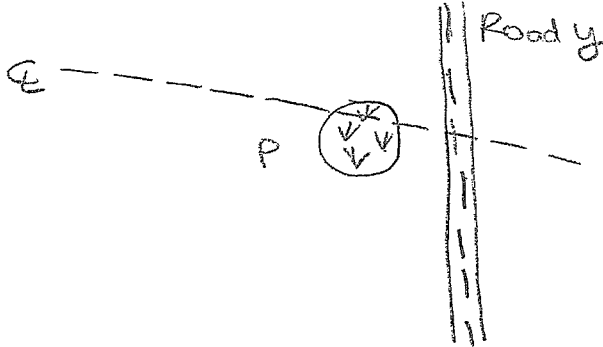
CONFIDENTIAL

WETLAND DELINEATION FORM (1987 USACE METHOD)		Site ID No.: <u>W.4A.C1.020</u>	Milepost: <u>639.05</u>				
Date: <u>4/21/06</u>	GPS FILE: <u>R042108A</u>						
Staff: <u>4A</u>	Client/Project Name: <u>Rockies Express Pipeline Project (REX-West) 04060-018-110</u>						
Logbook Page No's.: <u>Book 2 pg. 35</u>	Block/Lot/Tract No.: <u>C1-036</u>	Photo No's.: <u>01E 02E 03E</u>					
Nearest Waterway: <u>unnamed int. to S</u>	Watershed: <u> </u>	Drainage Basin: <u> </u>					
Loop/Facility: <u> </u>	State/County/Municipality: <u>Chariton Co., MO</u>						
DOMINANT PLANT SPECIES (% Cover)		Stratum:	Indicator	NON-DOMINANT PLANT SPECIES (% Cover)		Stratum:	Indicator
1. <u>Typha latifolia (15)</u>		<u>H</u>	<u>OBL</u>	1. <u>Lemna sp. (5)</u>		<u>H</u>	<u>OBL</u>
2. <u>Phalaris arundinacea (50)</u>		<u>H</u>	<u>FACW</u>	2. <u> </u>			
3. <u>Carex sp. (30)</u>		<u>H</u>	<u>≥ FACW</u>	3. <u> </u>			
4. <u> </u>				4. <u> </u>			
5. <u> </u>				5. <u> </u>			
6. <u> </u>				6. <u> </u>			
7. <u> </u>				7. <u> </u>			
8. <u> </u>				8. <u> </u>			
Per Cent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): <u>3/3%</u>							
REMARKS:							
HYDROLOGY							
Recorded Data? <u> </u>		Describe: <u>wetland fringe around PUB waterbody</u>					
Depth of Surface Water: <u>none</u> (in. or cm)		Other Notes: <u>red-winged blackbird frogs, woodcock w/ possible nest</u>					
Depth to Free Water in Pit: <u>none</u> (in. or cm)							
Depth to Saturated Soil: <u>16"</u> (in. or cm)							
Primary Wetland Indicators:				Secondary Wetland Indicators (2 or more required):			
<u> </u> Inundated <u>~1' from pit</u>				<input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches (30 cm)			
<u> </u> Saturated in Upper 12 Inches (30 cm)				<input checked="" type="checkbox"/> Water-Stained Leaves			
<u> </u> Water Marks				<u> </u> Local Soil Survey Data			
<u> </u> Drift Lines				<input checked="" type="checkbox"/> FAC-Neutral Test			
<u> </u> Sediment Deposits				<u> </u> Other (Explain in Remarks)			
<input checked="" type="checkbox"/> Drainage Patterns in Wetlands							
Estimate of wetlands or waters within disturbance area <u>180' x 150'</u>							
REMARKS:							
SOILS							
Soil Survey Map Unit (Series and Phase): <u> </u>				Drainage Class: <u> </u>			
Taxonomy (to Subgroup): <u> </u>				Field Observations Confirm Mapped Type? <u> </u>			
Profile Description:				USDA Land Resource Region: <u> </u>			
Depth Range (Inches or cm)	Horizon Desig.	Matrix Color (Munsell Moist)	Mottles (Abundance/Contrast/Color)	Texture, Concretions, Structure, Redox Concen., etc.			
<u>0-13"</u>	<u>A1</u>	<u>10YR4/1</u>	<u>Sy 2/6 10% prominent</u>	<u>silty clay loam - fine blocky</u>			
<u> </u> Histosol				<input checked="" type="checkbox"/> Concretions or Redox Concentrations			
<u> </u> Histic Epipedon				<u> </u> High Organic Content			
<input checked="" type="checkbox"/> Sulfidic Odor				<u> </u> Organic Streaking in Sandy Soils			
<u> </u> Aquic Moisture Regime				<u> </u> Listed on Local Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors				<u> </u> Other USDA Hydric Soil Indicator (Explain in Remarks)			
REMARKS:							
WETLAND DETERMINATION							
Hydrophytic Vegetation Present?		<input checked="" type="radio"/> Yes	<input type="radio"/> No	Is This Sampling Point Within a Wetland? <input checked="" type="radio"/> YES <input type="radio"/> NO			
Wetland Hydrology Present?		<input checked="" type="radio"/> Yes	<input type="radio"/> No				
Hydric Soils Present?		<input checked="" type="radio"/> Yes	<input type="radio"/> No				
REMARKS:							
Normal Circumstances? <u>yes</u>		Significantly Disturbed? <u>no</u>		Potential Problem Area? <u>no</u>			

WETLAND DELINEATION FORM (1987 USACE METHOD)

SITE ID NO.: W4A C1020

WETLAND sketch plan (include surrounding area and direction arrow) - not required if entered on other sheet



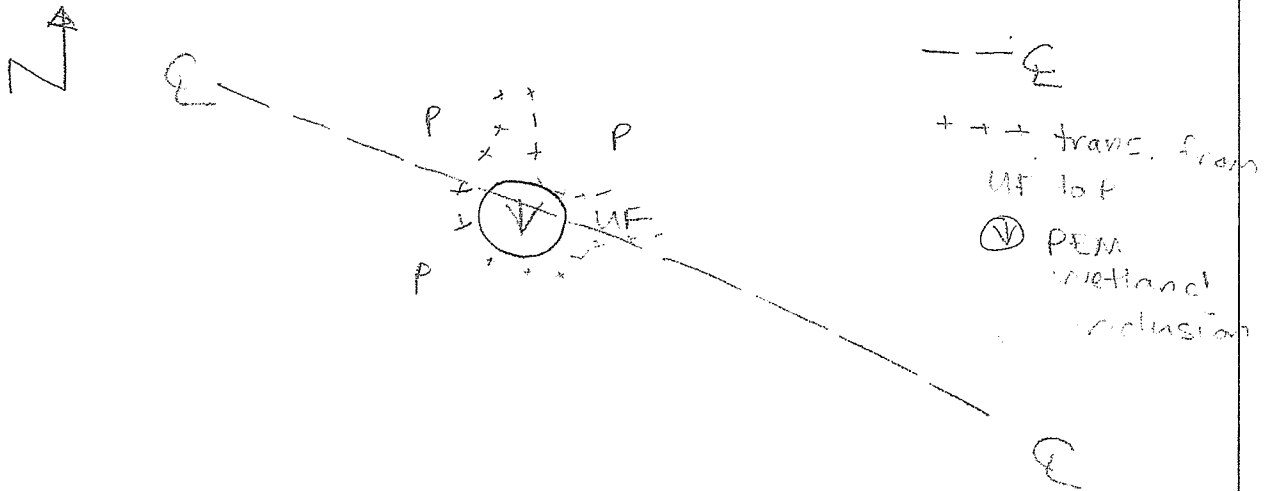
- - E
- ≡ Road
- ⊙ PUB wetland

GENERAL COMMENTS (ie. wetland disturbed by landowner, excessive noxious weeds in wetland, weather conditions, landowner issues, etc):

