CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 45-2

Map Unit Name
(Series and Phase): Oconee silt loams 2-5% eroded
Taxonomy (subgroup): Udolie ochraqualfs

Drainage Class: _____
Field Observations
Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
x	Aquic Moisture Regime		Listed on Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [x]	No [ ]
Wetland Hydrology Present?	Yes [x]	No [ ]
Hydric Soil Present?	Yes [x]	No [ ]

Is Sample Point Within a Wetland? Yes [x] No [ ]

Remarks: Small intermittant stream cutting through upland row crops.

Photos: 1729-1732

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 44-1

Project Site: 2Rivers Pipeline Project	Date 6/25/2001
Applicant/Owner: Equilon	County: Bond
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes x	No	Community ID:	RF
Is the site significantly disturbed (atypical situation)?	Yes x	No	Transect ID:	62501
Is the area a potential problem area?	Yes	No x	Plot ID:	WPT 255
(If needed, explain in Remarks spaces)				

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Celtis occidentalis*	T	FAC-	9.		
2. *Fraxinus pennsylvanica*	T	FACW	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 50%

Remarks: Survey conducted from road. Access denied by land owner. Understory heavily grazed/or removed by recent cable or pipline installation along road.

HYDROLOGY

x Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
___ Stream, Lake, or Tide Gauge	Primary Indicators:
x Aerial Photographs	___ Inundated
x Other	___ Saturated in Upper 12 Inches
___ No Recorded Data Available	___ Water Marks
	___ Drift Lines
	___ Sediment Deposits
	x Drainage Patterns in Wetlands
Field Observations:	Secondary Indicators:
Depth of Surface Water: - (in.)	___ Oxidized Root Channels (upper12")
Depth to Free Water in Pit: - (in.)	___ Water Stained Leaves
Depth to Saturated Soil: - (in.)	x Local Soil Survey Data
	___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Narrow flood plain on West side of stream. Wetland hydrology weak.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 44-2

Map Unit Name (Series and Phase): Wakeland silt loam	Drainage Class: SP
Taxonomy (subgroup): Aeric Fluvaquents	Field Observations Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [ ]	No [x]	Is Sample Point Within a Wetland?	Yes [ ]	No [x]
Wetland Hydrology Present?	Yes [x]	No [ ]			
Hydric Soil Present?	Yes [x]	No [ ]			

Remarks: Survey conducted from road (good visibility). Access denied by land owner. Small flood plains area, interrupted by county road.

Photos:

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 43-1

Project Site: 2Rivers Pipeline Project	Date: 6/25/2001
Applicant/Owner: Equilon	County: Bond
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No	
Is the site significantly disturbed (atypical situation)?	Yes		No	x
Is the area a potential problem area?	Yes		No	x
(If needed, explain in Remarks spaces)				

Community ID: RF
Transect ID: 62501
Plot ID: WPT 251

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Acer negundo*	T	FACW-	9.		
2. *Acer negundo*	S	FACW-	10.		
3. *Juglans nigra*	T	FACU	11.		
4. *Laportea canadensis*	H	FACW	12.		
5. *Elymus riparius*	H	FACW	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 80%

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: - (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- X Drift Lines
- ___ Sediment Deposits
- X Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- X Water Stained Leaves
- X Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Flood plain.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 43-1

Map Unit Name
(Series and Phase): Wakeland silt loam
Taxonomy (subgroup): Aeric Fluvaquents

Drainage Class: SP
Field Observations
Confirmed Map Type? Yes [x] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-18		7.5 YR 3/2			loam

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
x	Aquic Moisture Regime	x	Listed on Hydric Soils List
	Reducing Conditions	x	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: Negative to alfa alfa dipyridil

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No		Is Sample Point
Wetland Hydrology Present?	Yes	x	No		Within a Wetland? Yes x No
Hydric Soil Present?	Yes	x	No		

Remarks: Flood plain off small stream (branch of Little Beaver Creek)

Photos: 1725,1726 (creek bank)

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 42-1

Project Site: 2Rivers Pipeline Project	Date: 6/25/2001
Applicant/Owner: Equilon	County: Bond
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No	
Is the site significantly disturbed (atypical situation)?	Yes		No	x
Is the area a potential problem area?	Yes		No	x
(If needed, explain in Remarks spaces)				

Community ID: UF
Transect ID: 62501
Plot ID: WPT 248

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Carya laciniosa*	T	FACW	9.		
2. *Ulmus americana*	T	FACW-	10.		
3. *Ulmus americana*	S	FACW-	11.		
4. *Juglans nigra*	T	FACU	12.		
5. *Parthenocissus quinquefolia*	V	FAC-	13.		
6. *Elymus riparius*	H	FACW	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 67%

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):
- ____ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other
- ____ No Recorded Data Available

Wetland Hydrology Indicators:
Primary Indicators:
- ____ Inundated
- ____ Saturated in Upper 12 Inches
- ____ Water Marks
- ____ Drift Lines
- ____ Sediment Deposits
- ____ Drainage Patterns in Wetlands

Secondary Indicators:
- ____ Oxidized Root Channels (upper12")
- ____ Water Stained Leaves
- ____ Local Soil Survey Data
- ____ Other (Explain in Remarks)

Field Observations:

Depth of Surface Water: ____ - ____ (in.)

Depth to Free Water in Pit: ____ - ____ (in.)

Depth to Saturated Soil: ____ - ____ (in.)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Steep hillside.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 42-2

Map Unit Name
(Series and Phase): Hickory loam 15-30%
Taxonomy (subgroup): Typic Hapludalfs

Drainage Class:
Field Observations
Confirmed Map Type? Yes [ ] No [ ]

Profile Dscription

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
	Aquic Moisture Regime		Listed on Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit, steep slope, failed hydrology.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No		Is Sample Point
Wetland Hydrology Present?	Yes		No	x	Within a Wetland? Yes [ ] No [x]
Hydric Soil Present?	Yes		No	x	

Remarks: Steep forested hillside.

Photos: 1727-1728

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 63-1

Project Site:	2Rivers Pipeline Project	Date	6/28/2001
Applicant/Owner:	Equilon	County:	Madison
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: RF
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62802
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 329
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Acer negundo*	T	FACW-	9.		
2. *Acer negundo*	S	FACW-	10.		
3. *Elymus riparius*	H	FACW	11.		
4. *Juglans nigra*	T	FACU	12.		
5. *Laportea canadensis*	H	FACW	13.		
6. *Parthenocissus quinquefolia*	V	FAC-	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 83%

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
___ Stream, Lake, or Tide Gauge	Primary Indicators:
X Aerial Photographs	___ Inundated
X Other	___ Saturated in Upper 12 Inches
___ No Recorded Data Available	___ Water Marks
	___ Drift Lines
Field Observations:	___ Sediment Deposits
	x Drainage Patterns in Wetlands
Depth of Surface Water: - (in.)	
	Secondary Indicators:
Depth to Free Water in Pit: - (in.)	___ Oxidized Root Channels (upper12")
	X Water Stained Leaves
Depth to Saturated Soil: - (in.)	___ Local Soil Survey Data
	___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Extremely flat creek bottom.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 63-2

Map Unit Name (Series and Phase): Wakeland silt loam	Drainage Class: SP
Taxonomy (subgroup): Areic Fluvaquents	Field Observations Confirmed Map Type? Yes [x] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-5	A	7.5 YR 2.5/1			Loam
5-18	B	2.5 Y 4/3			Loam

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
x	Aquic Moisture Regime	x	Listed on Hydric Soils List
	Reducing Conditions	x	Listed on National Hydric Soils List
x	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: Negative to alfa alfa dipyridil

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No		Is Sample Point
Wetland Hydrology Present?	Yes	x	No		Within a Wetland? Yes x No
Hydric Soil Present?	Yes	x	No		

Remarks: Creek bottom wide, flat, NWI wetland.

Photos: 1781,1782

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 62-1

Project Site: 2Rivers Pipeline Project	Date 6/28/2001
Applicant/Owner: Equilon	County: Madison
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes x	No	Community ID:	PE
Is the site significantly disturbed (atypical situation)?	Yes	No x	Transect ID:	62802
Is the area a potential problem area?	Yes	No x	Plot ID:	WPT 326
(If needed, explain in Remarks spaces)				

VEGETATION

Dominant Plant Species	Stratum	Indicator	Other Plant Species	Stratum	Indicator
1. *Leersia oryzoides*	H	OBL	9. Elm		
2. *Ludwigia peploides*	H	OBL	10. Cottonwood		
3. *Typha latifolia*	S	OBL	11. Silver maple		
4. *Polygonum hydropiperoides*	H	OBL	12. Hickory		
5. *Salix nigra*	S	OBL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks: Emergent wetland with sparse trees (above).

HYDROLOGY

x Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- x Aerial Photographs
- x Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0-10 (in.)

Depth to Free Water in Pit: 11 (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- x Inundated
- x Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- x Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- x Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Pit on shore of small drainage. NWI Wetland. Wet line distinct at abrupt bank to vegatation line.

CONFIDENTIAL

Benchmark Ecology Services Inc.

QC ID: 62-2

SOILS

Map Unit Name
(Series and Phase): Marine silt loam 2-4% slope
Taxonomy (subgroup): Areic Albaqualfs

Drainage Class:
Field Observations
Confirmed Map Type? Yes [ ] No [X]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-5	A	10 YR 3/1	10 YR 5/8	Large numerous	sandy loam
5-10	B1	10 YR 4/1	10 YR 5/8		sandy loam
10-18	B2	10 YR 3/1			sandy loam

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
X	Sulfidic Odor		Organic Streaking in Sandy Soils
X	Aquic Moisture Regime		Listed on Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
X	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: Negative to alfa alfa dipyridil.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	X	No		Is Sample Point
Wetland Hydrology Present?	Yes	X	No		Within a Wetland? Yes X No
Hydric Soil Present?	Yes	X	No		

Remarks:

Photos: 1780

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 61-1

Project Site:	2Rivers Pipeline Project	Date	6/28/2001
Applicant/Owner:	Equilon	County:	Madison
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PE
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62801
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 323
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Leersia oryzoides*	H	OBL	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks: Wet band on NW end of stock tank. Other bank has S. nigra, but weak hydrology.

HYDROLOGY

x Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
___ Stream, Lake, or Tide Gauge	Primary Indicators:
x Aerial Photographs	___ Inundated
x Other	x Saturated in Upper 12 Inches
___ No Recorded Data Available	___ Water Marks
	___ Drift Lines
Field Observations:	___ Sediment Deposits
Depth of Surface Water: 0* (in.)	x Drainage Patterns in Wetlands
Depth to Free Water in Pit: no pit (in.)	Secondary Indicators:
Depth to Saturated Soil: 0 (in.)	___ Oxidized Root Channels (upper12")
	___ Water Stained Leaves
	x Local Soil Survey Data
	___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. *Agricultral pond edge.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 61-2

Map Unit Name
(Series and Phase): Hickory Loam 15-30% slope
Taxonomy (subgroup): Typic Hapludalfs

Drainage Class: _____
Field Observations
Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
	Aquic Moisture Regime		Listed on Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: Soils hydric due to extended inundation/saturation. Ag. Pond.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [x]	No [ ]
Wetland Hydrology Present?	Yes [x]	No [ ]
Hydric Soil Present?	Yes [x]	No [ ]

Is Sample Point Within a Wetland? Yes [x] No [ ]

Remarks: Agricultural pond steep sides except NW band of rice cutgrass along NW shoreline.

Photos: 1737

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

Project Site:	2Rivers Pipeline Project	QC ID:	41-1
Applicant/Owner:	Equilon	Date	6/24/2001
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	County:	Bond
		State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: RF
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62403
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 239
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Quercus macrocarpa*	T	FAC-	9.		
2. *Ulmus americana*	S	FACW-	10.		
3. *Ulmus rubra*	T	FAC	11.		
4. *Celtis occidentalis*	T	FAC-	12.		
5. *Toxicodendron radicans*	S	FAC+	13.		
6. *Toxicodendron radicans*	H	FAC+	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 67%

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: - (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- X Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- X Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- X Water Stained Leaves
- X Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Adjacent to small creek.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 41-2

Map Unit Name
(Series and Phase): Wakeland silt loam
Taxonomy (subgroup): Aeric Fluvaquent

Drainage Class:
Field Observations
Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
x	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit, listed soil.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [ ]	No [x]
Wetland Hydrology Present?	Yes [x]	No [ ]
Hydric Soil Present?	Yes [x]	No [ ]

Is Sample Point Within a Wetland? Yes [ ] No [x]

Remarks: forested strip following creek.

Photos: 1720

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 40-1

Project Site: 2Rivers Pipeline Project	Date: 6/24/2001
Applicant/Owner: Equilon	County: Bond
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No	
Is the site significantly disturbed (atypical situation)?	Yes		No	x
Is the area a potential problem area?	Yes		No	x
(If needed, explain in Remarks spaces)				

Community ID: UF
Transect ID: 62402
Plot ID: WPT 238*
approx 75m West of point.

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Celtis occidentalis*	T	FAC-	9.		
2. *Celtis occidentalis*	S	FAC-	10.		
3. *Ulmus rubra*	T	FAC-	11.		
4. *Ulmus rubra*	S	FAC-	12.		
5. *Parthenocissus quinquefolia*	H	FAC-	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 0%

Remarks: See wpt 237.

HYDROLOGY

x Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
___ Stream, Lake, or Tide Gauge	Primary Indicators:
x Aerial Photographs	x* Inundated
x Other	___ Saturated in Upper 12 Inches
___ No Recorded Data Available	___ Water Marks
	___ Drift Lines
	___ Sediment Deposits
	___ Drainage Patterns in Wetlands
Field Observations:	Secondary Indicators:
Depth of Surface Water: - (in.)	___ Oxidized Root Channels (upper12")
Depth to Free Water in Pit: - (in.)	___ Water Stained Leaves
Depth to Saturated Soil: - (in.)	___ Local Soil Survey Data
	___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Steep banks, unvegetated. * inundated in stream bed only.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 40-2

Map Unit Name (Series and Phase): Wakeland silt loam	Drainage Class: SP
Taxonomy (subgroup): Aeric Fluvaquent	Field Observations Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [ ]	No [x]	Is Sample Point Within a Wetland?	Yes [ ] No [x]
Wetland Hydrology Present?	Yes [ ]	No [x]		
Hydric Soil Present?	Yes [x]	No [ ]		

Remarks: No emergent zone. See WPT 237.