WETLAND DELINEATION FORM (1987 USACE METHOD)			Site ID No.:	Milepost:			
Date: 4/18/06		GPS FILE: R041802A		646.9			
Staff: 4A		Client/Project Name: Rockies Express Pipeline Project (REX-West) 04060-018-110					
Logbook Page No's.: Book 2 p. 17		Block/Lot/Tract No.: C1-056	Photo No's.: 0 E 2 W				
Nearest Waterway: Mussels Fork Creek		Watershed: —	Drainage Basin: —				
Loop/Facility: —		State/County/Municipality: Chariton Co., MO					
DOMINANT PLANT SPECIES (% Cover)		Stratum:	Indicator	NON-DOMINANT PLANT SPECIES (% Cover)		Stratum:	Indicator
1. Typha latifolia (70%)		H	OBL	1.			
2. Carex sp. (15%)		H	FACW	2.			
3. Potamogeton sp. (15%)		H	OBL	3.			
4.				4.			
5.				5.			
6.				6.			
7.				7.			
8.				8.			
Per Cent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 3/3 = 100%							
REMARKS: emergent aquatic veg. - in pasture w/ woodland fringe							
HYDROLOGY							
Recorded Data? —		Describe: depression on hillside					
Depth of Surface Water: none (in. or cm)		Other Notes:					
Depth to Free Water in Pit: 10" ± (in. or cm)							
Depth to Saturated Soil: 0 (in. or cm)							
Primary Wetland Indicators:				Secondary Wetland Indicators (2 or more required):			
— Inundated ~ 4' from pit				— Oxidized Root Channels in Upper 12 Inches (30 cm)			
<input checked="" type="checkbox"/> Saturated in Upper 12 Inches (30 cm)				<input checked="" type="checkbox"/> Water-Stained Leaves			
— Water Marks				— Local Soil Survey Data			
— Drift Lines				<input checked="" type="checkbox"/> FAC-Neutral Test			
— Sediment Deposits				— Other (Explain in Remarks)			
<input checked="" type="checkbox"/> Drainage Patterns in Wetlands							
Estimate of wetlands or waters within disturbance area							
REMARKS:							
SOILS							
Soil Survey Map Unit (Series and Phase): —				Drainage Class: —			
Taxonomy (to Subgroup): —				Field Observations Confirm Mapped Type? —			
Profile Description: —				USDA Land Resource Region: —			
Depth Range (Inches or cm)	Horizon Desig.	Matrix Color (Munsell Moist)	Mottles (Abundance/Contrast/Color)	Texture, Concretions, Structure, Redox Concen., etc.			
1-16"	A1	2.5y 4/1	>50% prominent 5YR 5/8	clay, med. blocky			
— Histosol				<input checked="" type="checkbox"/> Concretions or Redox Concentrations			
— Histic Epipedon				— High Organic Content			
— Sulfidic Odor				— Organic Streaking in Sandy Soils			
— Aquic Moisture Regime				— Listed on Local Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors				— Other USDA Hydric Soil Indicator (Explain in Remarks)			
REMARKS:							
WETLAND DETERMINATION							
Hydrophytic Vegetation Present?		<input checked="" type="radio"/> Yes <input type="radio"/> No		Is This Sampling Point Within a Wetland? <input checked="" type="radio"/> YES <input type="radio"/> NO			
Wetland Hydrology Present?		<input checked="" type="radio"/> Yes <input type="radio"/> No					
Hydric Soils Present?		<input checked="" type="radio"/> Yes <input type="radio"/> No					
REMARKS:							
Normal Circumstances? <input checked="" type="checkbox"/> Yes		Significantly Disturbed: <input type="checkbox"/> No		Potential Problem Area? <input type="checkbox"/> No			

WETLAND DELINEATION FORM (1987 USACE METHOD) SITE ID NO.: W.4A.C1.D12

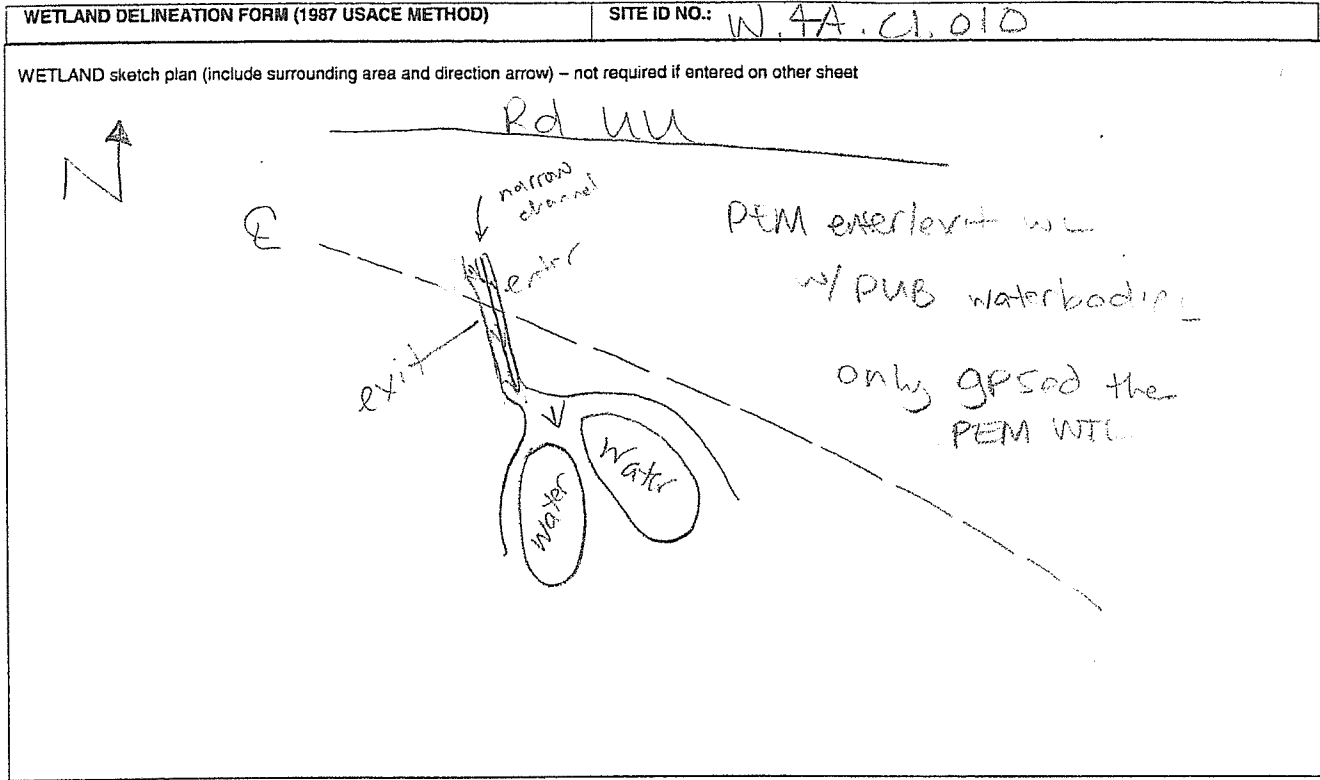
WETLAND sketch plan (include surrounding area and direction arrow) - not required if entered on other sheet