Photos:

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 39-1

Project Site: 2Rivers Pipeline Project	Date: 6/24/2001
Applicant/Owner: Equilon	County: Bond
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No	
Is the site significantly disturbed (atypical situation)?	Yes		No	x
Is the area a potential problem area?	Yes		No	x
(If needed, explain in Remarks spaces)				

Community ID: UF
Transect ID: 62402
Plot ID: WPT 237

VEGETATION

Dominant Plant Species	Stratum	Indicator	Sub - Dominant Plant Species	Stratum	Indicator
1. *Celtis occidentalis*	T	FAC-	9. Black Walnut		
2. *Celtis occidentalis*	S	FAC-	10. Silver Maple		
3. *Ulmus rubra*	T	FAC-	11. Black Willow		
4. *Ulmus rubra*	S	FAC-	12.		
5. *Parthenocissus quinquefolia*	H	FAC-	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 0%

Remarks:

HYDROLOGY

x Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
___ Stream, Lake, or Tide Gauge	Primary Indicators:
x Aerial Photographs	*x Inundated
x Other	___ Saturated in Upper 12 Inches
___ No Recorded Data Available	___ Water Marks
	___ Drift Lines
	___ Sediment Deposits
	___ Drainage Patterns in Wetlands
	Secondary Indicators:
	___ Oxidized Root Channels (upper12")
	___ Water Stained Leaves
	___ Local Soil Survey Data
	___ Other (Explain in Remarks)

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: - (in.)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. *In small channel. Bank steep and unvegetated.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 39-2

Map Unit Name (Series and Phase): Wakeland silt loam	Drainage Class: SP
Taxonomy (subgroup): Aeric Fluvaquent	Field Observations Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [ ]	No [x]	Is Sample Point Within a Wetland?	Yes [ ]	No [x]
Wetland Hydrology Present?	Yes [ ]	No [x]			
Hydric Soil Present?	Yes [x]	No [ ]			

Remarks: Narrow stream channel draining Ag. lands w/steep banks. Water restricted to channel area. No emergant zone.

Photos:

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 34-1

Project Site: 2Rivers Pipeline Project	Date: 6/24/2001
Applicant/Owner: Equilon	County: Fayette
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No	
Is the site significantly disturbed (atypical situation)?	Yes		No	x
Is the area a potential problem area?	Yes		No	x
(If needed, explain in Remarks spaces)				

Community ID: UP
Transect ID: 62402
Plot ID: WPT 231

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Phalaris arundinacea*	H	FACW+	9.		
2. *Apocynum cannabinum*	H	FAC	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):
- ____ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other
- ____ No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: - (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ____ Inundated
- ____ Saturated in Upper 12 Inches
- ____ Water Marks
- ____ Drift Lines
- ____ Sediment Deposits
- ____ Drainage Patterns in Wetlands

Secondary Indicators:
- ____ Oxidized Root Channels (upper12")
- ____ Water Stained Leaves
- ____ Local Soil Survey Data
- ____ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. ~ 2-3% grade allows adequete drainage to prevent wetland formation.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 34-2

Map Unit Name
(Series and Phase): Hoyleton silt loam 2-5% slopes
Taxonomy (subgroup): Aquollic Hapludalfs

Drainage Class:
Field Observations
Confirmed Map Type? Yes [x] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-20	A/B	10 YR 4/2	7.5 YR 4/6	Fine & Few	Loam

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
	Aquic Moisture Regime		Listed on Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
x	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No		Is Sample Point
Wetland Hydrology Present?	Yes		No	x	Within a Wetland? Yes [ ] No [x]
Hydric Soil Present?	Yes	x	No		

Remarks:

Photos: 1717

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 35-1

Project Site: 2Rivers Pipeline Project	Date: 6/24/2001
Applicant/Owner: Equilon	County: Fayette
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No	
Is the site significantly disturbed (atypical situation)?	Yes		No	x
Is the area a potential problem area?	Yes		No	x
(If needed, explain in Remarks spaces)				

Community ID: UF
Transect ID: 62401
Plot ID: 60 ft N WPT 224

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Acer saccharinum*	T	FACW	9.		
2. *Celtis occidentalis*	T	FAC-	10.		
3. *Fraxinus pennsylvanica*	T	FACW	11.		
4. *Toxicodendron radicans*	V	FAC+	12.		
5. *Laportea canadensis*	H	FACW	13.		
6. *Parthenocissus quinquefolia*	H	FAC-	14.		
7. *Parthenocissus quinquefolia*	V	FAC-	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 57%

Remarks: Adjacent to perched wetland.

HYDROLOGY

X Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (in.)

Depth to Free Water in Pit: NA (in.)

Depth to Saturated Soil: NA (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- ___ Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Hillside (slope not conducive to wetland formation)

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 35-2

Map Unit Name
(Series and Phase): Hickory loam 15-30% slope

Taxonomy (subgroup): Typic Hapludalfs

Drainage Class: _____

Field Observations

Confirmed Map Type? Yes [X] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-4	A1	7.5 YR 3/1			Sandy Loam
4-18	A_2 & B	10 YR 4/3			Sandy Loam

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
	Aquic Moisture Regime		Listed on Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [X]	No [ ]
Wetland Hydrology Present?	Yes [ ]	No [X]
Hydric Soil Present?	Yes [ ]	No [X]

Is Sample Point Within a Wetland? Yes [ ] No [X]

Remarks: Hillside upland forest. Pit ~ 60 Ft North of WPT 224. Upland of wetland WPT 227

Photos:

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 38-1

Project Site: 2Rivers Pipeline Project	Date 6/24/2001
Applicant/Owner: Equilon	County: Bond
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No	
Is the site significantly disturbed (atypical situation)?	Yes		No	x
Is the area a potential problem area?	Yes		No	x

(If needed, explain in Remarks spaces)

Community ID: PE-1
Transect ID: 62040
Plot ID: A-2

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Rumex crispis*	H	FAC+	9.		
2. *Carex tribuloides*	H	FACW+	10.		
3. *Phalaris arundinacae*	H	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks: Similar to wpt 230, small band of wetland in swale drainage.

HYDROLOGY

x Recorded Data (Describe in Remarks):
- ____ Stream, Lake, or Tide Gauge
- x Aerial Photographs
- x Other
- ____ No Recorded Data Available

Field Observations:

Depth of Surface Water: ____ - ____ (in.)

Depth to Free Water in Pit: ____ - ____ (in.)

Depth to Saturated Soil: ____ - ____ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ____ Inundated
- ____ Saturated in Upper 12 Inches
- ____ Water Marks
- ____ Drift Lines
- ____ Sediment Deposits
- x Drainage Patterns in Wetlands

Secondary Indicators:
- ____ Oxidized Root Channels (upper12")
- ____ Water Stained Leaves
- ____ Local Soil Survey Data
- ____ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 38-2

Map Unit Name
(Series and Phase): Cisne silt loam
Taxonomy (subgroup): Vertic Albaqualfs

Drainage Class: P
Field Observations
Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
x	Aquic Moisture Regime	x	Listed on Hydric Soils List
	Reducing Conditions	x	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No		Is Sample Point
Wetland Hydrology Present?	Yes	x	No		Within a Wetland? Yes x No
Hydric Soil Present?	Yes	x	No		

Remarks: Narrow band drainage. ~ 2m wide. See WPT 230.

Photos:

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 37-1

Project Site: 2Rivers Pipeline Project	Date 6/24/2001
Applicant/Owner: Equilon	County: Bond
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	**Yes**	x	**No**	
Is the site significantly disturbed (atypical situation)?	**Yes**		**No**	x
Is the area a potential problem area?	**Yes**		**No**	x
(If needed, explain in Remarks spaces)				

Community ID: OW
Transect ID: 62402
Plot ID: A-1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1.			9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-):

Remarks: From road (no access) crops (corn) to bank of intermittent stream. No wet area suspected. Other water.