GENERAL COMMENTS (ie. wetland disturbed by landowner, excessive noxious weeds in wetland, weather conditions, landowner issues, etc):

- * diverse bird pop.
- * one of the most high quality wetlands so far
- * could shift line to the S by ~ 150' to avoid wetland + UF

WETLAND DELINEATION FORM (1987 USACE METHOD)				Site ID No.: W-4A-CI-010	Milepost: 648.35
Date: 4/17/06		GPS FILE: R041709A			
Staff: 4A		Client/Project Name: Rockies Express Pipeline Project (REX-West) 04060-018-110			
Logbook Page No's.: Book 2 pg 14		Block/Lot/Tract No.: CI-064		Photo No's.: (1)E (2)SE (3)SW (4)N	
Nearest Waterway: Long Cr.		Watershed: Long Cr.		Drainage Basin: Long Cr.	
Loop/Facility: —		State/County/Municipality: Chariton Co., MO			
DOMINANT PLANT SPECIES (% Cover)		Stratum	Indicator	NON-DOMINANT PLANT SPECIES (% Cover)	
1. Polygnum		H	OBL	1. Salix sp.	
2. Carex sp.		H	OBL	2.	
3. Phalaris arundinacea		H	FACW	3.	
4.				4.	
5.				5.	
6.				6.	
7.				7.	
8.				8.	
Per Cent of Dominant Species that are OBL, FACW, or FAC (excluding FAC): 3/3 = 100%					
REMARKS: emergent veg in ponds PEM fringe along pond					
HYDROLOGY					
Recorded Data? —		Describe: pond fed by drainage tile to the N from ag field			
Depth of Surface Water: none (in. or cm)		Other Notes:			
Depth to Free Water in Pit: 4 (in. or cm)					
Depth to Saturated Soil: 0 (in. or cm)					
Primary Wetland Indicators:			Secondary Wetland Indicators (2 or more required):		
— Inundated v 5' from pit			<input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches (30 cm) few		
<input checked="" type="checkbox"/> Saturated in Upper 12 Inches (30 cm)			<input checked="" type="checkbox"/> Water-Stained Leaves		
— Water Marks			— Local Soil Survey Data		
— Drift Lines			<input checked="" type="checkbox"/> FAC-Neutral Test		
— Sediment Deposits			— Other (Explain in Remarks)		
<input checked="" type="checkbox"/> Drainage Patterns in Wetlands					
Estimate of wetlands or waters within disturbance area 200' x 250'					
REMARKS:					
SOILS					
Soil Survey Map Unit (Series and Phase): —				Drainage Class: —	
Taxonomy (to Subgroup): —				Field Observations Confirm Mapped Type? —	
Profile Description: —				USDA Land Resource Region: —	
Depth Range (Inches or cm)	Horizon Desig.	Matrix Color (Munsell Moist)	Mottles (Abundance/Contrast/Color)	Texture, Concretions, Structure, Redox Concen., etc.	
0-14"	A1	10yr 3/1	7.5yr 4/6 2% distinct clay		
— Histosol			<input checked="" type="checkbox"/> Concretions or Redox Concentrations		
— Histic Epipedon			— High Organic Content		
<input checked="" type="checkbox"/> Sulfidic Odor			— Organic Streaking in Sandy Soils		
— Aquic Moisture Regime			— Listed on Local Hydric Soils List		
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			— Other USDA Hydric Soil Indicator (Explain in Remarks)		
REMARKS:					
WETLAND DETERMINATION					
Hydrophytic Vegetation Present?		<input checked="" type="radio"/> Yes	<input type="radio"/> No	Is This Sampling Point Within a Wetland? <input checked="" type="radio"/> YES <input type="radio"/> NO	
Wetland Hydrology Present?		<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Hydric Soils Present?		<input checked="" type="radio"/> Yes	<input type="radio"/> No		
REMARKS:					
Normal Circumstances? NO		Significantly Disturbed: NO		Potential Problem Area? NO	



GENERAL COMMENTS (ie. wetland disturbed by landowner, excessive noxious weeds in wetland, weather conditions, landowner issues, etc):

plate pipe exposed

ROUTINE WETLAND DETERMINATION FORM (1987 USACE METHOD)				Site ID No.: <u>WSC1M011001</u>	GPS File: <u>R0713SC11</u>	Milepost: <u>978.8</u>
Date: <u>07/13/06</u>		WETLAND COORDINATES: <u>38° 56' 00.22" N 90° 50' 51.47" W</u>		Client/Project Name: <u>Keystone Pipeline</u>		Photo LOCATIONS: <u>002S and 002SW</u>
Staff/Team I.D.: <u>SC1</u>		Block/Plot/Tract No.:		Watershed: <u>Cuivre River</u>		Drainage Basin: <u>Cuivre River</u>
Logbook Page No's.: <u>28 + 29</u>		State/Country/Municipality: <u>Missouri - Lincoln</u>		Nearest Waterway: <u>Campbell Creek</u>		
Loop/Facility: <u>Mainline</u>						

DOMINANT PLANT SPECIES		Stratum	Indicator	NON-DOMINANT PLANT SPECIES		Stratum	Indicator
1.	<u>Ludwigia alternifolia</u>	<u>H (80%)</u>	<u>OBL</u>	1.			
2.	<u>Leersia oryzoides</u>	<u>H (20%)</u>	<u>OBL</u>	2.			
3.				3.			
4.				4.			
5.				5.			
6.				6.			
7.				7.			
8.				8.			