HYDROLOGY

X Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: ___ - ___ (in.)

Depth to Free Water in Pit: ___ - ___ (in.)

Depth to Saturated Soil: ___ - ___ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- ___ Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Observations from recorded data and visual from road indicate no wetland present. Crops planted up to crest of bank. Bnaks steep/unvegetated.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 37-2

Map Unit Name (Series and Phase): Cisne silt loam	Drainage Class:
Taxonomy (subgroup): Vertic Albaqualfs	Field Observations
	Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [ ]	No [x]	Is Sample Point	
Wetland Hydrology Present?	Yes [ ]	No [x]	Within a Wetland?	Yes [ ] No [x]
Hydric Soil Present?	Yes [x]	No [ ]		

Remarks: Access denied by owner. Observations from recorded data and visual from road indicate no wetland present. Crops planted up to crest of bank.

Photos:

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 36-1

Project Site: 2Rivers Pipeline Project	Date: 6/24/2001
Applicant/Owner: Equilon	County: Bond
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No	
Is the site significantly disturbed (atypical situation)?	Yes		No	x
Is the area a potential problem area?	Yes		No	x
(If needed, explain in Remarks spaces)				

Community ID: PE
Transect ID: 62402
Plot ID: WPT 230

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Rumex crispus*	H	FAC+	9.		
2. *Carex tribuloides*	H	FACW+	10.		
3. *Phalaris arundinacea*	H	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks:

HYDROLOGY

x Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- x Aerial Photographs
- x Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: - (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- x Drainage Patterns in Wetlands

Secondary Indicators:
- x Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- ___ Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Small drainage way through bean/wheat field. Narrow (~2m wide) opens into a small agricultural impoundment; abrupt elevation change separates wetland ditch from surrounding prairie and bean field.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 36-2

Map Unit Name
(Series and Phase): Hoyleton silt loam 2-5% eroded
Taxonomy (subgroup): Aquollic Hapludalfs

Drainage Class:
Field Observations
Confirmed Map Type? Yes [x] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-7	A	2.5 Y 5/3			loam
7-20	B	2.5 Y 7/1	2.5 Y 5/6	Fine	loam

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
	Aquic Moisture Regime		Listed on Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
x	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No		Is Sample Point
Wetland Hydrology Present?	Yes	x	No		Within a Wetland? Yes [x] No [ ]
Hydric Soil Present?	Yes	x	No		

Remarks: 2m wide strip in ag field drainage that opens into a shallow Agricultural impoundment (dammed).

Photos: 1767,68,69

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 33-1

Project Site:	2Rivers Pipeline Project	Date	6/24/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PF
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62401
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 227*
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Acer saccharinum*	T	FACW	9.		
2. *Acer saccharinum*	S	FACW	10.		
3. *Saururus cernuus*	H	OBL	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 67%

Remarks: North side transitions to Phragmites perched wetland -area cleared for pipline.

HYDROLOGY

X Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
___ Stream, Lake, or Tide Gauge	Primary Indicators:
X Aerial Photographs	___ Inundated
X Other	x Saturated in Upper 12 Inches
___ No Recorded Data Available	___ Water Marks
	___ Drift Lines
	___ Sediment Deposits
	___ Drainage Patterns in Wetlands
Field Observations:	Secondary Indicators:
Depth of Surface Water: - (in.)	___ Oxidized Root Channels (upper12")
Depth to Free Water in Pit: 8.5 (in.)	___ Water Stained Leaves
Depth to Saturated Soil: 0 (in.)	___ Local Soil Survey Data
	x Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Parched water. Accumulated detritus on surface.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 33-2

Map Unit Name
(Series and Phase): Hicker lows 15-30% slopes
Taxonomy (subgroup): Typic hapludalfes

Drainage Class: _____
Field Observations
Confirmed Map Type? Yes [ ] No [X]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-8.5		10 YR 2/1			Sandy loam
8.5-18		5 YR 3/1			sand

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon	X	High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
	Aquic Moisture Regime		Listed on Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
X	Gleyed or Low-Chroma Colors	X	Other (Explain in Remarks)

Remarks: Negative to alfa alfa dipyridil. Water outdropping at serveral locations within wetland.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [X]	No [ ]
Wetland Hydrology Present?	Yes [X]	No [ ]
Hydric Soil Present?	Yes [X]	No [ ]

Is Sample Point Within a Wetland? Yes [X] No [ ]

Remarks: Perched wetland. East 219,220,221. West 225,226. South 221,222,223,224,225. Read notes in notebook - some points need to be moved. Plot ~ 50 ' N of WPT 227

Photos: 1714,15,16(16 background)

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 2-1

Project Site:	2Rivers Pipeline Project	Date	6/20/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	**Yes**	X	**No**		Community ID: PF
Is the site significantly disturbed (atypical situation)?	**Yes**		**No**	X	Transect ID: 62001
Is the area a potential problem area?	**Yes**		**No**	X	Plot ID: WPT 7
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Sub-Dominant Plant Species	Stratum	Indicator
1. *Carex lurida*	H	OBL	9.		
2. *Carex tribuloides*	H	FACW+	10.		
3. *Fraxinus pennsylvanica*	T	FACW	11.		
4. *Cephalanthus occidentalis*	S	OBL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):
- Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other
- No Recorded Data Available

Field Observations:

Depth of Surface Water: NA (in.)

Depth to Free Water in Pit: 14.5 (in.)

Depth to Saturated Soil: 14.5 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- Inundated
- Saturated in Upper 12 Inches
- x Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetlands

Secondary Indicators:
- x Oxidized Root Channels (upper12")
- Water Stained Leaves
- x Local Soil Survey Data
- x Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Buttressed trees. Small area of forested wetland adjacent to WMA. Emergent wetland at base of slope transitioning to upland. Small seep area with Phragmytes on west end.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 2-2

Map Unit Name (Series and Phase): Wakeland Silt Loam	Drainage Class: SP
Taxonomy (subgroup): Aeric Fluvaquents	Field Observations Confirmed Map Type? Yes [x] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-20		10 YR 3/1			Loam

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
x	Aquic Moisture Regime	x	Listed on Hydric Soils List
x	Reducing Conditions	x	Listed on National Hydric Soils List
x	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: Oxydized Root Channels

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [x]	No [ ]	Is Sample Point Within a Wetland?	Yes [x] No [ ]
Wetland Hydrology Present?	Yes [x]	No [ ]		
Hydric Soil Present?	Yes [x]	No [ ]		

Remarks:

Photos: 1655

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 3-1

Project Site:	2Rivers Pipeline Project	Date	6/20/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: UP
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62001
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 8
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Phalaris arundinacea*	Herb	FACW+	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks: Narrow band of P. arundinacae from approximately 3-10 m wide

HYDROLOGY

X Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
___ Stream, Lake, or Tide Gauge	Primary Indicators:
X Aerial Photographs	___ Inundated
X Other	___ Saturated in Upper 12 Inches
___ No Recorded Data Available	___ Water Marks
	___ Drift Lines
	___ Sediment Deposits
	___ Drainage Patterns in Wetlands
Field Observations:	Secondary Indicators:
Depth of Surface Water: NA (in.)	___ Oxidized Root Channels (upper12")
Depth to Free Water in Pit: NA (in.)	___ Water Stained Leaves
Depth to Saturated Soil: NA (in.)	___ Local Soil Survey Data
	___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Non wetland hydrology. WPT 9 & 10 are C/L existing line