Per Cent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): H = 100%

REMARKS:

HYDROLOGY

Recorded Data? Yes Describe: NWI Mapping

Depth of Surface Water: 0 (in. or cm)

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

Depth to Saturated Soil: 0 (in. or cm)

Primary Wetland Indicators:

- Inundated
- Saturated in Upper 12 Inches (30 cm)
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetlands

Secondary Wetland Indicators (2 or more required):

- Oxidized Root Channels in Upper 12 Inches (30 cm)
- Water-Stained Leaves
- Local Soil Survey Data
- FAC-Neutral Test
- Other (Explain in Remarks)

REMARKS:

SOILS

Soil Survey Map Unit (Series and Phase):

Taxonomy (to Subgroup):

Profile Description:

Depth Range (Inches or cm)	Horizon Desig.	Matrix Color (Munsell Moist)	Mottles (Abundance/Contrast/Color)	Texture, Concretions, Structure, Redox Concn., etc.
<u>0-2</u>		<u>10YR 4/2</u>	<u>10YR 4/6 Ctd</u>	<u>sic1, sbk</u>
<u>2-15</u>		<u>10YR 4/1</u>	<u>10YR 2/1 p+m</u> <u>10YR 2/6 p+m</u>	<u>sic1, sbk</u>

Drainage Class:

Field Observations Confirm Mapped Type?

USDA Land Resource Region:

Other USDA Hydric Soil Indicator (Explain in Remarks):

REMARKS (INCLUDE SOIL PIT COORDINATES):

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No

Wetland Hydrology Present? Yes No

Hydric Soils Present? Yes No

REMARKS: will be re-evaluated

Normal Circumstances? Yes Significantly Disturbed (Atypical): No Potential Problem Area? No

COMPLETE SKETCH OF WETLAND ON BACK OF THIS SHEET; INCLUDE SOIL PIT AND PHOTO LOCATIONS, NORTH ARROW, AND CROSS-SECTION.

ENSR/AECOM

ROUTINE WETLAND DETERMINATION FORM (1987)			Site ID No.:	GPS File:	Milepost:
USACE METHOD)			W3C1MOLI002	R0713SC1A	978.8
Date: 07/13/06	WETLAND COORDINATES: 38°56'00.42" N 90°50'50.77" W				
Staff/Team I.D.: SC1	Client/Project Name: Keystone Pipeline				
Logbook Page No's.: 29+30	Block/LoI/Fract No.:	Photo LOCATIONS: 001 NE			
Nearest Waterway: Campbell Creek	Watershed: Cuivre River	Drainage Basin: Cuivre River			
Loop/Facility: Mainline	State/County/Municipality: Missouri Lincoln				

DOMINANT PLANT SPECIES		Stratum	Indicator	NON-DOMINANT PLANT SPECIES		Stratum	Indicator
1.	<i>Leersia oryzoides</i>	H (90%)	OBL	1.			
2.	<i>Rumex altissimus</i>	H (10%)	FACW	2.			
3.				3.			
4.				4.			
5.				5.			
6.				6.			
7.				7.			
8.				8.			

Per Cent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): H = 100%

REMARKS:

HYDROLOGY

Recorded Data? Yes Describe: NWI Mapping

Depth of Surface Water: none (in. or cm)

Depth to Free Water in Pit: > 15 (in. or cm)

Depth to Saturated Soil: > 15 (in. or cm)

Primary Wetland Indicators:

Inundated

Saturated in Upper 12 Inches (30 cm)

Water Marks

Drift Lines

Sediment Deposits

Drainage Patterns in Wetlands

Secondary Wetland Indicators (2 or more required):

Oxidized Root Channels in Upper 12 Inches (30 cm)

Water-Stained Leaves

Local Soil Survey Data

FAC-Neutral Test

Other (Explain in Remarks)

REMARKS: Area is bermed up on downstream side through the presence of existing dirt road. Within drainage - but not a defined channel

SOILS

Soil Survey Map Unit (Series and Phase):

Taxonomy (to Subgroup):

Profile Description:

Depth Range (Inches or cm)	Horizon Desig.	Matrix Color (Munsell Moist)	Mottles (Abundance/Contrast/Color)	Texture, Concretions, Structure, Redox Concn., etc.
0-4		10YR 4/5		sil, sbk
4-12		10YR 5/2	10YR 4/0	sil, sbk
12-15		10YR 4/1	10YR 3/0, 10YR 2/1	sil, sbk

Histosol

Histic Epipedon

Sulfidic Odor

Aquic Moisture Regime

Gleyed or Low-Chroma Colors

Concretions or Redox Concentrations

High Organic Content

Organic Streaking in Sandy Soils

Listed on Local Hydric Soils List

Other USDA Hydric Soil Indicator (Explain in Remarks)

REMARKS (INCLUDE SOIL PIT COORDINATES):

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No

Wetland Hydrology Present? Yes No

Hydric Soils Present? Yes No

Is This Sampling Point Within a Wetland? YES NO

Normal Circumstances? Yes

Significantly Disturbed (Atypical): No

Potential Problem Area? No

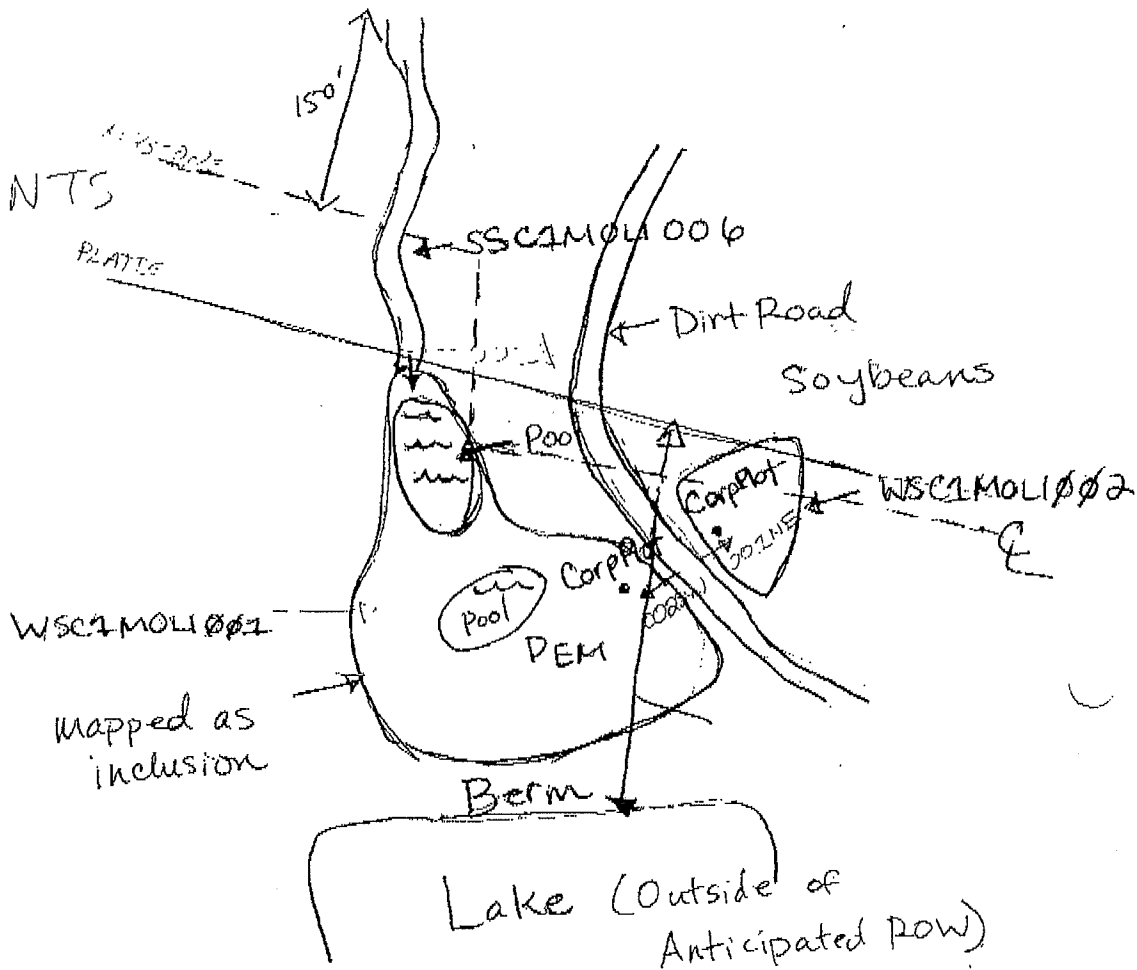
channel

COMPLETE SKETCH OF WETLAND ON BACK OF THIS SHEET; INCLUDE SOIL PIT AND PHOTO LOCATIONS, NORTH ARROW, AND CROSS-SECTION.

ENSR/AECOM

WSC1MOL1001 & WSC1MOL002
MP . 974.8

4.1



ROUTINE WETLAND DETERMINATION FORM (1987 USACE METHOD)		Site ID No.: WSC1MOLI 00#3R07BSC1A	GPS File:	Milepost: 973.9
Date: 07/13/06	WETLAND COORDINATES: 38°55'58.84" N		90°50'46.71" W	
Stall/Team I.D.: SC1	Client/Project Name: Keystone Pipeline		Photo LOCATIONS: 001 SW	
Logbook Page No.s: 31	Stock/Lot/Tract No.:	Drainage Basin: Cuivre River		
Nearest Waterway: Campbell Creek	Watershed: Cuivre River	State/County/Municipality: Missouri - Lincoln		
Loop/Facility: Mainline				

DOMINANT PLANT SPECIES		Stratum	Indicator	NON-DOMINANT PLANT SPECIES		Stratum	Indicator
1.	Rumex altissimus	H (40%)	FACW	1.			
2.	Leersia oryzoides	H (5%)	OBL	2.			
3.	Amaranthus tuberculatus	H (30%)	OBL	3.			
4.				4.			
5.				5.			
6.				6.			
7.				7.			
8.				8.			

Per Cent of Dominant Species that are OBL, FACW, or FAC (excluding FAC): **H = 100%**

RE MARKS:

HYDROLOGY

Recorded Data? **Yes** Describe: **NW1 Mapping**

Depth of Surface Water: **none** (in. or cm)

Depth to Free Water in Pit: **> 15** (in. or cm)

Depth to Saturated Soil: **> 15** (in. or cm)

Primary Wetland Indicators:

- Inundated
- Saturated in Upper 12 Inches (30 cm)
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetlands

Secondary Wetland Indicators (2 or more required):

- Oxidized Root Channels in Upper 12 Inches (30 cm)
- Water-Stained Leaves
- Local Soil Survey Data
- FAC-Neutral Test
- Other (Explain in Remarks)

RE MARKS: **upstream side of pond**

SOILS

Soil Survey Map Unit (Series and Phase):

Taxonomy (to Subgroup):

Profile Description:

Depth Range (inches or cm)	Horizon Desig.	Matrix Color (Munsell Moist)	Mottles (Abundance/Contrast/Color)	Texture, Concretions, Structure, Redox Concn., etc.
0-15		10YR 4/2	10YR 3/6 ctd	sil, blk

Drainage Class:

Field Observations Confirm Mapped Type?

USDA I and Resource Region:

Texture, Concretions, Structure, Redox Concn., etc.

- Histosol
- Hist. Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Clayed or Low-Chroma Colors

Concretions or Redox Concentrations

High Organic Content

Organic Streaking in Sandy Soils

Listed on Local Hydric Soils List

Other USDA Hydric Soil Indicator (Explain in Remarks)

RE MARKS (INCLUDE SOIL PIT COORDINATES):

WETLAND DETERMINATION

Hydrophytic Vegetation Present? **Yes** No

Wetland Hydrology Present? **Yes** No

Hydric Soils Present? **Yes** No

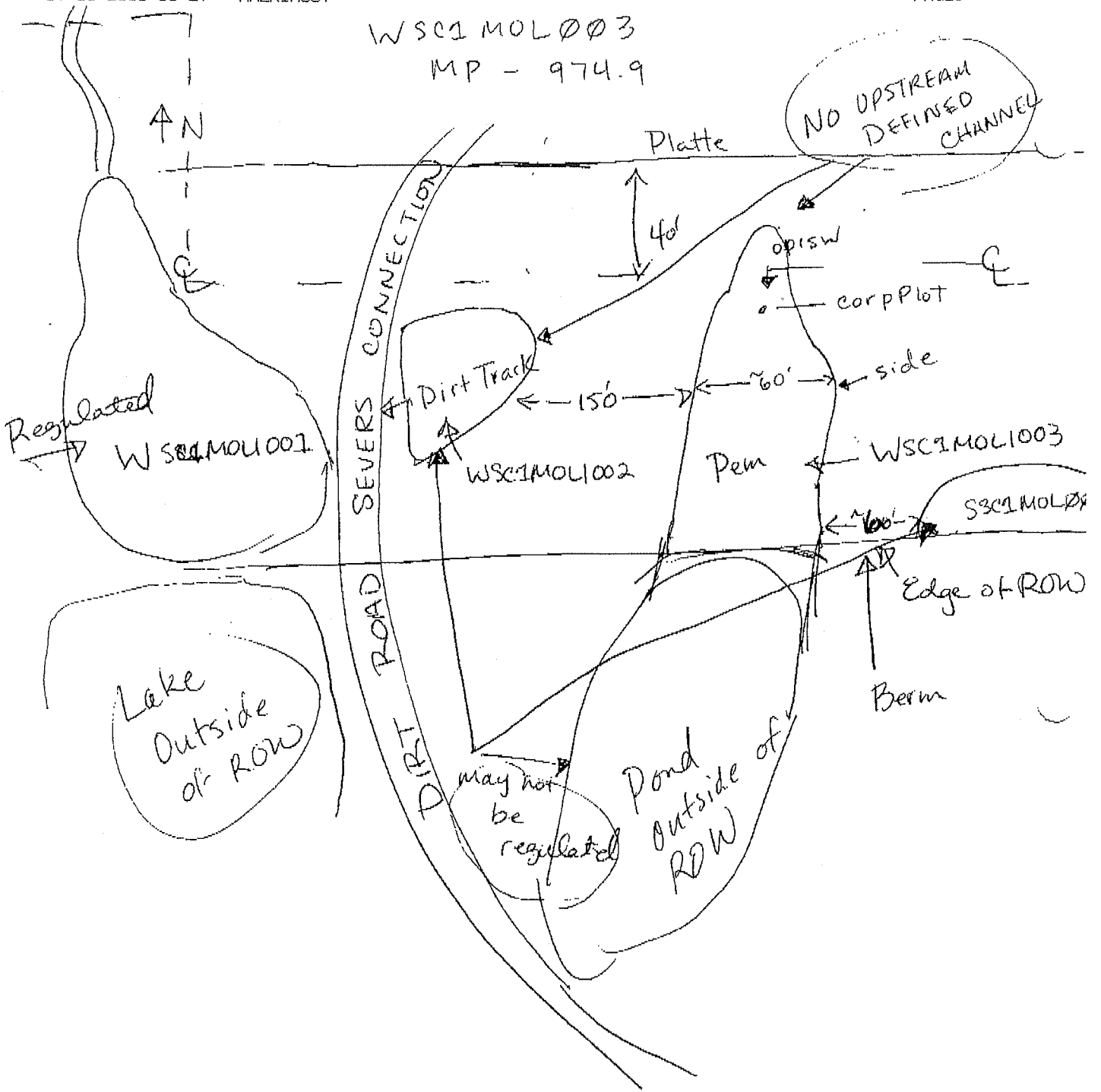
RE MARKS: **may not be regulated by USACE**