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 3-2

Map Unit Name (Series and Phase): Hickory loam 15-30% slope	Drainage Class:
Taxonomy (subgroup): Typic Hapludalfs	Field Observations Confirmed Map Type? Yes [X] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-20		10 YR 3/1			Loamy

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
	Aquic Moisture Regime		Listed on Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
X	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: Lower edge of slope between WMA wet area and hillside.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [X]	No [ ]	Is Sample Point Within a Wetland?	Yes [ ] No [x]
Wetland Hydrology Present?	Yes [ ]	No [X]		
Hydric Soil Present?	Yes [X]	No [ ]		

Remarks: WSlope not conducive to wetland formation (too steep)

Photos: Disc 1 1650-1653

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 1-1

Project Site:	2Rivers Pipeline Project	Date	6/20/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PE
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62001
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 18
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Sub-Dominant Plant Species	Stratum	Indicator
1. *Eleocharis obtusa*	H	OBL	9. *Rumex crispus L.*		FAC+
2. *Polygonum setaceum*	H	OBL	10. *Polygonum lapathifolium L.*		FACW+
3. *Cyperus spp.*	H		11. *Salix nigra*		OBL
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): ≥ 67%

Remarks: Recently Flooded. In waterfowl management cell.

HYDROLOGY

X Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
___ Stream, Lake, or Tide Gauge	Primary Indicators:
X Aerial Photographs	X Inundated
X Other	X Saturated in Upper 12 Inches
___ No Recorded Data Available	___ Water Marks
	___ Drift Lines
Field Observations:	___ Sediment Deposits
Depth of Surface Water: 18 (in.)	X Drainage Patterns in Wetlands
Depth to Free Water in Pit: NA (in.)	Secondary Indicators:
Depth to Saturated Soil: 0 (in.)	___ Oxidized Root Channels (upper12")
	___ Water Stained Leaves
	X Local Soil Survey Data
	___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Inside Levee impoundment. WPT 26 - end of levee. WP 11 & 17 C/L proposed line. WPT 12 & 13 - East adge levee/wetland. 14 east levee/wet boundry. 15,16 levee corner (wet boundry). 19,-21,23,24 N side of levee. C/L existing line: 22,25,27

CONFIDENTIAL

Benchmark Ecology Services inc.

SOILS QC ID: 1-2

Map Unit Name (Series and Phase): Wakeland silt loam	Drainage Class: SP
Taxonomy (subgroup): Aeric Fluvaquents	Field Observations Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit - Inundated.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	X	No		Is Sample Point Within a Wetland? Yes X No
Wetland Hydrology Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No		

Remarks: Water management cell West side of Carlyle WMA. Water elevation recently rose ~ 1-1.5 inches

Photos: East 1,2,3 Disc 1. West 4,5. Photo 1656

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 4-1

Project Site:	2Rivers Pipeline Project	Date	6/21/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PF
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62101
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 51
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Sub-Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	S	OBL	9.		
2. *Rumex crispus*	H	FAC+	10.		
3. *Eleocharis obtusus*	H	OBL	11.		
4. *Salix nigra*	T	OBL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks: East end of community ~10 m wide A. trifida/R. crispis and parallel to river bank. WPT 42 C/L proposed line and river bank PT 1063. WPT 43,46 edge of river.

HYDROLOGY

x Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- x Aerial Photographs
- x Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (in.)

Depth to Free Water in Pit: NA (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- x Inundated
- x Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- ___ Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 4-2

Map Unit Name
(Series and Phase): Petrolia Silt loam, frequently flooded
Taxonomy (subgroup): Typic fluvaquents

Drainage Class: 4
Field Observations
Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
	Aquic Moisture Regime		Listed on Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit, inundated

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [x]	No [ ]
Wetland Hydrology Present?	Yes [x]	No [ ]
Hydric Soil Present?	Yes [x]	No [ ]

Is Sample Point Within a Wetland? Yes [x] No [ ]

Remarks: Wetland located East of plot ID WPT 18 and West of Hurricane creek. WPT 39 ~ c/l marathon @ riverbank. WPT 34-52. WPT 36,37,38,39,44 also c/l marathon PL & 47

Photos: 1657,1658,1659,60

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 23-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PE
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62201
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 61
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Rumex crispus*	H	FACW+	9.		
2. *Polygonum lapathifolium*	H	FACW+	10.		
3. *Phalaris arundinacea*	H	FACW+	11.		
4. *Salix nigra*	S	OBL	12.		
5. *Polygonum amphibium*	H	OBL	13.		
6. *Ambrosia trifida*	S	FACW+	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks: Riparian stream border approximately 12m wide, transition to PF (willow/rumex/ambrisia)

HYDROLOGY

x Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
___ Stream, Lake, or Tide Gauge	Primary Indicators:
x Aerial Photographs	___ Inundated
x Other	x Saturated in Upper 12 Inches
___ No Recorded Data Available	___ Water Marks
	___ Drift Lines
	___ Sediment Deposits
	___ Drainage Patterns in Wetlands
Field Observations:	Secondary Indicators:
Depth of Surface Water: - (in.)	___ Oxidized Root Channels (upper12")
Depth to Free Water in Pit: 12 (in.)	___ Water Stained Leaves
Depth to Saturated Soil: 0 (in.)	x Local Soil Survey Data
	___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Stream bank from - 6" (inundated) +12"

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 23-2

Map Unit Name
(Series and Phase): Wakeland silt loam Frequently Flooded
Taxonomy (subgroup): Aeric Flavaquents

Drainage Class: SP
Field Observations
Confirmed Map Type? Yes [x] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-20		10 YR 3/2			Silt Loam

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
x	Aquic Moisture Regime	x	Listed on Hydric Soils List
	Reducing Conditions	x	Listed on National Hydric Soils List
x	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: River Bank

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No		Is Sample Point Within a Wetland? Yes [x] No [ ]
Wetland Hydrology Present?	Yes	x	No		
Hydric Soil Present?	Yes	x	No		

Remarks: Narrow band along stream bank. Marathon 55 C/L. Equilon CL pipeline 56. Outline 57 watersedge 59 inner. 58 Inner 60 watersedge.

Photos: 1665

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 24-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PF
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62201
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 63
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	T	OBL	9.		
2. *Salix nigra*	S	OBL	10.		
3. *Rumex crispus*	H	FAC+	11.		
4. *Ambrosia trifida*	H	FAC+	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks:

HYDROLOGY

x Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- x Aerial Photographs
- x Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: 8.5 (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- x Saturated in Upper 12 Inches
- x Water Marks
- x Drift Lines
- ___ Sediment Deposits
- x Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- x Water Stained Leaves
- x Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Slightly elevated compared to pipline to north and Willow/Rumex wetland to west of stream.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 24-2

Map Unit Name (Series and Phase): Wakeland silt loam Frequently Flooded	Drainage Class: SP
Taxonomy (subgroup): Aeric Flavaquents	Field Observations Confirmed Map Type? Yes [x] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-12		10 YR 3/1			Silt Loam
12-18		10 YR 4/1	5 YR 4/6		Silt Loam

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
x	Aquic Moisture Regime	x	Listed on Hydric Soils List
x	Reducing Conditions	x	Listed on National Hydric Soils List
x	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: Negative alfa alfa dipyridil in surface layer (0-12). Positive alfa alfa dipyridil in subsurface layer (12-

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No		Is Sample Point Within a Wetland? Yes x No
Wetland Hydrology Present?	Yes	x	No		
Hydric Soil Present?	Yes	x	No		