Normal Circumstances? **Yes** Significantly Disturbed (Atypical): **NO** Potential Problem Area? **NO**

COMPLETE SKETCH OF WETLAND ON BACK OF THIS SHEET; INCLUDE SOIL PIT AND PHOTO LOCATIONS, NORTH ARROW, AND CROSS-SECTION.

ENSR/AECOM

WSC1MOL003
MP - 974.9

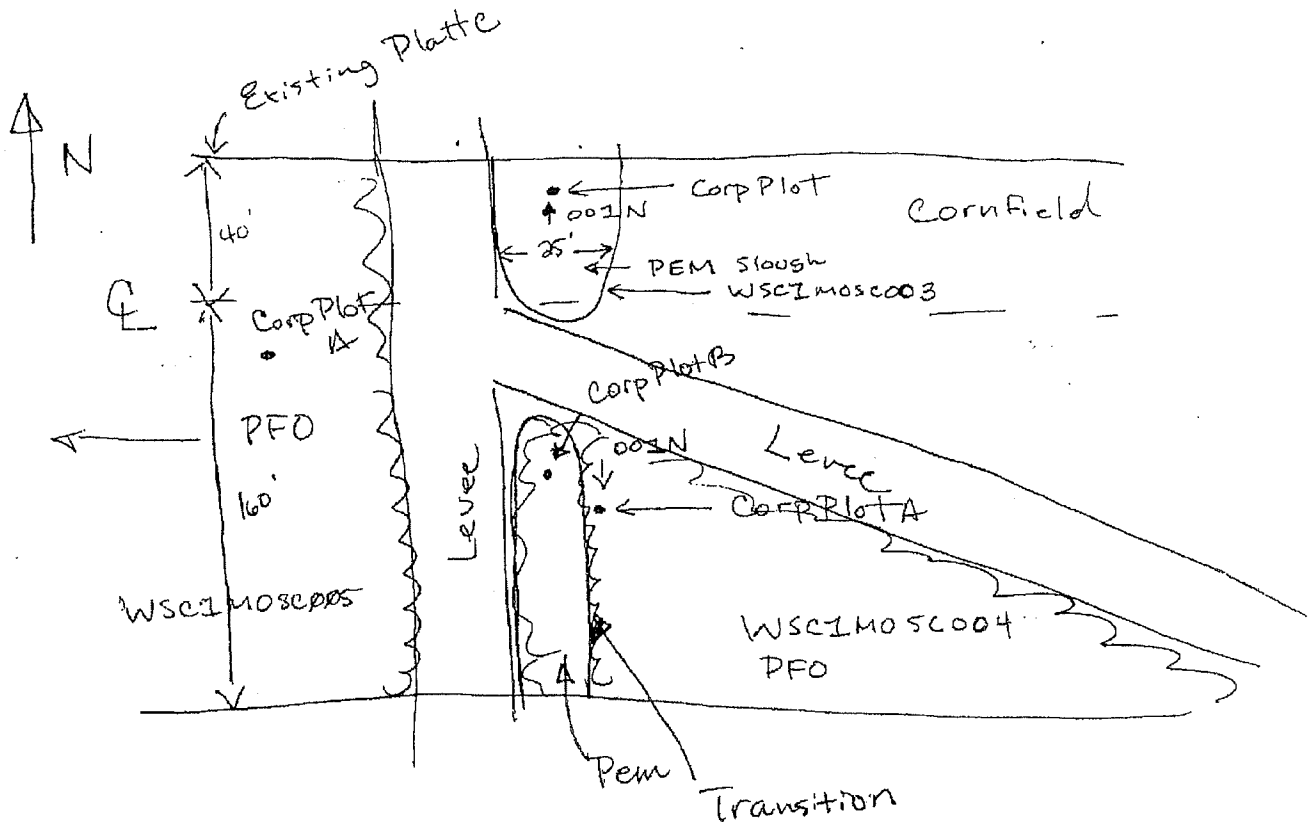


CONFIDENTIAL

ROUTINE WETLAND DETERMINATION FORM (1987 USACE METHOD)		Site ID No.: <u>003</u>	GPS File: <u>W501.MOSC004 R07185C1A</u>	Milepost: <u>982.8</u>			
Date: <u>07/18/06</u>	WETLAND COORDINATES: <u>38° 53' 33.11" N 90° 41' 32.65" W</u>						
Staff/Team I.D.: <u>SC1</u>	Client/Project Name: <u>Keystone Pipeline</u>						
Logbook Page No's.: <u>40, 41</u>	Block/Lot/Tract No.:	Photo LOCATIONS: <u>007N</u>					
Nearest Waterway: <u>Fish Slough</u>	Watershed: <u>Cuivre</u>	Drainage Basin: <u>Cuivre</u>					
Loop/Facility: <u>Main Line</u>	State/County/Municipality: <u>MO St. Charles</u>						
DOMINANT PLANT SPECIES		Structure	Indicator	NON-DOMINANT PLANT SPECIES		Structure	Indicator
1. <u>Cassia fasciculata</u>	<u>H (5%)</u>	<u>FACU</u>	<u>1</u>				
2. <u>Boltonia asteroides</u>	<u>H (5%)</u>	<u>FACW</u>	<u>2</u>				
3. <u>Carex spp.</u>	<u>H (5%)</u>	<u>FACW</u>	<u>3</u>				
4. <u>Juncus tenuis</u>	<u>H (5%)</u>	<u>FAC</u>	<u>4</u>				
5. <u>Bidens frondosa</u>	<u>H (5%)</u>	<u>FACW</u>	<u>5</u>				
6. <u>Cephalanthus occidentalis</u>	<u>S (10%)</u>	<u>OBL</u>	<u>6</u>				
7. <u>Salix nigra</u>	<u>S (10%)</u>	<u>OBL</u>	<u>7</u>				
8.			<u>8</u>				
Per Cent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-):		<u>H = 100 80%</u>		<u>S = 100%</u>			
REMARKS:							
WETLAND INDICATORS							
Recorded Data? <u>Yes</u>		Describe: <u>NWI Mapping</u>					
Depth of Surface Water: <u>none</u> (in. or cm)							
Depth to Free Water in Pit: <u>> 15</u> (in. or cm)							
Depth to Saturated Soil: <u>> 15</u> (in. or cm)							
Primary Wetland Indicators:				Secondary Wetland Indicators (2 or more required):			
<input type="checkbox"/> Inundated				<input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches (30 cm)			
<input type="checkbox"/> Saturated in Upper 12 Inches (30 cm)				<input type="checkbox"/> Water-Stained Leaves			
<input type="checkbox"/> Water Marks				<input type="checkbox"/> Local Soil Survey Data			
<input type="checkbox"/> Drift Lines				<input checked="" type="checkbox"/> FAC-Neutral Test			
<input type="checkbox"/> Sediment Deposits				<input type="checkbox"/> Other (Explain in Remarks)			
<input checked="" type="checkbox"/> Drainage Patterns in Wetlands							
REMARKS:							
SOILS							
Soil Survey Map Unit (Series and Phase):				Drainage Class:			
Taxonomy (to Subgroup):				Field Observations Confirm Mapped Type?			
Profile Description:				USDA Land Resource Region:			
Depth Range (Inches or cm)	Horizon Desig.	Matrix Color (Munsell Moist)	Mottles (Abundance/Contrast/Color)	Texture, Concretions, Structure, Redox Concen., etc.			
<u>0-6</u>		<u>10YR 4/2</u>	<u>-</u>	<u>sicl, sbk</u>			
<u>6-15</u>		<u>10YR 4/a</u>	<u>10YR 4/6 c+d</u>	<u>cl, sbk</u>			
<input type="checkbox"/> Histosol				<input type="checkbox"/> Concretions or Redox Concentrations			
<input type="checkbox"/> Histic Epipedon				<input type="checkbox"/> High Organic Content			
<input type="checkbox"/> Sulfidic Odor				<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime				<input type="checkbox"/> Listed on Local Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors				<input type="checkbox"/> Other USDA Hydric Soil Indicator (Explain in Remarks)			
REMARKS (INCLUDE SOIL PIT COORDINATES):							
WETLAND DETERMINATION							
Hydrophytic Vegetation Present?		<input checked="" type="radio"/> Yes	<input type="radio"/> No	Is This Sampling Point Within a Wetland? <input checked="" type="radio"/> YES <input type="radio"/> NO			
Wetland Hydrology Present?		<input checked="" type="radio"/> Yes	<input type="radio"/> No				
Hydric Soils Present?		<input checked="" type="radio"/> Yes	<input type="radio"/> No				
REMARKS:							
Normal Circumstances? <u>Yes</u>		Significantly Disturbed (Atypical): <u>NO</u>		Potential Problem Area? <u>NO</u>			

COMPLETE SKETCH OF WETLAND ON BACK OF THIS SHEET; INCLUDE SOIL PIT AND PHOTO LOCATIONS, NORTH ARROW, AND CROSS-SECTION. ENSR/AECOM

WSC1MOSC003 , WSC1MOSC004 , WSC1MOSC005



CONFIDENTIAL

ROUTINE WETLAND DETERMINATION FORM (1987 USACE METHOD)			Site ID No.: WSCI1M05004 B202185C1A	GPS File:	Milepost: 982.8
Date: 7/18/06		WETLAND COORDINATES: 38° 53' 21.66" N 90° 41' 33.59" W			
Staff/Team I.D.: SC1		Client/Project Name: Keystone Pipeline			
Logbook Page No's.: 41, 42		Block/Lot/Tract No.:		Photo LOCATIONS: 001N	
Nearest Waterway: Fish Slough		Watershed: Cuivre		Drainage Basin: Cuivre	
Loop/Facility: Mainline		State/County/Municipality: MO St. Charles			
DOMINANT PLANT SPECIES					
		Stratum	Indicator	NON-DOMINANT PLANT SPECIES	
1. Sagittaria Latifolia		H (30%)	OBL	1.	
2. Leersia oryzoides		H (40%)	OBL	2.	
3. Polygonum hydropiperoides		H (50%)	OBL	3.	
4.				4.	
5.				5.	
6.				6.	
7.				7.	
8.				8.	
Per Cent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): H - 100%					
REMARKS:					
HYDROLOGY					
Recorded Data?		Describe:			
Depth of Surface Water:		1 (in. or cm)			
Depth to Free Water in Pit:		10 (in. or cm)			
Depth to Saturated Soil:		0 (in. or cm)			
Primary Wetland Indicators:			Secondary Wetland Indicators (2 or more required):		
<input checked="" type="checkbox"/> Inundated			___ Oxidized Root Channels in Upper 12 Inches (30 cm)		
<input checked="" type="checkbox"/> Saturated in Upper 12 Inches (30 cm)			___ Water-Stained Leaves		
___ Water Marks			___ Local Soil Survey Data		
___ Drift Lines			___ FAC-Neutral Test		
___ Sediment Deposits			___ Other (Explain in Remarks)		
___ Drainage Patterns in Wetlands					
REMARKS:					
SOILS					
Soil Survey Map Unit (Series and Phase):				Drainage Class:	
Taxonomy (to Subgroup):				Field Observations Confirm Mapped Type?	
Profile Description:				USDA Land Resource Region:	
Depth Range (Inches or cm)	Horizon Desig.	Matrix Color (Munsell Moist)	Mottles (Abundance/Contrast/Color)	Texture, Concretions, Structure, Redox Concen., etc.	
0-4		10 YR 4/2	10 YR 4/6 C+D	CL, SBR	
4-15		Gley 1 5/W	10 YR 4/6 C+D	CL, SBR	
___ Histosol		___ Concretions or Redox Concentrations			
___ Histic Epipedon		___ High Organic Content			
___ Sulfidic Odor		___ Organic Streaking in Sandy Soils			
___ Aquic Moisture Regime		___ Listed on Local Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		___ Other USDA Hydric Soil Indicator (Explain in Remarks)			
REMARKS (INCLUDE SOIL PIT COORDINATES):					
WETLAND DETERMINATION					
Hydrophytic Vegetation Present?		<input checked="" type="radio"/> Yes <input type="radio"/> No		Is This Sampling Point Within a Wetland? <input checked="" type="radio"/> YES <input type="radio"/> NO	
Wetland Hydrology Present?		<input checked="" type="radio"/> Yes <input type="radio"/> No			
Hydric Soils Present?		<input checked="" type="radio"/> Yes <input type="radio"/> No			
REMARKS: Will be Regulated					
Normal Circumstances? <input checked="" type="radio"/> YES		Significantly Disturbed (Atypical): NO		Potential Problem Area? NO	

COMPLETE SKETCH OF WETLAND ON BACK OF THIS SHEET; INCLUDE SOIL PIT AND PHOTO LOCATIONS, NORTH ARROW, AND CROSS-SECTION. **ENSR/AECOM**