Remarks: West boundry WPT 58,59. East Boundry 65,66. C/L Marathon 62,64

Photos: 1663,1664

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 5-1

Project Site: 2Rivers Pipeline Project	Date: 6/22/2001
Applicant/Owner: Equilon	County: Fayette
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes X	No	Community ID:	PE
Is the site significantly disturbed (atypical situation)?	Yes	No X	Transect ID:	62201
Is the area a potential problem area?	Yes	No X	Plot ID:	WPT 73
(If needed, explain in Remarks spaces)				

VEGETATION

Dominant Plant Species	Stratum	Indicator	Sub-Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	S	OBL	9.		
2. *Rumex crispus*	H	FACW+	10.		
3. *Cephalanthus occidentalis*	S	OBL	11.		
4. *Polygonum amphibium*	H	OBL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks: Transition zone between North/South levee and silver maple grove

HYDROLOGY

X Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- X Saturated in Upper 12 Inches
- X Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- X Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- X Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 5-2

Map Unit Name (Series and Phase): Wakefield silt loam Frequently flooded	Drainage Class: SP
Taxonomy (subgroup): Aeric Flavaquents	Field Observations Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit, saturated/ listed soil

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No		Is Sample Point Within a Wetland? Yes x No
Wetland Hydrology Present?	Yes	x	No		
Hydric Soil Present?	Yes	x	No		

Remarks: West bound 68,69 Marathon PL 72. East bound 72,73,70,71

Photos: 1666

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 9-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PE
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62202
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 79
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	T	OBL	9.		
2. *Cephalanthus occidentalis*	S	OBL	10.		
3. *Salix nigra*	S	OBL	11.		
4. *Polygonum amphibium*	H	OBL	12.		
5. *Sagittaria latifolia*	H	OBL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks: Levee Border

HYDROLOGY

x Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- x Aerial Photographs
- x Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0-1 (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- x Inundated
- x Saturated in Upper 12 Inches
- ___ Water Marks
- x Drift Lines
- ___ Sediment Deposits
- x Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- x Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 9-2

Map Unit Name (Series and Phase): Wakeland silt loam Frequently flooded	Drainage Class: SP
Taxonomy (subgroup): Aeric Flavaquents	Field Observations Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit, inundated.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	X	No		Is Sample Point Within a Wetland? Yes X No [ ]
Wetland Hydrology Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No		

Remarks: West boundries WPT 77,78. East Boundries WPT 81,82. C/L marathon - 80

Photos: 1669

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 6-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PF
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62202
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 83
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Acer saccharinum*	T	FACW	9.		
2. *Acer saccharinum*	S	FACW	10.		
3. *Ambrosia trifida*	H	FAC+	11.		
4. *Bidens aristosa*	H	FACW	12.		
5. *Aster lanceolatus (syn. Aster simplex)*	H	NI	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 80%

Remarks:

HYDROLOGY

x Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- x Aerial Photographs
- x Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: NA (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- x Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- x Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Saturated to surface

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 6-2

Map Unit Name (Series and Phase): Wakefield silt loam Frequently flooded	Drainage Class: SP
Taxonomy (subgroup): Aeric Flavaquents	Field Observations Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit, saturated to surface, listed soil

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [x]	No [ ]	Is Sample Point Within a Wetland?	Yes [x] No [ ]
Wetland Hydrology Present?	Yes [x]	No [ ]		
Hydric Soil Present?	Yes [x]	No [ ]		

Remarks: West 81-82. East 84-85.

Photos:

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 8-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PE
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62202
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 86
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Bidens aristosa*	H	FACW	9.		
2. *Cephalanthus occidentalis*	S	OBL	10.		
3. *Leersia oryzoides*	H	OBL	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks:

HYDROLOGY

x	Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
	Stream, Lake, or Tide Gauge	Primary Indicators:
x	Aerial Photographs	Inundated
x	Other	x Saturated in Upper 12 Inches
	No Recorded Data Available	Water Marks
		Drift Lines
		Sediment Deposits
		x Drainage Patterns in Wetlands
		Secondary Indicators:
		Oxidized Root Channels (upper12")
		Water Stained Leaves
		x Local Soil Survey Data
		Other (Explain in Remarks)

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: 0 (in.)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Saturated to surface.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 8-2

Map Unit Name (Series and Phase): Wakeland silt loam Frequently flooded	Drainage Class: SP
Taxonomy (subgroup): Aeric Flavaquents	Field Observations Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit, saturated to surface, listed soil

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [x]	No [ ]	Is Sample Point Within a Wetland?	Yes [x] No [ ]
Wetland Hydrology Present?	Yes [x]	No [ ]		
Hydric Soil Present?	Yes [x]	No [ ]		

Remarks: West 84-85. East 87-88-89

Photos: 1670,71

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 7-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PE
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62202
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 90
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Typha latifolia*	S	OBL	9.		
2. *Sagittaria latifolia*	H	OBL	10.		
3. *Ludwigia peploides*	H	OBL	11.		
4. *Bidens aristosa*	H	FACW	12.		
5. *Salix nigra*	S	OBL	13.		
6. *Cephalanthus occidentalis*	S	OBL	14.		
7. *Leersia oryzoides*	H	OBL	15.		
8. *Scirpus tabernaemontani*		OBL	16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks: Veg. species dominance varies with slight elevation change (higher West, lower East)

HYDROLOGY

x Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- x Aerial Photographs
- x Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0-1 (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- x Inundated
- x Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- x Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- x Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 7-2

Map Unit Name (Series and Phase): Wakeland silt loam Frequently flooded	Drainage Class: SP
Taxonomy (subgroup): Aeric Flavaquents	Field Observations Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit, inundated

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No		Is Sample Point Within a Wetland? Yes x No [ ]
Wetland Hydrology Present?	Yes	x	No		
Hydric Soil Present?	Yes	x	No		

Remarks: West 87-88-89. East 91-94.

Photos: 1672,73

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 11-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PE
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62202
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 94
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Ludwigia peploides*	H	OBL	9.		
2. *Cephalanthus occidentalis*	S	OBL	10.		
3. *Salix nigra*	S	OBL	11.		
4. *Lemna minor*	H	OBL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks:

HYDROLOGY

x Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- x Aerial Photographs
- x Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 1-24 (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- x Inundated
- x Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- x Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- x Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Inundated.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 11-2

Map Unit Name (Series and Phase):	Wakeland silt Loam Frequently Flooded. Petrolia silt loam Frequently Flooded	Drainage Class:	P, VP
Taxonomy (subgroup):	Typic Flavaquents	Field Observations Confirmed Map Type?	Yes ☐ No ☐

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
x	Aquic Moisture Regime	x	Listed on Hydric Soils List
	Reducing Conditions	x	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: Inundated. No pit.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No		Is Sample Point
Wetland Hydrology Present?	Yes	x	No		Within a Wetland? Yes x No
Hydric Soil Present?	Yes	x	No		

Remarks: West 93-94. East 96-97. Marathon CP 98.