CONFIDENTIAL

JUL.19'2006 16:58 6369498269

SCI ENGINEERING

#6345 P.004/008

ROUTINE WETLAND DETERMINATION FORM (1987 USACE METHOD)		Site ID No.: Wsc1mosc007	GPS File: R0195C1A	Milepost: 984.9
Date: 07/19/06	WETLAND COORDINATES: 38° 52' 55.07" N		70° 39' 25.21" W	
Staff/Team I.D.: SCI	Client/Project Name: Keystone Pipeline		Photo LOCATIONS: 0025	
Logbook Page No's.: 50 + 51	Block/Lot/Tract No.:		Drainage Basin: Cuivre	
Nearest Waterway: Fish Slough Perigue Creek	Watershed: Cuivre Perigue			
Loop/Facility: Mainline	State/County/Municipality: Mo - St. Charles			

DOMINANT PLANT SPECIES	Stratum	Indicator	NON-DOMINANT PLANT SPECIES	Stratum	Indicator
1. <i>Leucosia oryzoides</i>	H (20%)	OBL	1. <i>Xanthium strumarium</i>	H (5%)	
2. <i>Cephalanthus occidentalis</i>	S (10%)	OBL	2. <i>Eupatorium serotinum</i>	H (3%)	
3. <i>Salix nigra</i>	S (15%)	OBL			
4. <i>Phyla lanceolata</i>	H (15%)	OBL			
5. <i>Bidens frondosa</i>	H (10%)	FACW			
6.					
7.					
8.					

Per Cent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): S = 100% H = 100%

REMARKS: Most plants listed were observed along the edge of a

HYDROLOGY heavily inundated area.

Recorded Data? No	Describe:
Depth of Surface Water: 4 (in. or cm)	
Depth to Free Water in Pit: 0 (in. or cm)	
Depth to Saturated Soil: 0 (in. or cm)	
Primary Wetland Indicators:	Secondary Wetland Indicators (2 or more required):
<input checked="" type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches (30 cm)
<input checked="" type="checkbox"/> Saturated in Upper 12 Inches (30 cm)	<input type="checkbox"/> Water-Stained Leaves
<input type="checkbox"/> Water Marks	<input type="checkbox"/> Local Soil Survey Data
<input type="checkbox"/> Drift Lines	<input checked="" type="checkbox"/> FAC-Neutral Test
<input type="checkbox"/> Sediment Deposits	<input type="checkbox"/> Other (Explain in Remarks)
<input checked="" type="checkbox"/> Drainage Patterns in Wetlands	

REMARKS:

SOILS			
Soil Survey Map Unit (Series and Phase):		Drainage Class:	
Taxonomy (to Subgroup):		Field Observations Confirm Mapped Type?	
Profile Description:		USDA Land Resource Region:	
Depth Range (Inches or cm)	Horizon Desig.	Matrix Color (Munsell Moist)	Mottles (Abundance/Contrast/Color)
0-10		10YR 4/2	10YR 4/6 ctd
10-15		10YR 4/1	10YR 4/6 ctd
			10YR 2/1 f+d
<input type="checkbox"/> Histosol	<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Aquic Moisture Regime
<input type="checkbox"/> Concretions or Redox Concentrations	<input type="checkbox"/> High Organic Content	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Other USDA Hydric Soil Indicator (Explain in Remarks)			

REMARKS (INCLUDE SOIL PIT COORDINATES):

WETLAND DETERMINATION			
Hydrophytic Vegetation Present?	Yes	No	Is This Sampling Point Within a Wetland? YES NO
Wetland Hydrology Present?	Yes	No	
Hydric Soils Present?	Yes	No	

REMARKS:

Normal Circumstances? Yes	Significantly Disturbed (Atypical): No	Potential Problem Area? No
----------------------------------	---	-----------------------------------

COMPLETE SKETCH OF WETLAND ON BACK OF THIS SHEET; INCLUDE SOIL PIT AND PHOTO LOCATIONS, NORTH ARROW, AND CROSS-SECTION. **ENSR/AECOM**

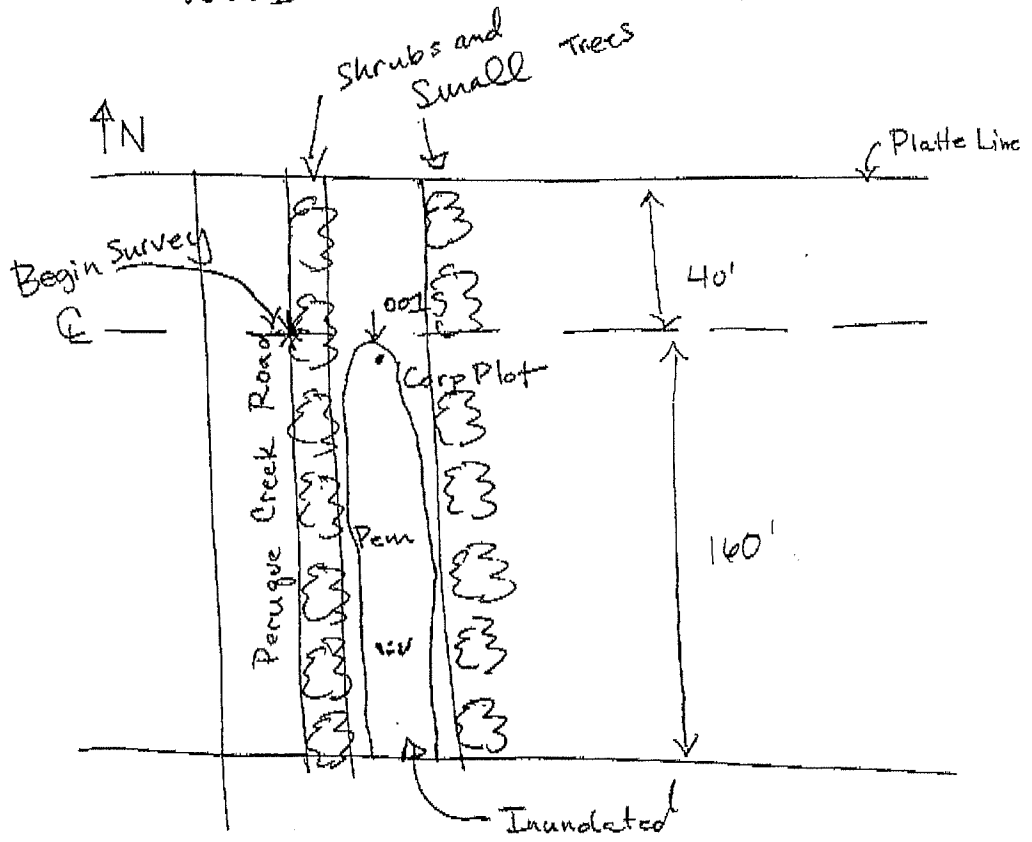
CONFIDENTIAL

JUL.19'2006 16:58 6369498269

SCI ENGINEERING

#6345 P.005/008

WSC1M10SC007 MP-484.9



Appendix C

Wetland Maps