Photos: 1674,75

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 14-1

Project Site: 2Rivers Pipeline Project	Date: 6/22/2001
Applicant/Owner: Equilon	County: Fayette
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: UP
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62202
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 102
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Trifolium hybridum*	H	FAC-	9.		
2. *Trifolium aureum*	H	NI	10.		
3. *Erigeron annuus*	H	FAC-	11.		
4. *Solidago canadensis*	H	FACU	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 0%

Remarks: Levee slope

HYDROLOGY

X Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: - (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- ___ Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Steep levee embankment.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 14-2

Map Unit Name (Series and Phase): Petrolia silt loam Frequently Flooded

Taxonomy (subgroup): Typic Flavaquents

Drainage Class: P, VP

Field Observations

Confirmed Map Type? Yes [ ] No [x]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
	Aquic Moisture Regime		Listed on Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: On levee, slope steep compared to natural soil slope (anthropogenic)

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [ ]	No [x]
Wetland Hydrology Present?	Yes [ ]	No [x]
Hydric Soil Present?	Yes [ ]	No [x]

Is Sample Point Within a Wetland? Yes [ ] No [x]

Remarks: Levee

Photos:

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 10-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PE
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62202
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 103
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	T	OBL	9.		
2. *Cephalanthus occidentalis*	S	OBL	10.		
3. *Salix nigra*	S	OBL	11.		
4. *Ludwigia peploides*	H	OBL	12.		
5. *Lemna minor*	H	OBL	13.		
6. *Eleocharis palustris* (syn.Eleocharis macros	H	OBL	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks: Density and species diversity variable. Ludwigia & Eleocharis in small openings in S. nigra.

HYDROLOGY

x Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
___ Stream, Lake, or Tide Gauge	Primary Indicators:
x Aerial Photographs	x Inundated
x Other	x Saturated in Upper 12 Inches
___ No Recorded Data Available	___ Water Marks
	___ Drift Lines
	___ Sediment Deposits
	x Drainage Patterns in Wetlands
Field Observations:	Secondary Indicators:
Depth of Surface Water: 1-3 (in.)	___ Oxidized Root Channels (upper12")
Depth to Free Water in Pit: - (in.)	___ Water Stained Leaves
Depth to Saturated Soil: 0 (in.)	x Local Soil Survey Data
	___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Both sides (shore lines) of the small bayou. Bayou = other water.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 10-2

Map Unit Name (Series and Phase): Petrolia silt loam Frequently Flooded	Drainage Class: P, VP
Taxonomy (subgroup): Typic Flavaquents	Field Observations Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
	Aquic Moisture Regime		Listed on Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit, inundated.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [x]	No [ ]			150
Wetland Hydrology Present?	Yes [x]	No [ ]	Within a Wetland?	Yes [x]	No [ ]
Hydric Soil Present?	Yes [x]	No [ ]			

Remarks: West 96,97. East 99,100. Marathon 101. Equilon CP 102.; Shorlines of bayou.

Photos: 1680,81,82

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 13-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PE
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62203
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 108
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	S	OBL	9.		
2. *Cephalanthus occidentalis*	S	OBL	10.		
3. *Ludwigia peploides*	H	OBL	11.		
4. *Leersia oryzoides*	H	OBL	12.		
5. *Salix nigra*	T	OBL	13.		
6. *Lemna minor*	H	OBL	14.		
7. *Eleocharis palustris* (syn.Eleocharis macros	H	NI	15.		
8. *Polygonum pensylvanicum*	H	FACW+	16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks: Similar characteristics as pbt WPT 94. Varying S. nigra densities and size (Shrub:Tree).

HYDROLOGY

x Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
___ Stream, Lake, or Tide Gauge	Primary Indicators:
x Aerial Photographs	x Inundated
x Other	x Saturated in Upper 12 Inches
___ No Recorded Data Available	___ Water Marks
	___ Drift Lines
Field Observations:	___ Sediment Deposits
Depth of Surface Water: 0-24 (in.)	x Drainage Patterns in Wetlands
Depth to Free Water in Pit: - (in.)	Secondary Indicators:
Depth to Saturated Soil: 0 (in.)	___ Oxidized Root Channels (upper12")
	___ Water Stained Leaves
	x Local Soil Survey Data
	___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Gradual slope droping East to West.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 13-2

Map Unit Name
(Series and Phase): Petrolia silt loam Frequently Flooded
Taxonomy (subgroup): Typic Flavaquents

Drainage Class: P, VP
Field Observations
Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
x	Aquic Moisture Regime	x	Listed on Hydric Soils List
	Reducing Conditions	x	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit, inundated.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No	
Wetland Hydrology Present?	Yes	x	No	
Hydric Soil Present?	Yes	x	No	

Is Sample Point Within a Wetland? Yes [x] No [ ]

Remarks: Map from orthoguard. C/L pipeline. Levee/West boundry 107,108. East 110,111. Marathon CP 109.

Photos: 1685-6-7

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 12-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PE
Is the site significantly disturbed (atypical situation)?	Yes	x	No		Transect ID: 62203
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 112
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Alisma plantago-aquatica*	H	OBL	9.		
2. *Scirpus tabernaemontani*	H	OBL	10.		
3. *Sagittaria latifolia*	H	OBL	11.		
4. *Leersia oryzoides*	H	OBL	12.		
5. *Eleocharis obtusa*	H	OBL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks: Management Cell. Has been recently tilled.

HYDROLOGY

x Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- x Aerial Photographs
- x Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: 14 (in.)

Depth to Saturated Soil: 9.5 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- x Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators:
- x Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- x Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 12-2

Map Unit Name (Series and Phase): Petrolia silt loam Frequently Flooded	Drainage Class: P, VP
Taxonomy (subgroup): Typic Flavaquents	Field Observations Confirmed Map Type? Yes [x] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-6	A	10 YR 3/1			Loam
6-18	B	10 YR 3/1			Loam

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
x	Aquic Moisture Regime	x	Listed on Hydric Soils List
x	Reducing Conditions	x	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: Oxide root channels.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [x]	No [ ]	Is Sample Point Within a Wetland?	Yes [x] No [ ]
Wetland Hydrology Present?	Yes [x]	No [ ]		
Hydric Soil Present?	Yes [x]	No [ ]		

Remarks: West 110,111. East 114,115. Marathon Center 113. Area has been recently tilled for planting crops for waterfowl mgt program.

Photos: 1685-87

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 16-1

Project Site: 2Rivers Pipeline Project	Date: 6/22/2001
Applicant/Owner: Equilon	County: Fayette
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes x	No	Community ID:	PE
Is the site significantly disturbed (atypical situation)?	Yes x	No	Transect ID:	62204
Is the area a potential problem area?	Yes	No x	Plot ID:	WPT 116
(If needed, explain in Remarks spaces)				

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Cultivated corn			9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-):

Remarks: Note similar elevation/slope/soils on wet side of levee; see WPT 112

HYDROLOGY

X Recorded Data (Describe in Remarks):
- Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other
- No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: 12" (in.)

Depth to Saturated Soil: 6.5 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- Inundated
- x Saturated in Upper 12 Inches
- Water Marks
- Drift Lines
- Sediment Deposits
- x Drainage Patterns in Wetlands

Secondary Indicators:
- x Oxidized Root Channels (upper12")
- Water Stained Leaves
- Local Soil Survey Data
- Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 16-2

Map Unit Name (Series and Phase): Petrolia silt loam Frequently Flooded	Drainage Class: P, VP
Taxonomy (subgroup): Typic Flavaquents	Field Observations Confirmed Map Type? Yes [x] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-13		10YR 4/1			Silty clay
13-18		10YR 5/1	7.5YR 5/8		

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
x	Aquic Moisture Regime	x	Listed on Hydric Soils List
	Reducing Conditions	x	Listed on National Hydric Soils List
x	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: Negative to alfa alfa dipyridil

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [ ]	No [x]	Is Sample Point	
Wetland Hydrology Present?	Yes [x]	No [ ]	Within a Wetland?	Yes [ ] No [x]
Hydric Soil Present?	Yes [x]	No [ ]		

Remarks: Cultivated for water fowl management in corn. Levee/field border 117-118

Photos: 1688-89

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 17-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PF
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62204
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 124
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Acer saccharinum*	T	FACW	9.		
2. *Acer saccharinum*	S	FACW	10.		
3. *Fraxinus pennsylvanica*	T	FACW	11.		
4. *Bidens aristosa*	H	FACW	12.		
5. *Polygonum amphibium*	H	OBL	13.		
6. *Cephalanthus occidentalis*	S	OBL	14.		
7. *Salix nigra*	T	OBL	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks: Mixed forest.

HYDROLOGY

x Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- x Aerial Photographs
- x Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: 6 (in.)

Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- x Saturated in Upper 12 Inches
- x Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators:
- x Oxidized Root Channels (upper12")
- x Water Stained Leaves
- x Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 17-2

Map Unit Name (Series and Phase): Petrolia silt loam Frequently Flooded	Drainage Class: P, VP
Taxonomy (subgroup): Typic Flavaquents	Field Observations Confirmed Map Type? Yes [x] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.
0-18		10 YR 4/1			Silty Loam

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
x	Aquic Moisture Regime	x	Listed on Hydric Soils List
x	Reducing Conditions	x	Listed on National Hydric Soils List
x	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: Positive to alfa alfa dipyridil.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [x]	No [ ]	Is Sample Point Within a Wetland?	Yes [x] No [ ]
Wetland Hydrology Present?	Yes [x]	No [ ]		
Hydric Soil Present?	Yes [x]	No [ ]		

Remarks: West 122,123. East 120,121. Marathon CP 119.

Photos: 1690-1693

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 18-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PF
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62204
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 133
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	T	OBL	9.		
2. *Salix nigra*	S	OBL	10.		
3. *Ambrosia trifida*	H	FAC+	11.		
4. *Bidens aristosa*	H	FACW	12.		
5. *Apocynum cannabinum*	S	FAC	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks:

HYDROLOGY

x Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- x Aerial Photographs
- x Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: - (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- x Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- x Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- ___ Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 18-2

Map Unit Name (Series and Phase): Wakeland silt loam Frequently Flooded	Drainage Class: P
Taxonomy (subgroup): Aeric Flavaquents	Field Observations Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit, listed soil.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes [x]	No [ ]	Is Sample Point Within a Wetland?	Yes [x] No [ ]
Wetland Hydrology Present?	Yes [x]	No [ ]		
Hydric Soil Present?	Yes [x]	No [ ]		

Remarks: West 125-128. East 129-132.

Photos:

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 20-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PF
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62204
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 137
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Acer saccharinum*	T	FACW	9.		
2. *Fraxinus pennsylvanica*	T	FACW	10.		
3. *Quercus palustris*	T	FACW	11.		
4. *Bidens aristosa*	H	FACW	12.		
5. *Ambrosia trifida*	H	FAC+	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks:

HYDROLOGY

x Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- x Aerial Photographs
- x Other
- ___ No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)

Depth to Free Water in Pit: - (in.)

Depth to Saturated Soil: - (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- x Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- x Drainage Patterns in Wetlands

Secondary Indicators:
- ___ Oxidized Root Channels (upper12")
- ___ Water Stained Leaves
- x Local Soil Survey Data
- ___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 20-2

Map Unit Name (Series and Phase): Wakeland silt loam Frequently Flooded	Drainage Class: P
Taxonomy (subgroup): Aeric Flavaquents	Field Observations Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: No pit.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No		Is Sample Point Within a Wetland? Yes x No
Wetland Hydrology Present?	Yes	x	No		
Hydric Soil Present?	Yes	x	No		

Remarks: West 134-136. East 139-140. Starts again West 141-142. East 143-144-145. Includes areas east and west of WPT 143.

Photos: 1694

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 19-1

Project Site:	2Rivers Pipeline Project	Date	6/22/2001
Applicant/Owner:	Equilon	County:	Fayette
Investigator(s):	Benchmark Ecological Services, Inc. BD, NH	State:	Illinois

Do Normal Circumstances Exist on the site?	Yes	x	No		Community ID: PF
Is the site significantly disturbed (atypical situation)?	Yes		No	x	Transect ID: 62204
Is the area a potential problem area?	Yes		No	x	Plot ID: WPT 143
(If needed, explain in Remarks spaces)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Acer saccharinum*	T	FACW	9.		
2. *Fraxinus pennsylvanica*	T	FACW	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-): 100%

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
___ Stream, Lake, or Tide Gauge	Primary Indicators:
X Aerial Photographs	___ Inundated
X Other	X Saturated in Upper 12 Inches
___ No Recorded Data Available	X Water Marks
	___ Drift Lines
Field Observations:	X Sediment Deposits
Depth of Surface Water: - (in.)	X Drainage Patterns in Wetlands
Depth to Free Water in Pit: - (in.)	Secondary Indicators:
Depth to Saturated Soil: 0 (in.)	___ Oxidized Root Channels (upper12")
	X Water Stained Leaves
	X Local Soil Survey Data
	___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Saturated to surface.

CONFIDENTIAL

Benchmark Ecology Services Inc.

SOILS QC ID: 19-2

Map Unit Name (Series and Phase): Wakeland silt loam	Drainage Class: P
Taxonomy (subgroup): Aeric Flavaquents	Field Observations Confirmed Map Type? Yes [ ] No [ ]

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, ect.

Hydric Soil Indicators

	Histisol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	X	Listed on Hydric Soils List
	Reducing Conditions	X	Listed on National Hydric Soils List
	Gleyed or Low-Chroma Colors		Other (Explain in Remarks)

Remarks: no pit. Saturated to surface, listed soil.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	x	No		Is Sample Point Within a Wetland? Yes x No
Wetland Hydrology Present?	Yes	x	No		
Hydric Soil Present?	Yes	x	No		

Remarks: West 139-140. East 141-142.

Photos: 1695-98

CONFIDENTIAL

DATA FORM
Routine Wetland Delineation
(1987 COE Manual)

QC ID: 21-1

Project Site: 2Rivers Pipeline Project	Date 6/22/2001
Applicant/Owner: Equilon	County: Fayette
Investigator(s): Benchmark Ecological Services, Inc. BD, NH	State: Illinois

Do Normal Circumstances Exist on the site?	Yes x	No	Community ID:	PE
Is the site significantly disturbed (atypical situation)?	Yes x	No	Transect ID:	62204
Is the area a potential problem area?	Yes	No x	Plot ID:	WPT 175
(If needed, explain in Remarks spaces)				

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1.			9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, OR FAC (excluding FAC-):

Remarks: No natural vegetation, recently tilled.

HYDROLOGY

x Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
___ Stream, Lake, or Tide Gauge	Primary Indicators:
x Aerial Photographs	___ Inundated
x Other	___ Saturated in Upper 12 Inches
___ No Recorded Data Available	___ Water Marks
	___ Drift Lines
	___ Sediment Deposits
	x Drainage Patterns in Wetlands
Field Observations:	Secondary Indicators:
Depth of Surface Water: - (in.)	___ Oxidized Root Channels (upper12")
Depth to Free Water in Pit: - (in.)	___ Water Stained Leaves
Depth to Saturated Soil: - (in.)	x Local Soil Survey Data
	___ Other (Explain in Remarks)

Remarks: Other Recorded Data: USGS Quadrangle, NWI Data, Soil Survey. Recently tilled